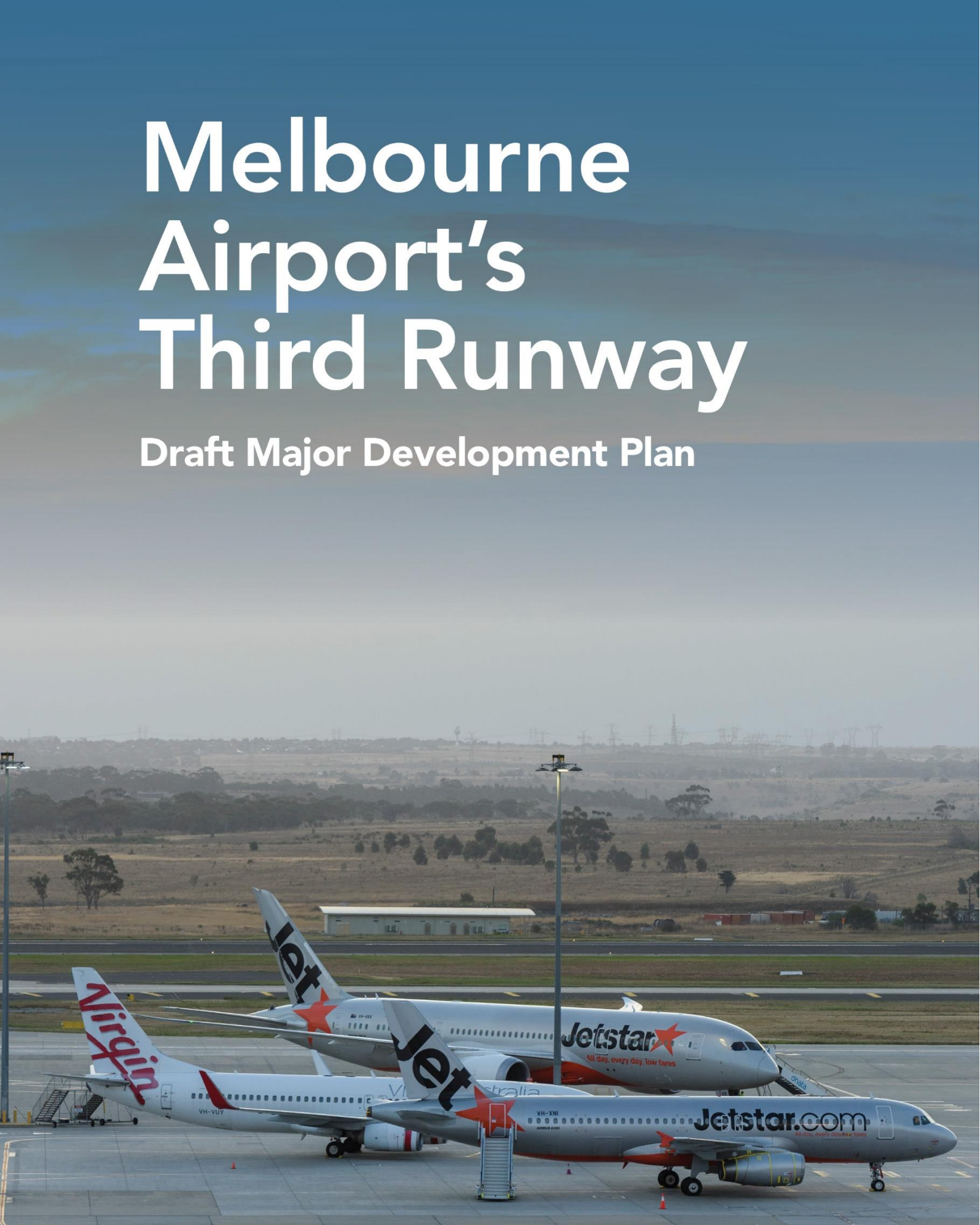
Melbourne Airport's Third Runway

Draft Major Development Plan



Supplementary Report

Submission to the Minister

MELBOURNE AIRPORT

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1 Introduction

1.1 Purpose and Scope of the M3R MDP Supplementary Report

This Supplementary Report has been prepared to assist the Minister for Infrastructure, Transport, Regional Development and Local Government (the Minister) and the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) in the formal consideration of the Melbourne Airport's Third Runway Major Development Plan (M3R MDP).

The purpose of this Supplementary Report is to:

- Demonstrate compliance with the relevant requirements of the Airports Act relating to the preparation and content of MDPs
- Address the relevant requirements of the Airports Act relating to exhibition of the Preliminary Draft MDP
- Address the relevant requirements of the Airports Act relating to submission of a Draft MDP to the Minister for approval
- Demonstrate that APAM has given due regard to the comments raised in the submissions that were received during public exhibition of the Preliminary Draft MDP.

1.2 Background

Australia Pacific Airports (Melbourne) Pty Ltd (APAM) is the airport-lessee company for Melbourne Airport under the Airports Act 1996 (the Airports Act). APAM has prepared this Supplementary Report to accompany and support the submission of the Draft M3R MDP to the Minister. More specifically, this report has been prepared to satisfy the consultation requirements of the Airports Act relating to the preparation of the Draft MDP.

The Draft M3R MDP is the culmination of over three years of work by APAM. It sets out APAM's plans for the development of M3R, in accordance with the requirements of the Airports Act and the Melbourne Airport Master Plan 2022 (approved 14 November 2022) and incorporates input and feedback from a wide range of stakeholders.

Public exhibition for the Preliminary Draft M3R MDP was undertaken concurrently with the Preliminary Draft Master Plan 2022. The engagement activities described in this Supplementary Report largely provided information about and addressed concepts for both documents. The aim of the concurrent exhibition process was to minimise confusion through delivery of integrated engagement.

Pursuant to the Airports Act, the Preliminary Draft M3R MDP was placed on exhibition for public comment from 1 February to 16 May 2022. The exhibition period was extended to 71 business days (104 calendar days) to facilitate participation opportunity that recognised the volume and complexity of the material being presented across the two documents. Following the exhibition period, APAM has prepared the Draft M3R MDP. APAM has made updates to reflect its consideration of the submissions received in relation to the exhibited Preliminary Draft MDP, including editorial and formatting modifications where required.

APAM seeks approval of the M3R MDP from the Minister in accordance with the Airports Act.

1.3 Statutory Framework

Part 5, Division 4 of the Airports Act sets out the legislative requirements relating to the preparation and approval of MDPs for Commonwealth leased airports, including Melbourne Airport. This includes specific requirements relating to:

- Contents of MDPs (Section 91)
- Public comment and advice to State etc (Section 92)
- Consultations (Section 93)
- Approval of MDP by Minister (Section 94)

The Draft M3R MDP has been prepared in accordance with these requirements, as outlined in this report.

2 Statutory Requirements for Consultation

This section outlines the statutory requirements for consultation under the Airports Act and describes how APAM met those requirements.

The Preliminary Draft MDP was placed on exhibition for public comment from 1 February to 16 May 2022. Public Exhibition was extended beyond the 60 day statutory requirement by APAM, in agreement with DITRDCA, to ensure participation opportunities as noted in Section 1.2.

2.1 Advice to State etc under Section 92(1A)

In accordance with Section 92(1A) of the Act, the following persons were notified in writing of the Preliminary Draft MDP:

Table 1: Persons notified in accordance with Section 92(1A)

Name	Position / Organisation
The Hon. Richard Wynne	State Minister for Planning
Mr John Bradley	State Secretary Department of Environment, Land, Water and Planning
Ms Sheena Frost	CEO Hume City Council
Ms Fiona Blair	CEO Brimbank City Council
Mr Maurie Heaney	Acting CEO Melton City Council
Ms Cathy Henderson	CEO Moreland City Council
Ms Helen Sui	CEO City of Moonee Valley
Ms Celia Haddock	CEO Maribyrnong City Council

Written advice was also provided to an extensive list of additional Commonwealth, State, local government and other relevant contacts over and above the statutory requirement outlined in Section **Error! Reference source not found.** above. Advice was provided to this extensive additional list to ensure awareness was raised across a broad platform. Copies of the letters sent are provided in Appendix 1.

2.2 Certificate under Section 92(1B)

Section 92(1B) of the Act requires the Draft MDP submitted to the Minister to be accompanied by:

> *(a) a copy of the advice given under subsection (1A); and*
>
> *(b) a written certificate signed on behalf of the company listing the names of those to whom the advice was given.*

Copies of the letters sent in accordance with Section 92(1A) are provided at Appendix 1.

The Section 92(1B)(b) written certificate is provided at Appendix 2.

2.3 Public Notice under Section 92(1)

In accordance with Section 92(1) of the Act the following was undertaken:

- A notice was published in the Herald Sun newspaper on 1 February 2022 – a copy of the notice is provided at Appendix 3.
- Hard copies of the Preliminary Draft MDP were made available for inspection and to take-away free of charge at:
    - Melbourne Airport Management, Level 2, Terminal 4, Melbourne Airport; and
    - Local libraries of the Cities of Brimbank (Keilor library), Hume (Broadmeadows, Craigieburn, Sunbury, Gladstone Park and Tullamarine libraries), and Hobsons Bay (Altona library) and Brimbank Council offices (inspection only).
- An electronic copy of the Preliminary Draft MDP was made available on the airport's website along with supporting information.

2.4 Certificate under Section 92(2)

Section 92(2) of the Act states:

> *If members of the public (including persons covered by subsection (1A)) have given written comments about the preliminary version in accordance with the notice, the draft plan submitted to the Minister must be accompanied by:*
>
> *(a) copies of those comments; and*
>
> *(b) a written certificate signed on behalf of the company:*
>
> *(i) listing the names of those members of the public; and*
>
> *(ii) summarising those comments; and*
>
> *(iii) demonstrating that the company has had due regard to those comments in preparing the draft plan; and*
>
> *(iv) setting out such other information (if any) about those comments as is specified in the regulations.*

Copies of the comments and submissions received are provided at Appendix 4.

The Section 92(2) written certificate is provided at Appendix 5.

Sections 4 and 5 of this report demonstrate how APAM has had "due regard" to the comments (submissions) received regarding the Preliminary Draft MDP.

2.5 Statement under Section 93(2)

Section 93 of the Airports Act 1996 relates to consultations prior to public exhibition of the Preliminary Draft MDP. Section 93(1) states:

> *This section applies if:*
>
> *(a) an airport-lessee company gives the Minister a draft major development plan; and*
>
> *(b) before the publication under section 92 of a notice about the plan, the company consulted (other than by giving an advice under subsection 92(1A)) a person covered by any of the following subparagraphs:*
>
> *(i) a State government;*
>
> *(ii) an authority of a State;*
>
> *(iii) a local government body;*
>
> *(iv) an airline or other user of the airport concerned;*
>
> *(v) any other person.*

Section 93(2) states:

> *The draft major development plan submitted to the Minister must be accompanied by a written statement signed on behalf of the company:*
>
> *(a) listing the names of the persons consulted; and*
>
> *(b) summarising the views expressed by the persons consulted.*

APAM undertook extensive consultations prior to public exhibition to ensure strong community ties and stakeholder understanding of M3R as documented in the Preliminary Draft MDP. A key component of developing the Draft MDP has been ensuring APAM's ongoing commitment to being a responsible member of the communities in which it operates.

APAM undertakes frequent and proactive communication with the communities that surround the airport, as well as the broader Victorian community. This inclusive approach will continue with the implementation of Master Plan 2022 and M3R.

Consultation and engagement prior to public exhibition comprised a range of methods including public forums, online engagement, newsletters and in-person briefings. Those consulted came from a wide spectrum including:

Commonwealth Government

- Department of Infrastructure, Transport, Regional Development, and Communications (now Department of Infrastructure, Transport, Regional Development, Communications and the Arts)
- Department of Agriculture, Water and the Environment (now Department of Climate Change, Energy the Environment and Water)
- Airservices Australia
- CASA
- Members of Parliament

State Government

- Department of Environment, Land, Water and Planning (now Department of Energy, Environment and Climate Action / Department of Transport and Planning)
- Department of Transport (now Department of Transport and Planning)
- Department of Health
- Environment Protection Authority
- Members of Parliament

Local Government

- Hume City Council
- Brimbank City Council
- Melton City Council
- Maribyrnong City Council

Other

- Airlines (Qantas, Virgin, Rex)
- Planning Coordination Forum
- Melbourne Airport Community Aviation Consultation Group
- School councils
- Airline Advisory Group
- Parallel Runway Operations Steering and Implementation Group
- Airport neighbours

The Section 93(2) written statement is provided at Appendix 6.

A table summarising the views expressed by the persons consulted prior to public exhibition is provided at Appendix 7.

3 Public Exhibition Engagement Activities

3.1 Overview

Melbourne Airport's purpose is to create connections that matter, while continuing to develop a world-class airport that generates economic, social and employment benefits for Victoria. Our vision – what we are striving for - is to be Australia's favourite airport destination, and support Melbourne's international status as a liveable city and attractive travel destination. Achieving this vision is only possible with the contribution of a wide variety of stakeholders and communities.

APAM recognises that effective community engagement is vitally important to delivering better and more sustainable airport planning outcomes through a process that engenders trust. Reflecting this, stakeholder and community engagement has been a key component in the development of the Preliminary Draft of Melbourne Airport's Third Runway Major Development Plan (M3R MDP).

Proactively engaging with APAM's broad and diverse communities and stakeholders to understand potential impacts, opportunities, needs, queries and concerns is essential to ensure effective planning, delivery and implementation of Melbourne Airport's future development plans. As such, APAM has committed to frequent and proactive communication with the communities that surround the airport, as well as the broader Victorian community and other stakeholders.

In addition to the statutory requirements for consultation described in Section 2, APAM delivered the largest and most extensive airport public engagement program ever undertaken in Victoria to support the public exhibition process for the preliminary drafts of Master Plan 2022 and M3R MDP.

Given the primary driver of the new Master Plan 2022 was updated plans for a third runway, APAM made the decision to exhibit the Preliminary Draft Master Plan 2022 concurrently with the Preliminary Draft M3R MDP to ensure the community had access to all possible information about both. This approach served to reduce confusion due to duplicated engagement processes.

In recognition of the volume of information being presented, the exhibition period was extended from 60 to 71 business days (104 calendar days) from 1 February 2022 to 16 May 2022, over and above the statutory requirements of the Act outlined in Section 2.

This Section provides a detailed overview of APAM's extensive range of additional engagement activities during the public exhibition period.

3.1.1 Engagement Objectives and Principles

The objectives of the engagement process for the Preliminary Draft M3R MDP were to:

- Inform the development of the Preliminary Draft M3R MDP and raise awareness of airport planning
- Build the capacity of stakeholders and communities to make informed submissions
- Encourage and facilitate well-informed written submissions in accessible formats
- Acknowledge and respect the diversity of views about the future of Melbourne Airport
- Broaden engagement participation to extend beyond near-neighbours of Melbourne Airport.

The following principles guided how engagement was conducted. They ensured engagement activities were delivered in a way that supported the above objectives.

- Explain the engagement objectives and opportunities to influence decisions
- Respect the views and opinions of all community members
- Share information about project activities and hard decisions
- Provide feedback about the outcomes of community engagement
- Ensure engagement activities are inclusive and equitable
- Provide technical information in clear, concise and accessible language
- Engage with impacted and interested community members
- Conduct engagement in a timely manner
- Understand the community and stakeholders we are engaging with
- Measure the outcomes of engagement to support continual improvement

3.1.2 Stakeholder overview

Stakeholders are individuals or organisations which affect, or can be affected by, project decisions. All groups and individuals (internally and externally) affected by or having an interest in the project could be a stakeholder - but not all stakeholders will need to be engaged at the same level.

APAM developed a composite noise model for the geographical extent of likely community interest and/or impact related to proposed changes to the airport's operation (including as a result of M3R implementation). The extent of this area is shown in Figure 1 - the catchment includes almost one million households.

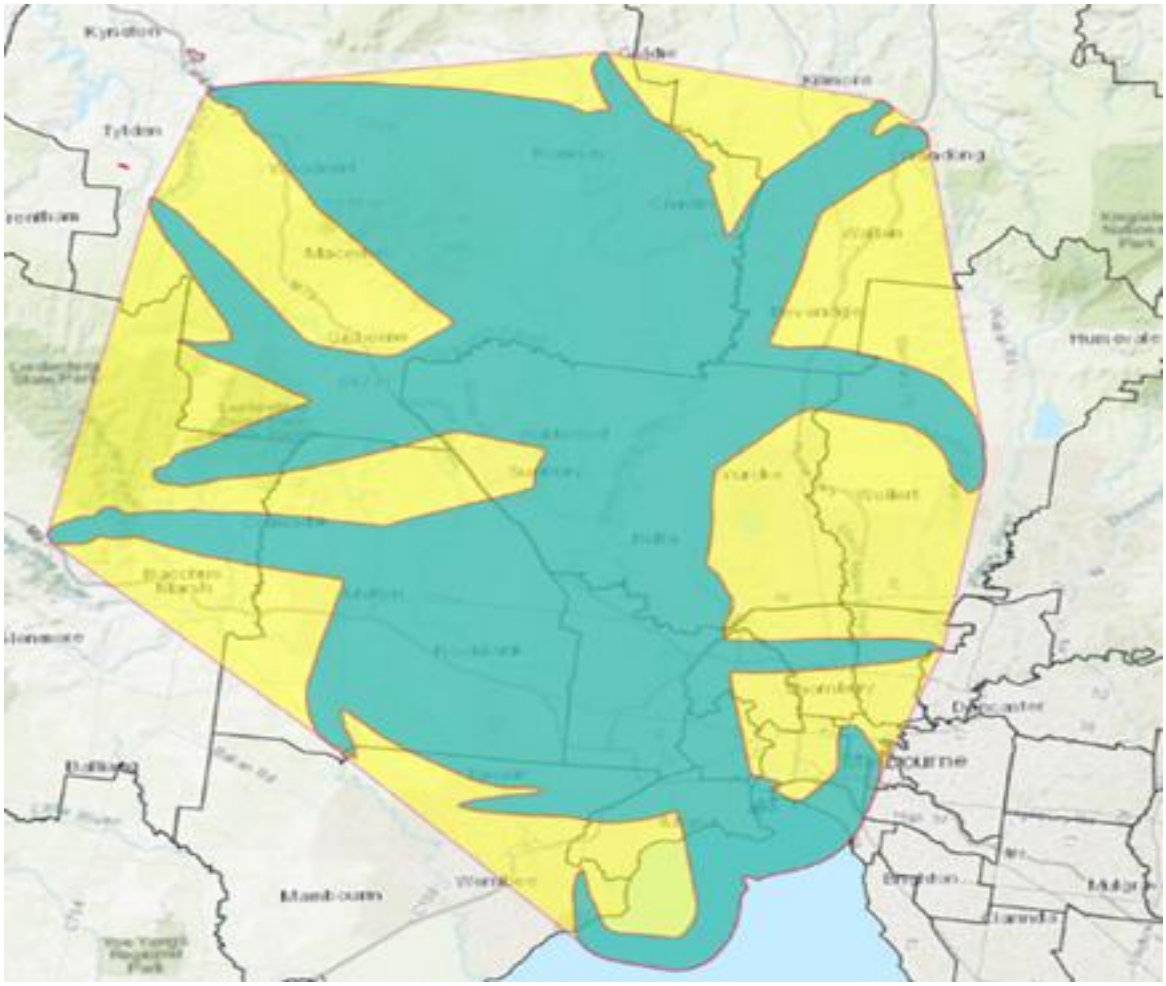


Figure 1: Catchment area of likely community interest and/or impact related to proposed changes to the airport's operation

While noise impact modelling guided engagement and communication planning, ensuring that awareness of the M3R MDP was raised well beyond this boundary was essential. Communication activities sought to reach the greater Metropolitan Melbourne area and areas of regional Victoria. These included areas covered by lower threshold 'noticeability' modelling.

Specific stakeholders who would likely be interested and impacted by this project have been grouped into stakeholder categories in the Table 2.

Table 2: Stakeholder Groups

Stakeholder group	Stakeholders
Commonwealth Government	Department of Infrastructure, Transport, Regional Development, Communications and the Arts
	Department of Agriculture, Water and the Environment (former)
	Department of Climate Change, Energy, the Environment and Water
	Civil Aviation Safety Authority

Stakeholder group	Stakeholders
	Airservices Australia
	Members of Parliament
	The Honourable Barnaby Joyce MP – Minister for Infrastructure, Transport and Regional Development (former)
	The Honourable Catherine King MP – Minister for Infrastructure, Transport, Regional Development and Local Government
	The Honourable Sussan Ley MP – Minister for the Environment (former)
	The Honourable Tanya Plibersek MP – Minister for the Environment and Water
	The Honourable Dr Jim Chalmers MP – Shadow Treasurer (former), Treasurer
	The Honourable Anthony Albanese MP – Leader of the Opposition (former), Prime Minister
	The Honourable Dan Tehan MP – Minister for Trade, Tourism and Investment (former)
	Senator the Honourable Don Farrell – Shadow Minister for Sport and Tourism (former), Minister for Trade and Tourism
	The Honourable Bill Shorten MP – Member for Maribyrnong
	The Honourable Tim Watts MP – Member for Gellibrand
	Rob Mitchell MP – Member for McEwen
	Josh Burns MP – Member for Macnamara
	Maria Vamvakinou MP – Member for Calwell
	Daniel Mulino MP – Member for Fraser
	The Honourable Brendan O'Connor MP – Member for Gorton
	Adam Bandt MP – Member for Melbourne
State Government	Department of Environment, Land, Water and Planning
	Environment Protection Authority
	Department of Transport
	Department of Health (Western Health)
	Department of Education (School Building Authority)
	Department of Treasury and Finance
	Department of Jobs, Precincts and Regions

Stakeholder group	Stakeholders
	Members of Parliament
	The Honourable Martin Pakula MP – Minister for Trade, Minister for Tourism, Sport and Major Events
	The Honourable Jill Hennessey MP – Member for Altona
	Josh Bull MP – Member for Sunbury
	The Honourable Ben Carroll MP – Member for Niddrie
	The Honourable Melissa Horne MP – Member for Williamstown
	The Honourable Danny Pearson MP – Member for Essendon
	Katie Hall MP – Member for Footscray
	Lizzie Blandthorn MP – Member for Pascoe Vale
	The Honourable Robin Scott MP – Member for Preston
	The Honourable Richard Wynne MP – Minister for Planning
	Natalie Suleyman MP – Member for St Albans
	Sarah Connolly MP – Member for Tarneit
	Danielle Green MP – Member for Yan Yean
	Ros Spence MP – Member for Yuroke
	Members of the Legislative Council
	Sheena Watt MLC – Northern Metropolitan Region
	Nazih Elasmar OAM MLC – Northern Metropolitan Region
	Samantha Ratnam MLC – Northern Metropolitan Region
	Craig Ondarchie MLC – Northern Metropolitan Region
	Fiona Patten MLC – Northern Metropolitan Region
	Cesar Melhem MLC – Western Metropolitan Region
	The Honourable Ingrid Stitt MLC – Western Metropolitan Region
	Bernie Finn MLC – Western Metropolitan Region
	Kaushaliya Vaghela MLC – Western Metropolitan Region
	Dr Catherine Cumming MLC – Western Metropolitan Region
	Mark Gepp MLC – Northern Victoria
	The Honourable Wendy Lovell MLC – Northern Victoria
	Tim Quilty MLC – Northern Victoria
	Tania Maxwell MLC – Northern Victoria

Stakeholder group	Stakeholders
	The Honourable Jaclyn Symes MLC – Northern Victoria
Local Government	Hume City Council Brimbank City Council Maribyrnong City Council Hobsons Bay City Council Macedon Ranges Shire Council City of Melbourne Moonee Valley City Council City of Yarra City of Port Phillip City of Stonnington Wyndham City Council Melton City Council Mitchell Shire Council City of Whittlesea City of Moreland Darebin City Council City of Stonnington
Consultative Groups	Melbourne Airport Community Aviation Consultation Group (CACG) Planning Coordination Forum (PCF) Victorian Chamber of Commerce and Industry Infrastructure Partnerships Australia Australian Logistics Council Metropolitan Transport Forum Business Council of Australia Victorian Farmers Federation Australasian Land and Groundwater Association Professional Environmental Womens' Association Business Associations
Airlines/ operators	Airlines On-airport companies, businesses and support services
Local community	Near neighbours Residents and businesses within projected impact areas

Stakeholder group	Stakeholders
	Schools and early years centres within projected impact areas
	Health and community centres within projected impact areas
	Hard-to-reach community members
Airport users	Passengers
	Airport workforce

3.1.3 Prior engagement (before public exhibition)

APAM has engaged continuously with its stakeholders on the development of Melbourne Airport's third runway since the completion of the Master Plan 2018 public engagement process.

APAM engaged with airlines, industry representatives, representatives from all levels of government, Victorian business and tourism bodies, statutory authorities, passengers, and local organisations and communities through a program of regular meetings, briefings and forums. APAM also engaged with its established consultation forums (including the Planning Coordination Forum and Community Aviation Consultation Group).

3.1.3.1 Orientation change engagement

In mid-2019, APAM announced to community and stakeholders that it was reviewing its decision to construct a parallel east-west runway as the airport's third runway as described in the Master Plan 2018.

Engagement activities were undertaken to support the planning review undertaken into the third runway orientation. A summary of key engagement activity in this period included:

- 226 people participating in online and face to face engagement events
- 2,790 visits to dedicated engagement website
- 20 community workshops held in 14 locations
- Four "Meet the planner" sessions
- Two direct mailouts to approximately 330,000 households to advise of the review, engagement workshops and final decision
- Media coverage on TV, radio, daily and local newspapers
- Information on my.melbourneairport.com
- Alerts sent to approximately 3,000 people on the Melbourne Airport database
- Commonwealth, Victorian and local government briefings
- A range of CACG, PCF and community group presentations and briefings.

Following this, in November 2019, APAM announced that it was planning for the third runway to be oriented north-south.

3.1.3.2 Preliminary engagement during the coronavirus (COVID-19) pandemic

The public exhibition, originally planned to take place in 2020, was delayed due to the global Coronavirus (COVID-19) pandemic in March 2020. In 2021, APAM decided to further delay public exhibition until early 2022.

Following this decision, APAM maintained updates and engagement with its stakeholders through existing channels such as the Melbourne Airport website, social media channels and CACG and PCF forums.

In 2021, APAM undertook preliminary engagement with the 'hard-to-reach' community (including members from Culturally and Linguistically Diverse (CALD) communities, young people, young families and elderly citizens) to build awareness and provide information about the M3R MDP and seek feedback on the engagement program.

Six online focus groups were held between September and October 2021. Participants had the opportunity to hear about the draft plans, ask questions of technical staff and give feedback on the engagement program and information material.

40 people participated across seven online focus group sessions. There was general support from the participants and a range of suggestions which led to the following changes to the engagement program:

- Redesign of the promotion flyer to add in more visual cues, with addition of two more languages, and inclusion of a QR code, a project 'hotline' phone number and a dedicated email address
- Use of multiple radio channels to promote the engagement program in seven community languages
- Support for community members that speak languages other than English to submit their submissions in their own languages
- Incorporation of a mix of online and in-person events to cater for different needs.

3.2 Engagement and communications methodology

The engagement methodology was developed in consideration of:

- The engagement objectives and design principles described in Section 3.1
- Feedback and lessons learned from prior engagement activities
- COVID-19 impacts - a COVID-safe plan was developed and followed to ensure staff and public safety risks were managed.

To maximise participation opportunities, engagement activities were undertaken through a mix of in-person and online forums, including pop-ups, library talks, meet-the-planner sessions, focus groups and online information sessions.

3.2.1 Formal Public Exhibition engagement during the coronavirus (COVID-19) pandemic

The formal public exhibition occurred outside Victorian lockdown periods, but during the global coronavirus (COVID-19) pandemic with public health orders in force and changing throughout.

Although Melbourne ended its lockdown in late 2021, the State was recording over 22,000 positive cases per day in January 2022. The pandemic impacted availability of suitable venues (with density limits imposed by the State health authority), and potentially participation levels at face-to-face events (due to sickness, being a close contact of a contracted case, or fear of contracting the

virus). In the first two months of the public exhibition some community members were reluctant to attend in-person events and community events were limited. As such APAM could not organise pop-up sessions to co-host at community markets/ library events. APAM made changes to locations of some events as restrictions eased. These changes have been detailed in Section 3.4.1.

3.2.2 Information provided during Public Exhibition

Engagement activities and communications encompassed both the Master Plan 2022 and M3R MDP. Recognising that the two are inextricably linked, all events facilitated both the Master Plan and M3R MDP to ensure that participants had ample opportunity to understand the full breadth of proposed changes and potential impacts. This approach appears to have been validated by the significant number of submissions on the Preliminary Draft Master Plan 2022 that discuss the planning context of the M3R MDP.

3.2.3 Online engagement tools

A dedicated online engagement and communications platform (Virtual Visitor Centre) was developed to house all Preliminary Draft Master Plan 2022 and M3R MDP information, provide opportunities to ask questions, register to attend engagement advents and write and submit submissions to the approval processes.

This platform also included access to a bespoke 'Noise and Flight Path Tool' which allowed stakeholders to explore potential noise and amenity effects from a nominated address to assist their understanding of current (2019) and forecast noise. Further description of these two online engagement and communications platforms is provided below:

Table 3: Overview of online engagement tools used

Approach	Description
Virtual Visitor Centre	The Virtual Visitor Centre (https://www.melbourneairport.com.au/runway) replicated a traditional drop-in information session format on a website, with visitors able to access all project information and register for engagement activities. The site was live throughout the public exhibition period and remains online and available for the public to access. The Virtual Visitor Centre includes: • The Preliminary Draft Master Plan 2022 • The Preliminary Draft M3R MDP • Event calendars that outlined all the public engagement events, with registration link • Videos of online information session recordings • Information boards that highlight key facts • A video animation explaining the M3R project • Videos from CEO and Chief of Infrastructure • Link to interactive flight path and noise tool • Supporting fact sheets and chapter summaries • Q&A tool and FAQ list

Approach	Description
	• Link to the web portal for lodging submissions • Translated documents in seven key languages • Contact information (phone and email) The link to the Virtual Visitor Centre was promoted through a top banner image displayed on Melbourne Airport's website. Visitors could contact the project team via the centre to ask for project information or register for engagement events.  **Figure 2: Screenshot of the Virtual Visitor Centre**
Noise and Flight Path Tool	A Noise and Flight Path Tool was designed to illustrate current (2019 two-runway), projected (three-runway) and 'ultimate' (four-runway) noise impacts and flight paths, as described in the Preliminary Draft Master Plan 2022 and M3R MDP. An interactive map allows users to learn about the possible changes in overflights and noise levels at their property or place of interest. The link to the Noise and Flight Path Tool can be accessed through the Virtual Visitor Centre and Melbourne Airport's website. The tool was shown to participants at in-person events using a digital device and promoted through all online information sessions. Upon request some community members were given bespoke information packets with screenshots and explanations of results for their location.

Approach	Description

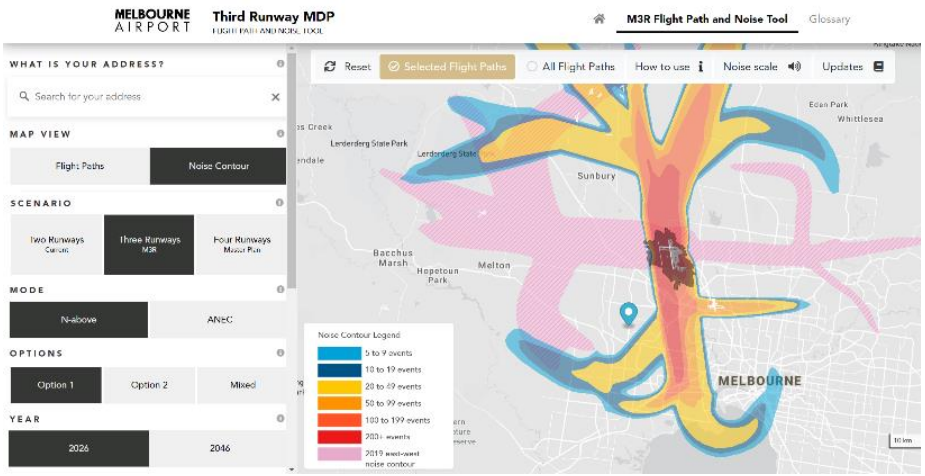


Figure 3: Screenshot of the Noise and Flight Path Tool

3.2.4 Engagement activities

A total of 53 engagement sessions were held both online and in-person. Online sessions were held through the online meeting platform Zoom. Locations of in-person engagement (pop-ups, meet-the-planner, town halls and library talks) were selected by APAM staff based on existing airport impacts, potential future impacts and where there was demand. An overview of engagement activity formats used is provided in in the table below.

Table 4: Engagement activities

Approach	Description	Intended participants
Pop-up	16 pop-ups were held in locations that received passing foot traffic (e.g. parks, airport terminals and local events) with the objective to reach out to the public in places they already visit and congregate. This strategy also captured people who may not otherwise be compelled to attend a more formal/registered event. The purpose of the pop-ups was to raise awareness of the M3R MDP and Preliminary Draft Master Plan 2022, as well as public exhibition engagement opportunities - where the public was provided an opportunity to talk directly to airport staff. Materials were distributed including maps, project flyers and fact sheets. Mobile tablets and laptops with access to the Virtual Visitor Centre and the interactive Noise and Flight Path Tool were shown to assist participants in	Near neighbours Residents within the noise impact catchment Interested community members

Approach	Description	Intended participants
	understanding the potential impacts of the M3R project. Each pop-up session was two hours long and staffed by Melbourne Airport subject matter experts and engagement teams. Pop-ups were set up with a branded marquee, a pull-up banner, a Melbourne Airport branded podium and project area maps. No capacity limits were applied. Three different pop-up formats were held: • Seven at local reserves or community events • Four at the Sunbury Road aircraft viewing area • Five in airport terminals. At the in-terminal pop-ups, free coffee vouchers were given out to encourage people to take project information.  **Figure 4: Photo of a pop-up at the Sunbury Rd Viewing Area**	
Online information session	Thirteen online information sessions were held to provide key information on specific aspects of the Preliminary Draft Master Plan 2022 and Preliminary Draft M3R MDP. Online sessions could accommodate up to 100 participants. Each session included a presentation given by APAM staff and technical experts, and a Q&A session where participants were encouraged to seek clarification - which allowed for greater	All stakeholders

Approach	Description	Intended participants

exploration of key topics of interest. All online sessions were recorded and made available through the Virtual Visitor Centre to ensure people who couldn't participate could still access this detailed information and answers to questions.

Online sessions covered the following topics:

- Master Plan 2022 overview
- Sustainability
- Health impacts
- Social impacts
- Heritage
- Transport
- Airspace architecture
- Aircraft noise
- Draft runway operating plan
- Ecology

Each session ended with a 'call to action' encouraging participants to make a submission, join other engagement activities and/or read further information on the Virtual Visitor Centre.

Online information sessions were two hours in length and held via Zoom meeting platform. Prior registrations were requested.

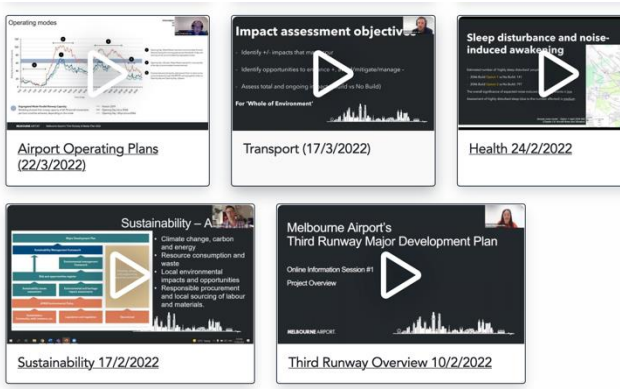
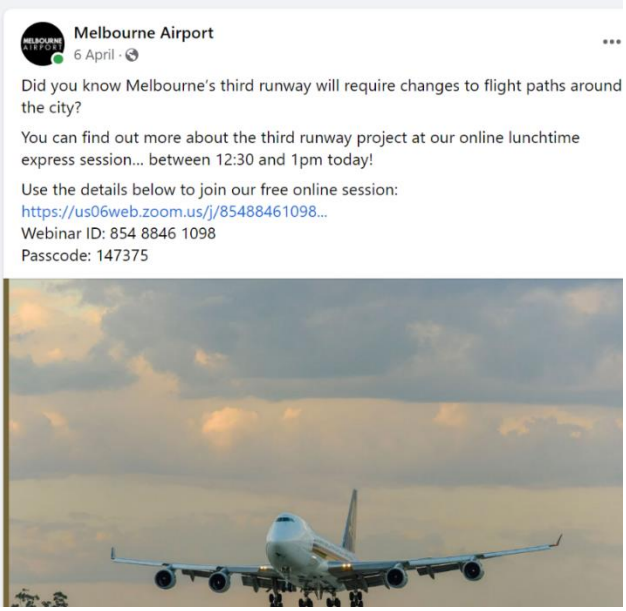


Figure 5: Screenshot of the Virtual Visitor Centre page where all Online Information Sessions were recorded and uploaded

Approach	Description	Intended participants
	 **Figure 6: Screenshot of an Online Information Session**	
Library talk	11 library talks were held in community meeting spaces across Melbourne. The library talks were two-hour topic-based presentations from APAM staff on various aspects of the Preliminary Draft M3R MDP and/or Preliminary Draft Master Plan 2022 These talks were mirrored in the online information sessions to ensure alternative access routes for the same information. The library talks were designed to be informative presentations from subject matter experts and allowed time for questions and answers at the end. APAM identified key topics of interest for these sessions: • Project overview • Sustainability • Health impacts • Social impacts • Heritage • Transport • Airspace architecture • Aircraft noise • Draft runway operating plan • Ecology • Environmental management framework Each session could accommodate up to 30 participants. Fact sheets were given out at the Library Talks and hard copy maps and documents made available.	Near neighbours Residents within the noise impact catchment Interested community members

Approach	Description	Intended participants
	Prior registrations were requested, but walk-ins were permitted subject to density/participation limits. 	
	Figure 7: Image of a library talk	
Meet the Planner	The six 'meet the planner' sessions were a series of one-to-one meetings with technical specialists from APAM, which allowed participants to ask detailed, specific questions. These sessions provided opportunity for people to discuss private and sensitive matters (such as their individual property or personal circumstances). Some participants indicated their questions in advance and so APAM staff were able to prepare bespoke and detailed information ahead of the meeting. Participants were required to register to attend these sessions and were allocated 30-minutes each. Questions that couldn't be answered in that time were followed up by email. Participants could register online, or through the project phone line. All sessions were attended by an APAM staff member, technical specialists as/when required, and engagement staff. They were held every fortnight on Tuesdays from 12pm-8pm starting 22 February 2022. Appointments were both in person and online.	Near neighbours Residents within the noise impact catchment Interested community members

Approach	Description	Intended participants
	Each session could accommodate up to 13 meetings.	
Hard-to-reach Focus groups	Three focus groups were held to target cohorts identified as hard-to-reach - young people, young families, elderly and Culturally and Linguistically Diverse (CALD) community. Focus groups were limited to 15 participants. The focus groups were designed to concentrate on topics that people were most concerned about: • Health impacts • Social impacts • Airspace, flight paths and noise Focus groups participants were recruited through existing networks and Community Champions (who were recruited prior to public exhibition), Council networks, representative groups, service providers and organisations. Fifty-dollar gift cards were given to encourage participants and to help reduce barriers to participation. Prior registration was required.	Hard-to-reach community members (young people, young family, CALD communities)
Lunchtime Express	Five 'lunchtime express' online information sessions were held to provide a short general Preliminary Draft M3R MDP and Preliminary Draft Master Plan 2022 by an APAM team member, followed by Q&A. These sessions were designed to encourage participation from people working online and were provided in response to community feedback requesting online sessions at different times (outside of weekends and evenings). The sessions were promoted through Melbourne Airport's social media platform with the link to the session. No registration was required to attend.	All stakeholders

Approach	Description	Intended participants
	 **Figure 8: Screen capture of the Lunchtime Express promotion**	
Town Hall	A 'Town Hall' format meeting was held in the Jack McKenzie Community Centre in Bulla during the evening of March 9. APAM staff presented key information about various aspects of the Preliminary Draft M3R MDP. The location was chosen due to significant community interest from Bulla, and with respect to feedback that the mailout had not been received in the area. The Town Hall was designed to be an informative presentation from subject matter experts and allowed time for questions and answers at the end. APAM presented general information about the project and included some specific impacts to Bulla. We identified key topics of interest for these sessions: • Airport planning history • The M3R project • The Airports Act major project approval process • Impact assessment objectives • Impact assessment details: • Flight paths • Operating modes • Noise in Bulla	Near neighbours Residents within the noise impact catchment Interested community members

Approach	Description	Intended participants
	• Social and health • Property planning and values • Guidance about how to lodge a submission and attend further information sessions This session was attended by 50+ participants. Fact sheets were given out and hard copy maps and documents made available. Prior registrations were requested, but walk-ins were permitted subject to density/participation limits.	

3.2.5 Communication and promotion methods

APAM recognises the need for best practice engagement, and as such went much further than the statutory requirement to raise awareness of the proposals.

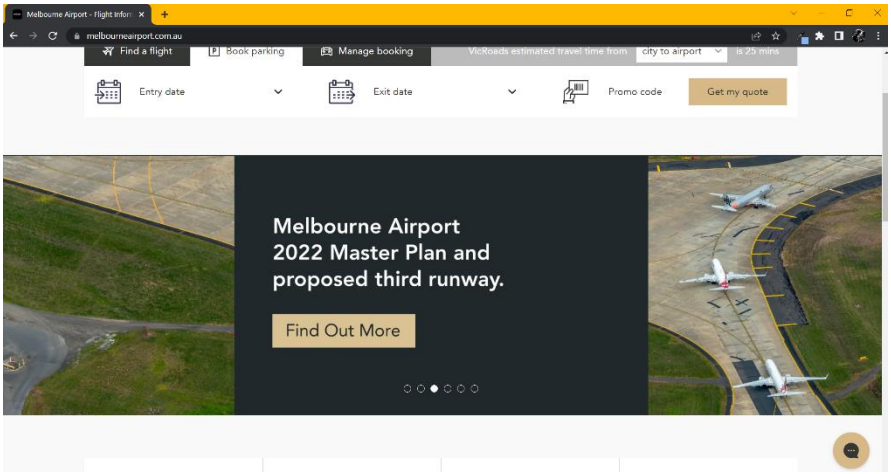
Through a combination of paid advertising, traditional media and social media, APAM made every effort to inform as many people as possible of the Preliminary Draft M3R MDP and Master Plan 2022, and how they could contribute to the process.

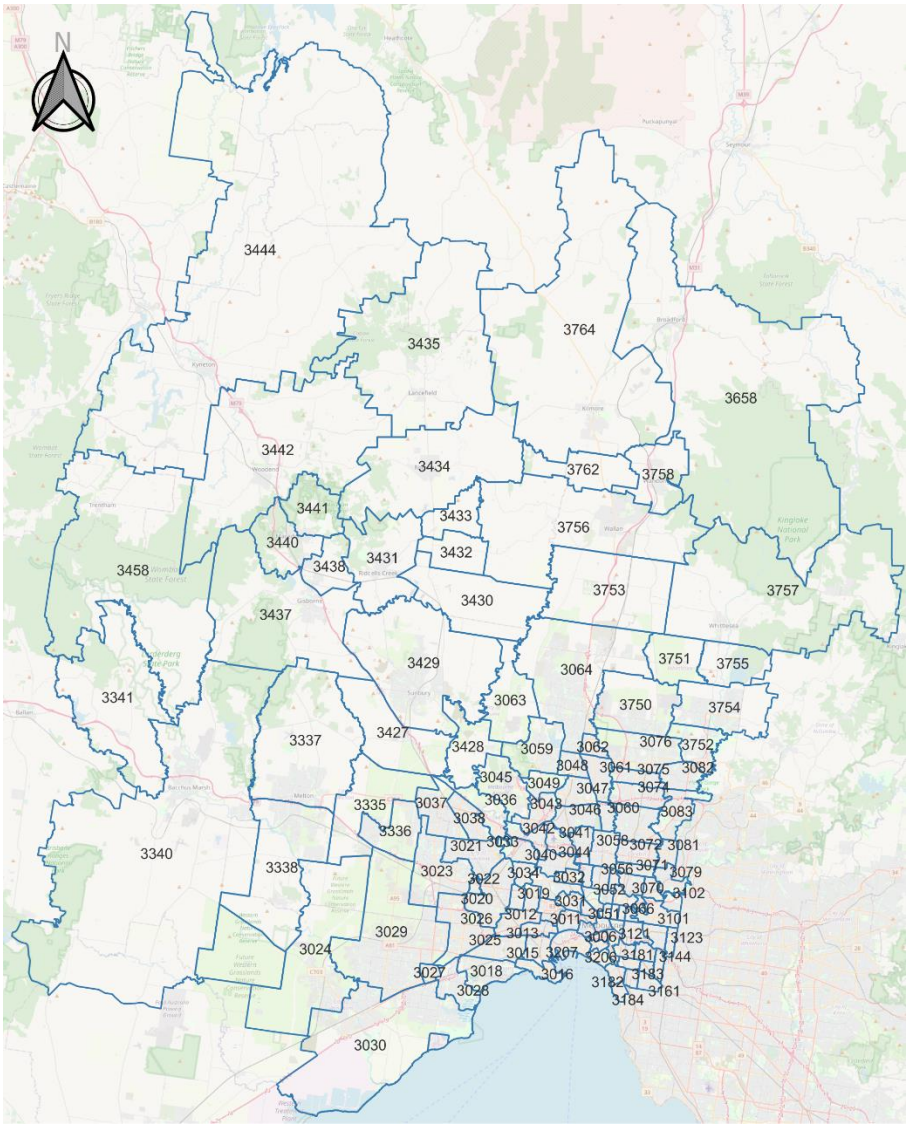
Dedicated Preliminary Draft M3R MDP and Master Plan 2022 communication channels were established in addition to the existing Melbourne Airport communication channels. An outline of each channel is provided below.

Table 5: Communication Channels

Approach	Description
Virtual Visitor Centre	Virtual Visitor Centre is a dedicated project web portal and interactive engagement platform. The Virtual Visitor Centre (https://www.melbourneairport.com.au/runway) was developed to house information relating to the Preliminary Draft M3R MDP and Master Plan 2022. It can be accessed directly or via the main Melbourne Airport website homepage. A total of 64924 unique users visited the Virtual Visitor Centre.
Email address	A dedicated project email address was set up to for questions to be asked and answered about the Preliminary Draft M3R MDP (newrunway@melair.com.au). All emails received were reviewed by APAM staff and received responses. A total of 308 enquiries were received through email (this excludes email submissions). These emails were generally related to noise impacts and requests for information about process

Approach	Description
Phone	Melbourne Airport's reception phone number was used to capture initial contacts as a dedicated project hotline throughout the engagement period. The phone number was printed on key project collateral and on Melbourne Airport's website and the Virtual Visitor Centre. A phone log was used to record all phone calls relating to the Preliminary Draft M3R MDP and Master Plan 2022. APAM staff responded to all phone inquiries and followed up by providing further information/ or organising follow-up meetings as requested. A total of 124 phone inquiries were recorded. Follow-up calls or any phone calls that were directed to staff phone numbers were not recorded.
Letter to landowners residents	Properties located in/near a new Public Safety Area (established for the proposed runway and detailed in the Preliminary Draft Master Plan 2022) were notified by direct mail. Maps showing the Public Safety Areas proposed for opening of the new runway, and how they are expected to change over the ensuing 20-year period as air traffic increases were included in the letter. Occupants were encouraged to review the Preliminary Draft M3R MDP and Preliminary Draft Master Plan 2022 online and/or ask questions through email or any engagement activities. Further direct mail outs were sent as part of the promotion channels described in next section.
Melbourne Airport's website	In addition to the dedicated Virtual Visitor Centre, Melbourne Airport's website (www.melbourneairport.com.au) was used to promote the exhibition. • Throughout the public exhibition period, a prominent project banner was displayed on the home page to direct web visitors to view project information. The website home page reached 256,347 users during engagement period.

Approach	Description
	
	Figure 9: Screenshot of the project banner on Melbourne Airport's website
Direct Mailout	In the first week of public exhibition, a flyer with information in seven languages was mailed to more than 980,400 homes in Melbourne's north, west and inner east. The flyer outlined some key features of the Preliminary Draft M3R MDP and Master Plan 2022 - and included a QR code linking to the Virtual Visitor Centre, Melbourne Airport website, consultation email address and phone number so people could access more information. The mailout was distributed using Australia Post's unaddressed mail booking service. In deciding on a distribution area, APAM used the catchment area described in Section 3.1.

Approach	Description
	 **Figure 10: Distribution area of the mailout** A few weeks into public exhibition some residents in Bulla indicated they had not received the flyer, which prompted APAM to commit to a second mailout in that area. Property owners were sent a letter from Chief of Infrastructure Simon Gandy directing them to information on the Preliminary Draft M3R MDP and Master Plan 2022, with encouragement to engage with the consultation and approval process. This resulted in several extra submissions, directly referencing the letter. APAM also undertook a targeted briefing for Bulla residents two weeks later, with 50 Bulla residents attending.
Newspaper Advertising	In addition to notice in the Herald Sun on February 1 advising of the exhibition period for the Preliminary Draft M3R MDP and Master Plan 2022, APAM also purchased front page advertising on the Star Weekly Brimbank North West and Star Weekly Sunbury Macedon Ranges

Approach	Description
	newspapers every second week, for the duration of the public exhibition period, totalling 12 advertisements. This advertising was designed to drive engagement in the impacted area by particularly highlighting proposed changes to flight paths required for the new runway with a 'call to action' for residents to "find out more".
Radio Advertising	To help raise awareness of the engagement period across greater Melbourne, APAM undertook a significant radio advertising campaign. Two fortnight-long blocks of advertising aired on four of Melbourne's most popular radio stations (3AW, Nova100, Gold 104 and Kiss FM). In total 290 radio spots were delivered with estimated campaign reach of 2.4 million people aged 18+. The spread of radio stations was designed to reach a wide range of demographics and was spread throughout the day. The advertising highlighted changes to flight paths, and the likelihood that people may notice more aircraft near their homes and workplaces. It included a 'call to action' directing people to the website for more information. 45 second spot script: *To keep Victoria connected Melbourne Airport is planning to build a third runway to ensure Melbourne is able to cope with future demand as the city continues to grow. This new north-south runway will support the community and deliver significant economic benefits to the state - providing thousands of jobs, giving local producers better access to overseas markets and reducing delays for travellers. It will also require a change to flight paths, so when the new runway opens you may see more planes flying over your home or workplace. To find out more and to have your say, visit Melbourne Airport dot com dot A-U.* APAM also commissioned SBS radio to produce a series of non-English language advertisements, for broadcast during foreign language programming. A total of 32 spots were commissioned. These advertisements were voiced in Chinese (traditional and simplified), Arabic, Greek, Italian, Vietnamese, Turkish and Somali. These languages were selected based on 'Language Spoken at Home' data from Australian Bureau of Statistics in the catchment area (described in Section 3.1).
Online Advertising	Throughout the public exhibition period APAM advertised on realestate.com.au to ensure that potential home purchasers were aware of the changes being proposed. This campaign delivered more than 3.7 million impressions across greater Melbourne and resulted in more than ten thousand clicks on the Melbourne Airport Virtual Visitor Centre. This advertising was supplemented by social media promotion for specific engagement events, which reached a total of 171,439 people across 16 different events. APAM also used non-sponsored posts on its social media channels to help drive participation in the engagement process.

Approach	Description
	To help drive further engagement APAM commissioned a second round of online advertising in April. This delivered 8,613,116 impressions across Google Display Ads, the Herald Sun and The Age, which resulted in 4,839 clicks on the Melbourne Airport Virtual Visitor Centre. A further 1,536,881 impressions were delivered across social media platforms, (1,003,963 on Facebook and 532,918 on Instagram), pointing people to specific public information events.
Media Coverage	APAM recognised the value of using traditional media outlets to help raise and build awareness of the public exhibition and worked to leverage this wherever possible. To ensure maximum exposure, the airport held a media launch for the consultation on the day before the start of formal public exhibition. This resulted in extensive coverage on all Melbourne-based television news bulletins, local radio stations, the Herald Sun and the Age, Star Weekly newspapers as well as numerous online publications. Across the three days from January 31, it is estimated that television coverage of the Preliminary Draft M3R MDP and Master Plan 2022 reached more than 5.84 million people. (Source: Isentia). State-wide and local newspaper coverage in the following week helped increase public awareness in communities close to the airport and further afield. The earned and externally generated media coverage reached millions of people across Victoria, across a broad range of demographics- helping to drive awareness of APAM's proposal, and the public exhibition process. In April 2022 APAM embarked on a second media push, encouraging people to explore the online noise tool and highlighting changes to flight paths in suburbs further away from the airfield. This attracted coverage from state-wide outlets such as the Channel 7 and the Herald Sun.
Media release	APAM used monthly passenger figure media releases to keep the Preliminary Draft M3R MDP and Master Plan 2022 in the forefront of news reporters' awareness, while the concerns of community groups received coverage from outlets such as the Guardian and Star Weekly.
Others	Towards the end of public exhibition, APAM partnered with Airservices Australia to take Channel 7 into the control tower, with both APAM staff and the Melbourne Airport Community Action Group highlighting the extent of forecast noise impacts.

Table 6: Earned print/online media coverage

Date	Source	Author	Title
31/01/2022	7 News	Liz Hobday	Melbourne Airport runway plan takes off.
31/01/2022	The New Daily	Liz Hobday	Melbourne Airport runway plan takes off.
31/01/2022	Yahoo News	Unknown	Melbourne Airport runway plan takes off.
01/02/2022	Brimbank Star Weekly	Tara Murphy	Runway plan is revealed
01/02/2022	Brimbank Star Weekly	Tara Murphy	Council encourages residents to have their say
01/02/2022	Herald Sun	Kieran Rooney	Ready for the future of travel
01/02/2022	Herald Sun	Kieran Rooney	Noise levels to soar with new runway
01/02/2022	Launceston Examiner	NA	Third Runway Plan takes off
01/02/2022	Herald Sun	Kieran Rooney	Melbourne Airport's third runway will increase plane noise north, south of Tullamarine
01/02/2022	CAPA	NA	Melbourne Tullamarine Airport announces plans to construct third runway
01/02/2022	Sunbury and Macedon Ranges Star Weekly	Oliver Lees	Runway plan is revealed.
01/02/2022	The Age	Michael Fowler	Airport to open third runway before 2030.
01/02/2022	The Australian	Robyn Ironside	Airport's promise to residents on runway.
08/02/2022	Brimbank and North West Star Weekly	No author listed	Airport's big plans for the future.
08/02/2022	Brimbank and North West Star Weekly	Tara Murphy	Brimbank Council encourages residents to have their say.
08/02/2022	Brimbank and North West Star Weekly	Tara Murphy	Sessions on airport plans.

Date	Source	Author	Title
08/02/2022	Melton and Moorabool Star Weekly	Tara Murphy and Sarah Oliver	Plans for third runway take off
08/02/2022	Northern Star Weekly	Oliver Lees	Airport vision takes off
11/04/2022	Brimbank and North West Star Weekly	Max Hatzoglou	Infrastructure lifts housing market
12/04/2022	Sunbury and Macedon Ranges Star Weekly	Elsie Lange	Moves on airport noise metric
12/04/2022	Brimbank and North West Star Weekly	Max Hatzoglou	VTAG calls for new noise metric
17/04/2022	Herald Sun	Kieran Rooney	Airport wants flight path feedback
19/04/2022	Brimbank and North West Star Weekly	Max Hatzoglou	Projects drive housing market
10/05/2022	Sunbury and Macedon Ranges Star Weekly	Elsie Lange	Hume supports a third runway
14/05/2022	Brimbank and North West Star Weekly	Max Hatzoglou	Mayor says runway is a ‘health risk’
16/05/2022	Brimbank and North West Star Weekly	Max Hatzoglou	Final day to enter feedback on the proposed third runway

Table 7: Realestate.com.au advertising results

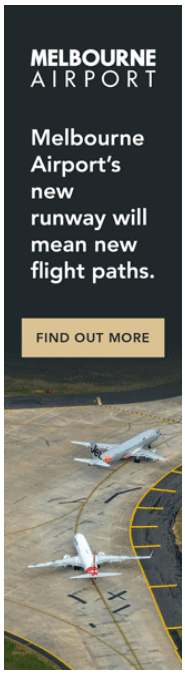
Image	Impressions	Clicks
 **(on click linked to Virtual Visitor Centre)**	1,234,236	1,876
 **(on click linked to Virtual Visitor Centre)**	1,234,314	2,559
 **(on click linked to Virtual Visitor Centre)**	921,545	4,949

Table 8: Melbourne news bulletins viewers on 31 January 2022 (Source: Oztam)

TV Channels	Viewers
Nine News	322,000
Seven News	280,000
ABC News	179,000
Ten News	91,000
Nine Afternoon News	86,000
Seven Afternoon News	unknown
SBS News	unknown
Total TV viewers (estimate)	**958,000**

Table 9: Melbourne Airport Media Releases

Date	Source	Title
30/01/2022	Media Release	Melbourne Airport's proposed Master Plan and third runway
14/03/2022	Media Release	Melbourne Airport passenger performance February 2022
13/04/2022	Media Release	Melbourne Airport passenger performance March 2022
13/05/2022	Media Release	Melbourne Airport passenger performance April 2022

*All Media Releases included a mention of the consultation underway and deadline for submissions

A summary of the media releases distributed by APAM which promoted the public exhibition period for the Preliminary Draft M3R MDP and Master Plan 2022 are provided in the table below.

Table 10: Media releases during public exhibition

Date	Source
31/01/2022	Melbourne Airport's proposed third runway on public exhibition
16/04/2022	The future's looking up. Melburnians urged to check future flight paths. [Includes promotion of the noise tool]
21/04/2022	Melbourne residents encouraged to join the conversation on Melbourne Airport's proposed third runway

3.2.6 Communication Information materials

To complement the core Preliminary Draft documents (M3R MDP and Master Plan 2022), which are voluminous and technical by necessity, a range of accessible and concise resources were developed and distributed online, through print and at face-to-face events. Examples of these can be found at Appendix 8.

Table 11: Communications materials

Materials	Description
FAQs	A list of Frequently Asked Questions was produced (and updated as new topics of interest emerged).
Fact sheets	Fact sheets explaining key aspects of the of the proposals were developed. Airport safeguarding Airside development Economic contribution of the airport Historic runway use Predicted Mode availability Option 1 Predicted Mode availability Option 2 Runway naming convention Proposed operating Modes **Airspace Operations:** Prescribed airspace Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO) How are aircraft allocated to runways? Aircraft operating at Melbourne Airport Process for airspace finalisation Melbourne Basin Approach procedures **Noise:** Aircraft noise Aircraft noise sources Noise Abatement Procedures Noise and Flight Path Monitoring System (NFPMS) & Complaints N-above contours M3R Project:

Materials	Description
	Heath impacts Impacts on communities Construction Changes to infrastructure Social impacts Greenhouse gas emissions Wildlife hazards and aircraft MDP process Why we need a third runway What happens after Public Exhibition? Heritage (Indigenous and European)
Information boards	Key information boards were designed to provide a snapshot of key project information in simple language with graphical aids. These information boards were uploaded to the Virtual Visitor Centre. Examples of the information boards:
Chapter summaries	A total of 29 documents summarising the contents of the Preliminary Draft M3R MDP and Master Plan 2022 into single-page documents were produced to succinctly assist members with sourcing and understanding key information.

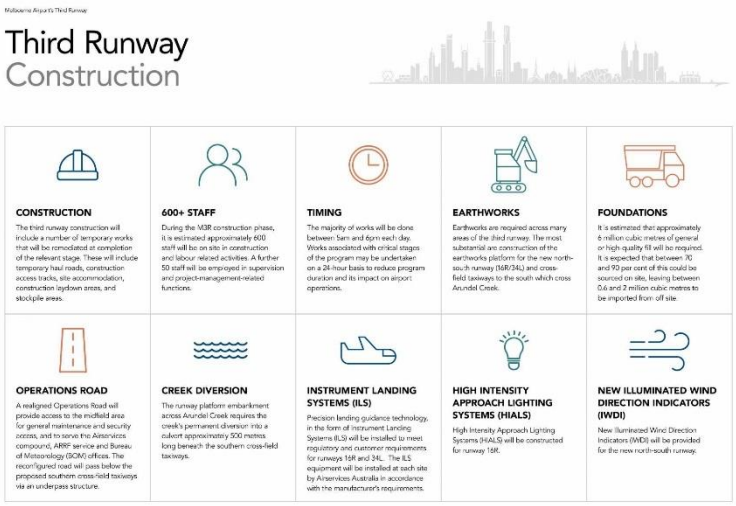


Figure 11: An example of the key information board

Materials	Description
Documents	Full hard copies of the Preliminary Draft M3R MDP and Master Plan 2022 were provided at: Melbourne Airport's office reception Local libraries Broadmeadows Library Craigieburn Library Sunbury Library Tullamarine Library Gladstone Park Community Library Keilor Library Altona Library

3.2.7 Communications for Culturally & Linguistically Diverse Communities (CALD)

3.2.7.1 Translated documents

Melbourne Airport is situated in one of the most culturally diverse regions in Victoria. In order to assist accessibility in these communities, APAM translated key documents into languages prevalent in the CALD communities most affected by the Preliminary Draft M3R MDP. Key project information was translated into seven community languages that were identified as the most common in the catchment area based on data from Australian Bureau of Statistics (detailed in Section 3.1). They were:

- Chinese (Traditional)
- Chinese (Simplified)
- Greek
- Turkish
- Italian
- Vietnamese
- Arabic
- Somali.

The translated information was made available on the Virtual Visitor Centre, sent to community organisations that were connected to multicultural communities, media outlets and anyone who requested translated materials through email or phone.

People were also encouraged to make a submission in their own language and APAM committed to translating them into English, however no non-English submissions were received.

3.2.7.2 Community Champions

APAM recruited six 'Community Champions' in 2021. This role was created to help raise awareness of the Preliminary Draft M3R MDP and Master Plan 2022 amongst hard to reach,

diverse and under-represented communities - with emphasis on assisting to recruit participants for hard-to-reach focus groups and encouraging people to make a submission.

Community Champions were self-nominated and had expressed an interest in helping APAM promote engagement activities to their networks. An incentive was provided to the Community Champions to compensate for time and effort.

A briefing pack including all engagement activities (date and time), and a script to help explain the Preliminary Draft M3R MDP and Master Plan 2022 were provided to the Community Champions to support the engagement promotion.

Community Champions recruited participants to the hard-to-reach focus groups and promoted the Preliminary Draft M3R MDP and Master Plan 2022 through their own networks.

3.3 Engagement Participation

3.3.1 Overview

A total of 54 public engagement sessions were held from 1 February to 16 May 2022, with 816 people attending these events.

The figures below provide a snapshot of key participation metrics for online and in person engagement events.

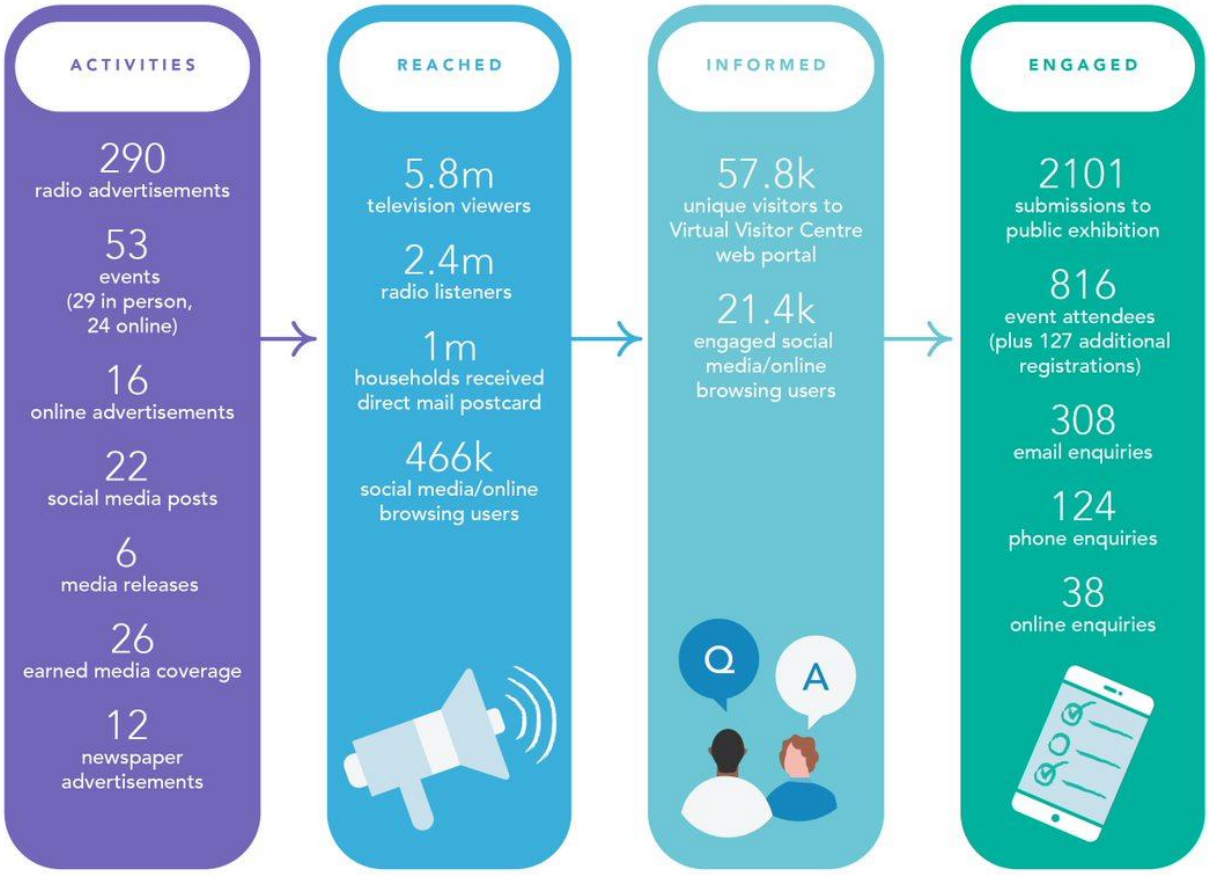


Figure 12: Total participation across all engagement and communications channels

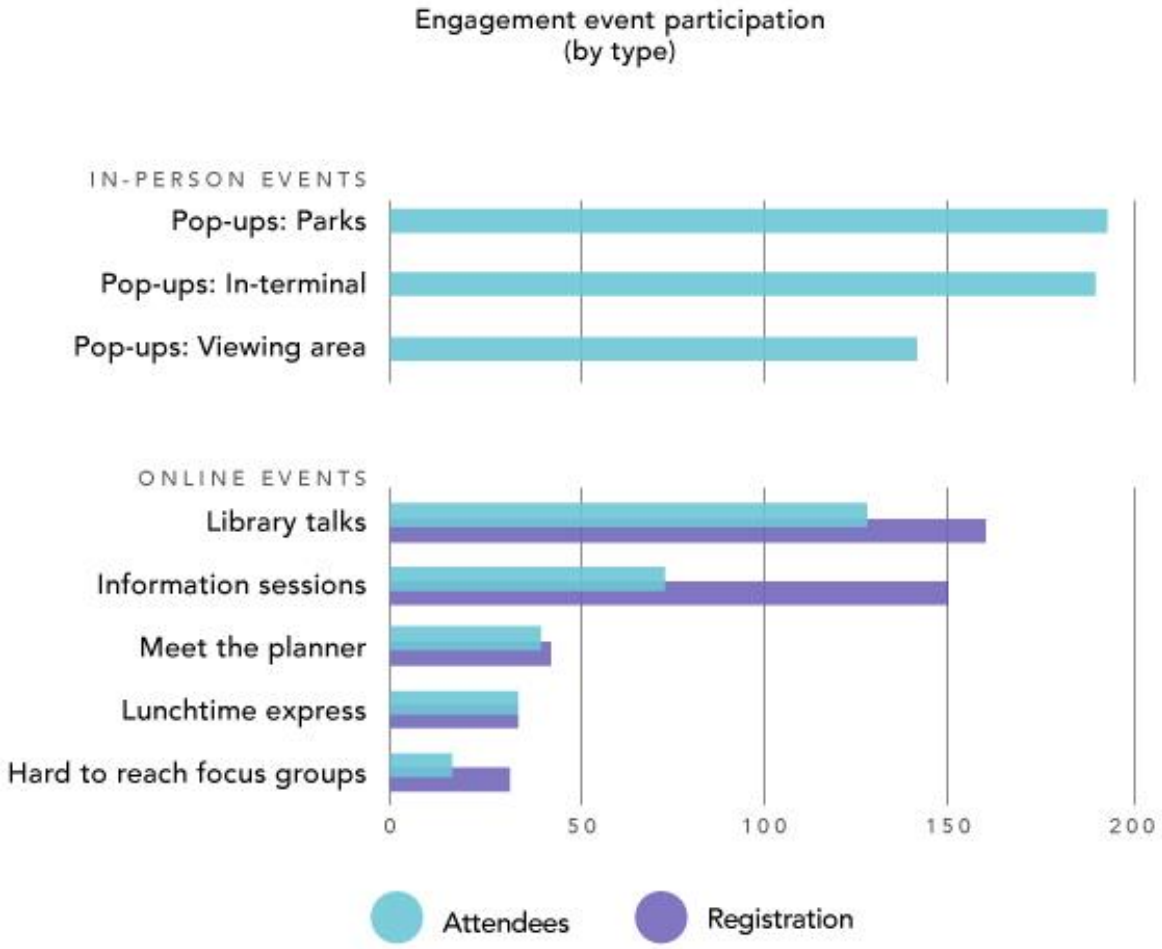


Figure 13: Engagement participation grouped by event types

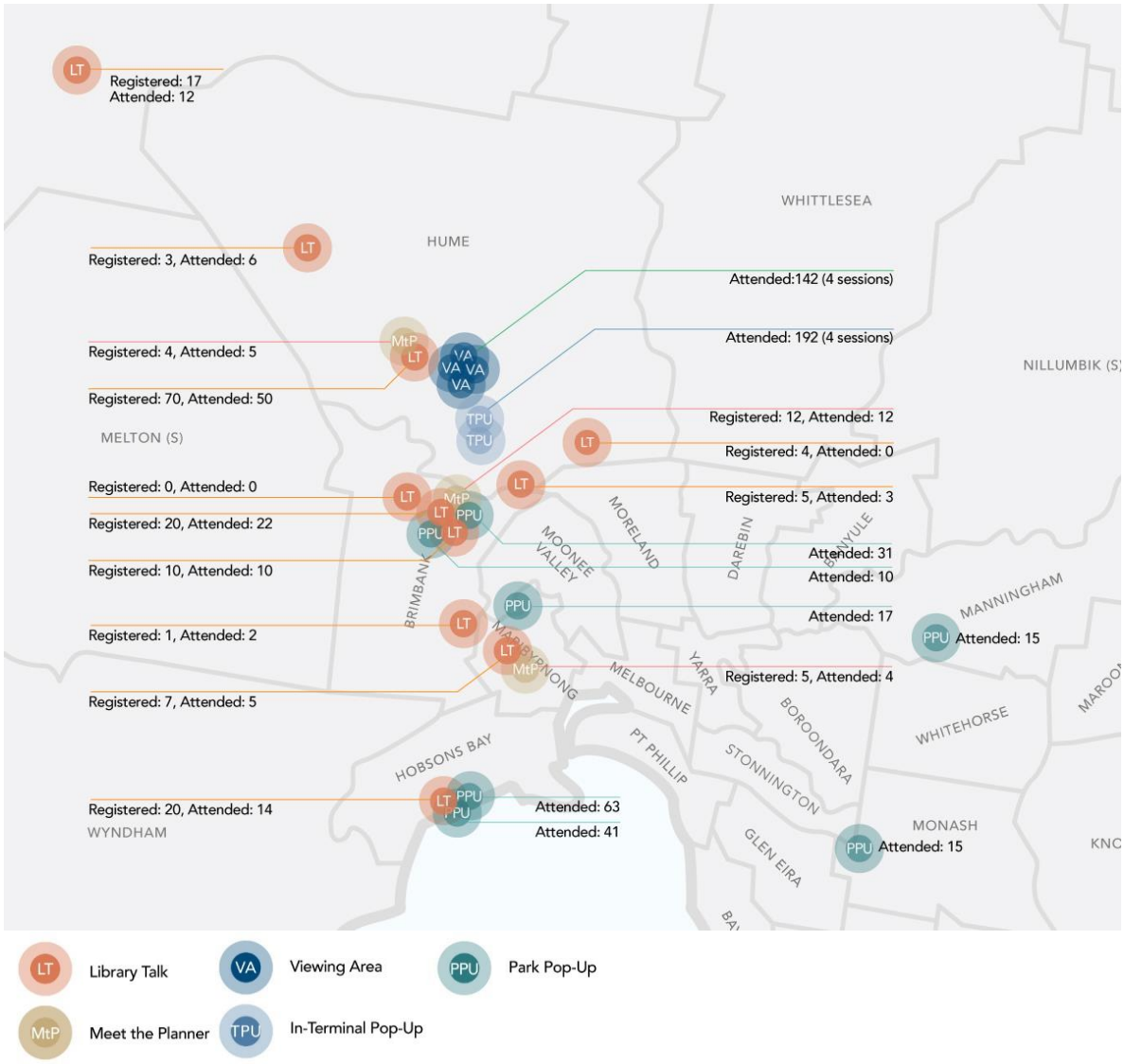


Figure 14 : Locations of face-to-face events

The pop-up event format proved the most well attended, with approximately 524 people visiting the information stands and talking to Melbourne Airport staff. This format performed well to engage stakeholders who may not have otherwise known or been compelled to attend a registered event.

Library talks were the second most popular event (128 total attendees), followed by online information sessions (73 total attendees).

There was a noticeable difference in the rate of 'no shows' (people who registered for an event but did not attend), between online and in person sessions. On average approximately 50% of the registered online participants showed up, compared to 80% for in-person sessions.

With 31,119 page views of the events calendar on the dedicated web portal, awareness of the availability of events is presumed to be high.

Further details of participation records for each key event type are provided in the following sections. Each section provides an overview of the engagement activities held - including dates, locations and attendance.

3.3.2 Virtual Visitor Centre

The Virtual Visitor Centre was a dedicated web portal designed to replicate a typical face to face 'drop in' style information session. It was a purpose-built online environment for all stakeholders to access the Preliminary Draft M3R MDP and Master Plan 2022 and all related documents and communication materials.

The figure below provides a snapshot of key usage metrics of the Virtual Visitor Centre during the public exhibition period from 1 February to 16 May 2022.

Figure 15: Snapshots of key usage metrics of the Virtual Visitor Centre during the public exhibition period

The figure below shows usage statistics throughout the public exhibition period. Website visitation peaked at the commencement of the public exhibition period with 8,951 portal sessions and 16,995 page views on Day 1 of public exhibition.

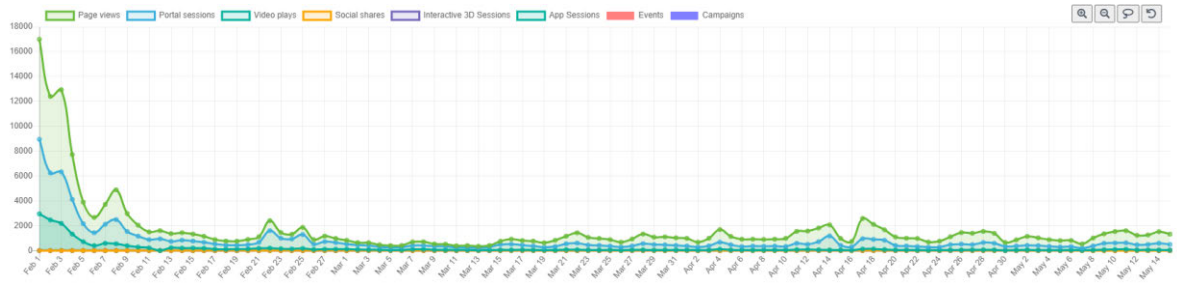


Figure 16: Virtual Visitor Centre visitation throughout the engagement period

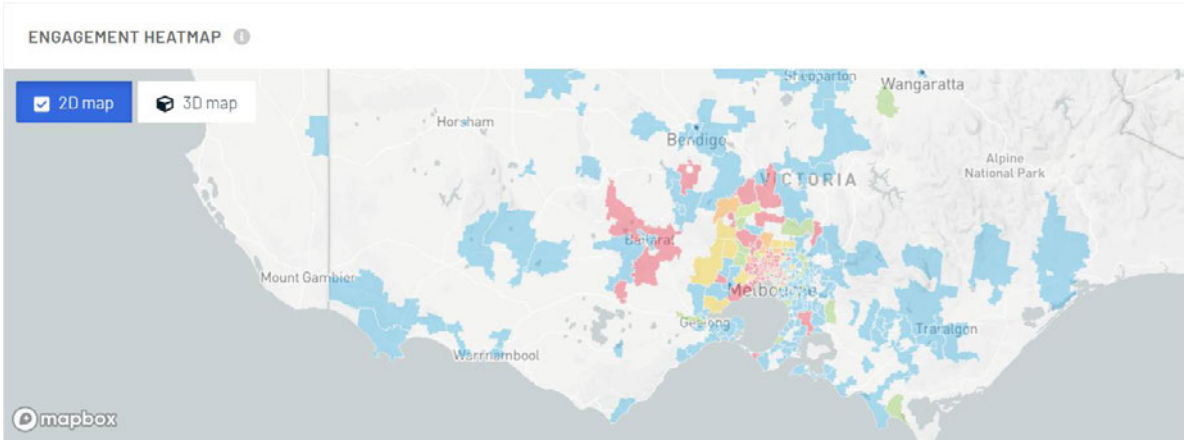


Figure 17: Heatmap showing the locations of Virtual Visitor Centre visitors

The Virtual Visitor Centre was deliberately designed to replicate the look of a traditional in-person 'drop in' information session. Posters, documents, videos and other key pieces of project information were made accessible from specifically designed 'hotspots' around the home page (see images below).

Figure 18: Screenshot of the Virtual Visitor Centre (left view)

Figure 19: Screenshot of the Virtual Visitor Centre (right view)

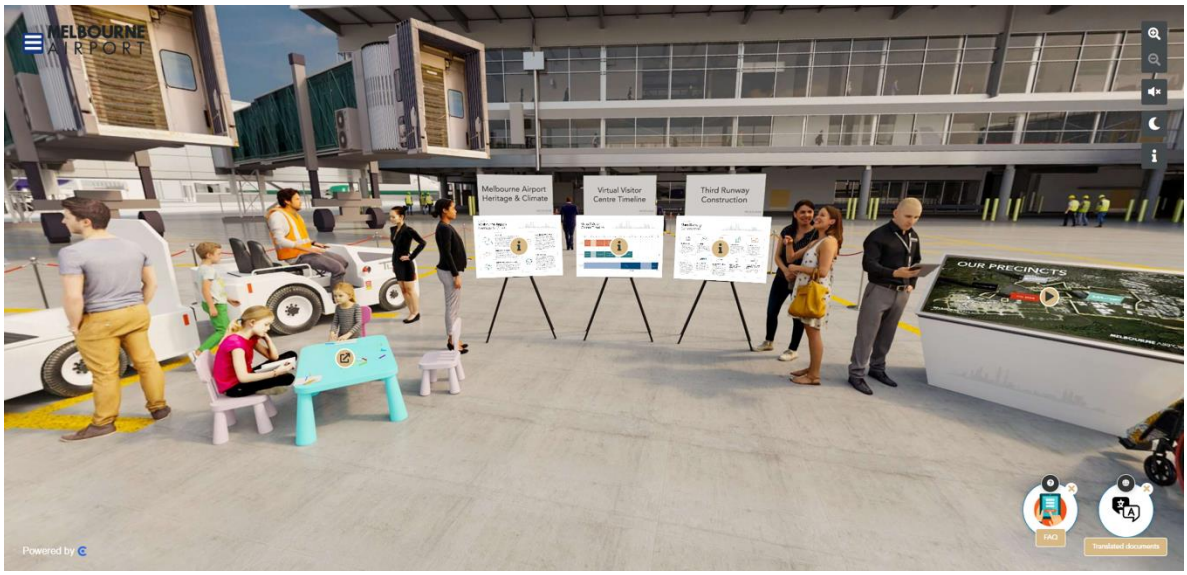


Figure 20: Screenshot of the Virtual Visitor Centre (back view)

Hotspots comprised a poster, document, video or link to crucial Preliminary Draft M3R MDP and Preliminary Draft Master Plan 2022 information. The table below displays the top ten hotspot clicks directly from the Virtual Visitor Centre home page. It shows the total number of times any hotspot was clicked, grouped by unique title.

The Noise and Flight Path Tool was the most popular hotspot, followed by the Preliminary Draft Master Plan map and Preliminary Draft Master Plan 2022 document itself. These three hotspots were all located on the table located at the centre of the home page.

Table 12: Top ten 'hotspots' clicks on the Virtual Visitor Centre

Hotspot	Type	Clicks
Third Runway Flight Path and Noise Tool map	Link to Noise and Flight Path Tool	9318
Master Plan 2022 map	Map	7880
Master Plan 2022	Document	6467
Third Runway - Concept Design	Video	6223
Project Overview Master Plan 2022	Information board	3796
Melbourne Airport Airspace	Information board	2944
Third Runway Construction	Information board	2718
Have Your Say	Link to feedback/submission page	2684
M3R Major Development Plan	Document	2674
Melbourne Airport Events Calendar	Information board, list of events (with registration links), link to event recording videos	2304

The table below displays the top page views, identifying the number of times each page was visited and the average time spent on that page. Multiple visits to a page by the same visitor are counted separately. The Noise and Flight Path Tool and Virtual Visitor Centre homepage were the most commonly visited sites, followed by the engagement events calendar.

Table 13: Top pages viewed (by the number of times each page was visited)

Page	Description	Views	Avg time (mm:ss)
/melair/virtual/m3r	Noise and Flight Path Tool	58654	00:35
/melair/virtual	Virtual Visitor Centre home page	58822	00:22
/melair/event-calendar	Lists all engagement events and details of how to register (if required)	31918	00:21
/melair/virtual/feedback	Submission home page	13200	00:31
/melair/virtual/mp22-map	Preliminary Draft Master Plan 2022 and M3R MDP map displaying proposed design changes	8222	00:26
/melair/virtual/feedback/m3r	Specific submission form for Preliminary Draft M3R MDP	1956	00:59
/melair/virtual/feedback/mp22	Specific submission form for Preliminary Draft Master Plan 2022	542	01:35

The Virtual Visitor Centre hosted several videos providing overviews of key project information, and also hosted recordings from the online information session events.

The table below lists the top ten videos, based on the total number of plays, grouped by unique title.

Table 14: Top ten videos played on the Virtual Visitor Centre

Video	Plays
Third Runway - Concept Design	6674
Melbourne Airport Preliminary Draft Master Plan 2022 and Third Runway Project Overview	4962
Project Overview - Master Plan 2022	3012
Why we need a 3rd runway	2079
Project Overview – Third Runway Project	1748
Health 24/2/2022 – Online information session recording	48
Third Runway Overview 10/2/2022 - Online information session recording	27
Airspace Architecture (24/03/2022) - Online information session recording	24
Aircraft Noise (31/03/2022) - Online information session recording	20
Online Information Session Recordings	14

3.3.3 Noise and Flight Path Tool

A total of 58,654 views were recorded using the Noise and Flight Path Tool during the public exhibition period.

Throughout the engagement period, APAM received community feedback to improve usability of the tool. APAM made every effort to accommodate these suggestions and updated the tool several times. The table below outlines the iterations made to the tool during the public exhibition period.

Table 15: iterations made to the Noise and Flight Path Tool during public exhibition

Date	Description
31/01/2022	Flight path and noise tool launched
14/02/2022	Added altitude calculator to flight path functionality
18/02/2022	Added altitude calculator to map
27/03/2022	Added disclaimer for addresses potentially receiving increased noise events near airport Improved logic of altitude calculator to cover wider swathe of territory Updated wording on map annotations

07/04/2022	Added MP22 flight paths Added east-west contours to noise tool to better reflect noise distribution Added helpers on page load to guide user through tool

3.3.4 Online Information Session

Thirteen online information sessions were held during the public exhibition period, covering topics of interest to stakeholders and general overviews of key aspects of the M3R MDP.

Registrations were requested for the online sessions. In total 150 people registered for a session, with 73 participants attending. The most well-attended events were sessions related to the topic of aircraft noise (18), followed by ecology (12) and the Master Plan 2022 general overview (10). All sessions were recorded and can be viewed on the Virtual Visitor Centre.

Table 16**: Outcomes of Online Information Sessions**

Date	Topic	Registered	Attended	Other topics discussed
10/02/2022	Melbourne Airport's Third Runway Plan	24	6	Noise impacts Construction Air traffic volume Pandemic impacts on modelling assumptions Traffic and transport impacts Technologies of the new runway
17/02/2022	Sustainability	5	2	Curfew and noise abatement Air traffic volumes Ecology impacts and management Environmental management First Nations engagement PFAS
24/02/2022	Health Impacts	5	3	Noise impacts Noise modelling
3/03/2022	Social Impacts	4	0	Nil
10/03/2022	Heritage	4	2	Cultural heritage impact assessment

Date	Topic	Registered	Attended	Other topics discussed
17/03/2022	Transport	11	2	General project information Transport impacts
22/03/2022	Operating Plans	6	4	General project information Noise impacts Property impacts
24/03/2022	Airspace Architecture	9	4	Noise impacts Airport rail Project benefits Consultation process
31/03/2022	Aircraft Noise	29	18	Noise impacts Noise modelling Air traffic volume Flight path changes Runway operations Curfew and noise abatement Compensation Health impacts MAEO
7/04/2022	Environment	3	4	Noise impacts (wildlife, open space)
21/04/2022	Ecology	27	12	Environmental impacts and mitigation (Greybox woodland, waterways, climate change, waste) PFAS Traffic and transport impacts Social impacts Noise impacts Runway operations
28/04/2022	Master Plan 2022	15	10	Compensation Noise impacts

Date	Topic	Registered	Attended	Other topics discussed
5/05/2022	General questions and answers	8	6	Submission process Construction Noise impacts Noise modelling Noise abatement Weather impacts Runway operations Airport alternatives Submission process
Total – 13 events		150	73	

3.3.5 Library talks

Eleven library talks were held in libraries or event spaces of notable community gathering in locations within the noise impact catchment.

Registrations were requested for these in in-person sessions. In total, 160 people registered to attend a session, with 128 participants attending the event on the day. The most well attended event was a general Q&A session held in Bulla (50), followed by Operating Plans (22) and the Environment (14).

The table below lists each library talk held and in addition to the event topic, other matters discussed during the Q&A section.

Table 17: Outcomes of Library Talks

Date	Key topic	Location	Registered	Attended	Other topics discussed
12/02/2022	Preliminary Draft Master Plan 2022	Broad-meadows	4	0	• Nil
15/02/2022	Sustainability	Maidstone	7	5	• Construction traffic • Noise impacts • Environmental impacts (Arundel Creek endangered species) • East-west vs North-south runway • Airport rail

Date	Key topic	Location	Registered	Attended	Other topics discussed
					• First Nations engagement • Approval timelines • Airport operations and facilities
26/02/2022	Health impacts	Keilor	10	10	• Noise impacts • Social equity • Social impacts • Curfew and noise abatement • Approval process
1/03/2022	Social impacts	Tullamarine	5	3	• Noise impacts • Health impacts • Melbourne Airport ownership & governance • Environmental impacts (woodlands, climate change) • Noise abatement • Compensation
9/03/2022	General information	Bulla	70	50	• Noise impacts • Health impacts • Vibration • Social equity • Noise abatement • Compensation
15/03/2022	Transport	Taylors Lakes	3	4	• Noise impacts • Social impacts • Compensation • Noise abatement • Transport (improvements)
19/03/2022	Airspace architecture	Sunshine	1	2	• Noise impacts • Flight path changes
29/03/2022	Aircraft noise	Gisborne	17	12	• Health impacts • Noise modelling • Noise impacts • Vibrations • Air quality • Flight path changes and frequency

Date	Key topic	Location	Registered	Attended	Other topics discussed
12/04/2022	Operating plans	Keilor	20	22	• Health impact assessment • Social impact assessment • Noise modelling and contours • Runway design and operations • East-west vs north-south runway • Considering other airport locations • Curfew and noise abatement • Weather conditions • Environmental impacts (PFAS) • Consultation process
23/04/2022	Ecology	Sunbury	3	6	• Environmental impacts • Environmental mitigation • Waste management
26/04/2022	Environment	Altona	20	14	• Environmental impacts (wetlands, migratory birds, climate change) • PFAS • Air quality • Flight path changes • Airspace architecture and operations • Noise impacts • East-west vs north-south runway • Melbourne Airport ownership • Submission process
Total - 11 events			160	128	

3.3.6 Pop-ups

Sixteen pop-ups were held in local parks or highly visited community locations (such as weekend markets), the Sunbury Road aircraft viewing area and in airport terminals.

These informal events attracted the greatest number of participants as they did not require registration, had no capacity limits and were designed to attract the interests of “passers-by” who may not have otherwise known or felt sufficiently interested to attend a registered event.

Project team members were asked to note the number of people they spoke to, however, passers-by may have also engaged with the display by viewing the information boards. These interactions have not been recorded.

Approximately 526 people are recorded as participating in a pop-up session, based on the number of people who stopped and discussed the propositions with a member of the project team. 192 people attended the park pop-ups, 192 people attended the in-terminal pop-ups and 142 people attended the Sunbury Road aircraft viewing area on the northern perimeter of the airport.

APAM also relocated three pop-ups, which were originally scheduled to take place as ‘walk throughs’ in the Terminal 4 car park at Melbourne Airport, due to low foot traffic. One session was relocated to Cherry Lake Farmers Market as a park pop-up, and two others to the Sunbury Road aircraft viewing area.

The tables below list each pop up, separated by type, and notes the key matters discussed with project staff.

Table 18: Pop-ups at local parks

Date	Location	Attended	Topics discussed
12/03/2022	Keilor Downs	10	• General project information • Noise impacts • Flight path changes
26/03/2022	Altona	63	• General project information • Alternative airports • Curfew • Noise impacts • Flight path changes • Property impacts • Airspace architecture • Airport rail • Job creation • Environmental impacts (birds)
3/04/2022	Altona	41	• General project information • Noise impacts • Curfew and noise abatement • Project benefits • Project support
6/04/2022	Doncaster	15	• General project information • Project benefits • Project support
9/04/2022	Avondale Heights	17	• Flight path changes • Noise modelling

Date	Location	Attended	Topics discussed
			• Transport impacts • Melbourne Airport facilities
29/04/2022	Oakleigh	15	• General project information • Airport rail • Consultation process • Project support
30/04/2022	Keilor	31	• Noise impacts • Runway operating modes • Property prices • Alternative airports • East-west vs north-south runway • Safety
Total – 7 events		192	

Table 19: Pop-ups at Airport terminals

Date	Location	Attended (estimate)	Topics discussed
5/03/2022	Terminal 4 Car Park	2	• General project information • Consultation process
8/02/2022	Terminal 3	50	• General project information • Economic development (job opportunities) • Noise impacts
1/03/2022	Terminal 4	50	• General project information • Noise impacts • Alternative airports • Project support
29/03/2022	Terminal 4	40	• General project information • Noise impacts
12/04/2022	Terminal 1	50	• General project information
Total – 5 events		192	

Table 20: Pop-ups at the Sunbury Road aircraft viewing area

Date	Location	Attended (estimate)	Topics discussed
19/02/2022	Sunbury Road aircraft viewing area	30	• General project information • Noise impacts

5/03/2022	Sunbury Road aircraft viewing area	50	• General project information • Noise impacts • Flight path changes • Amenity impacts • Aircraft viewing area impacts
2/04/2022	Sunbury Road aircraft viewing area	30	• General project information • Flight path changes • Runway capacity • Airspace architecture • Project support
30/04/2022	Sunbury Road aircraft viewing area	32	• General project information • Noise impacts • Flight path changes
Total – 4 events		142	

3.3.7 Hard-to-reach focus groups

Three hard-to-reach focus groups were held with the intention of encouraging stakeholders who may experience greater barriers to participation to attend an event. These focus groups were incentivised with a gift voucher to all participants to try to encourage greater levels of participation. These sessions comprised of a presentation on a key topic, followed by a facilitated discussion with the group.

These sessions required registration and participants were asked to identify any support they may need to participate (e.g. interpreters or accessibility aids) and a team member contacted all participants prior to the event to confirm attendance and clarify any additional support needed.

In total, three focus groups were held online, with 32 people registered and 16 attending. Four sessions were originally advertised, but the last session was cancelled due to no registrations. Attendees included residents living near the airport, CALD community members, young family, older people and young people.

The table below lists each focus group held, event topic and other matters discussed during the facilitated group discussion.

Table 21: Hard-to-reach focus groups

Date	Key topic	Registered	Attended	Other topics discussed
16/02/2022	Health and social impacts	9	5	• Approval process • Property value impacts

				• Pollution impacts • Health impacts • Noise impacts • Compensation • Curfew and noise abatement
23/02/2022	Airspace architecture	15	4	• Runway operations • East-west vs north-south runway • Role of Airservices • Noise impacts/ contours • Social impacts
2/03/2022	Master Plan 2022	8	7	• General airport operation • Ground transport • Economic impact • Noise impacts
Total – 3 events		32	16	

3.3.8 Meet the planner

'Meet the planner' sessions were designed to provide a one-on-one opportunity for stakeholders to discuss the proposals with a member of the APAM planning team with respect to their individual interests.

In total, six meet the planner sessions were held. Of the 72 available time slots, 45 were registered and 41 people attended. The most popular sessions were online on 8 March 2022 and in Keilor on 22 March 2022, with 12 people attending each.

The table below lists each meet the planner session and the key matters discussed.

Table 22: Meet the planner sessions

Date	Location	Registered	Attended	Topics discussed
22/02/2022	Bulla	4	5	• Specific personal circumstances • Noise impacts • Planning rules • General project information • Consultation process
8/03/2022	Online	12	12	• Specific personal circumstances • Noise impacts • Environmental impacts (native vegetation, tree removal, ecology) • Economic viability of the runway • East-west runway changes • Plane spotting opportunities • Weather impacts • Construction timing • Airport rail
22/03/2022	Keilor	12	12	• Specific personal circumstances • Noise impacts • Property impacts • Health impacts
5/04/2022	Online	5	5	• Specific personal circumstances • Noise impacts • Noise abatement • Runway operations • Airspace architecture • Essendon Airport impacts
28/04/2022	West Footscray	5	4	• Specific personal circumstances • Environmental impacts • Noise impacts • Curfew and noise abatement

Date	Location	Registered	Attended	Topics discussed
				• Compensation • Development opportunities • Flight path changes • Airspace architecture • Project benefits • Integration with Sunshine Precinct development • Role of Airservices Australia
3/05/2022	Online	7	3	• Specific matters about individual properties/personal circumstances • Health impacts (including pets) • Noise impacts • Flight path changes • Airspace architecture
Total – 6 events		45	41	

3.3.9 Lunchtime express

Five 30-minute 'lunchtime express' online general information sessions were held to provide a general project overview by an APAM team member, followed by Q&A. These sessions were developed in response to some early stakeholder feedback that online sessions should be offered at different times (outside of weekends and evenings). Registrations were not required.

In total, 34 people attended a lunch time express session. Key matters discussed are shown in the table below.

Table 23: Lunchtime express

Date	Attended	Topics discussed
4/04/2022	9	• Environmental management (contaminated land) • Runway operations • Aircraft viewing area impacts • Melbourne Airport facilities • Transport connections

Date	Attended	Topics discussed
5/04/2022	9	• Noise impacts • Noise abatement • Job opportunities • Flight path changes • Airspace architecture • Weather impacts
6/04/2022	8	• General project information • Noise impacts • Job opportunities
7/04/2022	4	• General project information • Noise impacts
8/04/2022	4	• General project information
Total – 5 events	34	

3.3.10 Public meetings and briefings

APAM hosted meetings and briefing sessions for stakeholders throughout the exhibition process. These meetings' objectives centred around APAM staff presenting key information about the Preliminary Draft M3R MDP and Master Plan 2022 in a structured and formal setting. Q&A sessions were generally held at the end of these meetings.

The tables following outline the details of the meetings with key stakeholder groups.

Table 24: Local Government meetings

Date	Council	Location
2/02/2022	General LGA Briefings Moreland City Council Moonee Valley City Council City of Melton City of Melbourne Hobsons Bay City Council	Melbourne Airport
3/02/2022	Macedon Ranges Shire Council	Online
4/02/2022	Hume City Council	APAM Boardroom and airfield tour – Melbourne Airport

Date	Council	Location
7/02/2022	City of Maribyrnong	Online
7/02/2022	Yarra City Council	Online
8/02/2022	Brimbank City Council	APAM Boardroom and airfield tour – Melbourne Airport
17/02/2022	Hobsons Bay City Council	Online
15/03/2022	Moonee Valley City Council	Online
21/03/2022	City of Melton	Online
3/05/2022	City of Melton	APAM Boardroom and airfield tour – Melbourne Airport
22/06/2022	Yarra City Council	Online

Table 25: State Government meetings

Date	Entity or Member of Parliament	Location
10/02/2022	Office of Katie Hall MP	Electorate Office
17/02/2022	Natalie Suleyman MP	Electorate Office
28/02/2022	Department of Treasury and Finance	Online
01/03/2022	Cindy McLeish MP	APAM Boardroom and airfield tour – Melbourne Airport
02/03/2022	The Honourable Lizzie Blandthorn MP	Electorate Office
04/03/2022	Office of Josh Bull MP	Electorate Office

Date	Entity or Member of Parliament	Location
11/03/2022	The Honourable Ben Carroll MP	APAM Boardroom and airfield tour – Melbourne Airport
11/03/2022	The Honourable Steve McGhie MP	APAM Boardroom and airfield tour – Melbourne Airport
11/03/2022	The Honourable Ros Spence MP	APAM Boardroom and airfield tour – Melbourne Airport
16/03/2022	Victorian School Building Authority	Online
16/03/2022	Cindy McLeish MP	Online
18/03/2022	Josh Bull MP	APAM Boardroom and airfield tour – Melbourne Airport
30/03/2022	Office of the Premier	35 Collins Place, Melbourne
31/03/2022	The Honourable David Davis MP	Online
31/03/2022	Department of Health	Online
01/04/2022	The Honourable Natalie Hutchins MP	APAM Boardroom and airfield tour – Melbourne Airport
04/04/2022	The Honourable Richard Wynne MP	Online
11/04/2022	Natalie Suleyman MP	Electorate Office
11/04/2022	Office of The Honourable Martin Pakula MP	121 Exhibition Street, Melbourne

Date	Entity or Member of Parliament	Location
	Office of The Honourable Melissa Horne MP	
12/04/2022	The Honourable Melissa Horne MP	Online
27/04/2022	The Honourable Sarah Connolly MP	APAM Boardroom and airfield tour – Melbourne Airport

Table 26: Federal Government meetings

Date	Entity or Member of Parliament	Location
31/01/2022	The Honourable Sussan Ley MP	Online
15/02/2022	Office of the Honourable Catherine King MP Office of the Honourable Anthony Albanese MP	Online
22/02/2022	Office of Maria Vamvakinou MP	Online
07/03/2022	Office of the Honourable Jim Chalmers MP	Online
16/03/2022	The Honourable Bill Shorten MP	APAM Boardroom and airfield tour – Melbourne Airport
21/03/2022	The Honourable Barnaby Joyce MP	Melbourne Jet Base
30/03/2022	Office of the Honourable Brendan O'Connor MP	Electorate Office
08/04/2022	Office of Senator the Honourable Don Farrell	Online
14/04/2022	Dr Daniel Mulino MP	APAM Boardroom and airfield tour – Melbourne Airport
04/05/2022	Josh Burns MP	Electorate Office
04/05/2022	Tim Watts MP	Online

APAM has several formal forums to facilitate the exchange of information between the airport and stakeholders. These forums are important for disseminating information and discussing a range of topics including the M3R MDP and the Master Plan 2022.

Planning Coordination Forum (PCF):

Focuses on the strategic partnerships between the airport operator, Commonwealth, State and local planning authorities to shape the airport's current and future operations. The PCF works to integrate the airport's long-term planning approach, with other relevant urban and regional planning policies, to protect its long-term growth and curfew-free status. The Preliminary Draft M3R MDP and Master Plan 2022 development and progress was discussed at the PCF meetings held from February 2019 to August 2022.

The Melbourne Airport Community Aviation Consultation Group (CACG):

Focuses on community-related airport issues. The group provides opportunity for the community to discuss and express opinions regarding Melbourne Airport - particularly with regard to planning, development and operations - and disseminate information regarding the airport. Members include representatives from the community, government, and industry. The group is independent of the airport and has an independent Chair. The Preliminary Draft M3R MDP and Master Plan were discussed by the CACG at the following meetings: 1 February 2022; 22 February 2022; 24 May 2022.

Parallel Runway Operations Steering and Implementation Group (PROSIG):

Regular meeting between APAM and Airservices Australia (Civil Aviation Safety Authority attendance optional) to navigate project and planning concerns shared between the parties that relate to the M3R project. The group considers and advises strategies for eventual production of airspace architecture (including flight paths) and operations, as well as ground movement of aircraft and provision of the Airport Rescue and Fire Fighting Service.

Airline Advisory Group (AAG):

Group of airlines, Airservices Australia, Civil Aviation Safety Authority and APAM. Collectively considers the details of the M3R project – including demand, design and operating concepts.

The tables below summarise the details of these meetings that were held during the public exhibition period. Appendix 7 provides a comprehensive list of the meetings held and issues discussed at these meetings held both pre and during public exhibition.

Table 27: CACG meetings

Date	Location	Attended
1/02/2022	Online/ Quest Melbourne Airport	20
22/02/2022	Online/ Bendigo Room, Park Royal Hotel Melbourne Airport	19
24/05/2022	Online/ Quest Melbourne Airport	22

Table 28: PROSIG meetings

Date	Location	Attended
16/02/2022	Online	15
16/03/2022	Online	13
27/04/2022	Online	12

Table 29: AAG meetings

Date	Location	Attended
24/02/2022	Online	23
28/04/2022	Online	30

Table 30: Peak bodies/ organisations briefings

Date	Organisations	Location
01/02/2022	Victorian Chamber of Commerce and Industry	Melbourne Convention and Exhibition Centre
09/02/2022	Melbourne Airport Community Action Group member	Phone call
24/02/2022	Keilor Primary School Council	Online
24/02/2022	Airline Station Managers	Online
11/03/2022	Infrastructure Partnerships Australia	The Westin Hotel, Melbourne
25/03/2022	Australian Logistics Council	Online
06/04/2022	Metropolitan Transport Forum	Online

Date	Organisations	Location
07/04/2022	Avalon Airport	Linfox House, 493 St Kilda Road, Melbourne
14/04/2022	Business Council of Australia	Online
20/04/2022	Broadmeadows Revitalisation Board	Online
26/04/2022	Planning Coordination Forum (PCF)	Online
27/04/2022	Victorian Farmers Federation	Online
02/05/2022	German – Australia Chamber of Commerce	Online
03/05/2022	Western Health Department of Environment, Land, Water and Planning Department of Health	Online
04/05/2022	Australasian Land and Groundwater Association	Online and Cliftons Venues, 1/440 Collins Street, Melbourne
05/05/2022	Planning Coordination Forum	Online
09/05/2022	Tourism and Transport Forum Victorian Tourism Industry Council	Online
12/05/2022	RMIT University – Sustainable Airport Operations course	Online and RMIT Building 80, Swanston Street
19/05/2022	Professional Environmental Women's Association	JustCo, Level 19, 15 William Street, Melbourne

3.3.11 Social media

APAM utilised its existing Facebook and Instagram accounts and paid posts/advertisements to share and promote the Preliminary Draft Master Plan and M3R MDP public exhibition period.

In total 22 posts were made during the public exhibition period with a combined reach of 295,506 users, with 15,123 interactions (likes, shares or comments):

- Facebook: 12 posts were shared to promote the project, resulted in a total of 249,058 reach and 11,873 interactions.
- Instagram: 10 posts were shared to promote the project, resulted in a total of 46,448 reach and 3,250 interactions.

An overview of each post, its platform, content, reach and engagement is provided in the table below.

Table 31: Overview of social media posts

Date	Platform	Post content	Reach	Interacted
31/1/2022	Facebook	Melbourne Airport is moving ahead with plans to build a new north-south runway to ensure we have the capacity to keep serving Victoria for decades to come. Today we released our preliminary draft 2022 Master Plan, and preliminary draft Major Development Plan for Melbourne's Third Runway. Formal public exhibition will run until May 16. To find out more about Melbourne Airport's plans and to have your say visit www.melbourneairport.com.au/runway	14,892	2,534
8/2/2022	Facebook	As part of engaging our community, we have multiple information sessions around our planned Third Runway and 2022 Master Plan. There are a range of online and in-person session scheduled over the next two months, and anyone is encouraged to register and attend these sessions. More information https://caportal.com.au/melair/virtual or to register here > https://www.eventbrite.com/cc/melbourne-airport-100689	16,894	554
11/2/2022	Facebook	Do you want to know more about Melbourne Airport's third runway? We are hosting a series of in-person and	12,043	183

Date	Platform	Post content	Reach	Interacted
		online events to share more information about the project. We are holding a community information meeting tomorrow to talk about our Master Plan which will guide the development of Melbourne Airport over the next couple of decades. The meeting is being held at Broadmeadows Town Hall, 10 Dimboola Road, Broadmeadows from 11am to 1pm. Register here: https://bit.ly/3gFHiLL		
15/3/2022	Facebook	Want to know more about Melbourne Airport's third runway? We are hosting a series of in-person library talks to share more information about the project. The talks will cover a range of topics including aircraft noise, transport, environment and more. See below event details. Register here for one of the talks https://bit.ly/36f7NG2. Event details 19 March - Architecture Library Talk – Dempster Park Hall, Sunshine 29 March - Aircraft Noise Library Talk – Gisbourne Community Hall 12 April - Operating plans Library Talk – Keilor Library 23 April - Ecology Library Talk – Sunbury Library 26 April - Environment Library Talk – Altona Library	30,837	1,085
4/4/2022	Facebook	Did you know Melbourne Airport's new runway will require 4 MCGs worth of soil? Most of that we can source from on-site (and yes as Melbourne's Airport we'll be using Melbourne's standard unit of measurement)! You can find out more about the third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to	39,931	1,592

Date	Platform	Post content	Reach	Interacted
		join our free online sessionhttps://us06web.zoom.us/j/85488461098...Webinar ID: 854 8846 1098Passcode: 147375		
5/4/2022	Facebook	Did you know that Melbourne Airport's new runway will have a slight uphill slope? (Or downhill depending on which way the wind is blowing!) You can find out more about the third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	24,562	1,045
6/4/2022	Facebook	Did you know Melbourne's third runway will require changes to flight paths around the city? You can find out more about the third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	31,462	1,660
7/4/2022	Facebook	Did you know in 2019 over 174,000 tonnes of air freight departed Melbourne Airport. That is the same weight as over 310 million jars of Vegemite! Building a third runway will allow an increase of inbound and outbound freight for Melbourne. You can find out more about the airport's third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	19,430	783

Date	Platform	Post content	Reach	Interacted
8/4/2022	Facebook	Did you know Melbourne's new runway will be called 16R/34L? (Sorry, the boss said no to Runway McRunwayface). You can find out more about the third runway project at our last online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	22,646	1,013
29/4/2022	Facebook	Public submissions for Melbourne Airport's third runway plan and preliminary draft 2022 Master Plan close on May 16. Over the next few days our team will be out at the following locations to help answer any questions you might have. Please stop by for a chat! Oakleigh: Allen Street Playground, Scotchman's Creek Trail, Friday 11am-1pm Keilor: Cliff Harvey Lagoon Reserve, Saturday 10am-12pm Aircraft Viewing Area, Sunbury Road. Saturday 2pm-4pm	10,548	362
11/5/2022	Facebook	With just under a week to go until the public exhibition period on Melbourne Airport's third runway finishes, now is the time to have your say. Since February when the public exhibition began, the team has held face-to-face events at Keilor, Sunbury, Footscray, Altona, Bulla, Taylors Lakes, Broadmeadows, Gisborne, Doncaster, Oakleigh and Sunshine, as well as numerous online sessions. Melbourne Airport has received hundreds of submissions on its preliminary draft Master Plan and third runway proposal. The new runway will help reduce flight delays, promote airline competition, create jobs and support our local exporters. Thank you if you have already provided feedback. If you	16,249	625

Date	Platform	Post content	Reach	Interacted
		haven't provided your feedback and you want to, you can do so at www.melbourneairport.com.au/runway before Monday 16 May.		
16/5/2022	Facebook	Thank you to everyone who has taken part in our public exhibition of Melbourne Airport's third runway, and shared their views by making a submission. The new runway will help reduce flight delays, promote airline competition, create jobs and support our local exporters. If you want to provide your feedback but haven't yet, a reminder that submissions close tonight 16 May at 11:59pm www.melbourneairport.com.au/runway	9,564	437
	Total - Facebook		**249,058**	**11,873**
31/1/2022	Instagram	Melbourne Airport is moving ahead with plans to build a new north-south runway to ensure we have the capacity to keep serving Victoria for decades to come. Today we released our preliminary draft 2022 Master Plan, and preliminary draft Major Development plan for Melbourne's Third Runway. Formal public exhibition will run until May 16. To find out more about Melbourne Airport's plans and to have your say visit www.melbourneairport.com.au/runway	6,310	628
18/2/2022	Instagram	Want to know more about Melbourne Airport's 2022 Master Plan and Third Runway proposal? Drop in to the Sunbury Road viewing area between 11am and 1pm tomorrow to talk to our planning team (and grab an ice cream!) If you can't make it, log onto melbourneairport.com.au/runway to find out more and have your say.	8,070	390

Date	Platform	Post content	Reach	Interacted
10/3/2022	Instagram	Want to know more about Melbourne Airport's third runway? We are hosting a series of in-person pop-ups to share more information about the project. The event in the series will put you in touch with the team who are making the new runway and Master Plan happen. Register for one of the below events via the link in our bio. 12 March – Brimbank Pop Up, 11am – 1pm 26 March – Altona Park Pop Up, 11am – 1pm 09 April – Canning Reserve Avondale Heights, 11am – 1pm	4,957	389
15/3/2022	Instagram	Want to know more about Melbourne Airport's third runway? We are hosting a series of in-person library talks to share more information about the project. The talks will cover a range of topics including aircraft noise, transport, environment and more. See below event details. Register here for one of the talks https://bit.ly/36f7NG2. Event details 19 March - Architecture Library Talk – Dempster Park Hall, Sunshine 29 March - Aircraft Noise Library Talk – Gisbourne Community Hall 12 April - Operating plans Library Talk – Keilor Library 23 April - Ecology Library Talk – Sunbury Library 26 April - Environment Library Talk – Altona Library	3,482	262
4/4/2022	Instagram	Did you know Melbourne Airport’s new runway will require 4 MCGs worth of soil? Most of that we can source from on-site (and yes as Melbourne’s Airport we’ll be using Melbourne’s standard unit of measurement)! You can find out more about the third runway project at our online lunchtime express session… between 12:30 and 1pm today!Use the details below to join our free online	3,989	283

Date	Platform	Post content	Reach	Interacted
		sessionhttps://us06web.zoom.us/j/85488461098...Webinar ID: 854 8846 1098Passcode: 147375		
5/4/2022	Instagram	Did you know that Melbourne Airport's new runway will have a slight uphill slope? (Or downhill depending on which way the wind is blowing!) You can find out more about the third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	3,595	265
6/4/2022	Instagram	Did you know Melbourne's third runway will require changes to flight paths around the city? You can find out more about the third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	4,674	330
7/4/2022	Instagram	Did you know in 2019 over 174,000 tonnes of air freight departed Melbourne Airport. That is the same weight as over 310 million jars of Vegemite! Building a third runway will allow an increase of inbound and outbound freight for Melbourne. You can find out more about the airport's third runway project at our online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375	3,601	232
8/4/2022	Instagram	Did you know Melbourne's new runway will be called 16R/34L? (Sorry,	4,425	245

Date	Platform	Post content	Reach	Interacted
		the boss said no to Runway McRunwayface). You can find out more about the third runway project at our last online lunchtime express session… between 12:30 and 1pm today! Use the details below to join our free online session: https://us06web.zoom.us/j/85488461098... Webinar ID: 854 8846 1098 Passcode: 147375		
29/4/2022	Instagram	Public submissions for Melbourne Airport's third runway plan and preliminary draft 2022 Master Plan close on May 16. Over the next few days our team will be out at the following locations to help answer any questions you might have. Please stop by for a chat! Oakleigh: Allen Street Playground, Scotchman's Creek Trail, Friday 11am-1pm Keilor: Cliff Harvey Lagoon Reserve, Saturday 10am-12pm Aircraft Viewing Area, Sunbury Road. Saturday 2pm-4pm	3,345	226
	Total - Instagram		**46,448**	**3,250**

3.4 Public engagement and communication outcomes

Key themes discussed throughout the engagement period focused primarily on:

- Aircraft noise impacts
- Flight path changes
- Health impacts
- Environmental and ecological impacts
- 'Compensation' interests expressed by people affected by the impacts of the M3R MDP

A detailed overview of key themes and matters of community interest raised in the submissions received can be found in Section 5: Discussion of Themes and Issues.

3.4.1 Iterative changes to engagement approach to respond to feedback

APAM conducted a preliminary review of the first weeks of public engagement in March 2022 to identify any gaps and implement ways to address them. This resulted in changes and additions to the engagement program:

- The Terminal 4 carpark walk-through events were changed to park pop-up events to take advantage of greater passing foot traffic (this included a pop-up session at Cherry Lake Farmer's Market and a pop-up at Sunbury Viewing Area)
- Additional paid advertising on social media platforms to boost engagement promotion
- Scheduling 'lunchtime express' online sessions to encourage increased participation
- Changes to the Noise and Flight Path Tool
- An additional pop-up event in Keilor

3.4.2 Event feedback

Participants were given opportunity to complete an event evaluation form at events during the public exhibition period. These forms invited participants to evaluate, from a scale of 1 to 5 (1 being Poor, 5 being Excellent), four key questions about the event.

A total of 26 event evaluation forms were received. The question and average response provided by participants is listed below:

Quality of information:

- How well did we do in providing relevant information and answering your questions?
- Average response = 4 (good)

Use of time:

- How well did we use our time?
- Average response = 4 (good)

Participation:

- How well did we do on making sure everyone was involved?
- Average response = 4 (good)

Organisation:

- How well was the event run?
- Average response = 4 (good)

Of those who completed an evaluation form 40% heard about the event via word of mouth, 36% via social media (Facebook/Instagram) and 4% each via Eventbrite, Melbourne Airport website or email invitation.

3.4.3 Evaluation of objectives

The project engagement objectives listed in Section 3.1 were developed to guide planning and support for effective engagement and communications – with the intent to raise awareness of the public exhibition process and maximise participation.

A high-level review has been completed of the engagement and communications data described in this report in order to consider whether the desired outcomes of the engagement objectives have been met to the standard described by APAM.

Please note this is a subjective self-assessment based on the available information. APAM acknowledges that individual views may differ from those described.

Table 32: Engagement outcomes

Objective	Outcome
Inform the development of the Preliminary Draft M3R MDP, Preliminary Draft Master Plan and raise awareness of airport planning	• Reached: Over 1 million Victorian households were reached through direct letterbox mail, radio or print. • Informed: Almost 65,000 stakeholders sought further information via the Virtual Visitor Centre. • Engaged: 2128 submissions for the Preliminary Draft M3R MDP were received during the public exhibition period, and 816 stakeholders attended an event, discussed the Preliminary Draft Master Plan or M3R MDP with APAM and/or made a formal submission.
Build the capacity of stakeholders and communities to make informed submissions	• The volume and quality of submissions received indicate that capacity to make informed submissions was reasonably high. • Submissions to the Preliminary Draft M3R MDP covered a wide range of themes. • A mix of communications tools were used to maximise opportunities for community members to access information, these included traditional channels (letters and phone calls) and digital approaches (Virtual Visitor Centre and social media promotions). • APAM tried to distil complex knowledge into easy-to-understand topic-based fact sheets. Fact sheets were provided in all engagement events to build public capacity to understand technical knowledge.

Objective	Outcome
	• Key project information was translated into seven community languages to ensure people who do not speak English as their first language have access to information. • Topic-based library talks were held to provide in-depth technical information of a certain topic and allow time for the public to ask questions to subject matter experts.
Acknowledge and respect the diversity of views about the future of Melbourne Airport	• Participants who completed an event evaluation form rated APAM 4 out of 5 (good) on the level of participation (extent to which participants were able to be involved) and quality of information (providing relevant information and answering questions) indicating a useful and respectful environment was provided to support participation. • APAM listened to feedback from stakeholders and community members and made adjustments to the engagement program throughout to respond to these changes. • APAM ensured all engagement events included sufficient time for questions and answers from the audience. This ensured two-way dialogue between APAM and the community. Participants rated APAM 4 out of 5 (good) on use of time.
Broaden Preliminary Draft M3R MDP and Master Plan engagement participation to extend beyond near neighbours	• Visitation data from the Virtual Visitor Centre shows attendance from participants throughout wide and diverse parts of metropolitan Melbourne and regional Victoria, well beyond near neighbours. Figure 16, Data extracted from the Virtual Visitor Centre, shows postcodes of visitors to the website (blue), overlaid with the mail-out catchment area (yellow). • As shown in Section 3.3, engagement activities were held beyond “near neighbours” of the airport. APAM hosted in-person events as far as Gisborne and Chadstone. Online event participants came from across Victoria and even overseas. • Submissions have been received from the entire Metropolitan Melbourne area and some parts of regional Victoria.

Objective	Outcome
Build the support of community and stakeholders to understand the need for the third runway	A total of 1200 Melbourne residents were reached by expert market research about the M3R project prior to and following the public exhibition period. 400 residents lived within 15km of the airport (airport catchment) while 800 residents lived in the greater Melbourne area. The research indicates that: • Over half of Melbourne residents have heard about the third runway. Residents in the airport catchment are more likely to know something about the project than the rest of Melbourne • Total support for the third runway increased significantly after provision of basic information about the project (from 51% supporting to 74% supporting) • 48% of respondents 'always support' the planned third runway • 39% of respondents are "positive converters" - support increased following the public exhibition period • 7% of respondents are "negative converters" - support reduced following public exhibition period • One in four respondents were aware of the submission process • Only 1% made a submission. While 75% indicated that they would be unlikely to make a submission • Those within 15kms of the airport are more interested than others in receiving information on the third runway

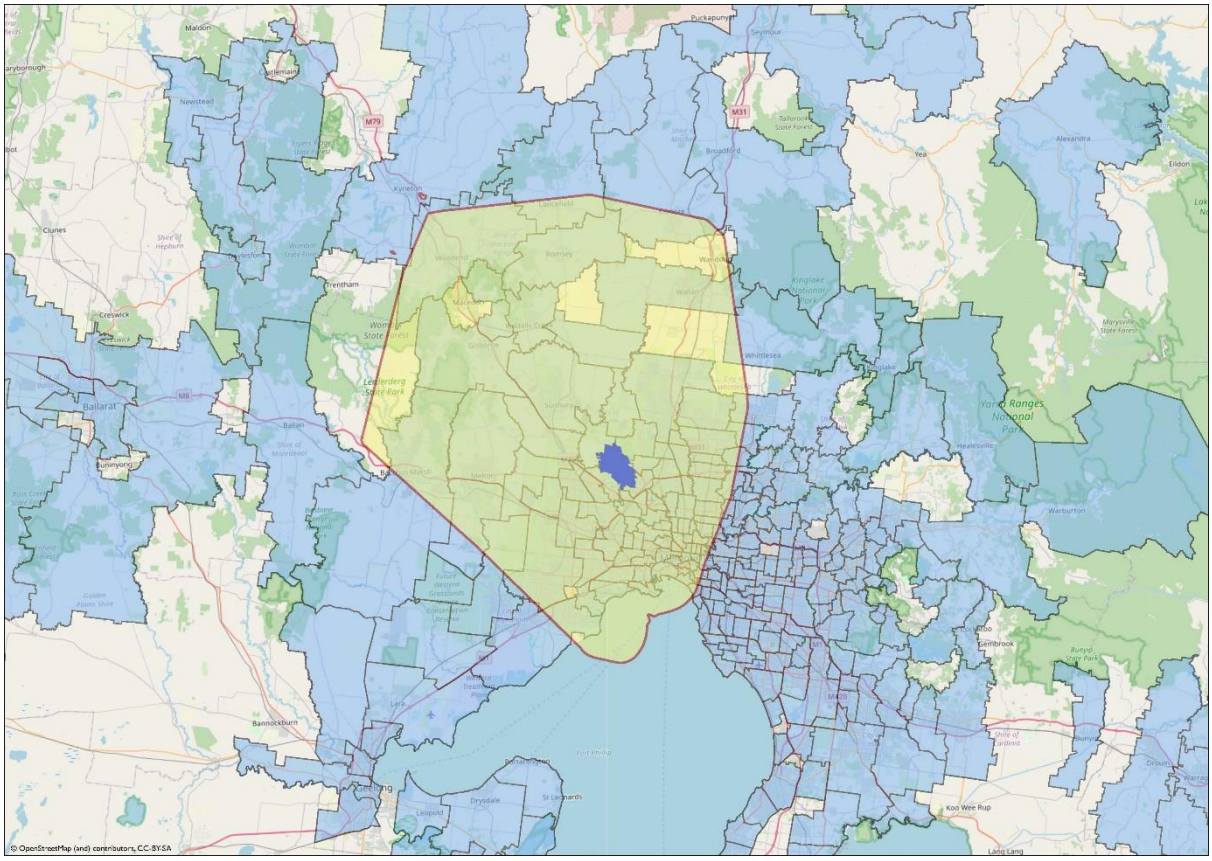


Figure 21: Indicative consultation reach - mail-out overlaid

4 Submissions

This section discusses the consideration of the submissions received during the public exhibition of the Preliminary Draft MDP. The primary purpose of this section is to demonstrate how APAM has given ‘due regard’ to the comments raised in the submissions.

APAM utilised a bespoke Community Analytics software tool developed by Spatial Media to assist in the analysis of the substantial number of submissions received on the Preliminary Draft MDP.

4.1 Overview of Submissions

APAM invited members of the community, organisations, and all levels of government to make a submission on the Preliminary Draft MDP. A range of different avenues were made available for submissions to be made to ensure accessibility. Submission methods included via email to a discrete email address, through the Community Analytics (CA) portal (online or upload document), and through the post.

A total of 2,128 submissions were received during public exhibition of the Preliminary Draft MDP. Submissions made via methods other than the CA portal were all uploaded to the CA portal to allow for comprehensive analysis. Copies of all submissions are provided at Appendix 4.

All submissions were categorised by:

- Type of submitter (Community, Government, or Private Company or Organisation)
- What part of the Preliminary Draft MDP a submitter wanted to comment on (Parts A, B, C, D, E or general)
- How a submitter made a submission (online through the CA portal, uploading a document to the CA portal, direct email or postal mail)
- All submissions were given an identification number and time stamped. Submitters were provided the opportunity to give their name, address, gender and to request to receive updates on the MDP.

The “type of submitter” categories are defined as follows:

- Community: Consists of individuals who have made a submission as private citizens.
- Government: Consists of Commonwealth, State and Local Governments, including government departments, authorities and agencies.
- Private Company or Organisation: Consists of community groups, industry groups and private companies.

Over 95% of the submissions were classified as ‘Community’ submissions.

4.2 Approach to Consideration of Submissions

Public engagement for both the Preliminary Draft Master Plan 2022 and Preliminary Draft M3R MDP occurred concurrently. APAM expected to receive many submissions due to the parallel public engagement and the focus of the M3R MDP in proposing a third runway.

It was important for APAM to be able to effectively manage the potential receipt of many submissions. APAM therefore commissioned the development of a bespoke web-based analytics portal to assist with the management of submissions received.

The 2,128 submissions received on the Preliminary Draft MDP were collected via several methods as documented in Section 4.1. All submissions were imported into the CA portal to enable the APAM team to undertake the analysis outlined below and presented in Section 5 of this report.

4.3 Themes and Issues

Based on an initial review of submissions, common themes were identified to reflect the feedback given. Each theme has a series of associated issues which relate to the theme and unpack topics specifically raised by the submitters. It should be recognised that the issues cover both positive and negative positions.

Points raised by submitters in submissions were then categorised in the CA portal using the 'Themes' and 'Issues'. Each Theme was categorised alphabetically whilst Issues were numbered. The identified Themes and Issues are set out in Table 33 along with the numeric and alphabetical categorisation.

Subject Matter Experts (SMEs) were assigned themes and issues. The SMEs undertook an extensive analysis of all submissions categorised under their assigned Themes and Issues. The SME analysis forms the basis of Section 5 and provides a description of the Theme and associated Issue and importantly provides APAM's response to these.

APAM notes that a number of submissions raised matters that pose wider policy questions, beyond the scope of an individual MDP. For example, matters such as the use of the World Health Organization (WHO) Environmental Noise Guideline 2018 as a more appropriate aircraft noise descriptor, or the potential greenhouse gas emissions that will result from airport expansion. APAM has responded to such matters within the applicable Theme and Issue in Section 5 but recognises that these issues should be explored more holistically.

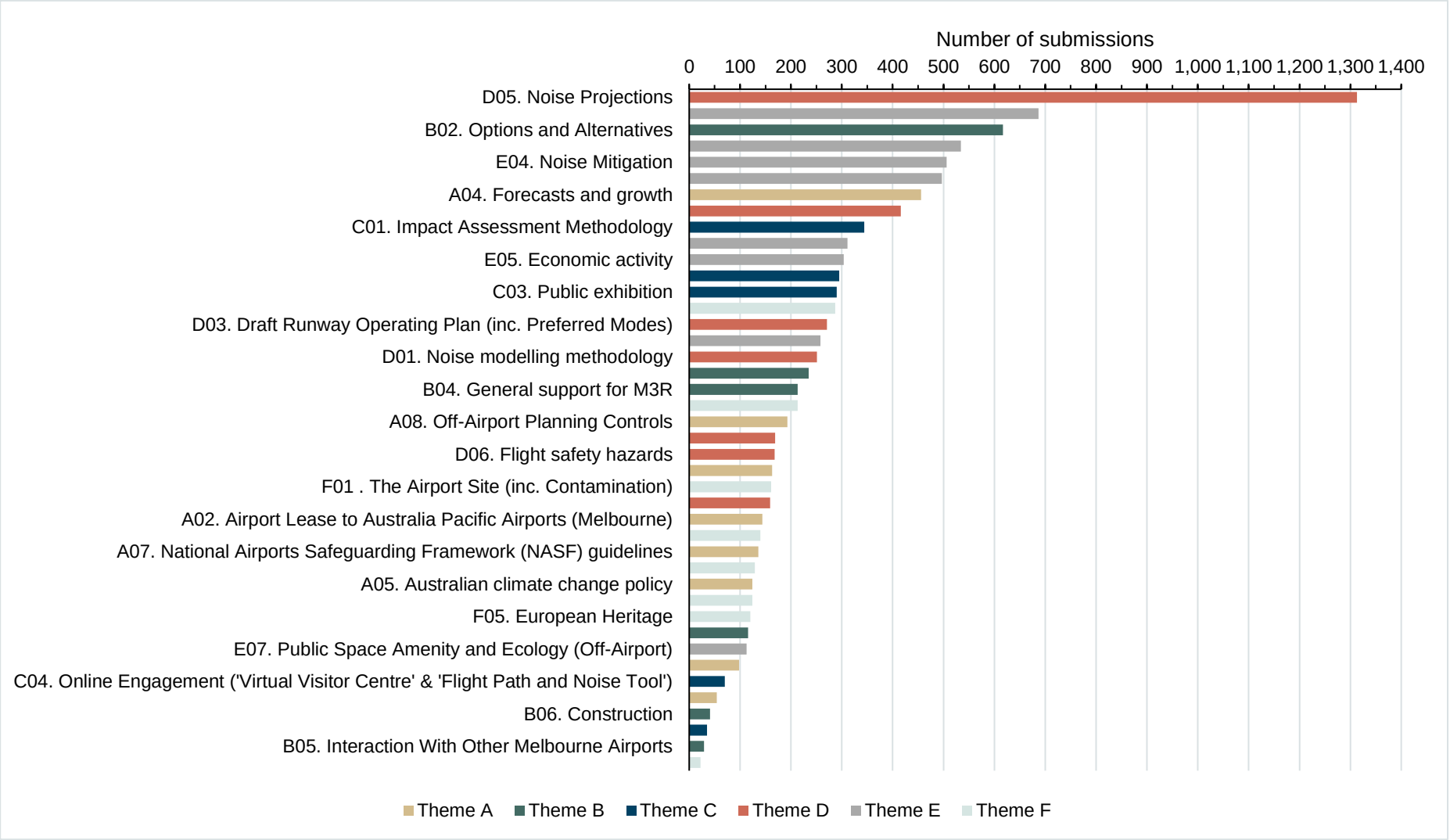
The Australian Government has announced that it intends to deliver a new Aviation White Paper that will consider aviation sector wide issues including the management of aircraft noise and achieving net zero carbon emissions. APAM considers that the aviation white paper is an appropriate mechanism to explore these broader policy issues more fully and has noted this where relevant in Section 5.

The graph following provides a summary of the number of submissions relating to each Issue.

Table 33: Submission Themes and Issues

Themes →	Background and Governance	The Project	Engagement and Approval	Airspace and Aircraft Impacts	Community Impacts	Environmental Impacts
Issues ↓	**A**	**B**	**C**	**D**	**E**	**F**
1	Master Plan 2022	Project Justification and Timing	Impact Assessment Methodology	Noise Modelling Methodology	Health Impacts	The Airport Site
2	Airport Lease to Australia Pacific Airports Melbourne	Options and Alternatives	MDP Approval Process	Future Use of 09/27 (East-West Runway)	Social Impacts	Waterways
3	Melbourne Airport Strategies and Plans	General Objection to M3R	Public Exhibition	Draft Runway Operating Plan	Compensation	Ecology (On-Airport)
4	Forecasts and Growth	General Support for M3R	Online Engagement	Flight Path Design	Noise Mitigation	Indigenous Cultural Heritage
5	Australian Climate Change Policy	Interaction with Other Melbourne Basin Airports and Operators	Detailed Airspace Design and Airspace Change Processes	Noise Projections	Economic Activity	European Heritage
6	Environmental Management Framework	Construction		Flight Safety Hazards	Employment	Air Quality
7	National Airports Safeguarding Framework (NASF) Guidelines			Aircraft-Induced Vibration	Public Space Amenity and Ecology (Off-Airport)	Airport Contribution to Climate Change
8	Off-Airport Planning Controls				Off-Airport Road Network Performance and Plans	EPBC Act and Offset Management Strategy

Figure 22: Number of Submissions by Issue



5 Discussion of Themes and Issues

This section discusses APAM's consideration of the key Themes and Issues arising from the submissions, as identified in Table 33.

The discussion relating to each Theme:

- Provides an overview of each Theme and associated Issues
- Provides APAM's response to the Issues within each Theme including:
    - Summarises each Issue in the context of Melbourne Airport and the M3R project
    - Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment
    - Explains if/how the M3R MDP addressed the subject in its Preliminary Draft version
    - Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM's response/position where balances between impacts and benefits must be sought
    - Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.
- Summarises the outcomes of APAM's consideration of each Theme.

5.1 Theme A: Background and Governance

5.1.1 Overview of Theme

This Theme addresses underlying contexts of planning, policy and governance that support the M3R MDP. These subjects manifested during public exhibition in submissions raising existing and/or historical policy environments, and how M3R fits within these. These included queries about the airport lease and master plan and their administration under the Airports Act, previous airport strategies and plans, the environmental management framework and airport safeguarding guidelines. This theme outlines APAM's consideration of queries and challenges in this context and demonstrates that M3R is consistent with applicable governance.

This Theme also addresses comments relating to the growth forecasts that support the need for the project and which have informed development of the MDP.

The 'Background and Governance' Theme was raised in 943 submissions. The Issues within this Theme were mostly raised in submissions from the community, but there were also submissions from various sections of government and corporate organisations.

Whilst this Theme and its associated Issues were largely addressed in the Preliminary Draft MDP, their prevalence in submissions warranted addressing in the Supplementary Report. Each Issue response identifies where the matter was addressed in the Preliminary Draft MDP.

The following Issues are considered within the 'Background and Governance' Theme:

A1: Master Plan 2022

This Issue responds to submissions that discuss the M3R proposal within the context of the airport's Master Plan. The Issue explains how M3R aligns and is consistent with the effective Master Plan for Melbourne Airport. It confirms that, with the approval of Master Plan 2022 in November 2022, M3R is entirely consistent with the airport's current approved Master Plan.

A2: Airport Lease to Australia Pacific Airports Melbourne

This Issue relates to submissions that remark upon APAM's ability as a private company to undertake developments, such as the M3R, that submitters consider will cause unjust detriment to surrounding communities. Other concerns addressed in this Issue include the community's expectation of APAM as a corporate citizen and the expectation of APAM's obligations under the lease agreement with the Commonwealth Government.

A3: Historical Melbourne Airport Strategies and Plans

This Issue addresses whether APAM is entitled to expand the airport site, given a community view that the Commonwealth undertook to limit impacts when the airport was first developed. Some submitters contend that the Melbourne Airport Strategy 1990 imposed capacity limits on the site and that these should be upheld.

A4: Forecasts and Growth

This Issue responds to comments on the growth projections presented in the MDP, in the short and long term. The timing of public exhibition, early in the recovery from COVID-19 shutdowns and associated downturn in aviation, clearly influenced many comments regarding forecasts.

A5: Australian Climate Change Policy

This Issue addresses queries about pursuit of M3R and aviation growth within the context of climate change governance. Melbourne Airport's role in relation to local and Australian climate change objectives and policy is discussed.

A6: Environmental Management Framework (inc. AES & Sustainability)

This Issue relates to the airport's Environmental Management Framework, including the Airport Environment Strategy and sustainability. It addresses concerns about the airport's environmental sustainability with regard to the runway development, road traffic to the airport and overall climate change impacts from increased emissions. It also addresses questions about access to the airport via rail, use of sustainable materials for runway construction, and sustainable fuels.

A7: National Airports Safeguarding Framework (NASF) Guidelines

This Issue relates to comments regarding airport safeguarding, including how this is enacted and its impacts on surrounding land and communities. This Issue addresses submissions that challenge airport safeguarding by explaining implementation of the National Airports Safeguarding Framework (NASF) and its associated guidelines.

A8: Off-Airport Planning Controls

This Issue discusses Melbourne Airport's application of protections beyond its boundary in response to submissions that express concern about planning restrictions - particularly the Melbourne Airport Environs Overlay and Green Wedge Zone. The Issue also addresses submissions relating to the State Government's review of planning controls and timely updating of the schemes.

5.1.2 APAM Response to Issues

This section of the Supplementary Report addresses the Issues grouped into the 'Background and Governance' Theme. This section:

- Summarises each Issue in the context of Melbourne Airport and the M3R project

- Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment
- Explains if/how the M3R MDP addressed the issue in its Preliminary Draft version
- Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM's response/position where balances between impacts and benefits must be sought
- Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.

A1 Master Plan 2022

A1.1 Summary of Issue

Melbourne Airport maintains Master Plans that are updated every five years to demonstrate long-term strategic plans for the airport's site and business. When APAM revised the concept for the third runway in 2019, revision of the then-effective 2018 Master Plan became necessary.

APAM elected to concurrently release the Preliminary Drafts of Master Plan 2022 (MP22) and the M3R MDP for public exhibition in February 2022. This decision was made in recognition of the fundamental links between the documents, and to enable the community to engage with the full framework of airport development plans collectively. The exhibition was extended to 70 business days to accommodate an extensive community consultation program.

A selection of submissions lodged to the M3R process discussed MP22 in a variety of contexts. This Issue groups the submission topics as follows:

- Process - concurrent exhibitions of MP22 and M3R
- 'Ultimate' Master Plan concepts
- MP22 progression of Melbourne Airport's historical planning
- Noise Modelling, Impacts and Mitigation
- Reliability of forecasts
- Support for M3R growth as enabled by MP22.

MP22 was approved by the Federal Minister for Infrastructure, Transport, Regional Development and Local Government on 14 November 2022 and is thus the final master plan for Melbourne Airport.

MP22 contains strategic information about the M3R project, including infrastructure scope, development area and operational concept. Approval of MP22 thus endorses M3R in principle, however the MDP remains a necessary project approval process.

This Issue addresses M3R submissions that specifically refer to MP22 context relating to the project. Many of these submissions also contain specific reference to other Issues contained in this Supplementary Report and are thus also considered therein. This approach has also captured the sentiment of submissions that have been labelled as regarding the MP22, but which ostensibly speak to M3R.

A1.2 Number and Types of Submissions

98 submissions contain reference to the 'Master Plan 2022' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities

- Government:
    - Victorian State Government
    - Brimbank City Council
    - City of Yarra
    - Hume City Council
    - Maribyrnong City Council
    - Wyndham City Council
    - Yarra Ranges Council.

A1.3 Discussion of Submissions

Process - Concurrent Exhibitions Of MP22 And M3R

Several submissions were critical of the combined public exhibitions for MP22 and M3R. A resident of Gladstone Park remarked upon public perception of the strategy:

> *"Presenting the M3R MDP for public comment ahead of an approved Master Plan assumes the approval for the 2022 Draft Master Plan is*
>
> - *A formality*
> - *Undermines public confidence*
> - *Public comments will not influence decisions already made by Melbourne Airport*
> - *Interferes with the public's right to know of government approval decisions and conditions for the 2022 Draft Master Plan."*

The Hume Residents Airport Action Group and Melbourne Airport Action Group tendered a shared submission that commented on the legislative validity of the exhibition:

> *"The process of presenting more than one major plan – whether it is a Master Plan or Major Development Plan – over the same public comment period is not approved within the Airports Act 1996.*
>
> *…*
>
> *We seek urgent action to halt the concurrent public comment period for the Melbourne Airport Draft Master Plan 2022 and the Melbourne Airport Draft Third Runway Major Development Plan. The Federal Minister can only approve an Airport Major Development Plan if it is consistent with the final approved Airport Master Plan."*

This submission also remarked upon the length of the exhibition, regarding the volume and technicality of information presented by Melbourne Airport:

> *"APAM have allowed 70, rather than the minimum 60, days for the public comment period but this is far short of the combined 120 days the community would ordinarily have if they were presented sequentially. These are complex documents totalling over 2180 pages that deal with sometimes complex technical information."*

Similar sentiment was expressed by a resident of Keilor:

> *"The fact that the Master Plan 2022 and M3R Major Development Plan have been placed on public exhibition at the same time has placed additional pressure and confusion on myself and the impacted Communities, on top of immense stress already being*

experienced due to the uncertainties of what these mean to our future and our lives should the related proposals go ahead in their current format. On top of this, we are all trying to live our normal lives with work and family pressures, COVID, financial issues, illnesses and grieving for lost loved ones during this period. Both being published at the same time has created undue expectations on us when trying to make meaningful submissions."

Note: Issue C3: Public Exhibition examines this topic in detail.

'Ultimate' Master Plan concepts

Broad objection to expansion of the airport, as presented by the long-term forecasts and plans presented in MP22, was raised by some parties as basis for rejecting M3R. The Keilor Residents & Ratepayers Association (KRRA) proforma submission objected to airport development due to community impacts:

"As a resident of Keilor I am deeply concerned that the additional runways proposed in the master plan will cause me, my family and the community serious distress, hardship, health issues and loss of property values. The damage to our community cannot be justified as a necessity for a private organisation to increase its profit."

Conversely, some submitters remarked that the Master Plan falls short of adequately developing the site for growth:

[Location not provided]:

"As a frequent international traveller, I know the value of an airport with multiple runway choices and support Tullamarine's expansion.

Tullamarine has many issues in terminal layout and access in general. New and better terminals are required although current layout does not help with this prospect. Terminal capacity does need to be enlarged. From observation of overseas locations, the master plan fails in this. This said, more runways allowing greater movement of flights is welcome, in my eyes.

The layout of additional runways have been available since the time of the airport's opening, even marked on street directories, and residents nearby have had all that time to make decisions on living choices."

From South Kingsville:

"I am surprised that a third runway is planned.

Anyone trying to depart on a Monday from the terminal has experienced the terrible congestion.

How can the terminal cope with more passengers?"

Hume City Council acknowledged Melbourne Airport's long-standing planning strategy, and encouraged continuation subject to appropriate engagement:

"It is recognised that key elements in the 2042 and Long Term Development Concept Plans are principally the same as those that were identified in the long term plan developed in the 1990s. In particular, Council notes Melbourne Airport's continued long term aspiration of constructing of a fourth and final runway following the east-west alignment.

The forecasted passenger rates included in the 2022 Master Plan assume that Victorians will resume the same or greater demand for air travel that was occurring pre-COVID. Council believes that such assumptions need to be further interrogated in future Master Plans with a focus on an increasingly climate-conscious society and evolving tourist and business travel pattens.

Council supports the strategic identification of the fourth runway in the Long Term Development Plan, but believes that Melbourne Airport must begin undertaking these long term assessments to inform the long term need for the fourth runway. The inclusion of this in the next and subsequent Master Plans will provide greater transparency to the community currently living under the future flight path of the fourth runway."

Master Plan 2022 progression of Melbourne Airport's historical planning

A small group of submissions from Keilor remarked that MP22, and by extension M3R, are not consistent with the airport site's planning history. Examples include:

Keilor: *"The forefathers of the City of Keilor ensured the original master plan for Melbourne Airport did NOT have runways oriented for flights directly over Keilor Village, with a future N-S runways positioned to the immediate east of the current N-S runway and over parklands. In recent years after privatisation of Melbourne Airport, Master Plans have corrupted our forefathers sensible planning and foresight. Subsequent masterplans have maximised the yield from leases airport land and subsequently compromising the position of future runways at the expense of Keilor residents quality of life."*

Keilor East: *"Does not satisfy the social and environmental guardrails agreed in 1990. 2022 MA Master Plan does not satisfy the social and environmental guardrails agreed in the 1990 Melbourne Airport (MA) Strategy.*

The 1990 MA Strategy endorses a 4-runway system supporting 320K flights, which shares and distributes the noise N/S/E/W. The 2022 MA Master plan proposes a 3-runway system supporting 380K flights.

This means suburbs in the North and South will need to bear the noise burden, which undermines the plan made to balance growth within "agreed social and environmental constraints". (Page 26 2022 MA Master plan)."

Note: Issue A3: Melbourne Airport Strategies and Plans (inc. MAS 1990 & Master Plans) examines this topic in detail.

Noise Modelling, Impacts and Mitigation

Challenge to the methodology of noise modelling used by APAM, as primarily represented by the ANEF in MP22, was raised in some significant submissions.

The East Melbourne Group submitted that:

"We note that the objective of 'manage and where possible minimise the impact of the airport and aircraft operations surrounding areas and communities.' There appear to be limited real tangible actions listed in the plan that will achieve this for communities abutting and on flight paths approaching the airport."

The Keilor Residents & Ratepayers Association proforma submission included:

"Aircraft noise from the proposed third runway has not been accurately estimated and practical indications are it will be greater than claimed in the airport master plan."

Some submissions requested independent review of MP22 and M3R focusing on impacts to communities from the development and operation of the third runway. They include:

> Keilor: *"Melbourne Airport needs to undertake proper community consultation and explore alternative options for efficiency that are compatible with the communities that already exist around it including an equitable distribution of benefits and impacts. Approval of the Melbourne Airport Preliminary Draft Master Plan 2022 should be delayed until these issues are resolved, and an independent assessment completed on the health, noise and environmental impacts as well as a needs based assessment."*
>
> Brimbank City Council: "*Federal Government progress…undertaking a review of the aircraft noise system to minimise harm to human health and provide health impact guidance to protect community from aircraft noise."*

Note: Issues C1: Impact Assessment Methodology and D1: Noise Modelling Methodology examine this topic in detail.

Reliability of forecasts

A share of submissions challenged the validity of forecasts presented in MP22 and thus justification for the M3R project. These submissions often questioned the projection of short- to medium-term industry recovery:

> Keilor: *"Current aircraft travel in/out of Melbourne Airport remains at a very low fraction of pre-pandemic usage. The airport is still like a ghost town. Predictions for usage growth seem arbitrary at best, when considered through a lens that knows about COVID-19."*

The East Melbourne Group stated:

> *"Post Covid you are forecasting an increase in numbers equating to the increase prior to Covid. Impacts resulting from Covid have not been taken into account"*
>
> …
>
> *"A significant portion of business-related travel is unlikely to occur as companies have adopted Zoom, Skype for many communications."*

Note: Issue A4: Forecasts and Growth examines this topic in detail.

Support for M3R growth as enabled by MP22

A noteworthy contingent of organisations expressed explicit support for M3R within the context of MP22. These organisations acknowledge the function of the third runway to support the growth forecast in MP22. Examples include:

> Hume City Council: *"Council is supportive of the development objectives outlined in the vision of the 2022 Master Plan as well as the six themes that have guided the drafting and objectives of the Master Plan to achieve this vision."*
>
> SkyBus: *"…we are confident that the proposed third runway at Melbourne Airport will be a significant contributor to the continued success of SkyBus services. The additional aircraft capacity (and corresponding increase in passenger numbers) that a third runway will deliver is anticipated to directly translate into extra demand for SkyBus services. Based on the current rate of airport passengers that convert into SkyBus customers, it is envisaged that by 2042, the additional 39 million passengers passing through Melbourne Airport will mean an extra 3 million passengers using our SkyBus services. A significant*

increase of this nature is likely to require at least an extra 50 bus drivers to operate our services."

Virgin Australia: "*The ongoing investment into major airports such as Melbourne is crucial to the recovery and continued growth of the aviation sector into the long term. Melbourne Airport remains a critical piece of the national aviation network and efficient operations at this airport are always a priority, to ensure we can get our passengers to where they need to be safely, while having a positive experience flying with VA."*

Tourism Accommodation Australia and Accommodation Association: *"The Associations acknowledge that Melbourne Airport makes a significant contribution to the Victorian and Australian economies. As a key driver of tourism and trade-based industries that supports jobs and creates economic growth, Melbourne Airport plays an important role in the lives of Victorians through job creation and connects them with other parts of Australia and the rest of the world.*

This submission provides the Associations response to the draft major development plan for the third runway. For reasons outlined in our submission, TAA and AAoA support the Draft 2022 Master Plan and Preliminary Draft Major Development Plan for Third Runway

…

Delay will mean a hindered capacity to welcome 23 million new passengers per annum by 2046, a potential hit to investor confidence that will see other states and territories become more attractive resulting in a direct adverse impact to the Victorian economy and Victorian jobs. Doing nothing will impact productivity, deny Australians getting home to their families faster, reach holiday destinations with fewer disruptions and make it to meetings critical for growing their businesses and their ability to generate jobs."

A1.4 M3R MDP References

MP22 is primarily discussed in the M3R MDP in Chapter B2: Land Use and Planning. Reference therein centres on the replacement of MP18 with MP22 and thus changed plans for the orientation of the third runway.

Both MP18 and MP22 are referred to in various chapters of the M3R MDP for context relating to and historical planning, growth forecasting and development strategy.

A1.5 APAM Position

The MP22 approval in November 2022 endorsed Melbourne Airport's strategic planning initiatives for the next 20 years. MP22 is the basis for APAM's third runway proposition, M3R.

Section 91(1)(d) of the Airports Act states that a MDP must set out:

"if a final master plan for the airport is in force--whether or not the development is consistent with the final master plan"

Section 94(5) of the Airports Act states:

"If a final master plan is in force for the airport, the Minister must not approve the draft major development plan unless it is consistent with the final master plan."

Melbourne Airport's master plans have included provision for two future runways, to deliver the ultimate 'hashtag' arrangement, since 1990. The 2018 Master Plan (MP18) nominated the third runway orientation as east-west. Subsequent analysis found that the runway must be configured north-south, and thus inconsistent with MP18.

MP22 importantly updates plans for the airport's third runway via the M3R project. Though M3R was not consistent with MP18, it is facilitated by MP22.

M3R submissions that raise MP22 were made prior to the master plan's approval. Public exhibition feedback relating to MP22, including regarding M3R in its strategic planning context, was addressed through that approval process.

Process - concurrent exhibitions of MP22 and M3R

The Airports Act requires public consultation processes for preliminary draft Master Plans and MDPs of 60 business days.

APAM considered releasing the Preliminary Draft of MP22 in advance of the Preliminary Draft M3R MDP, however chose to consult the material concurrently for several reasons:

- Urgency in the community to understand plans for the third runway following the 2019 announcement of orientation change.
- Consulting the Master Plan along with the detail of the runway project (as afforded by the M3R MDP) allowed full context of the airport's development plans to be understood.
- Concurrent consultation period allowed APAM to address the full breadth of context in exhibition activities (presentations, info sessions, etc. with expert personnel) rather than fragmenting communication.
- Consecutive exhibition periods would have spanned over 6+ months. Advice received from community, regulatory and industry representatives indicated that such an extended period is undesirable. The two documents proposed are fundamentally related and it was concluded that the best and fairest strategy would be to consult them together.
- APAM was, however, cognizant that there was a great deal of complex information and thus extended the consultation period to 70 business days. The entire period was supported by a large and wide-ranging program of engagement options (in-person and online sessions, individual information requests, etc.).

'Ultimate' Master Plan and MP22 progression of historical airport planning

Melbourne Airport Master Plans since 1990 have shown two additional runways to the existing runway system. One additional north-south runway and one additional east-west runway complete the "hashtag" runway configuration of the Tullamarine site. APAM maintains that details of the long-term runway plan have been consistently promulgated to the public, and that the exhibition process for MP22 and M3R formed a natural progression of the development and delivery of the airport.

Noise Modelling, Impacts and Mitigation

Part C15 of MP22 outlines the strategic framework APAM implements to minimise noise impacts to the communities surrounding the airport. M3R MDP Part C: Airspace and Part D: Community extensively address modelling undertaken for noise and related impacts that are associated with the growth enabled by the third runway project.

This Supplementary Report contains extensive analysis of noise modelling, expected impacts and mitigation strategies in the following Issues:

A7: National Airports Safeguarding Framework (NASF) guidelines

A8: Off-airport planning controls

C5: Detailed airspace design and airspace change process

D1: Noise modelling methodology

D5: Noise projections

E1: Health impacts

E2: Social impacts

E4: Noise mitigation

Reliability of forecasts

APAM maintains that the forecasts provided in both the MP22 and M3R are based on best practice and are underpinned by the latest information available at the time of publishing.

A1.6 Changes to Preliminary Draft M3R MDP

References to MP18 have been maintained where appropriate for historical context. All references to the effective Master Plan have been changed to MP22 to reflect its approval.

No other changes specific to the airport's Master Plan have been made.

A1.7 Summary and Conclusion

This issue focuses on references to MP22 in the M3R MDP across a range of contexts. As MP22 was approved by the Minister for Infrastructure, Transport and Regional Development on 14 November 2022, APAM has updated references to MP22 within the M3R MDP to reflect that MP22 is now effective but has maintained historical references to MP18 where appropriate.

A2 Airport Lease to Australia Pacific Airports Melbourne

A2.1 Summary of Issue

The key concern expressed in submissions regarding this issue centres around APAM as a private company undertaking developments, such as M3R, that the submitters' view will cause detriment to "surrounding private property". Other concerns raised included the community's expectation of APAM as a corporate citizen, community expectation of APAM's obligations under the lease agreement with the Commonwealth Government, and that improvements in communication technologies will result in reduced business travel and therefore less need for aviation infrastructure such as M3R.

A2.2 Number and Types of Submissions

144 submissions contain reference to the 'Airport Lease to Australia Pacific Airports Melbourne' Issue. They were received from:

- Community
- Community organisations
- Government (Local Government Organisations)

A2.3 Discussion of Submissions

The majority of submissions for this issue raised concerns about APAM's requirements under the airport lease. The submissions range from community expectations of what is considered a responsible corporate citizen to APAM's role in operating Melbourne Airport. The following sub-sections provide a range of examples of submissions relating to this issue.

Profit over community impact

A substantial number of submissions felt that APAM was putting corporate expectations, that is ensuring profitability, as a priority over other obligations, including corporate social responsibility. The following provide a snapshot of submissions that demonstrate this position:

> *"The damage to our community cannot be justified as a necessity for a private organisation to increase its profit."*
>
> *"It may also be argued such conduct would be negligent towards your shareholders, as you may be exposing your company to a large compensation payout that has not been accounted for in your plan."*
>
> *"It is all about $$$$ for the investors, not a benefit to the wider community."*
>
> *"I believe APAC doesn't have interests of all Victorians as number 1 priority. Generally, they will be looking at increasing profits and not looking at other options outside of their leased airports for providing best service to Victorians."*
>
> *"It doesn't seem reasonable that one investor is involved in a business to make money while harming the economic lives of another group."*
>
> *"Residents of Keilor cannot be expected to agree that a public company renting Commonwealth land can expand its operations and profits to the detriment of surrounding private property."*
>
> *"it is clear that Melbourne Airport is focused exclusively on increasing its revenue, with no regard for the health and welfare of the people living under its flight path."*
>
> *"Don't build a new runway, get an airport train station you profiteering muppets."*

Corporate Citizen

Related to the concept of "profit over community impact" is that of the corporate citizen, which is to recognise social, cultural and environmental responsibilities to the community within which one operates. The following submission from Climate Action Moreland advocates this concept:

> *"We feel Melbourne Airport, as a good corporate citizen, should take steps to manage aviation demand as your contribution to capping aviation emissions as a part of Australia's climate change commitment…."*
>
> *"Melbourne Airport Corporation is a privately owned entity but the airspace on which it relies is a public asset that should be managed for public good."*

Lease Requirements:

Community understanding of what the lease allows APAM to undertake formed another important element within a range of submissions. The following quotes demonstrate this point:

> *"In the 1990s expansion became an issue and master Plans published as a requirement for the privatisation and lease of airports, The intent of parallel east/west runways was made public. While this did not mean increased air traffic above Keilor Village this did not cause undue alarm. The Master Plan of 20 reversed this concept and changed from parallel east/west to parallel north/south."*

The Keilor Residents and Ratepayers Association states that:

> *"Overall it is obvious that the present arrangement of the Federal Government leasing the Melbourne Airport to a private operator is not perfect and certain parts of the arrangement need to be re assed and changes made to the lease agreement."*

> *"Melbourne Airport originally obtained permission to operate and plan its future on the provision that neighbouring communities' health and welfare were not impacted. The original 1990 (and still binding) contract between the Federal and State Government and the Victorian people was carefully crafted to ensure the people of Keilor, Gladstone Park and Bulla were protected from aircraft noise."*

There were a substantial number of submissions that made the following statement:

> *"In 1997 the leaseholders of Melbourne airport paid a once off fee of $1.3 Billion on a 50 year lease for an airport with a planned capacity of 37 million passengers p.a. anticipated by 2050. In 2019 Melbourne airport reached their 37 million passengers they paid for in 1997, 28 years earlier than promised. Melbourne Airport want to change a two-runway airport to double airport passenger capacity which will double the size of the airport lease actually paid for."*

There is also a perception that the lease agreement has been changed as demonstrated by the following statement:

> *"Amendment to the airport lease agreement has been negotiated between Melbourne Airport and the Commonwealth to include additional land without public disclosure of the land dealings."*

Technology Improvements Mean Less Business Travel

Some submissions state that the M3R development is not warranted due to improved technology that might limit the need for business travel and engagement

> *"We now know that most business can be effectively executed remotely using technology. The technology for business connection will only increase reducing the need for business travel."*

Whilst this statement does not appear to have an overt link to APAM's lease, it does contribute to this issue in relation to the need for airports to ensure anticipated growth and demand needs are met.

A2.4 M3R MDP References

Relevant information about the lease between APAM and the Commonwealth is found in Chapter A1 of the M3R MDP.

A2.5 APAM Position

APAM purchased the airport lease from the Commonwealth and is responsible for managing the airport under a 50-year lease with an option to extend the lease for another 49 years (to 2096).

APAM, as Melbourne Airport's lessee, is obligated to develop the site to a standard expected of an international airport through the application of good business practice, having regard to actual and anticipated future growth in demand.

Monitoring an airport's effectiveness in fulfilling certain requirements of the lease such as those in relation to meeting growth and demand can be done through review of the development and delivery of an airport's Master Plan and MDPs. An annual lease review undertaken by the

Department of Infrastructure, Transport, Regional Development, Communications and the Arts also ensures APAM complies with the requirements of its lease.

APAM acknowledges some submissions claim that profit is being placed before social well-being. It is essential for APAM, as a private company to continue to make grow financially to develop and meet growth and demand for shareholders and the wider community. This ability in turn ensures APAM is able to meet its lease requirements to develop the Airport at its own cost and expense having regard to actual and anticipated future growth and the quality and standards expected of an airport in Australia. It is also a vital element in ensuring strong contributions to the community can continue to be made such as through programs such as Western Chances, jobs summits and our commitment to the TAKE2 Climate Change Pledge. Australia Pacific Airports Corporation (APAC), the operator of Melbourne Airport is committed to operating in a way that is ethical, environmentally friendly, socially responsible and enhances travellers' experiences. To progress this commitment, APAM adopted its Environment, Social and Governance (ESG) strategy in early 2022 which establishes the key targets and initiatives to achieve these commitments. Further information on the ESG strategy can be found under Issues A5 and A6 of this report.

There is a belief that early agreements between the Commonwealth via the Federal Airports Corporate and State Government are still binding. This issue is discussed in more detail in A3. It is important to acknowledge that the Commonwealth granted long-term leases to all Commonwealth owned airports, including Melbourne Airport. The lease agreement between the Commonwealth and APAM provides one of the key guiding documents for management of the airport, including development to meet future demand. The development of M3R does not alter the original lease between the Commonwealth and APAM. Rather, it fulfils the requirements of the lease and the Airports Act.

The assumption that flying for business use has been reduced because of COVID-19 has not played out given APAM's experience post lockdown. Not only has flying for business resumed so too has the demand for holiday travel. Given one of the Commonwealth's key lease and regulatory requirements is to ensure anticipated growth and demand are met to an international standard, APAM is committed to addressing this requirement through projects including M3R.

A2.6 Changes to Preliminary Draft M3R MDP

No changes are considered to be required to the M3R MDP as a result of the submissions made with regard to the airport lease.

A2.7 Summary and Conclusion

This issue focuses on APAM's obligations with regard to the airport lease. After review of the issues raised in submissions, APAM considers that the M3R MDP appropriately addresses the substance of the issues raised and therefore no amendments to the M3R MDP document are deemed required.

A3 Historical Melbourne Airport Strategies and Plans

A3.1 Summary of Issue

The predominant thread from submissions received on this issue focuses on whether APAM is entitled to expand the airport site given a community view that the Commonwealth made certain undertakings to limit off-site impacts on local communities when the airport was first developed. In addition, many submitters feel that the Melbourne Airport Strategy 1990 (MAS) proposed capacity limits on the site and that these should be upheld as the MAS is claimed to still be a current and valid document.

A3.2 Number and Types of Submissions

163 submissions contain reference to the 'Melbourne Airport Strategies and Plans' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities

A3.3 Discussion of Submissions

Submissions about the MAS and other Melbourne Airport plans tend to focus on the understanding or belief that APAM has not met or has deviated from what is considered to have been an agreed set of requirements for the long-term development of Melbourne Airport.

Many submitters feel that the MAS is still a current plan that provides an "agreed" position about the ultimate capacity of flights for Melbourne Airport and that the forecasts presented in the M3R do not adhere to this plan. The following statements have been sourced from submissions and demonstrate this position:

> *"I am concerned about Melbourne Airport's decision to IGNORE the original 1990 agreement between the Federal Government and the people of Victoria and increase its planned capacity from the original 37 million annual passengers to 68-80 million per year by 2046. I believe this will have an unacceptable impact on surrounding existing land use."*
>
> *"Send FOUR times the planes over Melbourne's suburbs originally planned and committed to by the Federal government in the 1990 Environmental Impact Statement policy document, in order to double airport capacity"*
>
> *"The MAS EIS 1990 agreement stated the ultimate 2050 capacity of Melbourne Airport would be 37 Million passengers per annum. This capacity was met pre Covid 2019. Now Melbourne Airport forecast doubling this passenger movement moving forward."*
>
> *"I have lived in the area for over 40 years and recall that Melbourne Airport originally obtained permission to operate and plan its future on the provision that neighbouring communities' health and welfare were not impacted. The original 1990 (and still binding) contract between the Federal and State Government and the Victorian People was carefully crafted to ensure the people of Keilor, Gladstone Park and Bulla were protected from aircraft noise. The second runway was to be used only for lighter and quieter aircraft in busy periods and mainly to the north."*

The following example received from the Melbourne Airport Community Action Group was submitted under the M3R section of the submission portal but also references MP22:

> *"The 1990 MAS noise forecasts were touted as 'worst case scenario' and assurances were made that the noise footprint was expected to shrink rather than grow. Initially this seemed to be the case. According to the 1998 Master Plan, when the ultimate capacity of the airport quietly grew from 320,000 aircraft movements per year to 370,000, the number of dwellings above 20 ANEF shrank to 1862, although the number within the 25-30 ANEF more than tripled from 253 to 983 dwellings. Since then, the 'ultimate' capacity has grown with each new Master Plan and is now 68% higher than when the EIS was agreed to. The noise contours have also grown beyond what was agreed to in the 1990 EIS."*

The submission from the Town and Country Planning Association (TCPA) states:

> *"The history of the MAS was clearly expressed in the Master Plan (Section 4.1.1, p63). However, the TCPA was surprised and understandably disappointed that the Major Development Plan asserts that the master plan "supersedes" the MAS. (Section A3.3.2, p76). "…However, the MAS is no longer the relevant planning document for the airport, being superseded by subsequent Master Plans prepared under the Airports Act."*

Some submissions demonstrate that people have done and continue to interpret airport plans in a myriad of ways. Such diversity in interpretation can be seen in comments made in submissions that particularly focus on issues such as airport growth. The following extracts provide a range of examples within this category including:

> *"Furthermore, my understanding is that there were agreements in place that runways were never to be directed over Keilor."*

The Keilor Residents and Rate Payers Association members contributed a range of comments with consistent wording, such as:

> *"Assurances were given by the Commonwealth Government to the City of Keilor in the early planning stages (circa 1960) that aircraft would not fly over Keilor. How can Melbourne Airport today ignore this assurance."*

> *"The Airports Act allows that a master plan can supersede an earlier master plan approved under the Act, but it does not provide for a master plan to supersede a document prepared under another piece of Commonwealth legislation or indeed the conditions attached to any related approval."*

> *"Why can a private company ignore assurances given back in the 1960's that aircraft would not fly over Keilor."*

The Keilor Historical Society submitted:

> *"One other history items it is quoted that there are lines in the Melways for these runways to happen. Please note Melways was designed as a street directory not a planning document. It did not mean proposals were factual and definite. The proposal for a freeway in Keilor East never happened and there are lots of other examples throughout Melbourne in particular."*

A small number of submissions provided supportive responses to the development of M3R within the context of planning for the airport since 1990.

The TCPA submitted the following:

> *"The Victorian Government has taken significant steps to safeguard airports and ensure that planning for and around airports considers the potential safety and amenity impacts on surrounding communities, integration with Victoria's land based transport network and protection of airport operations.*

[redacted]

[redacted]

Another individual submitter provided the following:

"Thank you for your recent letter on the proposed new runway at Melbourne. I attach some info from material dated 1990, in regard to the New runways impact statement. Surely it is time we just got on and built them!!"

Other submissions highlighted the challenges for some communities and other stakeholders to keep abreast of planning updates and changes for important assets such as airports. The following quotes demonstrate this situation.

"When we purchased our home in Keilor in 2013 we closely examined all planning details for the Melbourne Airport and likely impacts over the next 10-20 years. It was clear from the Master Planning that a planned third runway would be aligned East-West, not North-South. Indeed the 2013 Master Plan indicated that "the East-West runway had a higher capacity and was thus the preferred nomination for Melbourne Airports third runway" (A3.3.3). Hence, we were assured to proceed with our purchase in 2013."

"There is no discussion on how the Master Plan or plans for Melbourne Airport have changed over time nor how any issues previously raised, documented, and consulted with the community have evolved or been addressed with this revised strategy."

"You must recognise that development in Keilor has been allowed to grow as plans for Melbourne Airport have also progressively changed as well as the regulatory framework around."

"When they built Tullamarine airport there was no talk about a 3rd runway, in fact they were talking about a green space where no houses would be built so that people didn't have to put up with the noise and live under a runway."

"Between 2000-2019 the number of passengers passing through Melbourne Airport have more than doubled from 16 Mil. to over 37 Mil. Melbourne Airport was already reaching capacity in 2019 and will have exceeded by 2026. Melbourne Airport has forecast numbers will grow to 76 mil. by 2042 Response In 1997 the leaseholders of Melbourne airport paid a once off fee of $1.3 Billion on a 50 year lease for an airport with a planned capacity of 37 million passengers p.a. anticipated by 2050. In 2019 Melbourne airport reached their 37 million passengers they paid for in 1997, 28 years earlier than promised. Melbourne Airport want to change a two-runway airport to double airport passenger capacity which will double the size of the airport lease actually paid for."

A3.4 M3R MDP References

Chapter A1 of the M3R MDP provides a concise narrative in line with the subjects that were raised in submissions to this issue. Specifically, this Chapter discusses the planning requirements and assumptions for the M3R as well as why a new Master Plan is required to replace the 2018 Master Plan due the change in orientation of the proposed third runway.

Chapter A3, Section A3.3.2, of the MDP sets out the history of developing runway options and early planning documents, including the MAS.

Chapter B2 of the MDP includes a comprehensive discussion of relevant Melbourne Airport strategies and plans, including the MAS. In relation to the MAS it states:

"It is noted that the Airports Act was enacted following the approval of the MAS and requires Commonwealth- regulated airports, including Melbourne Airport, to prepare a Master Plan every five years to establish the strategic direction of the airport. As such, the MAS/EIS has been superseded by the current Melbourne Airport Master Plan and is not a binding document under the Airports Act. It is acknowledged that the MAS is a policy guideline within PPF clause 18.04-1R, alongside the Master Plan and NASF.*

For clarity, the relevant strategic document foreshadowing the development of Melbourne Airport at any point in time is the current Melbourne Airport Master Plan."

*Planning Policy Framework

A3.5 APAM Position

The Melbourne Airport site has a long history of planning for constraint free operations dating back to its inception. All planning requirements and associated documents have naturally led to the current Master Plan 2022 approved under the Airports Act 1996 (the Act). The inherent requirements of the Act are to ensure the efficient and economic development of the airport to meet civil aviation needs.

There is a misconception amongst some in the community that the MAS document developed in 1990 is still the primary current airport planning document. The MAS document was jointly prepared by the Commonwealth Federal Airports Corporation (FAC) and State Government. Given the following statement within the executive summary of the MAS that states the purpose of the plan was to "provide the foundation and the guidelines for planning all aviation activity and related surface access and land use development through to the middle of the next century", it is clear how many stakeholders hold to the primacy of the MAS.

Between 1997 and 2003 Commonwealth owned airports, including Melbourne Airport, were granted long-term leases to operate and develop. Prior to this, the FAC owned and managed the airports. Both the Airports Act and the individual airport leases now define the planning framework that airports must adhere to. As part of this framework, Melbourne Airport, and all other leased federal airports, are required to prepare a Master Plan that incorporates an Environment Strategy.

Whilst the key features of the MAS have provided the basis of every long-term plan / Master Plan for Melbourne Airport since 1990, the requirement for Master Plans every 5 years in effect supersedes the role of the MAS. As noted in the 1998 Master Plan (the first for Melbourne Airport), the 1990 MAS was used as the foundation of the 1998 Master Plan. The 1998 Master Plan also provides commentary on the changes between the 1990 MAS and the 1998 Master Plan (such as the changes to Aviation Policy introduced by the Commonwealth Government in 1992).

The Master Plan 2022 was approved by the responsible Minister on 14 November 2022 and contains a section describing the updates and changes that have been made between the 2018 and 2022 Master Plans. APAM notes that releasing both the preliminary draft Master Plan 2022 and M3R MDP concurrently elicited concerns from some submitters around the volume of material to get across. Whilst both documents cover, to differing extents, the changes between Master Plans (2018 and 2022), and the rationale behind such changes, APAM recognises that this may have been missed by some. However, APAM stands behind the decision to run public exhibition concurrently due to the inherent relationship between the two documents.

The Federal Government wrote to APAM in June 2017 confirming that the MAS is no longer a valid document given the legislative framework articulated by the Airports Act. Specifically, the letter stated:

"For clarity, the relevant strategic document foreshadowing the development of Melbourne Airport at any point in time, is the current Melbourne Airport Master Plan."

This means that Master Plan 2022 is considered the "current" Melbourne Airport Master Plan as it was formally approved by the Minister on 14 November 2022. M3R is entirely consistent with Master Plan 2022, as outlined earlier under Issue A1.

Note, submissions referencing the airspace components of the 1990 MAS are discussed within Theme D: Airspace and Aircraft Impacts.

A3.6 Changes to Preliminary Draft M3R MDP

APAM considers there is no need to amend the M3R MDP to further reflect information about the MAS 1990 document as this document has been superseded by successive Master Plans as per the requirements of the Airports Act which outlines the legislative planning framework for all leased federal airports. APAM notes the need to continue engagement with all stakeholders in furthering the M3R development and delivery as well as other key planning documents such as the Master Plan.

A3.7 Summary and Conclusion

This issue focused on APAM's position to develop the airport and the associated currency of plans and strategies developed to progress such activities. APAM has strived to present relevant airport planning information in a format that is current, comprehensive, and relatable. Continued engagement with all stakeholders is considered a vital element in delivering M3R and substantial work is underway to achieve this objective through a range of activities including community newsletters, community festivals, industry forums (including education and job sectors), translated information, partnerships, CACG and community pop-ups.

As part of the Supplementary Report for the 2022 Master Plan, APAM noted that it is exploring the idea of commissioning an independent literature review (possibly by a local university) to detail the planning history of the airport. If progressed this will be made publicly available.

A4 Forecasts and Growth

A4.1 Summary of Issue

A substantial share of submissions (~20%) commented on the forecasts and growth projections presented in Chapter A2 of the Major Development Plan (MDP). This included submissions both supporting and challenging the forecast growth, in the short and long term.

The timing of public exhibition, early in the recovery from COVID-19 shutdowns and associated downturn in aviation, was clearly a factor influencing many comments relating to the presented forecasts and growth.

All forecasts presented in the MDP are consistent with those in the approved Master Plan 2022 for Melbourne Airport.

It should be noted that the need for the project is covered separately in this report under Issue B1: Project Justification and Timing, while this issue (A4) addresses comments on the forecast passenger and movement growth.

A4.2 Number and Types of Submissions

456 submissions contain reference to the 'Forecasts and Growth' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government/LGAs:
    - Victorian State Government
    - Moreland City Council
    - City of Yarra
    - Brimbank City Council

- Hume City Council
- Hobsons Bay City Council
- Maribyrnong City Council

A4.3 Discussion of Submissions

Submissions were received both supporting and challenging the forecasts provided. Submissions on the forecast can generally be split into two groups: recovery from the COVID-19 downturn, and long-term growth forecasts.

The recovery from the COVID-19 downturn was discussed by submitters in both a positive and negative light. Some submissions from community members and businesses were optimistic and supportive of a rapid recovery of air travel. Examplar community submissions:

> *"Post Pandemic the demand for Air Travel will be unprecedented. In order for Victoria's economy to grow and thrive Melbourne Airport will need to expand its offering."*

> *"I think this will be a great project for Melbourne Airport and will certainly help with alleviating the capacity bottleneck that will undoubtedly re-surface once we, as part of the global aviation and tourism community, recover from the impacts of COVID-19."*

Many submissions proposed that air travel would either not recover or would recover more slowly than APAM's forecast suggested. This included submissions suggesting that the transition to remote and online working during the pandemic would result in reduced business travel demands. Quotes to this effect from community members include:

> *"COVID has made these projections look ambitious to say the least."*

> *"Our business has, like many others. undergone a dramatic shift in the way that we continue to carry out our day to day operations, such that both our internal business priorities and those of our clients largely negate the need to travel domestically post-pandemic."*

> *"post pandemic international travel will be much less compair with pre-pandemic."*

The Melbourne Airport Community Action Group (MACAG) said in their submission:

> *"It also seems rash to assume population growth and traffic on the Sydney to Melbourne air corridor, the second busiest air corridor in the world despite the relatively small populations of Sydney and Melbourne, will recover to pre-COVID levels and forecasts given the mounting pressure on corporations to develop genuine climate change policies to reduce their carbon footprints. COVID has proven we can adapt to distance meetings, and the climate crisis has shown that we must."*

The East Melbourne Group, citing a Bloomberg survey from early 2022, suggested that *"A significant portion of business-related travel is unlikely to occur as companies have adopted, Zoom, skype for many communications*".

Submissions referring to the long term often referenced geo-political factors, such as tensions between Australia and China (and the potential impact on tourism and education travel markets), and the ongoing war in Ukraine as reasons that demand would never recover. The East Melbourne Group stated "*Given the political tension that exist between China and Australia and that is not going to dissipate in the medium term and the destabilisation of the world by Russian and Chinese aggression, these estimates appear fundamentally flawed*".

Another submission from a community member expressed that the forecast was "*based on pre-pandemic and pre-Chinese diplomatic standoff figures*" and that "*air travel by overseas back-packers, Chinese tourists and students may have peaked in 2019 or may not recover to those levels for decades because of the changed economic and diplomatic outlook*"… "*The world may well be heading into a global recession not an expansion, in which case air travel can be expected to follow suit*".

Perceived uncertainty surrounding the forecast during the exhibition period also led members of the community to request more information about construction and commissioning timelines. Some also suggested that the forecast and associated triggers be reviewed or updated during the recovery period:

> *"Emerging Travel patterns need to be assessed c 2025"*
>
> *"The Master Plan mentions great uncertainty in when air traffic will return to pre covid levels and when a third runway will actually be required, "twenty years". Can a time line be given relative to actual aircraft movements, start construction date, runway operational date."*

A number of submissions made comment on growth of air travel and the associated emissions and impact on climate change. Some suggested that the growth of air travel should be restricted or even reduced in order to meet climate change targets:

> *"Please, no more runways. We need fewer flights, not more - haven't you heard about global heating? Expanding air travel is not the way to go."*
>
> *"Commercial air travel and transport is a death industry... We need to be scaling down this industry urgently, not expanding it."*

Submissions also commented on the forecast methodology, for example it was suggested that the forecast did not sufficiently address competitors:

> *"[The forecast ignores] competitor risks to airport passenger growth forecasts such as high speed rail".*

Some submissions also made general comments about the forecast, both positive and negative, including:

> *"Its flight demand assessment is delusional"*
>
> *"I think the project is optimistic and based on historical rather than future numbers"*
>
> *"Very concerned about the increase in noise & number of flights in the future."*
>
> *"Additional air traffic capacity is of course vital to a growing city"*
>
> *"Needed to support the growing population"*

The Qantas Group submission endorses APAM's alignment with industry expectations:

> *"…the key passenger and aircraft movement assumptions that underpin the MDP and are in broad agreement with the long-term projected growth rates".*

A4.4 M3R MDP References

Section A2.4 of the MDP details growth and forecast data relevant to M3R within the Melbourne Airport context. This includes information about methodology as well as the forecast outputs. An analysis of the impact of COVID-19 and the predicted recovery is also included in this section of the MDP.

Master Plan 2022 Part B7: Airport Growth Forecasts includes airport-wide forecasts. All forecasts presented in the MDP are consistent with those in the approved Master Plan for Melbourne Airport.

A4.5 APAM Position

The forecasts provided in section A2.4 of the MDP are based on established industry best practice and are underpinned by the latest information available at the time of publishing. They are consistent with the forecasts in Part B7 of the approved Melbourne Airport Master Plan 2022.

The methodology and an overview of the sources used in these forecasts are outlined in section A2.4.1.3. Many of these sources are commercially confidential and thus not appropriate to discuss within the MDP.

The MDP references 2026 as the opening year. It is acknowledged that this is the earliest timing at which the new runway could be opened, and that the requirement for the runway is triggered at 2026 forecast levels, based on the pre-COVID forecast. The demand and requirement for the new runway is discussed in further detail in section Issue B1: Project Justification and Timing of this supplementary report.

MDP forecasts were re-calibrated to reflect COVID-19 as a range alongside the original 2019 baseline forecast. They were developed in line with advice published by the Bureau of Infrastructure and Transport Research Economics (BITRE).

Since publication of the Preliminary Draft MDP passenger and movement numbers for financial year 2022 have become available. The graphs shown below highlight the FY22 actual results for passengers and aircraft movements relative to the COVID-19 ranges shown in Figure 23 and Figure 24 which were included in the Preliminary Draft MDP. FY22 actuals are in line with the high side of the forecast range, demonstrating that the forecast COVID recovery ranges included in the MDP are appropriate.

Figure 23: FY22 Actual passengers added to COVID-19 forecast range

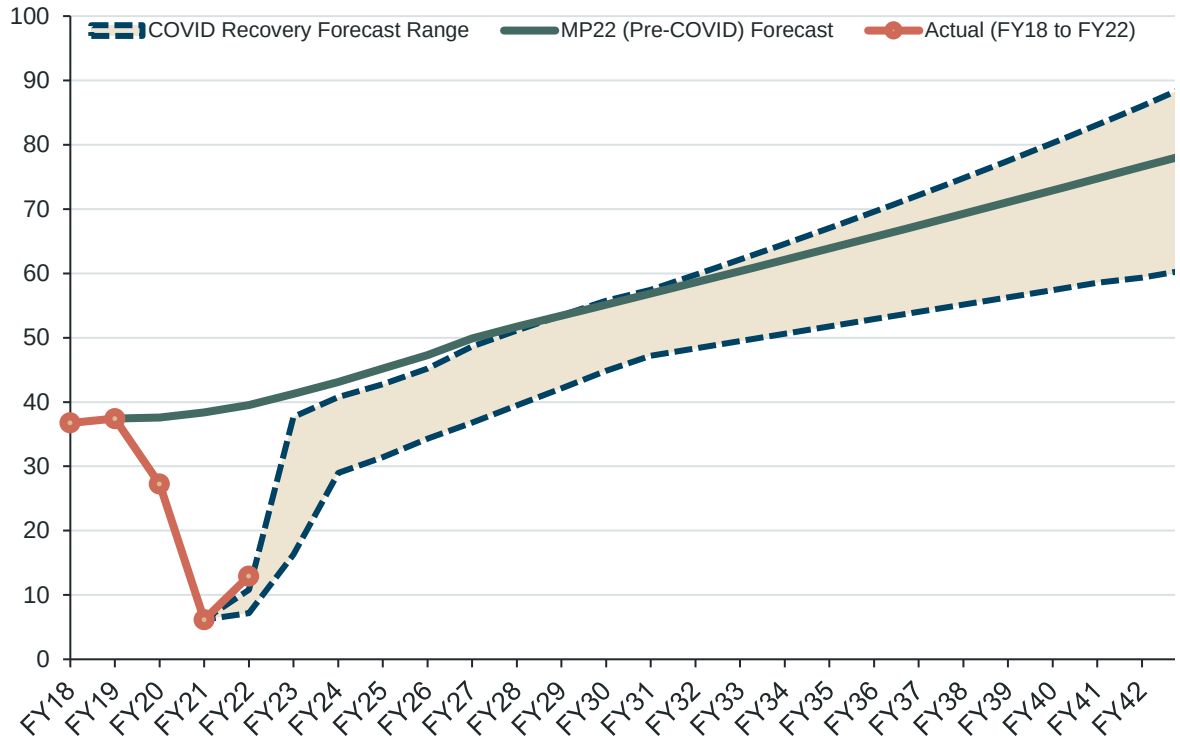
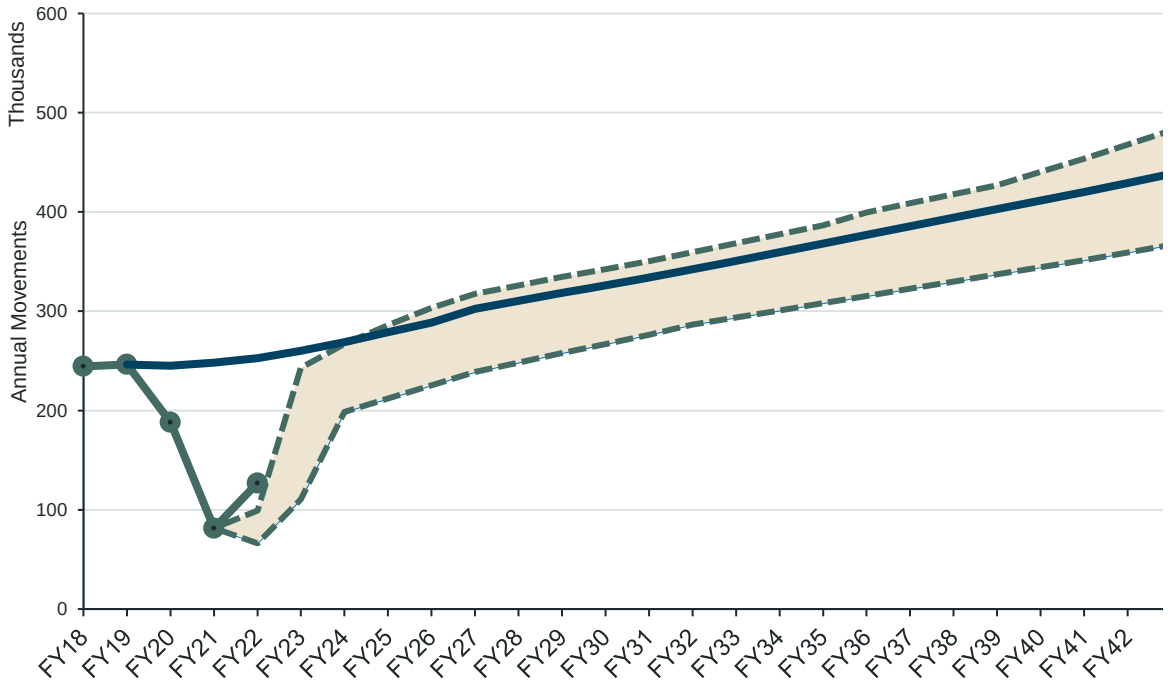


Figure 24: FY22 Actual aircraft movements added to COVID-19 forecast range

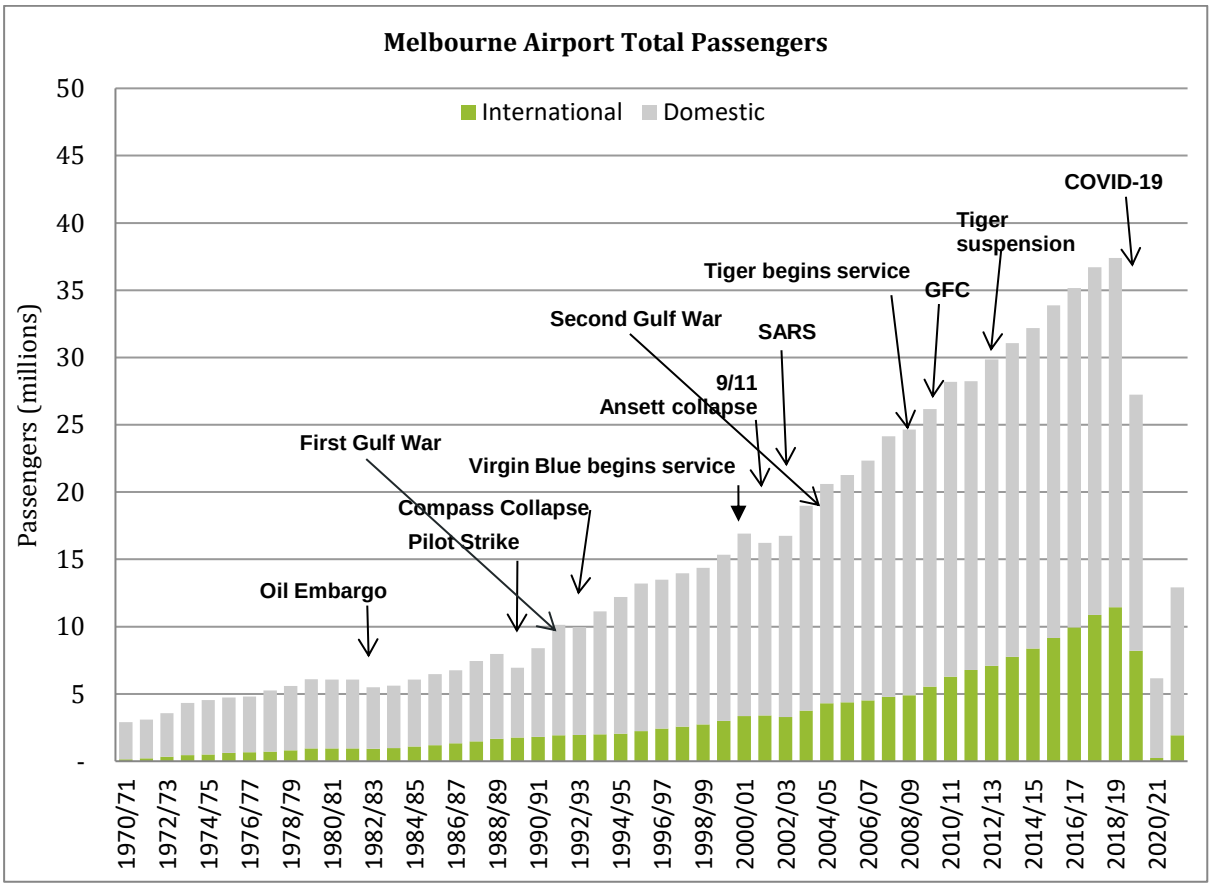


Forecasts will continue to be revised based on the best available data as the COVID-induced aviation downturn matures and demand evolves. Over time this will address current uncertainty about long-term effects on passenger behaviour.

It is not expected that current political tensions or the war in Ukraine will have a long-term impact on passenger numbers. Similar historical disruptions, illustrated by the graph in Figure 25, have not extensively or permanently damaged aviation growth. Global recession in the short term was

predicted in one submission, however should this eventuate it would also not be expected to have a significant impact on long-term growth - in line with experience of previous recessions and the Global Financial Crisis of 2007/08.

Figure 25: Historic recovery from past events impacting the aviation



Imposed constraints, particularly to address environmental concerns, were proposed by some submissions. Such artificial limitations have not been proposed by APAM and are not factored into M3R forecasting. Environmental impacts, and APAM's consideration of related submissions, are detailed in various other sections of the MDP and supplementary report.

Similar submissions suggested that alternatives to Melbourne Airport (such as high-speed rail and development of other airports) were also not applied to the forecast. However, these factors were considered along with other inputs to the forecasting process and are discussed further in the MDP Chapter A3: Options and Alternatives and the supplementary report Issue B2: Options and Alternatives.

A4.6 Changes to Preliminary Draft M3R MDP

No changes to the project haven been necessitated by submissions discussing forecasts and growth projections as presented in the Preliminary Draft.

A4.7 Summary and Conclusion

APAM has considered submissions related to the forecasts and growth presented in the MDP and does not believe that any changes to the MDP are required.

The forecasts presented in the MDP are consistent with those in the approved Melbourne Airport Master Plan 2022.

APAM acknowledges that a number of factors including the recovery from the COVID-19 pandemic and various geopolitical situations created a perception for the public of uncertainty in the forecast. Passenger and aircraft movement numbers since publication are consistent with forecast range provided in the Preliminary Draft MDP.

A5 Australian Climate Change Policy

A5.1 Summary of Issue

Many submissions expressed concern about Melbourne Airport's Third Runway (M3R) and the potential effects it will have on climate change. These were based around the emissions from increased air traffic movements, rather than the construction of M3R or airport operations.

Some submissions referenced specific targets from various climate change committees and the Australian Government, asking about the Airport's plan to achieve these.

A5.2 Number and Types of Submissions

124 submissions contain reference to the 'Australian Climate Change policy' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (The Moonee Valley Branch of the Australian Greens, Hume City Council, Brimbank City Council, City of Yarra and Moreland City Council)

A5.3 Discussion of Submissions

Many submissions expressed concern about Melbourne Airport's Third Runway (M3R) and the potential effects it will have on climate change. Some submissions referenced specific targets and recommendations from the Paris Agreement, the Intergovernmental Panel on Climate Change (IPCC), the International Energy Agency (IEA), Climate Action 100+ and the UK Climate Change Committee. For example, various submissions included the following statements:

> *"The IPCC stated we must divest from fossil fuels immediately if we are to maintain a planet that can support life."*
>
> *"The IEA says we must stop developing new emissions sources."*
>
> *"Climate Action 100+, the world's largest investor led initiative on climate change, says that growth in air travel needs to be curtailed."*
>
> *"Lord Deben, the chair of the UK Climate Change Committee, which advises government, said in January 2022: "There is not any space for airport expansion.""*

Other matters raised included questions around the omission of Scope 3 emissions attributable to increased aircraft movements. Some submissions referenced the Australian Government stating:

> *"Our own federal government says it is aiming for emissions cuts of 26-28% by 2030, and most Australians are calling for more significant cuts.".*

Brimbank City Council requested further information on how APAM will become a model environmental leader in the rapid transition away from fossil fuels by having specific reference to short and medium-term targets and KPI's that are publicly available and consistent with Victoria's net-zero by 2050 legislated climate target.

City of Yarra referenced their own climate change plan stating:

> *"Council has a Climate Emergency Plan that seeks to substantially reduce the use of fossil fuels in its own operations and in community emissions, and it notes the anticipated vast increase in plane movement which would only cause further use of fossil fuels and further emissions with environmental impact.".*

APAM acknowledges Western Health's submission stating:

> *"It would be great to see, as part of any development approved, a commitment to carbon neutrality or reducing emissions as soon as possible and an aggressive market leading position taken by the Airport. All landside operations for example could be carbon neutral by 2030 etc.".*

APAM acknowledges Virgin Australia's submissions stating they are, along with other major airlines:

> *"…actively working towards a net zero target by 2050".*

They also acknowledged that Melbourne Airport has its own emissions reductions and broader sustainability targets.

A5.4 M3R MDP References

Chapter A7 Sustainability Framework includes sustainability objectives and issues to be managed for the design, construction, and operation of M3R.

Chapter B2 Land Use and Planning, provides a detailed assessment of the Commonwealth, Victorian and local planning, and environmental legislative requirements.

Chapter B13 addresses climate change and natural hazards in terms of the potential impact to the construction of M3R.

Chapter B11 addresses greenhouse gas emission challenges and targets in further detail. Emissions are further discussed in the Airport contributions to climate change issue (Issue F7).

A5.5 APAM Position

Melbourne Airport is located on Commonwealth land. The Commonwealth Airports Act 1996 and Environmental Protection and Biodiversity Conservation (EPBC) Act 1999 are the key pieces of legislation setting the regulatory framework for M3R. Consideration has also been given to relevant Victorian and local legislation including environmental planning instruments, policies and guidelines.

APAM notes that the APAC ESG strategy is consistent with Victoria's net-zero by 2050 legislated climate target and APAM is committed to meeting our commitments related to climate change. In response to the submissions, the APAC ESG Strategy includes clear and ambitious targets relating to the reduction of carbon emissions including an updated target of net zero Scope 1 and 2 emissions (emissions within our control) by 2025. This is the most ambitious carbon emissions reduction plan of any capital city airport in Australia. This will be achieved by meeting half of Melbourne Airport's energy needs through onsite solar generation by 2030, securing green energy from the Victorian grid via a Green Power Purchasing Agreement (PPA), and reducing energy consumption through continued energy efficiency programs in terminals across the airport estate.

In response to the submissions that raise concerns about increased greenhouse gas emissions, it is important to note that Chapter B11 of the MDP assesses the increase as minimal in a broader

Australian context. There are efficiency benefits of limiting aircraft taxi time, and APAM acknowledges the need to balance emissions with efficiency and economic benefits. Greenhouse gas emissions have been further addressed in the Airport Contribution to Climate Change Issue F7. Comments regarding broader scale sustainability are addressed in Issue A6.

In relation to the submissions that asks about the omission of Scope 3 emissions, the Airports Council International Guidance Manual for Airport GHG Emissions Management (2009) was adopted as the most relevant approach for calculating airport emissions and is used internationally. This guidance states that an airport operator can choose to include "either the LTO cycle or whole of departing flight emissions" (page 8). No other guidance is provided regarding flight emissions reporting by airports in Commonwealth or State legislation in Australia.

Melbourne Airport has reported LTO emissions (to mixing height ~3,000 ft) based on results of the AEDT emissions model, as approved by EPA Victoria. This aligns with the air quality chapter (B10) methodology, to ensure consistency. The AEDT model does not estimate whole-flight emissions.

APAM notes it does not have operational control of whole of flight emissions. However, APAM recognises the significance of these aspects and works continuously with airlines and stakeholders to pursue positive environmental outcomes in relation to these matters. APAM is committed to developing a scope 3 strategy as nominated in the APAC ESG strategy. APAM is also working with our tenants, supply chain and airline partners on reducing our Scope 3 emissions.

Furthermore, APAM has achieved Level 2 status under the Airport Carbon Accreditation (ACA) Scheme of Airports Council International. This recognises APAM’s commitment to reducing its impacts on the environment, and to managing and reducing carbon emissions. The scheme recognises improved performance by airports in carbon and energy management; and encourages the development of management practices that support the principles of carbon neutrality. APAM is actively working to achieve ACA Level 3 status which involves incorporation of third-party providers and suppliers in an expanded reduction strategy which also captures Scope 3 emissions. Achievement of this level requires Melbourne Airport to account for the Landing and Take-Off (LTO) cycle of in and out-bound aircrafts.

A5.6 Changes to Preliminary Draft M3R MDP

Chapter A7 Section 7.4, Chapter E2 Section E2.4, and Chapter B2 Section 2.3 of the MDP have been updated to include reference to the APAC ESG Strategy. The ESG Strategy was adopted in February 2022, which was too late to be included in the Preliminary Draft MDP.

Chapter A7 Section 7.4.2 has been updated to refer to the Victorian Government’s climate change strategy and climate change adaptation plans which were released too late to be included in the Preliminary Draft MDP.

No further amendments relating to Australian Climate Change Policy are proposed to the MDP.

A5.7 Summary and Conclusion

APAM have read and reviewed all submissions relevant to Australian Climate Change Policy. Melbourne Airport is situated on Commonwealth Land, therefore the key pieces of legislation for M3R are the Commonwealth Airports Act 1996 and the EPBC Act 1999. As discussed in A5.5, consideration has still been given to relevant Victorian and local government’s legislation.

Melbourne Airport has achieved Level 2 status under the Airport Carbon Accreditation Scheme of Airports Council International and is actively working towards achieving Level 3. Melbourne Airport is committed to meeting our commitments related to climate change. In response to the submissions, the APAC ESG Strategy includes clear and ambitious targets relating to the reduction of carbon emissions including an updated target of net zero Scope 1 and 2 emissions (emissions

within our control) by 2025. This is the most ambitious carbon emissions reduction plan of any capital city airport in Australia.

Emissions directly attributable to aircraft are subject to different legislation and are outside the airport's direct operational control. However, APAM recognises the significance of these aspects and works continuously with airlines and stakeholders to pursue positive environmental outcomes in relation to these matters.

A6 Environmental Management Framework (inc. AES & Sustainability)

A6.1 Summary of Issue

This issue relates to the airport's Environmental Management Framework that will apply to managing the environmental impacts of M3R, including the Airport Environment Strategy and Sustainability.

Some submissions asked about APAM's Environment Management Framework (EMF). Submissions rather generally enquired about independent reviews and compliance with regulatory guidelines, including questions about the application of new Environment Protection Act Victoria (the EP Act) and compliance with the General Environmental Duty (GED) under the EP Act.

Some of the submissions raised concerns about the airport's environmental sustainability with regard to runway development, road traffic to the airport and overall climate change impacts from increased emissions. The submissions included questions about access to the airport via rail, use of sustainable materials for runway construction, and sustainable fuels.

Other matters raised by submitters include alternatives to air travel and developing airports in other areas of Victoria such as Avalon Airport.

A6.2 Number and Types of Submissions

54 submissions contain reference to the 'Environmental Management Framework' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Western Health, Maribyrnong City Council, Western Health, Hume City Council, Brimbank City Council, Victorian State Government and Moreland City Council)

A6.3 Discussion of Submissions

[redacted]

[redacted]

Some of the submissions raised concerns about the airport's environmental sustainability with regard to runway development, road traffic to the airport and overall climate change impacts from increased emissions. Sustainability in terms of climate change and greenhouse gas emissions is

discussed in the Airport contributions to the climate change issue later in this report (Issue F7). The submissions included questions about future-proofing access to the airport via rail, use of sustainable materials for runway construction, and sustainable fuels. For example, submissions included the following statements:

> *"Alternates need to be found, such as investing in more trains to run overnight between cities with cheaper tickets than currently available."*
>
> *"The project should be using materials made from recycled content."*
>
> *"Unlike most road travel, there are no other cleaner fuel alternatives. Developments in Biofuels or other technology for the aviation industry are premature and expensive."*

Yarra City Council (YCC) and Maribyrnong City Council (MCC) also suggest a high-speed rail should be established between Melbourne and Sydney. MCC stating:

> *"Alternatives to air travel must be examined, including a high-speed rail network linking cities on Australia's eastern and southern coast".*

Hume City Council (HCC) and Moreland City Council are supportive of APAM's goal "to be an environmental leader for transport and logistics sites in Australia" and are encouraged to see APAM have developed an Environmental Management Framework to ensure an environmental lens has been applied across the various functions of the airport.

A few submissions including the Greater Sunshine Community Alliance (GSCA) state their support for Brimbank councils' submission which requests to prioritise sustainability. There was some commentary from submissions related to sustainability not being treated as a core concern, and the limits of the airport policy as it does not relate to potential offsite impacts to the "*historical ambience beauty and village charm*" of Keilor. Other matters raised by submitters include developing airports in other areas of Victoria such as Avalon Airport and Melbourne's south-east to reduce potential impacts on liveability in Melbourne's north-west suburbs.

A6.4 M3R MDP References

Chapter A7 Sustainability Framework includes sustainability objectives and issues to be managed for the design, construction, and operation of M3R.

Chapter E2 addresses the EMF including sustainability. Section B2.3.4.5 details the Melbourne Airport Environment Strategy (AES).

Chapter B8 Surface Transport assesses the implications of the construction and operation of M3R on Melbourne Airport's surface transport network and off-airport arterial road network, including mitigation measures.

Chapter B2 addresses the need to comply with applicable legislation, including environmental protection legislation.

A6.5 APAM Position

Some submissions included commentary on the Environmental Management Framework to be implemented specifically as part of the proposed third runway development. Further detail on this is included in the Chapter E2 of the MDP. The Melbourne Airport EMF brings together all policies, procedures, regulations and management plans relevant to the airport to inform continuous improvement of environmental management. The EMF is one of the key mechanisms for ensuring commitments made in Melbourne Airport's Environment and Sustainability Policy, as well as regulatory and compliance obligations are met.

In response to the submissions relating to review and compliance monitoring (including Brimbank City Council's request for independent expert review), under the EMF environmental compliance is internally and externally monitored and reviewed on an ongoing basis to ensure it is in line with current regulatory guidelines. External reviews are conducted monthly, as well as annually, by the Commonwealth airport environment regulator. In addition, the Melbourne Airport Environmental Management System (EMS) is externally audited annually as part of maintaining ISO 14001 certification.

APAM understands its obligations in relation to 'General Environmental Duty' for on-airport activities. This requirement is outlined within Part 4 of the Airports (Environmental Protection) Regulations 1997. For those environmental aspects that also relate to the State jurisdiction the 'General Environmental Duty' under the Environmental Protection Act 2017 may apply and this is acknowledged by Melbourne Airport.

Environmental management of M3R construction and operational impacts will be undertaken in accordance with the new Melbourne Airport Environment Strategy (AES) and Environmental Management System. Specifically, M3R construction impacts will be managed through development and implementation of a Construction Environmental Management Plan (CEMP).

Regarding surface transport, an assessment has been completed in Chapter B8 of the MDP to understand the impact that increased transport activity will have on the performance of the internal and external road networks that serve Melbourne Airport. This assessment considers both the construction and operational phases of M3R. The assessment found that the overall difference between the Build and No Build scenarios is generally moderate (i.e. reduced road network performance of between 5 per cent and 20 per cent). A range of mitigation measures were identified and assessed, including a need to support further development of the proposed Melbourne Airport Rail link (to be undertaken independently of this Major Development Plan) and its potential to alleviate operational challenges. Off-airport road network performance and plans are further addressed in Theme E8 of this report.

In response to the submissions that raised potential for cleaner fuel alternatives and developing technology across the aviation industry, APAM notes that on 20 June 2022 the Australian Government announced Qantas and Airbus will invest a combined US$200 million to strengthen the sustainable aviation fuel industry in Australia. The Commonwealth Government has also announced a new Jet Zero Council to promote sustainable aviation fuels in Australia, as well as the establishment of a Net Zero Unit in the DITRDCA. Sustainable fuels cut greenhouse gas emissions by around 80 per cent compared to traditional fuels and are able to be used in existing engines without significant modification. Moving to sustainable fuels is the easiest way for the aviation sector to cut its emissions in the short to medium term, particularly for medium and long-haul flights. As outlined in the APAC ESG Strategy, APAM will continue to engage with tenants, supply chain, and airline partners on reducing our Scope 3 emissions.

Sustainability aspects related to aircraft flight and air traffic to and from Melbourne are outside of the scope of the Environment Strategy/EMF. However, APAM is committed to continue to work with all our stakeholders (including airlines) to improve sustainability across the sector. Alternative airport locations for development and expansion as well as development of a high-speed rail link is also outside of scope of the Environment Strategy/EMF and are further discussed in the Options and Alternatives issue (Issue B2) and Off-Airport Road Network Performance and Plans issue (Issue E8).

For sustainability management within our operational control, the key outcome of the Environment Strategy is ensuring the integration of sustainable practices across Melbourne Airport's ongoing operations and new development projects. This is further discussed in Chapter A7 of the MDP.

In relation to the submissions stating that sustainability is not treated as a 'core concern' it is noted that the following documents have been approved by APAM since the development of the MDP:

- Melbourne Airport Environment and Sustainability Policy, March 2022
- APAC Environmental, Social and Governance (ESG) Strategy, February 2022

The Environment and Sustainability Policy includes overarching commitments to sustainability to ensure it is a central part of how Melbourne Airport operates.

A6.6 Changes to Preliminary Draft M3R MDP

Chapter A7 Section 7.4, Chapter E2 Section E2.4, and Chapter B2 Section 2.3 of the MDP have been updated to include reference to the APAC ESG Strategy. The ESG Strategy was adopted in February 2022, which was too late to be included in the MDP.

[redacted]

No further amendments relating to Australian Climate Change Policy are proposed to the MDP.

A6.7 Summary and Conclusion

APAM has read and reviewed all submissions relevant to the Environmental Management Framework (EMF). The Melbourne Airport EMF brings together all policies, procedures, Regulations and management plans relevant to the airport to inform continuous improvement of environmental management. The EMF is one of the key mechanisms for ensuring commitments made in Melbourne Airport's Environment and Sustainability Policy, as well as regulatory and compliance obligations are met.

Regarding review and compliance monitoring, external reviews are conducted monthly by the Commonwealth airport environment regulator. In addition, the Melbourne Airport Environmental Management System (EMS) is externally audited periodically as part of maintaining ISO 14001 certification.

Environmental management of M3R construction and operational impacts will be undertaken in accordance with the new Melbourne Airport Environment Strategy (AES) and Environmental Management System. The key outcome of the Environment Strategy is ensuring the integration of sustainable practices across Melbourne Airport's ongoing operations and new development projects. M3R construction impacts will be managed through development and implementation of a Construction Environmental Management Plan (CEMP).

Melbourne Airport will continue to engage with relevant stakeholders to support the development of the Melbourne Airport Rail link and also cleaner fuel alternatives to assist in reducing Scope 3 emissions (as outlined in the APAC ESG Strategy).

The following sustainability aspects are outside of the scope of the Environment Strategy/EMF; however, APAM is committed to work with all our stakeholders to improve sustainability across the sector. The below issues are addressed separately in the MDP supplementary report:

- Aircraft flight and air traffic to and from Melbourne Airport (Theme D4)
- Alternative airport locations for development (Theme B2)
- High-speed rail link between Melbourne and Sydney (Theme B2)

The Environment and Sustainability Policy includes overarching commitments to sustainability to ensure it is a central part of how Melbourne Airport operates. Furthermore, the ESG Strategy

identifies six ESG priorities which address the issues of highest importance to APAM, it's stakeholders and the community. These priorities are carbon emissions, waste, PFAS and water quality, diversity and inclusion, First Nations, and sustainable procurement. The ESG Strategy includes specific targets and key initiatives related to each of these priority areas.

This includes the continued integration of solar energy and alternative energy solutions such as hydrogen fuel and vehicle electrification charging stations. APAM's commitments to alternative energy solutions are further outlined in the APAC ESG Strategy. Recent examples of this commitment include the construction of a 12MW solar farm at Oaklands Junction, and planning for a second on-airport solar farm with a minimum 7.5MW capacity expected to commence construction in FY24.

A7 National Airports Safeguarding Framework (NASF) Guidelines

A7.1 Summary of Issue

Various submissions raise the issue of airport safeguarding, including how this is achieved and its impacts on surrounding land and communities. This issue essentially revolves around the implementation of the National Airports Safeguarding Framework (NASF) and its associated guidelines.

There is a diverse range of views relating to this issue; both positive and negative, and there are also broad-based comments while others are very technical. Some submissions question or object to airport safeguarding measures including, for example, the ANEF system, N contours, wildlife buffer zones and public safety areas.

Whilst some submissions support the safeguarding of Melbourne Airport and the protection of its curfew free status, others object to the restrictions and implications of the safeguarding measures on land use and development.

A number of submissions highlight perceived deficiencies or problems with how airport safeguarding measures are determined and applied. Others express the view that the airport safeguarding measures are lopsided or unbalanced, in favour of the airport, and do not consider the community enough.

The submissions concerning this issue largely relate to the following specific aspects of NASF and its guidelines:

- Noise contours and associated development restrictions (NASF Guideline A)
- Wildlife strike buffers and associated implications for bird life around the airport (NASF Guideline C)
- Prescribed airspace and associated development height restrictions (NASF Guideline F)
- Public safety areas and associated land use implications (NASF Guideline I).

It is noted that many of the submissions that raise these matters do not explicitly refer to NASF or the associated guidelines, but they raise airport safeguarding issues that are covered and managed by NASF and one or more of the NASF guidelines.

It is also noted that related issues such as aircraft noise modelling methodology, noise projections, social impacts and compensation are dealt with separately in this report under Theme D: Airspace and Aircraft Impacts and Theme E: Community Impacts.

A7.2 Number and Types of Submissions

136 submissions contain reference to the 'National Airports Safeguarding Framework (NASF) Guidelines' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government:
  - Victorian Government
  - Brimbank City Council
  - Maribyrnong City Council
  - Moorabool Shire Council

A7.3 Discussion of Submissions

This issue is broadly encapsulated by the following comment in a community submission:

> *"APAC continues to assert it is congested and requires additional runways and road infrastructure to accommodate forecast aviation growth. This is inflexible planning that is not taking into account the existing residential development surrounding Melbourne Airport. Airport development on leased land should be conditional on the achievement of land use controls which are consistent with the NASF principles."*

Balancing airport and community safeguarding

In relation to balancing safeguarding of the airport and the community, an example is the East Melbourne Group's submission which states:

> *"How are you balancing the need for Safeguarding of the airport with safeguarding a community from the impact of the airport and aircraft noise and pollution. What takes precedence?*
>
> *Under safeguarding and under the other objectives there is no reference to safeguarding the community from the airport's operation. Why should we not conclude from the absence of such an objective that the Airport places no real priority on protecting the community?"*

The CACG submission states:

> *"CACG recognises 'safeguarding' is regarded as protecting MA from community impacts. But how is this balanced with protecting the community?"*

The Brimbank City Council's submission states:

> *"The measures to safeguard and maintain, protect and support Melbourne Airport's ongoing operations must be balanced with the needs of communities surrounding the airport."*

However, the Town & Country Planning Association's submission states:

> *"The Victorian Government has taken significant steps to safeguard airports and ensure that planning for and around airports considers the potential safety and amenity impacts on surrounding communities, integration with Victoria's land based transport network and protection of airport operations."*

The City of Hume's submission states:

> *"Council supports the long-term safeguarding of Melbourne Airport to maintain the social and economic benefits the Airport offers Hume residents."*

Noise Contours (NASF Guideline A)

This issue relates to the use of noise contours as an airport safeguarding measure including, for example, the ANEF system and N contours.

In relation to noise contours, the MACAG submission states:

> *"By way of background, aircraft noise modelling is used to generate ANEF and N contours which, in turn, form the basis of land use planning to safeguard Australian airport, and for informing the community of the noise exposure they will experience. If the noise forecasts are not accurate, safeguarding cannot be guaranteed and community health and education will be compromised."*

The MACAG submission then goes on to identify various inaccuracies or deficiencies with the ANEF and N contour systems, and further states:

> *"The importance of accurately predicting noise exposure cannot be overstated. Aircraft noise modelling is used to generate ANEF and N contours. ANEF contours establish the boundaries for planning overlays to provide guidance to local Councils on where certain types of building can suitably be located. Areas at 25 ANEF and above are considered unacceptable for residential purposes, and 20 ANEF and above conditionally acceptable, based on the percent of residents who are seriously and moderately affected by these levels of aircraft noise exposure. As stated in the section on Chapter B2 above, APAM have acknowledged that the National Airport Safeguarding Framework has failed in its purpose. If noise forecasts, and as a result land use planning contours, do not accurately reflect actually noise exposure, this will continue to be the case."*

Various other submissions raise issues with the basis of the noise contours in the MDP and/or the planning implications of the noise contours. For example, the City of Maribyrnong's submission states:

> *"The Airport says in the masterplan and the M3R development plan that it will continue to advocate for the use of N- contours in planning for the environs of the Airport. Council understands the intent of planning restrictions in safeguarding of the extended airport facilities. However this should not stymie Council's and the State Government's efforts to revitalise the inner west and to limit urban sprawl by replacing redundant industrial land with more viable uses, including residential."*

The UDIA's submission states:

> *"We are also concerned about the wide ranging impacts of the third runway, especially the proposed north-south orientation, on the following:*
>
> *The N-Contours, which will significantly expand and encompass more areas designated for residential development and urban renewal;*
>
> *The type of development permitted, including sensitive (residential) uses."*

Moorabool Shire Council's submission states:

> *"The Preliminary Draft Melbourne Airport Masterplan 2022 (MP22) and Third Runway Major Development Plan (M3R) should be amended to provide guidance as to how the proposed Planning Policy Framework Clause 18.04-1S should be interpreted and applied in relation to rezoning land for sensitive uses outside the Urban Growth Boundary. In particular, guidance should be provided regarding the specific N Contour noise limits that should be considered (e.g. N70 daytime and N60 night time)."*

A particular issue raised in some submissions is the lack of recognition of the World Health Organisation's noise research and recommendations in the noise modelling undertaken for the M3R MDP. For example, the Town and Country Planning Association (TCPA) states in its submission:

> *"Some TCPA members are also members of the Victorian Transport Action Group (VTAG) and have drawn our attention to a recent paper, Adverse Effects of Melbourne Airport's Runway Development on Community Health, (28 March 2022). The paper outlines the 2018 findings of various studies undertaken by the World Health Organisation (WHO) identifying personal health impacts beyond sleep disturbance and general distraction used in the current Australian Noise Exposure Forecast (ANEF) System for modelling future aircraft noise impacts.*
>
> *The newly identified impacts include noise distress and delay in cognitive development and the WHO has proposed critical noise levels (dB) that are lower than currently used to address transport related noise. VTAG notes that these are currently not addressed in the National Airports Safeguarding Framework (NASF) or its Guideline A – Measures for Managing Impacts of Aircraft Noise and recommends that they should now be addressed."*

The TCPA's submission further states:

> *"The TCPA supports the VTAG recommendation to review NASF Guideline A to include personal impacts identified by the WHO and recommends that Melbourne Airport also advocate for such a review."*

The WHO guideline is also a significant issue raised in the Brimbank City Council's submission (amongst others) which states:

> *"Council's principal concern with the Master Plan and the MDP is that the documents ignore world's best practice regarding noise and its impacts on public health. The WHO Noise Guidance highlights noise metrics and the impact on human health when exceeded, demonstrating that the current approach to airport planning is inadequate and out of date. Notably, the ANEF metric was intended to guide planning outcomes but is not a measure of harm from noise. Recent research around noise harm identifies that noise impacts are occurring at a lesser metric i.e. ANEF10, as opposed to the current accepted metric ANEF20. As is outlined later in this submission, the Master Plan and MDP need to be reviewed to consider and respond to contemporary research and best practice."*

The KRRA submission supports the use of N contours, stating:

> *"The use if the N-Contours, which defines the number of aircraft events which exceed a defined noise level threshold, would appear to be a more comprehensive metric to use for planning. KRRA encourage its adoption. Noise exposure is cumulative, and this approach is more in line with industrial legislation in factories."*

[redacted]

Wildlife Buffers (NASF Guideline C)

This issue essentially relates to managing the risk of wildlife strikes in the vicinity of Melbourne Airport. A small number of submissions have raised concern about the effect of the relevant wildlife hazard management requirements on birds in the vicinity of the airport.

For example, one community submission states:

> *"Brimbank Park and Kulin Wetlands is a significant Bird Sanctuary with more than 120 different bird species many of which are birds of prey. The ICAO recommends the mitigation of birds within 3, 8 and 13 km radius of an airport because of bird strikes. Melbourne Airport will use third parties to control bird strikes off airport grounds. This is a condition of their safety agreements with the ICAO."*

Another community submissions states:

> *"In line with International Safety Regulations many of the birds in Brimbank Park will be culled and this will continue as other birds move into the area."*

It is noted that the wider issue of impacts on ecology is dealt with separately later in this report under the Community Impacts and Environmental Impacts themes.

Prescribed Airspace (NASF Guideline F)

This issue relates to the implementation of Melbourne Airport's airspace protection surfaces (OLS and PANS-OPS) also known as prescribed airspace. Prescribed airspace can have implications for development opportunities around the airport.

In this regard, a submission from a property development business states:

> *"The proposed north-south orientation of the third runway will significantly impact the development potential of land within the City of Melbourne.*
>
> *The impacts will both be direct, through the new proposed flight paths to and from Melbourne airport, and indirect through changes required to Essendon Airport flight procedures to accommodate the new Melbourne Airport flight paths.*
>
> *…*
>
> *The future investment and development potential within City of Melbourne will be significantly reduced by the direct and indirect impacts of the new runway."*

The UDIA's submission states:

> *"We are also concerned about the wide ranging impacts of the third runway, especially the proposed north-south orientation, on the following:*

Curtailed development potential within City of Melbourne due to reduced maximum development heights as a result of possible future additional flight paths towards the city."

The Brimbank City Council submission states:

"The Obstacle Limitation Surfaces (OLS) are a series of surfaces that set the height limits of objects around an aerodrome. Objects that project through the OLS become obstacles.

The assessment of planning permits and the appropriate regard to OLS would be assisted by the development of an overlay to ensure the appropriate consideration."

The City of Maribyrnong submission states:

"Introducing a regional policy into the Victoria Planning Provisions which defines the area affected by the Melbourne Airport OLS and the circumstances (such as proposed building height) in which Melbourne Airport should be asked to advise on risks to the OLS from proposed buildings and works that are the subject of a planning scheme amendment and/or planning permit.

Supporting a policy with a practice note on identifying location where proposed buildings and works, lighting and plumes may intrude into the OLS, and procedures for addressing this risk.

Limiting the policy and procedures to high risk proposals. There should be no need for routine consideration of risks in the outer areas of the OLS."

Public Safety Areas (NASF Guideline I)

This issue relates to the Public Safety Areas (PSAs) identified in the MDP, and concerns about their implementation and effect on the properties included within their boundaries.

In relation to PSAs, Brimbank City Council's submission states that APAM should:

"Accurately identify all properties within the Public Safety area (PSA) within the Master Plan and the MDP, and made publicly available.

Undertake appropriate consultation with all owners of properties within the Public Safety Area (PSA), including face-to-face meetings and allow an adequate opportunity for their review and comment.

Introduce a scheme where properties within the PSA can be voluntarily offered by owners, at current market value, for purchase by Melbourne Airport / Commonwealth, or alternatively compensation is paid for the loss of property value.

Provide an appropriate opportunity for all owners with the PSA and the public to review and comment of the PSA purchase / compensation scheme, prior to its implementation."

The CACG submission states:

"The MDP shows that in 2026 the outer area of the southern Public Safety Area (PSA) is extending into some residential areas. What specific actions did MA take to notify affected properties that this is the case?"

A community member's submission states:

"The Public Safety Areas are yet another overlay limiting activity on my property and based on information provided to date may eliminate my ability to continue to live here."

Another community submission states:

> *"Table C5.2 – Public Safety Areas in the 1:100,000 is incompatible for use with recreation activities such as sport and entertainment, education, and community centres. Part C – Table C5.9 – Notes land impacted by PSA contours amounts to 36.93Ha – what is the strategy for managing these impacts? Part C – Figure C5.15 – Demonstrates that Keilor Sports Club is directly impacted by the 1:100,000 contour and the Keilor Precinct has "Major incompatibility" ".*

A7.4 M3R MDP References

NASF, the NASF guidelines and associated matters are dealt with in the following chapters of the MDP:

- Chapter B2: Land Use and Planning
- Chapter C2: Airspace Architecture and Capacity
- Chapter C3: Aircraft Noise Modelling Methodology
- Chapter C4: Aircraft Noise and Vibration
- Chapter C5: Airspace Hazards and Risks
- Chapter D4: Social Impact

In particular, Chapter B2: Land Use and Planning, Table B2.4, describes the compliance/consistency of the MDP against the requirements of each of the NASF guidelines.

Chapters C3: Aircraft Noise Modelling Methodology and C4: Aircraft Noise and Vibration deal with the details of the M3R noise contours (NASF Guideline A).

Chapter C5: Airspace Hazards and Risks provides technical detail relating to various other NASF matters including:

- Sections C5.3.3 and C5.6.2 deal with airspace protection and intrusions into operation airspace (NASF Guideline F)
- Sections C5.3.8 and C5.6.4 deal with wildlife strike risk (NASF Guideline C)
- Sections C5.3.9 and C5.6.9 deal with aircraft accidents and public safety impacts (NASF Guideline I).

NASF is also discussed in the Master Plan, particularly Part C15: Safeguarding Melbourne Airport, which includes sub-sections relating to each of the NASF guidelines and how they are implemented in the context of Melbourne Airport.

A7.5 APAM Position

The ability of an airport to operate effectively and efficiently fundamentally depends upon the activities taking place on the land around it. The long-term and effective safeguarding of Melbourne Airport is essential in preserving the social and economic benefits it provides to local communities, Melbourne and Victoria, and to protecting the surrounding neighbourhoods.

NASF

NASF provides a set of principles and guidelines that aim to:

- improve safety outcomes by ensuring aviation safety requirements are recognised in land use planning decisions;
- improve community amenity by minimising noise sensitive developments near airports, including through the use of additional noise metrics; and

- improve aircraft noise-disclosure mechanisms.

In relation to balancing airport and community safeguarding, it is noted that one of the NASF principles is:

> *"Principle 4. Land use planning processes should balance and protect both airport/aviation operations and community safety and amenity expectations."*

Under this principle it states:

> *"Governments at all levels will work cooperatively to ensure an appropriate balance is maintained between the social, economic and environmental needs of communities and the effective use of land on and around airports."*

The safeguarding of Melbourne Airport is governed and dictated by the NASF guidelines. The NASF guidelines were developed by the National Airport Safeguarding Advisory Group (NASAG) comprising Commonwealth, state and territory government planning and transport officials; the Department of Defence, the Civil Aviation Safety Authority (CASA), Airservices Australia, and the Australian Local Government Association (ALGA). Commonwealth, state and territory ministers agreed to the NASF principles and initially six guidelines at the Standing Council on Transport and Infrastructure (SCOTI) meeting on 18 May 2012. Since then, three additional NASF guidelines have been adopted (guidelines G, H and I).

NASF essentially applies to all Australian airports. APAM addresses and applies the NASF guidelines in its Master Plan for the airport, by preparing and including the necessary noise contours and other maps showing how the application of the guidelines affects surrounding areas (see Part C15 of the Master Plan: Safeguarding Melbourne Airport). All MDPs, including the M3R MDP, address NASF and its guidelines. The parameters of the various safeguarding contours/areas are dictated by the requirements of each relevant NASF guideline.

Pursuant to the SCOTI agreement, it is the responsibility of each state jurisdiction to implement NASF into their respective planning systems. In Victoria, NASF has been, or is being, given effect for off-airport land use planning as discussed below.

<u>Off-Airport Planning</u>

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[redacted]

[redacted]

[redacted]

On-Airport Planning

APAM has extensive policies and procedures in place to ensure that on-airport development addresses all of the NASF requirements, as outlined in Section B2.3.4 and further supported through other specialist chapters of this MDP. In addition, Section 8.10 of the Master Plan outlines the development approval process which must be followed at Melbourne Airport, which includes a three-step approval process:

- Planning and Design Approval or MDP approval
- Airport-lessee Company Consent and Permission to Commence Works (PERCOW) from APAM
- Building Permit from the ABC in consultation with the AEO.

APAM has a set of planning and design guidelines for on-airport developments that must be considered and addressed to obtain Planning and Design Approval or MDP approval. The guidelines require proponents to consider NASF and matters such as building heights, acoustic treatments, safety and security, use of non-reflective materials, illumination levels, landscaping, signage and environment. Potential impacts of on-airport commercial and industrial developments on neighbouring properties must also be considered, including issues such as privacy, noise levels and building setbacks.

M3R is consistent with the NASF guidelines, which are specifically addressed in Chapter B2: Land Use and Planning, particularly Table B2.4, and Chapter C5: Airspace Hazards and Risks which describe the compliance/consistency of the MDP against the requirements of the NASF guidelines.

Any criticism of the NASF guidelines, for example the aircraft noise metrics contained in NASF Guideline A and the WHO recommendations, is a matter for the Commonwealth Government and NASAG. Any concerns about how airport safeguarding measures are applied around the airport in the planning system (eg. the MAEO) is a matter for the State Government.

Having said that, as noted in Section 16.2 of the Master Plan, APAM recognises and accepts that protecting and safeguarding airport operations is an ongoing and shared responsibility between the airport and all levels of government. The Planning Coordination Forum plays a key role in achieving this objective.

APAM will continue to work together with all levels of government on these matters.

Noise Contours (NASF Guideline A)

The NASF factsheet states:

> *"Over the long term, inappropriate development around airports can result in unnecessary constraints on airport operations and negative impacts on community amenity due to the effects of aircraft noise.*
>
> *Guideline A provides advice on the use of a supplementary suite of noise metrics, including the Australian Noise Exposure Forecast system and frequency-based noise metrics, to inform strategic planning and provide communities with comprehensive and understandable information about aircraft noise."*

In accordance with NASF Guideline A, the approved Master Plan contains the noise contours to be used for airport safeguarding purposes (comprising ANEF and N contours). The noise contours in the M3R MDP have considered NASF but are primarily for impact assessment and information purposes rather than airport safeguarding. It is the N contours in MP22 which are to be used for planning purposes pursuant to NASF Guideline A and Clause 18.02-7S of the relevant planning schemes.

The technical details of the M3R noise contours are discussed in this report under Theme D: Airspace and Aircraft Impacts. Importantly, however, while N contour charts typically show an average number of events as low as 10 events a day, the MDP includes N contours for an even lower five events a day. This allows a more detailed understanding of noise impacts and is consistent with previous similar assessments in Australia. It is also more conservative than some other guidelines for communicating aircraft noise including NASF Guideline A.

In addition to N contours, the MDP also includes an M3R ANEC for 2046. This ANEC forms part of the ANEF in the Master Plan.

NASF Guideline A does not refer to the WHO aircraft noise guideline. The WHO guideline is discussed later in this report under Theme D: Airspace and Aircraft Impacts. APAM maintains that presentation of noise forecasts in accordance with NASF Guideline A - the current applicable governance in Australia - is the most suitable means of demonstrating forecast noise scenarios in airport master plans and MDPs.

[redacted]

[redacted]

[redacted]

Wildlife Buffers (NASF Guideline C)

The NASF factsheet states:

> *"Wildlife strikes and/or avoidance can cause major damage to aircraft and/or compromise aircraft safety. Whilst the Civil Aviation Safety Authority has well-established safety requirements for wildlife management plans on-airport, wildlife hazards also occur outside the airport fence.*
>
> *Guideline C provides advice to help protect against wildlife hazards originating off-airport. Many existing airports are surrounded by areas that are attractive to wildlife, especially birds, but appropriate land use planning decisions and the way in which existing land use is managed in the vicinity of airports can significantly reduce the risk of wildlife hazards."*

NASF Guideline C primarily relates to land use planning and reducing the risk of land uses that may attract wildlife/birds near airports. It is not about the active culling or killing of wildlife. The guideline provides actions for existing developments, changes to existing developments, and proposed developments based on the land use (agriculture, conservation, recreation etc) and the buffer zone category, to reduce the wildlife attraction risk on sites around the airport.

As stated earlier, the State Government is currently investigating options to address the risk of wildlife strike through improved planning controls.

It is noted that APAM also has a Wildlife Hazard Management Plan (WHMP) which forms part of the Melbourne Airport Manual and sets out a program for wildlife hazard reduction at the airport. This is a requirement of CASA's Part 139 (Aerodrome) Manual of Standards, Chapter 17: Wildlife Hazard Management.

In relation to active management measures, the WHMP states:

> *"Active management methods employed at Melbourne Airport include wildlife dispersal and lethal control. Lethal control of wildlife may be necessary, but in general, animals are not destroyed unless there is an immediate danger to essential facilities or to the safety of an aircraft. All care is taken to ensure that lethal control is a last resort and is only used after all other non-lethal harassment measures have been taken."*

Furthermore, in relation to lethal control, the WHMP states:

> *"The Melbourne Airport WHMP promotes a sustained integrated approach that includes a range of non-lethal and lethal methods. Lethal control of animals is not considered an effective method for large-scale wildlife hazard management as an isolated management tool; however, it is effective as part of a broader integrated program.*
>
> *Melbourne Airport personnel lethally control wildlife, as required, under authority 14828588 issued by DELWP, and the Firearms Act 1996. This licence allows the lethal control of species that pose a threat to aircraft operational safety."*

Lethal control measures are primarily undertaken on the airport site only.

APAM does note that there is some community confusion regarding the implementation of NASF Guideline C (Wildlife Buffers) in particular regarding the meaning of 'mitigate' which is assumed to infer culling. APAM has recently provided this feedback to DITRDCA on the review of Guideline C

and will continue to advocate for appropriate information to be provided to the community on these matters.

Note wildlife strikes are discussed under Issue D6: Flight Safety Hazards.

Prescribed Airspace (NASF Guideline F)

The NASF factsheet states:

> *"The operational airspace of airports is the volume of airspace above a set of imaginary surfaces, the design of which is determined by criteria established by the International Civil Aviation Organisation. These surfaces are established with the aim of protecting aircraft from obstacles or activities that could be a threat to safety—in particular, high-rise buildings.*
>
> *Guideline F provides advice for planners and decision makers about working within and around protected airspace, including OLS and PANS-OPS intrusions, and how these can be better integrated into local planning processes."*

Furthermore, NASF Guideline F states:

> *"Operational airspace above and around airports needs to be protected from intrusions by objects or activities that could interfere with safe aviation operations."*

In accordance with the requirements of the Airports Act and the Airports (Protection of Airspace) Regulations 1996, Commonwealth-leased airport operators are required to prepare plans of the future Prescribed Airspace (OLS and PANS-OPS) surfaces relating to their airport, in accordance with the criteria established by the International Civil Aviation Organisation, and have those surfaces declared under the airspace regulations. The design of the airspace is discussed in detail in Chapter C2: Airspace Architecture and Capacity of the MDP.

Once declared the surfaces are protected under the provisions of the Commonwealth airspace regulations. Intrusions into the declared surfaces are 'controlled activities'.

As discussed in Chapter C5: Airspace Hazards and Risks of the MDP, the airspace required to accommodate M3R is generally protected through the airspace currently prescribed for the ultimate four-runway layout of Melbourne Airport. APAM has also identified the airspace it considers necessary for the ultimate development of the airport (including M3R) in its Master Plan. The approved Master Plan 2022 (as with previous versions) incorporates the necessary airspace for the long-term four runway system.

Airport operators are required to make the airspace plans available to the land use planning authorities for integration into planning schemes in accordance with NASF Guideline F. APAM has provided plans of its prescribed airspace to the State Government and local councils.

[redacted]

Further discussion on the future airspace design and airspace change process, including engagement, can be found in Issue C5: Detailed Airspace Design and Airspace Change Process.

Public Safety Areas (NASF Guideline I)

The NASF factsheet states:

> *"Public Safety Areas (PSAs) are designated areas of land at the end of airport runways within which certain planning restrictions may apply. While air crashes are rare events, the majority occur in the vicinity of airports during take-off and landing. The PSA Guideline was developed to mitigate the risk of on-ground fatalities from an aircraft incident, by informing a consistent approach to land use at the end of Australian airport runways."*

As previously outlined, NASF applies to all Australian airports. APAM applies the NASF guidelines in the Master Plan, by preparing and including the necessary contours and maps showing how the application of the guidelines affects surrounding areas.

In accordance with NASF Guideline I, APAM has included PSAs for the long-term four runway system, including M3R, in the approved Master Plan 2022 (Section 15.15: Managing the Risk in Public Safety Areas). The PSAs identified in Chapter C5: Airspace Hazards and Risks of the MDP, form part of the PSAs in the approved Master Plan. The parameters of the PSAs, including compatible/incompatible uses with their boundaries, are dictated by the relevant NASF guideline, as outlined in Section 15.15 of the Master Plan and Chapter C5 of the M3R MDP. At present there are no planning controls relating to PSAs.

APAM notified all property owners within the PSAs as part of the Master Plan and M3R MDP public exhibition process. That notification did not go into details about the purpose of PSAs from a land use planning perspective for future developments. Importantly, the landowners need to be aware that:

- There are currently no planning controls or statutory restrictions relating to the PSAs
- Any planning controls would be applied by the State Government, not APAM
- PSAs do not apply retrospectively to existing buildings
- All off-airport land within the PSAs is already within the existing MAEO1 or MAEO2 overlays.

However, APAM agrees that more consultation is appropriate with property owners affected by the PSAs. This is something APAM will pursue going forward as outlined later in this report under Theme D: Airspace and Aircraft Impacts. APAM notes Brimbank City Council's proposed 'PSA purchase / compensation scheme'. APAM's position is that any compensation scheme should be nationally consistent, and the forthcoming Aviation White Paper may be a suitable avenue to further explore this issue.

[redacted]

Further discussion on PSAs can be found in Issue D6: Flight Safety Hazards. This includes discussion on the PSA methodology and how the operating options influence the contours.

A7.6 Changes to Preliminary Draft M3R MDP

In Chapter B2: Land Use and Planning, the Draft MDP incorporates updated references to MAESSAC to reflect the final report of the Committee and the Victorian Government's response, *Safeguarding Victoria's Airports*. The Draft Master Plan also includes reference to Amendment VC218 and the changes it made to the airports policy in planning schemes to better reflect NASF.

No further changes have been made to the Preliminary Draft MDP in relation to the NASF guidelines. It is considered that the MDP, in conjunction with the approved Master Plan, adequately and faithfully address the guidelines.

A7.7 Summary and Conclusion

NASF is Commonwealth government policy that has been agreed to by the State Government. APAM has faithfully addressed the NASF guidelines in the approved Master Plan and the M3R MDP as required. Pursuant to the principles of NASF, the implementation of the guidelines is intended to balance and protect both airport/aviation operations and community safety and amenity expectations.

It is the responsibility of the State Government to implement NASF into the planning system, which has partly occurred (Amendment VC218) with further actions proposed. The State's response to the MAESSAC report sets out a clear action plan for additional implementation measures. APAM will continue to work together with all levels of government on these matters.

Given the above, APAM is of the view that the submissions regarding this issue do not warrant any major changes to the Preliminary Draft MDP, other than some updates relating to MAESSAC and the State's actions since the MDP was exhibited. This is primarily on the basis that APAM has followed the guidelines.

However, APAM agrees that more consultation is appropriate with property owners affected by the PSAs. This is something APAM will pursue as part of the post-approval engagement plan. Any compensation scheme should be nationally consistent, and the forthcoming Aviation White Paper may be a suitable avenue to further explore this issue.

A8 Off-Airport Planning Controls

A8.1 Summary of Issue

This issue concerns the off-airport planning controls and is directly related to the previous issue (A7: NASF guidelines).

A significant number of submissions express concerns about the off-airport planning controls, particularly the MAEO and the Green Wedge Zone. Concerns generally relate to the basis of the controls and their restrictive nature.

There are also submissions relating to the State Government's review of the planning controls and the timely updating of the controls.

A8.2 Number and Types of Submissions

193 submissions contain reference to the 'Off-Airport Planning Controls' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities

- Government:
  - Victorian Government
  - Brimbank City Council
  - Hume City Council
  - Maribyrnong City Council
  - Moorabool Shire Council
  - Moreland City Council

A8.3 Discussion of Submissions

[redacted]

> [redacted]
>
> [redacted]*"*

Brimbank City Council's submission states:

> *"Council recognises the State Government's role in ensuring that the appropriate statutory controls are incorporated into planning schemes."*
>
> *"The Victorian Government has long planned for the protection of Melbourne Airport, with planning controls aimed at protecting the four-runway layout in place since 1990.*
>
> *The Melbourne Airport Environs Overlay (MAEO) is a planning control that was introduced by the Victorian Government in 2007, noting that planning controls for airport noise have applied to land in the Cities of Brimbank, Hume, Melton and Moonee Valley (and former councils) since 1992."*

However, Brimbank states that the following statutory planning actions are required:

> *"Identify the importance and implications for affected property owners and future owners associated with any delay by the State Government in updating the Melbourne Airport Environs Overlay to reflect the 2022 ANEF in the Master Plan.*
>
> *Identify the importance and implications for affected property owners and future owners associated with the Obstacle Limitation Surface (OLS) and commit to working with the State Government to develop an Overlay for the Obstacle Limitation Surface within the Victorian Planning Provisions.*
>
> *Consider the role of the surrounding green wedge land and limits on viable uses for property owners, including the role of Melbourne Airport in future planning for green wedges, and funding a potential compensation scheme."*

Brimbank's submission also makes the following points about the Green Wedge Zone:

> *"Council's strategic planning work program identifies the future review of the Brimbank Green Wedge Management Plan, which impacts the agricultural land located along the Maribyrnong River to the north of the municipality which is located outside the Urban Growth Boundary.*
>
> *Council has received several inquiries from landowners regarding the lack of development potential of land located in the Brimbank Green Wedge Zone. Council will seek to engage Melbourne Airport in the future review of the Zone."*

Maribyrnong City Council's submission also includes some proposed actions:

> *"Introducing a regional policy into the Victoria Planning Provisions which defines the area affected by the Melbourne Airport OLS and the circumstances (such as proposed building height) in which Melbourne Airport should be asked to advise on risks to the OLS from proposed buildings and works that are the subject of a planning scheme amendment or planning permit."*

Several submissions object to the restrictions and implications of the planning controls on land use and development around the airport. This includes some landowners in the green wedge areas who have a desire to develop their land in the future.

Various community submissions make statements regarding planning controls such as:

> *"The property subdivision rule for 300 M2 on MELBOURNE AIRPORT ENVIRONS OVERLAY - SCHEDULE 2 [MAEO] (Each lot must be at least 300 square metres) shouldn't be there as it impacting the value of the property and impacting the resale value."*
>
> *"I dont approve of a third runway as currently my property has just been cleared of an airport overlay and now with this third runway my property will be classified as being under that new airport overlay."*
>
> *"I am not happy that an overlay has been recently placed on my property."*
>
> *"M3R Project objectives omits any clear social responsibility towards communities within their flight paths particularly those in the MAEO1 and MAEO2 overlays. There is no clear plan or strategy for managing land use in these areas.*
>
> *"Melbourne Airport have continually expanded and extended Airport overlays, having detrimental effect on possible land uses, pollution, traffic and noise abatement."*
>
> *"Part D – D2.8 Discusses local planning controls which protect flight paths and airport environs from development encroachment. These controls limit the future opportunities to renew facilities at Keilor Primary School and potentially constructs a scenario where loss of enrolments post M3R opening forces school closure."*
>
> *"Zoning around Melbourne Airport does not appear clear. Why is it that the airport can arbitrary just put a runway and flight path through a well established residential area such as Keilor. And then have applied very restrictive overlays on residents and home owners."*
>
> *"Planning controls be applied to prevent the Airport as a referral authority to limit the operation of the school or any other existing civic facility due to an impact of their creation."*

> *"Furthermore, Melbourne is experiencing a crippling housing shortage, and the community cannot absorb any more airport overlays which will constrain future subdivisions and developments in localities close to transport, hospitals, and schools."*
>
> *"This area has been subject to numerous Federal, State, Local Government imposed overlays since Melbourne Airport was established, including a green wedge overlay which has prohibited property subdivision north of the Calder Freeway (where we are located)."*
>
> *"APAC continues to assert it is congested and requires additional runways and road infrastructure to accommodate forecast aviation growth. This is inflexible planning that is not taking into account the existing residential development surrounding Melbourne Airport. Airport development on leased land should be conditional on the achievement of land use controls which are consistent with the NASF principles."*

Some submissions express concern about the delay in updating the planning controls over time. Brimbank City Council's submission makes the following points in this regard:

> *"The changes to the Australian Noise Environment Forecast (ANEF) contours impact on a larger area of Brimbank including North Sunshine and should be reflected in the Melbourne Airport Environs Overlay (MAEO) to ensure the appropriate consideration of planning permit approvals with regard to use, density and noise attenuation.*
>
> *The expedited update and application of the MAEO is important, and the Airport can play a stronger role in advocating with councils to the State Government for a Ministerial planning scheme amendment to facilitate its introduction."*

Another submission states:

> *"These changes in the modelling of the contours have not manifested themselves in changes to the mapping of the MAEO. The mapping of the MAEO has not been changed since 2007, notwithstanding changes to the forecasts which that mapping is supposed to reflect. The time lag between forecasting/publication of revised contours, and the amendment of the planning scheme to reflect the position of the contours gives rise to obvious difficulties. Assuming for present purposes that the ANEF contours are, by themselves, an appropriate basis for the application of development permit triggers, where there is a delay in updating the planning control, it is possible that a development which would fall within affected area under the revised contours is processed and approved under outdated information."*

A8.4 M3R MDP References

Off-airport planning controls are dealt with in detail in Chapter B2: Land Use and Planning of the MDP, particularly the following sections:

- Section B2.3.2: State legislation and policy
- Section B2.3.3: Local planning schemes
- Section B2.6.1.3: State legislation and policy and local planning schemes
- Table B2.6: Statutory and policy consistency - Victorian and local government
- Section B2.6.2.3: Off-airport impacts – development controls

A8.5 APAM Position

It must first be stated that APAM is of the view that matters regarding off-airport planning controls are primarily a Master Plan issue and they were addressed in the Master Plan 2022

Supplementary Report. Furthermore, off-airport planning controls are implemented and administered by the State Government and local councils, not APAM.

Off-airport planning controls are essential for airport safeguarding purposes, including safeguarding the future operation of M3R, and are required in accordance with the principles and guidelines of NASF, as discussed earlier in this report. APAM strongly supports appropriate and effective off-airport planning controls.

A substantial review of the controls has recently been undertaken by the State Government (the MAESSAC review) to which APAM and many other parties made submissions. The MAESSAC process focused on Melbourne Airport but considered safeguarding of all Victorian airports. This was discussed earlier in this report under Issue A7: NASF Guidelines.

The MAEO is a key safeguarding measure for Melbourne Airport (including M3R) and is applied by the State Government. APAM would not support any reduction or lessening of the overlay restrictions. To the contrary, APAM has advocated (through MAESSAC) for an expansion of the controls based on the NASF guidelines. The Victorian Government's response to the MAESSAC report essentially agrees. It states that the Victorian Government will progress various short and medium-term actions set out over the next 18 months including the following:

> *"Currently, the MAEO and Airport Environs Overlay (AEO) primarily set planning requirements to address the impacts of aircraft noise in areas around airports."*
>
> *"However, other airports safeguarding risks such as wildlife strike, windshear, pilot distraction from lighting and public safety areas at the end of runways are not directly addressed through planning controls. These risks can affect the safety and efficiency of airport operations."*
>
> *"We agree that additional safeguarding risks should be addressed through planning controls. We will investigate options to address the risk of wildlife strike, pilot distraction from lighting, airspace intrusion and public safety areas through the MAEO and AEO."*

APAM will work together with all levels of government on the implementation of these and other actions to improve the off-airport planning controls. This includes an overlay relating to the OLS (airspace protection) requested in some submissions (eg. Brimbank).

As previously stated, APAM agrees with submissions that state that the MDP needs to be amended to update references to MAESSAC to reflect the final report of the Committee and the Victorian Government's response, *Safeguarding Victoria's Airports*. The MDP should also include reference to Amendment VC218 which updated the State planning policy in planning schemes to better reflect NASF.

The MAEO is currently derived from airport's ANEF contours. The current overlay is based on the 2018 ANEF. In October 2021 Amendment VC173 updated the land affected by the MAEO in the Brimbank, Hume, Melton, Moreland, Moonee Valley and Whittlesea municipalities consistent with the ANEF in the Melbourne Airport Master Plan 2018, which was approved by the Commonwealth Government in 2019. Some submissions state that the MAEO has not been updated since 2007, which is not correct.

However, APAM agrees that the MAEO should be updated as soon as possible to reflect the 2022 ANEF. APAM will assist in advocating with councils to the State Government for a Ministerial planning scheme amendment to facilitate its update. It is noted in this regard that the State Government's website relating to the October 2021 update (VC173) states:

> *"Future MAEO updates: Please note, the MAEO could be updated again in the future. This is to reflect Commonwealth endorsed Australian Noise Exposure Forecast (ANEF) in*

> *future Melbourne Airport Master Plans. Some properties that are not affected by this update of the MAEO may be affected by future ANEFs."*

APAM notes that Brimbank City Council's submission reflects a shift in expectations as to how aircraft noise is managed compared to the Council's joint submission with Hume City Council to the MAESSAC. As part of their submission to the Melbourne Airport Environs Safeguarding Issues and Options paper Brimbank City Council advocated for the revisit and removal of the density limit controls within the MAEO2, stating:

> *"45. Council is both disappointed and frustrated the Committee has not seized the important opportunity to revisit the setting of density controls in the MAEO2.*
> *46. The limitation of 1 dwelling per 300 sqm is strategically not justified and lacking in any evidentiary basis. It remains the case that no evidence has been or is adduced before the Committee or compelling argument advanced supporting the density control.*
> *47. The strategic justification for the present density setting for residential use appears to adopt a 'no risk' approach. It appears the underlying solution to a risk of unreasonable noise impacts to sensitive uses is to control the density so less people are theoretically impacted."*

This would have resulted in increasing the number of residents within the MAEO2 (the ANEF 20 contour). We acknowledge this shift may be a result of the Health Impact Assessment included in the Brimbank submission.

APAM also notes that local councils at MAESSAC strongly opposed the use of N-above contours in any land use planning and MAEO.

APAM notes that some developments around the airport have sought to reduce costs of noise insulation for dwellings through excluding aircraft types from AS2021:2015 calculations. Reports from some acoustic consultants suggest that the Boeing 747 aircraft should be considered atypical due to low operations forecasts - some reference a study completed by the Western Australian Planning Commission which recommended a set of principles for when a B747 should be used. APAM will work with local Councils to develop and agree clear guidance principles for use in AS2021:2015 calculations to provide certainty to developers and also, importantly, protect future residents as much as possible in developments that will be affected by aircraft noise.

It is not always clear whether new buildings subject to noise insulation requirements have been built in compliance with AS2021:2015, as local Councils do not share or publish this information. Some community members expressed concern during the public exhibition period that their new houses are not compliant. Advice will be sought from local Councils as to how assurance can be achieved that the Planning Scheme (the MAEO) has been adhered to by new developments.

In relation to the Green Wedge Zone, the Master Plan and Chapter B2 of the MDP emphasise the important role this planning controls plays in safeguarding the airport (including M3R). Along with the MAEO it is one of the primary safeguarding measures. In Chapter B2 it states:

> *"Melbourne Airport is predominantly surrounded by non-urban or green wedge land, particularly to the north and west, which helps separate the airport and its flight paths from the encroachment of incompatible activities."*

Clause 11.01-1R of the Hume Planning Scheme states that one of the purposes of the green wedges is to:

> *"Plan and protect major state infrastructure and resource assets, such as airports and ports with their associated access corridors, water supply dams, water catchments and waste management and recycling facilities."*

Furthermore, Clause 21.01-2 of the Hume Planning Scheme includes the following statements:

> *"Hume's non-urban land is primarily zoned Green Wedge. This land provides a permanent break between the urban areas of the Hume Corridor and Sunbury, creates a distinct rural landscape character and outlook to the edge of the urban areas, and contains important conservation, natural resource and landscape features. It also helps protect the curfew free status of Melbourne Airport by limiting land uses that are affected by aircraft noise."*
>
> *"The Urban Growth Boundary is an important tool in providing certainty around zoning and future potential land uses, and security for the continued curfew free operation of the aircraft flight path over Hume's Green Wedge land."*

Given the above, it is APAM's position that the Green Wedge Zone plays an important role in safeguarding Melbourne Airport. As such, APAM will continue to actively engage with the relevant councils about any future review of the Green Wedge Management Plans that apply to these areas.

In relation to the City of Hume's and City of Brimbank's specific recommendations relating to assisting landowners and the viability of the rural areas in the green wedges, APAM is willing to explore these matters further as suggested by both councils, as was stated in the Master Plan 2022 Supplementary Report. The green wedges play a critical role in safeguarding the ongoing operation of Melbourne Airport and APAM is willing to discuss ways it could assist in their protection. This does not, however, require a change to the MDP.

A8.6 Changes to Preliminary Draft M3R MDP

In Chapter B2: Land Use and Planning, the Draft MDP incorporates updated references to MAESSAC to reflect the final report of the Committee and the Victorian Government's response, Safeguarding Victoria's Airports. The Draft Master Plan also includes reference to Amendment VC218 and the changes it made to the airports policy in planning schemes to better reflect NASF.

No further changes have been made to the Preliminary Draft MDP in relation to the off-airport planning controls. It is considered that the MDP, in conjunction with the approved Master Plan, adequately and faithfully addresses this issue.

A8.7 Summary and Conclusion

Off-airport planning controls are essential for airport safeguarding purposes, including safeguarding the future operation of M3R, and are required in accordance with the principles and guidelines of NASF. APAM strongly supports appropriate and effective off-airport planning controls.

The recent MAESSAC review thoroughly considered the extent and effectiveness of the current controls and the State Government's response to that review proposes a number of actions for improvement. These actions will further assist in safeguarding Melbourne Airport and the operation of M3R.

APAM will work together with all levels of government on the implementation of these and other actions to improve the off-airport planning controls.

5.1.3 Theme Summary and Conclusion

The M3R MDP is entirely consistent with the current approved Master Plan for the airport under the Airports Act - Melbourne Airport Master Plan 2022. The project is also consistent with other

relevant policy and governance documents including the airport lease, NASF, the planning policy framework and climate change policy.

Analysis of this Theme and associated Issues has demonstrated that the M3R MDP has appropriately considered planning, policy and governance context relevant to the project. It further demonstrates that M3R is consistent with all applicable governance and historical planning.

Melbourne Airport's standards and policies that supporting achievement of M3R obligations include:

- Environment, Social and Governance Strategy
- Environment and Sustainability Policy
- Airport Environment Strategy
- Environment Management System.

Some minor changes to the Preliminary Draft MDP have been made as a result of considerations included in this Theme. These do not, however, constitute substantial modifications to the project.

5.2 Theme B: The Project

5.2.1 Overview of Theme

This theme covers project-related issues raised during the exhibition period of the M3R MDP. This includes general commentary on the project, both positive and negative, as well as the justification for the project, proposed timing, options and alternatives, interaction with other airports and the proposed construction of the runway and infrastructure.

A number of submissions received from the community during public exhibition have been categorised as general objection to the new runway. This was expected due to the nature of the project, and with specific concerns often relating to the perceived health, noise or environmental impacts.

This theme also encompassed commentary relating to the impact of the COVID-19 pandemic, and associated downturn in air travel, on the need for the project. Due to the pandemic starting at the end of the production of the MDP, the impacts of the pandemic were referred to in a separate section of the MDP, in paragraph A2.3 and A2.4.

Chapter A of the Preliminary Draft Major Development Plan (pdMDP) covered most topics mentioned in submissions, with minor changes to the MDP only made as a result of feedback received under issue *B2: Options and Alternatives*.

'The Project' Theme was raised in 617 submissions.

The following Issues are considered within 'The Project' Theme:

B1: Project Justification and Timing

The need for the runway and its proposed timing was discussed in approximately 10% of submissions. This included both positive and negative views on the requirement to build the new runway and commentary on the analysis presented in chapter A2 of the pdMDP. This also included submissions relating to the proposed timing of the project, many of which focused on the forecast recovery from the COVID-19 pandemic. This issue is closely linked to, and makes reference to, supplementary report section A4: Forecasts and Growth.

B2: Options and Alternatives

A commonly occurring theme amongst submissions was alternative suggestions for increasing the capacity other than the proposed infrastructure in the MDP. This included alternatives both on the Melbourne Airport precinct, different airports and other means of travel, as well as suggestions that a slot scheme or Runway Demand Management System (RDMS) could be implemented to manage demand.

B3: General Objection to M3R

Some feedback provided by the community included general objection to the proposed new runway, without providing a specific reason for the objection. Where a specific reason for the objection was given, feedback has been considered under the appropriate theme and issue.

B4: General Support for M3R

Submissions that supported the project without providing specific reasons are included in this issue, this included positive commentary regarding the expansion and growth of Melbourne Airport, or the general economic benefits associated with the project.

B5: Interaction with other Melbourne Airports

This issue relates to the interaction of M3R with other airports and operators within the Melbourne Basin. This includes the significant relationship and interdependencies with Essendon Fields Airport, as well as the impacts that flight paths may have on Moorabbin Airport, RAAF Point Cook and Avalon International Airport, as well as operations in that take place in the Melbourne basin airspace such as skydiving, hot air ballooning and general aviation.

B6: Construction

A small number of submissions expressed concerns with the construction phase of the proposed infrastructure. This included noise, environment and dust impacts on the local community, and were mainly addressed in other sections of the supplementary report.

5.2.2 APAM Response to Issues

This section of the Supplementary Report addresses the Issues grouped into ‘The Project’ Theme. This section:

- Summarises each Issue in the context of Melbourne Airport and the M3R project
- Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment
- Explains if/how the M3R MDP addressed the issue in its Preliminary Draft version
- Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM’s response/position where balances between impacts and benefits must be sought
- Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.

B1 Project Justification and Timing

B1.1 Summary of Issue

Around 10% of submissions discussed the overall need for, and context of, the project. Submitters both supported and challenged need for the new runway. This included submissions discussing the proposed timing of the project, both suggesting earlier or later timing, and submissions refuting the need for the project entirely.

This issue is closely linked to discussions on the forecast growth presented in the MDP, and alternative options to cater for growth. These issues are responded to separately in this supplementary report, in sections *A4: Forecasts and Growth* and *B2: Options and Alternatives*.

B1.2 Number and Types of Submissions

235 submissions contain reference to the 'Project Justification and Timing' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government
  - Victorian State Government
  - Hume City Council
  - Western Health
  - Maribyrnong City Council

B1.3 Discussion of Submissions

Submissions were received both in support and opposition of the project and its proposed timing.

Many of the submissions in opposition to M3R refuted the need for the project. A significant number simply declared that they did not believe that the project was justified or required, for example:

> *"Don't believe its needed for Tullamarine."*
>
> *"I am not convinced there is demand or need for a third runway."*
>
> *"3rd runway at Melbourne Airport is unnecessary."*

Some submissions linked this to a belief that the forecasts provided within the MDP were too optimistic, with many referencing the COVID-19 pandemic, and other international events.

> *"The business case for the third runway should be reconsidered given the reduction in flights due to the COVID pandemic and implications for reduced future flight demand."*
>
> *"Do we really need it given that Qantas has dramatically reduced it's international flights in and out of Melbourne?"*

Submissions also made an environmental argument against the need for the new runway, suggesting that growth should be restricted in order to reduce air travel and associated emissions.

> *"I reject the premise that we need to accommodate more flights. The environment is more important than the economy."*

> *"Frankly, I don't think it makes any sense to build a new runway in the midst of the climate crisis… A new runway is likely to be a costly white elephant."*

One submission questioned the need for the project, comparing the movement levels to those of Heathrow's current two parallel runway system, stating that:

> *"Melbourne airport is looking to grow to a level which is just under half that of Heathrow. The need for a third runway is therefore questioned."*

Another community submission suggested that more capacity could be realised by existing infrastructure:

> *"A full review of the efficiency of the existing runways should be undertaken which would highlight, there is zero need for a third runway. Many other international and busier airports run off two runways and have a higher number of aircraft utilising them."*

Many submissions opposing the approval of the MDP acknowledged the need for the runway, for example, but objected to associated impacts (often personal):

> *"Whilst there is a need for a third runway to cater for current and future needs, I vehemently object to the location of your proposed third runway."*

> *"Whilst I agree with expansion and support more transit into Melbourne, I am extremely worried about the increased noise that I will experience"*

> *"Whilst I believe that more flight capacity is required in Melbourne to fuel economic growth and development, I do not believe that this must be achieved at Tullamarine"*

> *"I appreciate the need for additional flight capacity, but I strongly object to flights over the built up community where I live, especially at night"*

In line with questions on the forecast, addressed in the supplementary report *Section A5: Forecasts and Growth*, some members of the community cited uncertainty around forecast demand, and hence the requirement for the new runway. Some suggested that it would be appropriate to reassess the need for the runway, or requested more detail on the timelines for construction and opening:

> *"The Master Plan mentions great uncertainty in when air traffic will return to pre covid levels and when a third runway will actually be required, "twenty years". Can a time line be given relative to actual aircraft movements, start construction date, runway operational date."*

> *"Why not defer and reassess?"*

> *"…it is too early to forecast future growth based on Covid 19 so why has this proposal not been delayed until a time that comes that allows such growth to be proposed?"*

A number of submissions were also received from both members of the community and corporate respondents, supporting the need for the runway. For example:

> *"We love travel and support the need for air transport and facilities. We also accept the population is growing and air transport needs are increasing"*

> *"An expansion of capacity is vital for Melbourne if it is to sustain its competitiveness as a city in a global marketplace"*

> *"In order for Victoria's economy to grow and thrive Melbourne Airport will need to expand its offering"*
>
> *"Needed to support the growing population"*
>
> *"I think this will be a great project for Melbourne Airport and will certainly help with alleviating the capacity bottleneck that will undoubtedly re-surface once we, as part of the global aviation and tourism community, recover from the impacts of COVID-19."*
>
> *"I think this will be beneficial to Melbourne to reduce airport delays"*
>
> *"I believe the new parallel runway is a critical piece of infrastructure for the Melbourne Airport that is clearly going through a significant growth phase"*

Virgin Australia supported the need for the project in their submission:

> *"In principle, we support the infrastructure proposed in the Master Plan which is needed to increase airport capacity and meet forecast growth in passenger demand".*

The Tourism Accommodation Australia and Accommodation Association of Australia stated in their combined submission that:

> "Doing nothing will impact productivity, deny Australians getting home to their families faster, reach holiday destinations with fewer disruptions and make it to meetings critical for growing their businesses and their ability to generate jobs".

The Melbourne Airport Community Action Group (MACAG) disputed the need for the project in their submission, including commenting on the scheduled demand:

> *"Scheduling more flights than the airport has capacity to manage creates a false impression of capacity constraints that could be addressed with a slot system and even distribution of flights throughout the day."*
>
> *"These may be self-inflicted consequences directly stemming from scheduling flights that exceed capacity at peak times, a tactic the airlines reportedly used to support the case for the third runway at Sydney Kingsford Smith Airport."*
>
> *"It should specify how many flights would have to be taken out of the peak period schedule to avoid those delays, and compare that with the number of passengers whose destinations could just as easily be reached via Avalon"*

MACAG also questioned the definitions used to determine capacity:

> *"… an average delay of ten minutes or more may be considered severe congestion. This would benefit from further explanation"*
>
> *"…it is important to explain how 'acceptable' and 'unacceptable' are being defined. What is unacceptable to the airport operator or its tenants and clients may be acceptable to the broader community?"*

B1.4 M3R MDP References

The MDP explores the justification and timing of the project in *Chapter A2: Need for the Project*. This includes analysis of FY19 capacity, performance and delays, and modelling and simulation of forecast future states.

Forecast modelling is based on a proposed opening year of 2026, utilising forecast schedules developed prior to the COVID-19 pandemic. This is the earliest possible timing for completion of the project.

B1.5 APAM Position

Prior to the COVID-19 pandemic, demand for the existing runways exceeded capacity on a significant portion of days during peak times. This was reflected in significant and increasing delays and reducing On-Time Performance (OTP), detailed in Chapter A2 of the MDP.

This poor performance was further accentuated on days with weather not conducive to crossing runway modes. During peak periods this was approximately one in four days.

Extensive analysis has sought to increase the overall capacity and reliability of the current runway system, concluding that only the construction of a new parallel runway will alleviate these issues. The majority of submissions rebutting the need for the new runway did not provide a solution to increase capacity or reliability of Melbourne Airport's runway system to respond to forecast demand. Submissions that suggested alternative locations for a new runway, including at other airports, are discussed in the Supplementary Report *Section B2: Options and Alternatives*.

One submission compared Melbourne Airport's runway system to London Heathrow, questioning the need for the third runway as "*Melbourne airport is looking to grow to a level which is just under half that of Heathrow".* As of the year ending June 2019, Heathrow saw a total of 475,874 aircraft movements and Melbourne Airport handled 236,766 on the existing runway system. The forecasts presented in the MDP show a demand of 449,000 annual movements by 2046. APAM further notes that Heathrow currently operates a parallel runway system, similar in capacity to the proposed runway system at Melbourne Airport.

Another response *"Many other international and busier airports run off two runways and have a higher number of aircraft utilising them."*. APAM has conducted a review based on the *Airports Council International - Worldwide Airport Traffic Report - Calendar Year 2019*, which shows Melbourne Airport as the 59th busiest airport worldwide. The only airports listed without a parallel runway system with more annual air traffic movements in 2019 were London Gatwick Airport (42nd busiest) and Chhatrapati Shivaji International Airport in Mumbai (41st busiest). While Melbourne Airport currently has two runways, these runways intersect resulting in a reduced capacity compared to two independent runways. The proposed parallel runway significantly increases the capacity allowing two runways to be used independently. More information on current and future runway capacity is provided within the MDP.

Both Gatwick and Mumbai airports are considered to be operating at capacity at capacity during peak times, and neither airport is able to achieve runway rates above 55 movements per hour. This is significantly below the current and forecast runway demand during peak periods for Melbourne, which currently exceed 60 movement per hour, and is forecast to rise to 70 movements per hour by opening year.

Some submissions commented on the uncertainty surrounding the forecasts and associated project need and triggers, especially due to the public exhibition period falling early in the recovery from the COVID-19 pandemic. The MDP references the opening year as 2026, acknowledging that this is the earliest possible construction timing, and that the *opening day* modelling presented in the MDP is based on 2026 forecast levels, based on the pre-COVID forecast.

APAM will continue to monitor actual passenger and movement numbers with respect to the forecasts, as well as key performance indicators such as on time performance, ground delay and airborne holding. This will be used to determine if and when the runway is required to be constructed and will also play a key role in commercial discussion with airlines.

The Melbourne Airport Community Action Group (MACAG) suggested in their submission that the peak demand gives a *"false impression of capacity constraints"* and that this could be dealt with by implementing a slot system. Runway demand at Melbourne Airport increased during peak times for a number or reasons, including passenger demand, geographic location and constraints at other ports, and operating at times outside this peak will not be tenable for some markets. For this reason, infrastructure is required to be built to cater for peak periods, which may be under-utilised at other times.

A slot scheme that smooths demand throughout the day, or Runway Demand Management System (RDMS), is discussed further in the MDP, and the supplementary report *Section B2: Options and Alternatives*.

MACAG also requested more information on the definitions of acceptable and unacceptable delays. Section A2.2.9 of the MDP outlines that "*The US Federal Aviation Administration (FAA) provides guidance indicating the level of airport congestion based on delay. It states that, when average delays reach four to six minutes, the airport is approaching practical capacity and generally considered congested. An average delay per operation of 10 minutes or more may therefore be considered severe congestion*". The impact of delays on the airport, industry and airport community is also further expanded in A2.2.10: Impact of the current situation on passengers.

B1.6 Changes to Preliminary Draft M3R MDP

No changes to the M3R MDP have been made in response to engagement regarding the project's overall justification. APAM asserts that requirement for this infrastructure, and it's timing in order to meet capacity need, have been demonstrated and that no substantial change has been required by feedback received.

B1.7 Summary and Conclusion

Many submissions questioned the justification for the project, or if necessary whether the proposed timing was appropriate. APAM acknowledges that the forecasts, and hence project triggers, presented during public exhibition may have appeared volatile due to the timing early during the recovery from the COVID-19 pandemic, but points to demonstrated recovery and continued strong trends (as discussed in Issue A4: Forecasts and Growth) to support the projected need for the capacity this project enables.

As aviation demand increases APAM will continue to monitor actual passenger and movement, as well as key performance indicators such as OTP, ground delays and airborne holding delays. This will be used to continue to refine the delivery of the project.

B2 Options and Alternatives

B2.1 Summary of Issue

A commonly occurring theme amongst submissions was alternative suggestions for increasing the capacity other than the proposed infrastructure in the MDP. This included alternatives both on the Melbourne Airport precinct, different airports and other means of travel, as well as suggestions that a slot scheme or Runway Demand Management System (RDMS) could be implemented to manage demand.

B2.2 Number and Types of Submissions

617 submissions contain reference to the 'Options and Alternatives' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities, including:
    - The Qantas Group
- Government:
    - Moreland City Council
    - City of Yarra
    - Brimbank City Council
    - Hume City Council
    - Wyndham City Council
    - Maribyrnong City Council

B2.3 Discussion of Submissions

Submissions commenting on options and alternatives have been grouped:

- Avalon Airport
- New airport to the south-east (i.e. Koo Wee Rup)
- Other Victorian airports
- High-speed rail
- Alternative runway layouts for Melbourne Airport
- Slot/demand management

Avalon Airport

Many submissions focussed on Avalon as an alternative means of meeting the demand for Melbourne and Victoria, for example:

"Take it to Avalon !!!"

"If capacity increase is required, look to Avalon."

"Why aren't existing runways not being utilised (i.e Avalon)?"

"Avalon airport is the better option for all concerned"

"Avalon is one of the most underused airports"

Submissions also suggested that infrastructure at Avalon should be expanded instead of Melbourne Airport:

> *"I'd like to see alternatives ie further development of the Avalon site"*
>
> *"Avalon Airport is Melbournes 3rd runway and should be further developed"*
>
> *"If there is more demand there can be multiple options like developing and using 'Avalon Airport' for increased demand"*

Many of the comments regarding Avalon focused on noise and impacts away from the suburbs surrounding Melbourne Airport, with some claiming that Avalon would have a lower impact on community:

> *"I believe there to be an alternative option at Avalon airport that would take planes away from residents and would not impact the community."*
>
> *"My preference would be to upgrade airports that currently operate in regional and less dense areas like Avalon."*
>
> *"Do in Avalon where there are less houses underneath and spreads traffic/ less noise pollution/less pollution"*
>
> *"Melbourne Airport should purchase Avalon Airport and add this new runway down there were you will only be disrupting cows eating lunch".*

A community pro-forma submission prepared by Keilor Primary School Council mentioned that the MDP *"Fails to discuss or consider the use of Avalon Airport as an alternative strategy for either Freight or Passenger travel."*

A new airport to the south-east

Some submissions also proposed the construction of a new runway to the South-East of the city of Melbourne:

> *"A new international airfield in Melbourne's south-east, floated by the Victorian government early this decade, should be considered with greater urgency as there should be a better alternative to ease flight congestion."*
>
> *"The government would be better off building a New Airport in the Eastern Area"*
>
> *"Why not build some fancy new airports in the eastern suburbs."*
>
> *"Why put all the eggs in one basket? I live in the South East and regularly fly interstate. It can take 4 hours just to get to the airport... It would be better to build an additional airport in the South East corridor of Melbourne to reduce traffic congestion and improve infrastructure of our city"*

Other Victorian airports

Other metro and regional Victorian airports were also suggested as alternatives, including:

> *"expanding Avalon, Bendigo or Shepparton Airports would actually help exporters and individuals"*
>
> *"make use of Avalon, Melbourne and Moorabbin airport, an airport system with all three taking international flights, in this case, a third runway will not be necessary at all, as*

Moorabbin has more than enough runways already, although they may need to be extended or upgraded, and that may also cut cost."

"Avalon Airport, Essendon Airport and Moorabbin Airport can also be addressed by the Minister to accommodate additional aircraft movement"

High Speed Rail

Submissions also suggested that High-speed Rail (HSR) was an alternative to aviation growth for key routes (i.e. Sydney and Brisbane), and hence would not require a new runway to be built. This was often linked to environmental concerns regarding increasing aviation traffic. Some examples of such submissions are:

"We need high-speed rail, not more flights!"

"We need to look at high-speed rail as an alternative."

"With the impacts of climate change we want to be looking at other ways to move people around that don't generate as many greenhouse gases as planes. Investment in a very fast rail link between Sydney and Melbourne would do this and free up space at both Melbourne and Sydney airports, which would mean that the infrastructure spend of a third runway could be avoided or delayed."

Maribyrnong Council stated in their submission that:

"Council submits that alternatives to the expansion of Melbourne Airport have not been explored. With the Melbourne-Sydney air route one of the busiest in the world, simply increasing capacity of existing constrained infrastructure seems misguided. An expansion would also appear misguided in the context of net zero greenhouse gas emissions, which Australia has committed to by 2050."

…

"Alternatives to air travel must be examined, including a high-speed rail network linking cities on Australia's eastern and southern coast. If air travel is found to be the only viable option, then increased capacity should be explored at Avalon Airport. Avalon Airport has much lower population densities surrounding it, with farmland and Port Phillip Bay generally to the east and west. This relatively unconstrained asset would appear to be a more viable option than continued expansion of Melbourne Airport."

One submitter suggested increasing sea travel in addition to rail as alternatives to increasing flights:

"These could include fast and frequent intercity trains, and investigating making travel by sea available as an option at least to closer destinations like New Zealand."

Alternative runway layouts for Melbourne Airport

Some submissions commented on the proposed orientation and positioning of the runway. The majority of these submissions stated a preference for an East-West runway, many commenting that this was planned to be constructed first in Melbourne Airport's 2018 Master Plan:

"Having a north south runway will add extra air traffic and noise level over our houses as well as the new Melbourne airport rail going through every 10 mins ..why not refer to the original plan to have east west run way which would go across country not residential homes."

"would prefer east west option as the north south option will be overwhelming with the frequency increase"

"Please build 2nd east to west runway or a new airport in Gippsland"

"I do not support a north south third runway. It should be east west"

"make it an East West direction runway, not north south."

"If the Masterplan has the option for 4 runways - why is the East West Option not being considered?"

A small number of submissions also suggested that both the north-south (34L/16R) and east-west (27L/09R) runways should be built now, in order to meet demand and enable more noise sharing:

"To minimize noise over residential areas the 4-runway plan should be executed now"

"you need to build all 4 runways so that planes can land and take off in all directions"

"4 runways the better to spread the noise levels out"

Some submissions also suggested relocation of the proposed runway:

"Move the runway elsewhere towards ie bulla and the western suburbs"

"The runway should be moved further north through sparsely populated farmland."

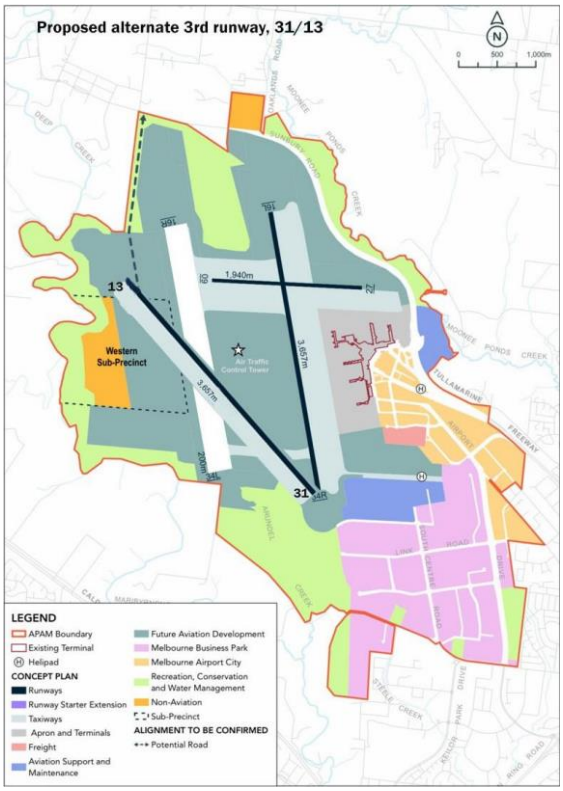
"Build it at Toorak."

Many similar submissions requested that the north-south and east-west runways should be built now, with the north-south moved further north:

"I further call on you Minister to apply your power under Part 3 Division 4 s94(7) Airports Act 1996 (Cth) to impose the following conditions as part of the MDP approval process:

- *That the Airport shift the new North / South Runway as far north as possible to reduce noise impacts to Keilor.*
- *That the ultimate configuration, that is all 4th runways be constructed now."*

One submission provided a detailed suggestion on an alternative alignment for a new runway 13/31:



A runway slot scheme, or RDMS, was also posed in some submissions as an alternative to the construction of a new runway.

This included The Qantas Group (QFG), who in their submission stated:

> *"QFG notes that Melbourne Airport does not currently operate a Runway Demand Management System (RDMS), resulting in oversubscription of capacity during peak periods. The prime objective of an RDMS is to ensure the most efficient declaration, allocation and use of available airport capacity in order to optimise benefits to consumers, taking into account the interests of airports and airlines. Prior to operationalising M3R, QFG believe it is essential to implement an RDMS over the course of a number of flying seasons to enable industry and airlines to understand demand and have informed discussions about M3R timing."*

The Melbourne Airport Community Action Group (MACAG) also included in their submission:

> *"Scheduling more flights than the airport has capacity to manage creates a false impression of capacity constraints that could be addressed with a slot system and even distribution of flights throughout the day."*

B2.4 M3R MDP References

Chapter A3 of the Major Development Plan (MDP) is dedicated to *Options and Alternatives.* This includes discussions about other airports within Melbourne and Victoria and RDMS scenarios.

The runway orientation of the runway is also discussed in Chapter A3 (section A3.3.6), including the Planning Review whereby the preferred orientation was changed from east-west to north-south. The same chapter goes on to discuss the proposed layout, and how it was decided on.

B2.5 APAM Position

The MDP contains significant commentary on the options and alternatives for building Melbourne Airport's Third Runway (M3R). While many submissions suggested that the increase in demand could be catered for by shifting demand to other airports, APAM asserts that this was adequately addressed within the MDP.

APAM does not believe that any of the options suggested within submissions provide a suitable alternative to constructing a new runway at Melbourne Airport. APAM notes that in addition to increasing capacity at the airport, M3R will improve the reliability of capacity at Melbourne Airport. This helps support the aviation network across Australia, in particular the east coast. Alternative locations do not increase the reliability of the runway system at Melbourne Airport to support 2019 traffic levels.

Avalon Airport was most frequently suggested as an alternative to cater for the increase in Melbourne's air traffic demand. Avalon as an alternative to M3R is explored in the MDP section *A3.2.3 Expand use of other airports*. APAM further notes that in recovery from the COVID-19 pandemic, the significant focus of recovery for Victorian air travel has been Melbourne Airport. This includes AirAsiaX moving their operation from Avalon to Melbourne Airport, Vietjet selecting Melbourne Airport over Avalon as its Victorian base, Regional Express entering the jet market and choosing Melbourne over Avalon Airport and new airline Bonza announcing Melbourne Airport for the majority of its Victorian routes compared to a single route from Avalon.

APAM further notes that, pre-COVID-19, demand at Melbourne Airport continued to grow despite increases in delays due to a constrained runway system. Any growth at Avalon Airport was largely supported by state and federal government financial assistance rather than any constraint at Melbourne Airport.

The MDP also acknowledges that Plan Melbourne 2017-2050 (DELWP, 2017) proposes a potential future airport to the South-East of Melbourne, potentially near Koo Wee Rup, to support the growth of Melbourne beyond 2050. APAM believes that the timeframes for the development of such an airport preclude it from being a viable alternative to the project to meet the near-term demand.

Other regional airports such as Bendigo and Shepperton do not have sufficient infrastructure, nor are in appropriate locations to present an alternative to M3R.

A number of submissions suggested that high-speed rail is an alternative to construction of a new runway, especially on the Melbourne-Sydney route, which is currently Australia's busiest air route. In FY19 this route represented approximately 55 thousand movements or 29% of domestic movements to or from Melbourne Airport.

There is currently no formal or committed proposal for high-speed rail between Australian cities, and while future HSR may complement some domestic air travel routes in the future, APAM does not believe that rail would be a viable alternative to the increasing demand for air travel. Furthermore, in 2019 31 domestic destinations were serviced from Melbourne Airport, many of which would not be possible or feasible for high-speed rail.

The orientation of the proposed new runway is also explored in detail in the MDP, including the Planning Review that resulted in the change in the order of construction of the runways within the Master Plan. The order of construction and orientation of M3R is also consistent with the approved 2022 Master Plan. While some members of the community did express a preference for an east-west parallel runway (27L/09R) to be constructed first, APAM feels that the reason for the orientation is adequately discussed in the MDP and Master Plan.

Some submissions suggested that construction of the fourth runway (27L/09R) should be triggered alongside, or immediately following, the construction of M3R. The primary reason for this is to allow

for increased noise sharing or to reduce the number of flights over the built-up areas to the south of Melbourne Airport. The fourth runway remains an important part of the Master Plan's 'Long-term Vision' and will enable an increase of capacity from that enabled by M3R. However, this runway is not expected to be required for many years following the construction of M3R and is unlikely to be commercially viable to construct earlier.

Other runway locations or orientations suggested by members of the community, including the *diagonal* 13/31, moving the runway further north and locating the runway in Toorak are not practically feasible, and the reasoning behind the proposed positioning of the runway is outlined in detail within the MDP. Other possible layouts and runway locations were considered within the *1990 Melbourne Airport Strategy*, which resulted in the adoption of the four-runway 'hash-tag' layout. This long-term runway layout has been maintained through the subsequent six Master Plans.

The proposal for a slot scheme (RDMS or similar) is also considered within the MDP. It is noted that while an RDMS may improve on-time performance in the short-term, it does not increase the capacity of the existing runway system. At best, a RDMS would move some demand into off-peak periods but the more likely result is that demand and growth would be constricted. More detailed analysis is provided in the MDP section *A3.2.4: Demand management scenarios.*

APAM will continue to discuss potential measures with our stakeholders to ensure as far as possible that our infrastructure can meet scheduled demand. It is important to note that under the IATA World Airport Slot Guidelines (WSG), Melbourne Airport is currently considered a Level 3 airport for international, requiring slot coordination, and a Level 1 airport for domestic, not requiring slot coordination. As a result, any growth from an international perspective is managed, whilst domestic demand can continue to be allocated without oversight of a coordinator.

The alternative of not building a third runway at Melbourne Airport is also mentioned in many submissions. The justification and need for the project are discussed in section *B1: Project Justification and Timing* of the supplementary report, however APAM notes that the alternative of not building a new runway would have a significant detrimental effect on aviation and the wider Victorian and Australian economy.

B2.6 Changes to Preliminary Draft M3R MDP

Due to the levels of community interest, a paragraph has been added to the MDP discussing high-speed rail and its validity as an alternative to increased air travel.

B2.7 Summary and Conclusion

APAM has considered submissions that suggested alternative means of meeting the forecast demand, and alternatives to the proposed runway. The reasoning behind the requirement for the proposed runway, including a detailed discussion of options and alternatives, is laid out in the Major Development Plan. APAM does not believe that any of the options or alternatives proposed in submissions modify the need for the new runway or put forward an improved option.

There was significant comment from the community regarding high-speed rail as an alternative to growing air-travel demand and as such a change to the MDP has been made.

B3 General Objection to M3R

B3.1 Summary of Issue

This issue relates to submissions containing a general objection to M3R only.

Other submissions expressing an objection as part of a larger submission (such as Brimbank City Council and Keilor Primary School Council proforma) are discussed in detail within the other sections of this report.

B3.2 Number and Types of Submissions

116 submissions contain reference to the General Objection to M3R Issue. They were received from community members.

B3.3 Discussion of Submissions

Submissions under this issue contained short responses with a simple preference for M3R to not proceed. Some examples are provided below:

"I don't want the third runway to go ahead"

"I oppose to the third runway project at Melbourne Airport"

"I object to the additional 3rd runway."

"fuck off with the runway, we dont want it"

"Do not want at all!"

"I oppose"

"Please don't do it!!!"

"As a resident of Keilor, I object to a third runway."

"Very against this project going ahead."

"It should not go ahead"

"My vote is a 'NO' for the Third Runway"

"No"

"Not in favour of the third runway project"

"Not supportive of any airport / runways or projects in this area"

"Don't build a new runway, get an airport train station you profiteering muppets."

"It should not go ahead"

"Strongly opposed to the third runway project.

"Take it to Avalon !!!"

B3.4 M3R MDP References

The justification for M3R is discussed in the following chapters of M3R MDP:

- Part A The Project, Chapter A2: Need for the project
- Part A The Project, Chapter A3: Options and alternatives

B3.5 APAM Position

General objections to a third runway are acknowledged by APAM but cannot be considered in detail other than as reflective of community sentiment. However, most objection submissions contain some guidance towards specific issues of concern. APAM's position relating to these issues is detailed in relevant sections of this report.

Melbourne Airport reiterates its role as a key economic asset for the city and state. Key to this function is need for the airport to accommodate forecast demand. In 2019 Melbourne Airport was rapidly approaching its operational capacity limit - M3R is proposed as the best means to ensure that Melbourne's aviation needs do not become unduly constrained.

Issues B1 Project justification and timing, B2 Options and Alternatives further explain the evaluation process which arrived at M3R as the optimal growth solution.

APAM notes that objections are largely driven by the perceived impacts of M3R to the surrounding community. Submissions referencing this concern are discussed in Theme E Community Impacts including the importance of balancing the economic importance of airports with better management of the impacts in the vicinity of the airport.

B3.6 Changes to Preliminary Draft M3R MDP

No changes have been made to the preliminary draft M3R MDP as a result of these submissions.

Changes related to more specific issues are considered and detailed in their respective sections of this report.

B3.7 Summary and Conclusion

APAM notes the community objections to the project and the need to balance the economic importance of M3R with management of the impacts in the vicinity of the airport.

B4 General Support for M3R

B4.1 Summary of Issue

This issue relates to submissions containing general support for M3R. These ranged from community submissions, non-government organisations and commercial entities. The submissions that support the runway quote economic, employment and tourism benefits as well as referencing the importance to the State of Victoria and historic planning of Melbourne Airport.

B4.2 Number and Types of Submissions

213 submissions contain reference to the General Support for M3R Issue. They were received from:

- Community
- Non-government organisations and commercial entities
- Government
    - Yarra Ranges Council

B4.3 Discussion of Submissions

Support for the M3R proposition has been expressed by a range of community members, industry organisations and local governments.

Community Submissions:

A number of submissions provided a general support commentary. Submission examples are referenced below:

> *"I'm in favour"*
>
> *"I'm supportive of this project. Spend less tax payer money on consultation and planning, and just build this. The economy needs this."*
>
> *"I look forward to seeing increased capacity, it's just a pity we can't actually use it for now."*
>
> *"We do need additional runway in Melbourne."*
>
> *"Just do it it's our future"*
>
> *"Bring it on, don't forget the rail line"*
>
> *"I think it's a great idea to have a third runway. I've lived near the Airport all my life and I love Melbourne Airport. I've been to all Major Airport in Australia and Melbourne by far is the best."*
>
> *"Good luck, you have our full support"*
>
> *"My personal view is that the Melbourne Airport third runway to be constructed considering the future growth and demand, it will be a positive step."*
>
> *"Great work. Fully support it. Don't let the woke brigade and whingers distract you. Full steam ahead"*
>
> *"We fully support Melbourne Airport being upgraded to First World standard."*
>
> *"I support the proposed new runway"*
>
> *"Hi there I just received your information about the new runway and think it's a fantastic development for Melbourne airport and long overdue."*
>
> *"The third runway sounds sensible to me."*
>
> *"Yes new runway is good"*

Some submissions provided a general support but provided either caveats or sought additional information. Some examples are referenced below:

> *"My husband and I are in favour of the 3rd runway and understand the need for the expansion however, upon looking at the map of the proposed flight paths, we are not happy that we seem to have the largest number of proposed flights going over our home. We moved last year so that we could have a little peace and quiet and this will be constant aircraft going above our property and surrounding area."*

"I currently live in a property that will be affected by noise created by the third runway and, while I am for the proposal to create a third runway, there needs to be an effort made to residents who live in the affected area."

"I'm excited to have more capacity at the Melbourne airport but I also don't want to always have to keep my house closed up to keep out the noise."

"Support the need for the 3rd runway, however we must consider the impact to residents and surrounding areas with the flight plans and routes."

"Yes I am in favour of a third runway. But change the flight path location please as we get enough flights over our house."

"I am in favour of the expansion subject to the following
- The airport is restricted to more modern aircraft which emit lower noise levels, especially during the night
- Serious efforts are made to reduce the carbon impact of the airport, aircraft and associated operations (e.g. thinking about how people get to and from the airport). In particular the new railway line should be cheap and affordable to discourage driving to the airport."

Other submissions encouraged growth and expansion of Melbourne Airport through M3R for a range of reasons. Submission examples are shown below for reference covering the historic plans for Melbourne Airport as well as benefits to tourism, economy, employment (job creation) and to the State of Victoria:

Previous Planning:

"I think this is a fantastic idea to have a 3rd runway. It will help Melbourne progress. I am all for new infrastructure. Sorry that some people will get more noise but as far as I know the proposed new runway has been in the Melways for at least 45 years."

"Long overdue. Has been on maps for decades so newer suburbs potentially affected were aware of situation"

"No problems it's been in the melways for over 30 years I'm sorry but unless your house was there before that you knew the runway was coming so suck it up and move"

"Disagree with the minority Group who oppose a 3rd runway, when this has been planned for decades and appears on Maps."

"I'm all for the new runway and the original land for the airport was purchased to accommodate this."

Tourism:

"I think it will be great for Melbourne tourism."

"Bring on the 3rd runway, we need millions of incoming tourists to revive this state."

Economy:

"We need this to go ahead so we can put money back into our economy"

"Great idea that needs to be built to support the growth of the Victorian Economy."

"The proposed third runway is a vital piece of infrastructure in not only developing the local economy but support the wider Victorian and Australian economy as we move past COVID and look towards the rest of the decade."

"I think it's a great idea to have another runway i have no issues with this good for the economy and people of Melbourne"

Job Creator:

"I would like to say I'm in favour of the Third runway and what it will do for Melbourne/ Victoria. I believe the runway will stimulate our community, economy and jobs within the western/northern region"

"It is an absolutely wonderful idea. Any project that contributes to growing our economy by creating jobs and supporting local exporting businesses, it's a winner."

"This is a good project and provides employment opportunities."

"Build the Runway, I'm a local. The airport brings jobs."

Importance to the State of Victoria:

"Happy the project is planned to proceed to cater for the growth in Melbourne's population and air transport needs with visitors to our State and the needs of the Victorian Community."

"I support this project as it provides opportunities to regional Victoria as well from cargo (fresh produce export) to tourism. Cannot wait for this project to be completed."

"as tourism and exports expand in the future this 3rd runway is very important to the people of Victoria."

"The 3rd runway is a vital piece of Victorian infrastructure that needs to be continue to be developed for the economic benefits of the state into the future.
The airport currently employs many people in and around the vicinity of the airport, and no doubt this will significantly increase with the development of the 3rd runway."

<u>Government</u>

Yarra Ranges Council:

The submission from Yarra Ranges Council supported M3R MDP, providing the following commentary:

"Tourism is integral piece of Yarra Ranges economy, directly providing 1,877 jobs and $160 million in gross revenue annually. Indirectly, Tourism contributes to the economy across all industry sectors including agriculture, manufacturing, retail trade, accommodation and food services, and arts and recreation services. An increase in international tourism will boost these economies and help provide visitation during off peak times. Additional freight capabilities will also boost our economy.
…
We support the Preliminary Draft Major Development Plan (pdMDP) of the Third Runway, and Preliminary Draft Master Plan (pdMP) 2022, and believe that they will provide economic benefit to our region, subject to no negative impacts as a result of noise, emissions, or changes in disturbance levels on the Yarra Ranges community."

Non-Government Organisations

Victoria Tourism Industry Council

The Victoria Tourism Industry Council is the dedicated peak body and leading advocate for Victoria's tourism and events industry. Their purpose is to influence and shape the state's vibrant visitor economy.

The submission supports M3R MDP providing the following commentary:

> *"A fully functioning Melbourne Airport is critical to the full recovery of both Victoria's and Australia's aviation performance. The realisation of the third runway project will ensure that Melbourne maintains its vital position in the overall aviation landscape in Australia, but also, that we continue to have the remarkable transport infrastructure in this state that we have come to expect.*
> *While Melbourne Airport is a major impetus to our tourism performance, we cannot underestimate the importance of being a destination with high levels of direct international services in attracting international students to our city. These services are vital in stamping our credentials as a knowledge city, as a centre for creativity, and as the central hub for innovation across a breadth of industries*
> *…*
> *The future fortunes of our state are inextricably linked to the profile and performance of Melbourne Airport as the primary gateway to Victoria.*
> *…*
> *As a state, Victoria exhibited remarkable vision and courage fifty years ago that saw us deliver a vital piece of transport infrastructure that has been the jewel in the crown of our state's profile and performance. We need to again channel this bold vision into the current expansion project that will solidify Melbourne and Victoria's global reputation for the next fifty years."*

Western Melbourne Tourism Inc

The submission supports M3R MDP providing the following commentary:

> *"We would like to offer our strong endorsement and support to the development of the new third runway at Melbourne Airport.*
> *…*
> *Melbourne Airport has traditionally been a key asset and competitive strength for the city. An expansion of capacity is vital for Melbourne if it is to sustain its competitiveness as a city in a global marketplace, but also in the face of other airport capacity expansions occurring nationally including the new curfew-free Western Sydney Airport to be opening soon.*
> *…*
> *The future economic growth of Melbourne's west is inextricably linked to the expansion and growth of Melbourne Airport. Hence this project has our strong support."*

Tourism Accommodation Australia and Accommodation Association of Australia

The submission supports M3R MDP providing the following commentary:

> *"The Associations acknowledge that Melbourne Airport makes a significant contribution to the Victorian and Australian economies. As a key driver of tourism and trade-based industries that supports jobs and creates economic growth, Melbourne Airport plays an important role in the lives of Victorians through job creation and connects them with other parts of Australia and the rest of the world.*

> …
> *TAA and AAoA has carefully considered the Draft 2022 Master Plan and Preliminary Draft Major Development Plan for Third Runway, engaging with our Victorian members and our internal stakeholders. We submit that the proposed third runway will allow Melbourne Airport to keep up with growth in demand, support better choices, reduce delays and improve the overall traveller's experience and therefore is critical to the growth of the Victorian and National economies."*

Business Council of Australia

The submission supports M3R MDP providing the following commentary:

> *"An efficient airport that can handle future growth and improve on-time reliability of services are welcome outcomes of the proposed third runway project. In this context, the Business Council is supportive of the third runway being developed as the current airfield reaches capacity.*
> …
> *Transport infrastructure such as airports are enablers of commerce and make tourism and trade possible. Melbourne Airport both directly and indirectly supports tens of thousands of jobs, in aviation and supporting industries, and in the broader tourism and freight sectors. The Airport's future expansion will further bolster its role in supporting jobs in Victoria"*

Melbourne Chamber of Commerce

The submission supports M3R MDP providing the following commentary:

> *"Post Pandemic the demand for Air Travel will be unprecedented. In order for Victoria's economy to grow and thrive Melbourne Airport will need to expand its offering. It will also be great news for Jobs in the travel and tourism sectors that probably suffered the most in the past 2 years."*

AUSVEG

The submission supports M3R MDP providing the following commentary:

> *"In summary, AUSVEG supports Melbourne Airport's Third Runway Plan. The new runway will provide capacity for Victoria's future passenger and cargo needs and will help facilitate more direct market routes for exporting Victorian growers. The airport's curfew free operation has always been the strong selling point for Victorian fresh vegetable growers, which is particularly important for local growers so they can harvest and pack during the day and have their product on planes the same night."*

<u>Commercial Organisations</u>

A number of commercial organisations provided submissions that supported M3R. Some specific submission examples are shown.

Melbourne Market Authority

The submission supports M3R MDP providing the following commentary:

> *"With the construction of a third runway at Melbourne Airport, the MMA can utilise these existing advantages to invest in a freight consolidation capability for key players in the national export supply chain.*
> …

> *The demand for premium Australian horticultural exports continues to grow strongly, thanks to the growing affluence and increasing numbers of middle-class consumers in Asia and the Middle East. By constructing a third runway at Melbourne Airport, Victoria can be well-positioned to take advantage of this opportunity for the benefit of the state agricultural industry, and the wider Australian economy."*

Daifuku Oceania

The submission supports M3R MDP providing the following commentary:

> *"We support the new project for the third runway which is there to accommodate passenger and cargo growth for the city of Melbourne.*
> *…*
> *With increasing passenger counts expected in Melbourne, this third runway project will inevitably be a trigger to provide further growth for Daifuku Oceania, to allow us to engage more local employees, and allow Daifuku to continue to test new technologies which is critical for the growth of both organisations, and Daifuku globally."*

FedEx Express

The submission supports M3R MDP providing the following commentary:

> *"The construction of a third runway will assist with both RPT and freighter (International & Domestic) in the years ahead with growth anticipated in all segments. Failure to expand may see some operations or operators seek alternative airport options within Australia to help with this demand."*

SkyBus

The submission supports M3R MDP providing the following commentary:

> *"SkyBus is supportive of the third runway at Melbourne Airport, not just for the tangible benefits that will be realisable for our business, but also for the positive impact it will have on the state of Victoria through increased tourism and visitor spending."*

Other commercial companies supporting M3R include:

- Transport / car rental / car parking: ADVAM, Hertz Australia Pty Ltd, Park Aod Pty Ltd, Redspot Enterprise and Uber
- Airport / aviation services: IKON Services Australia and Programmed
- Retail / advertising / hotel: Accor, Airport Retail Enterprises Pty Ltd, Prosegur McCann Australia, The Mercurius Group, The Nuance Group (Australia) Pty Ltd, oOh! media, Village Roadshow Pty Ltd and WHSmith Australia Pty Ltd.
- Consulting / construction: Donald Cant Watts Corke, Fulton Hogan Construction Pty Ltd, Grimshaw Architects Pty Ltd, Lend Lease Building Contractors Pty Ltd, MAZ Group, MinterEllison, Root Partnerships and Seymour Whyte Constructions Pty Ltd.

B4.4 M3R MDP References

The justification for M3R is discussed in the following chapters of M3R MDP:

- Part A The Project, Chapter A2: Need for the project
- Part A The Project, Chapter A3: Options and alternatives

B4.5 APAM Position

APAM acknowledges and appreciates the support of those who have lodged submissions to the Preliminary Draft M3R MDP endorsing the plans for a third runway.

APAM notes the importance of balancing the economic importance of M3R with management of the impacts in the vicinity of the airport. This is discussed further within Theme D and Theme E.

B4.6 Changes to Preliminary Draft M3R MDP

No changes have been made to the preliminary draft M3R MDP as a result of these submissions.

B4.7 Summary and Conclusion

APAM welcomes support for the project and notes the need to balance the economic importance of M3R with management of the impacts in the vicinity of the airport.

B5 Interaction With Other Melbourne Basin Airports and Operators

B5.1 Summary of Issue

This Issue relates to the interaction of M3R with other airports and operators within the Melbourne Basin. Submissions were received from the community, non-government organisations, commercial entities and Government departments.

Submissions from the community related to operations at Essendon Fields, with other submissions highlighting concerns around the impacts M3R will have on operations within the Melbourne Basin.

During the public exhibition, APAM held separate briefings with the following airports / operators within Melbourne Basin:

- RAAF Base Point Cook (including representatives from the 21 Squadron RAAF Base Point Cook, 100 Squadron, The Australian Air Force Cadets and Royal Melbourne Institute of Technology Flight school).
- Avalon International Airport
- Moorabbin Airport
- Representatives of the Australian Airline Pilots Association (AusALPA)
- Skydive Australia

Note submissions were not received from Avalon International Airport or Moorabbin Airport.

B5.2 Number and Types of Submissions

29 submissions contain reference to the ‘Interaction with Other Melbourne Basin Airports and Operators’ Issue. They were received from:

- Community
- Non-government organisations and commercial entities
    - Essendon Fields Pty Ltd (EAPL)
    - Global Ballooning Australia

- Qantas Group
- Skydive Australia Experience Co Pty Ltd (Skydive Australia)
- Moorabbin Airport Chamber of Commerce Inc. (MACCI)

- Government
  - Royal Australian Air Force, Department of Defence

B5.3 Discussion of Submissions

Community submissions relating to Essendon Fields Airport

Of the 18 community submissions, all included reference to Essendon Fields Airport. Common topics include:

- The Melbourne Airport arrival flight path over Essendon Fields Airport.
- The impacts of combined noise from both Essendon Fields and Melbourne Airport (a reference was also made in a submission to Avalon Airport flights)
- Concern about the safety of increased traffic at both airports
- Closure of Essendon Fields Airport

Other topics included changes to flight paths at Essendon Fields (both proposed and recent due to M3R), concern over increase in operations at Essendon Fields, impacts to operations at Essendon Fields due to M3R and a request that corporate jets are moved from Essendon Fields to Melbourne Airport.

Essendon Fields Airport

The submission from EAPL explains a number of areas of concern having regard to the information and consultation provided by APAM. In total 11 areas were identified and are summarised below.

"1.1 Protection of grandfathered facilities"

As part of EAPL's submission, it is requested that any change to facilities at Essendon Fields Airport because of M3R must be accompanied contemporaneously with appropriate exemptions by CASA preserving the status of all other unaffected facilities at Essendon Fields Airport. EAPL request a commitment that any costs to prepare a safety case or supporting material to be bore by APAM or the Commonwealth Government.

Additionally, costs of any infrastructure upgrades required by Melbourne Airport, Airservices, CASA or the Commonwealth Government to enable M3R must be borne by the initiator, not EAPL. They seek appropriate assurances that this is agreed and enforceable prior to approval of the dMDP.

"1.2 Maintaining existing capacity at EFA; providing for forecast growth; avoid economic loss"

EAPL state within their submission that upon reading the pdMDP, it is clear that M3R will result in a reduced aviation capacity at Essendon Fields.

EAPL do not believe that the impact on volume of traffic through Essendon Fields airport is appropriately recognised within the MDP. In particular the potential direct and consequential commercial impacts on Essendon Fields on aviation revenue, rent and any commercial property

penalties that may follow restrictions in the current free movement of aircraft at Essendon Fields in most conditions is not recognised within the pdMDP.

EAPL expressed a concern in relation to the likely economic loss to the aviation revenue stream at Essendon Fields and to the viability of general aviation businesses operating at Essendon Fields.

> *"1.3 The importance of EFA runway 08/26"*

EAPL identify the operations on Runway 08/26 (arrivals onto Runway 08 and departures on Runway 26) that will be in direct conflict with parallel operations at Melbourne Airport on the existing north-south runway (16L/34R) and new north-south runway (16R/34L).

EAPL state the operational requirement for some aircraft (operating weight and performance capability) to necessitate using Runway 08/26. EAPL note the requirement to reserve this capability, including during peak times at Melbourne Airport, for existing aviation movements and growth.

EAPL summarise their concern:

> *"We seek a commitment that procedures will be developed that respond to the current and published air traffic movement forecasts at EFA that provide at least equivalent airspace access in all conditions to that available today, including circumstances when aircraft at EFA require use of its longer east-west runway while MA is operating in a north-south mode."*

> *"1.4 Financial impacts of predominantly single-runway operations at EFA"*

EAPL raise a concern that the pdMDP does not address the increased usage of single runway and upgrades to meet regulatory compliance have the potential to significantly affect the frequency and timing of maintenance investment on Essendon Fields Runway 17/35. They note that a higher dependency of single runway operations will result in advancing capital work programmes for lifecycle major maintenance activities, most notably runway resealing and replacement.

Based on the above concerns, EAPL:

> *"seeks commitments that the facility upgrades at EFA that are consequent on the reorientation of MA's third runway will be funded by MA, including but not limited to runway extensions, installation of runway end safety areas, the installation or upgrade of communications, navigation and surveillance instructure, or earlier-than-scheduled surface improvements. This is a key matter that requires discussion with both MA and the Commonwealth prior to the approval of the Plans."*

> *"2.1 Five Runway Concept of Operations Plan (five runway CONOPS) Endorsement"*

EAPL point to the limited detail provided in relation to how the five-runway concept will function. They seek clarification on the statement made in the pdMDP regarding operating the three north-south runways as two distinct sets of parallel runways rather than triple parallel runways. They do acknowledge the reference within the pdMDP that further definition and clarification of interactions to occur during detailed airspace design. Their request relates to:

> *"comfort must be provided to EFA about the minimum performance requirements of the ultimate airspace redesign to enable efficient operations and provide equitable airspace access at EFA"*

EAPL do acknowledge the support provide by APAM in developing the required information to best outline changes to the Essendon Fields ANEF because of M3R.

EAPL raise a concern if the ICAO Near Parallel Runway Standards are not approved for either compatible or incompatible runway modes. They seek clarification from APAM on:

> *"what alternative traffic flow options are available should the relevant ICAO Parallel Near Runway Standards of operation not be approved by CASA"*

> *"2.2 Proposed EFA runway 35 instrument approach"*

EAPL seek clarification on which airport would experience approach restrictions due to Essendon Fields Runway 35 not being equipped for instrument approach procedures.

EAPL query whether the Runway 35 instrument approach procedure for Essendon Fields will provide more capacity benefit to Melbourne Airport.

EAPL raise a number of queries regarding what the minima could be for the offset approach required for the Runway 35 instrument approach as well as whether the Runway 26 ILS minima would be lower as well.

EAPL acknowledge the considerable consultation between EAPL and APAM however:

> *"until a detailed design is endorsed by Airservices and CASA and the grandfathered rights issue is canvassed with CASA, we are unable to support the introduction of this approach. This is however a matter on which we would welcome further engagement with MA."*

> *"2.3 Establishing and managing an Essendon Fields Slot Scheme"*

EAPL query the reference within the pdMDP regarding two approaches per hour within the Essendon Fields Slot Scheme as it is not referenced within the En-Route Supplement Australia (ERSA).

EAPL state:

> *"level of joint airport ownership in a more strategically orientated slot allocation scheme that enables room for growth in Essendon Fields slots*
> *…*
> *We seek commitment for a strategic alignment in relation to an "Essendon Fields Slot Scheme" if one is required to provide for current movements and future growth at EFA."*

> *"2.4 Operational improvements that may affect the need for and the numbers available for tactical slots in non-compatible operations"*

EAPL seek confirmation that all options have been explored to operate non-compatible operations between the two airports before adopting a slot scheme.

EAPL requested a better understanding of the procedural SIDS and STARS that are proposed within the pdMDP for all runways at Essendon Fields. They also seek a commitment from APAM that Essendon Fields is not liable for any costs (if any) from introducing these procedures.

> *"2.5 Application of the Airports (Protection of Airspace) Regulations and relevant safeguarding during the five runway CONOPS and airspace design phase"*

EAPL noted they are being asked to assess controlled activity applications that may have detrimental impact to future airspace design (such as the instrument approach to runway 35). To help EAPL protect prescribed airspace they seek:

> "Melbourne Airport's cooperation to expedite the five runway CONOPS and airspace design endorsement"

> *"2.6 Lowering of Controlled Area (CTA) steps – Melbourne CBD/Port Phillip Bay"*

EAPL note that:

> *"Lowering the base or extending the dimensions of Class C airspace in this location may have an impact on general aviation and rotary operations which currently occur outside of controlled airspace."*

EAPL state their position that the proposed runway 35 instrument approach option should be included as part of the M3R MDP process.

Regarding any extension to Class C airspace, EAPL seek clarification whether the driver for this is parallel approach operations at Melbourne Airport or the consequential need for a possible runway 35 instrument approach.

> *"3. Aircraft noise impacts to communities surrounding EFA"*

EAPL highlight that based on interpretation of commentary within the pdMDP (Section C2.5.11.1 and Figure C2.51) that there may be some increase in aircraft noise impacts to the north and south of the airport significantly understates the effect of the change.

EAPL note that:

> *"Given the relatively stable air traffic at Essendon Fields Airport a preliminary assessment using publicly available forecasts could have been used in the M3R MDP to give a clearer picture of the potential significant changes in relation to noise impacts in the areas surrounding both airports as a result of the five runway CONOPS proposed for the M3R project."*

EAPL state that:

> *"These changes to operations and aircraft noise impacts would not occur but for the reorientation of M3R north-south and should therefore be considered in detail as part of the M3R MDP, providing information to the community for its consideration prior to the approval of the Plans."*

<u>RAAF Base Point Cook</u>

The submission from the Royal Australian Air Force identified that:

> *"in its current state, the proposed project does not adequately consider Defence's capability requirements, or the safety of aerodrome users, at the neighbouring Point Cook aerodrome"*

The primary concern expressed within the submission relates to the proposed lowering of airspace over RAAF Base Point Cook to accommodate the proposed arrival flight path for Instrument Landing System (ILS) approaches.

The submission from the Royal Australian Air Force identified the importance of Point Cook within the submission:

> *"Point Cook is a strategic asset for Defence, enabling Royal Australian Air Force and Australian Army activities in support of national security. Proposed flight paths and*

procedures in the vicinity of Point Cook will need to consider separation requirements with future high-level arrivals and departures of Defence aircraft into Point Cook aerodrome."

The submission also states that Royal Australian Air Force:

"remains willing to work closely with Melbourne Airport at all stages of the preliminary and detailed design process to identify a viable airspace and flight path concept that adequately addresses both organisations' requirements."

Qantas Group

With respect to interactions with other Melbourne Basin airports and operators, Qantas Group note in their submission:

"construction of M3R will trigger the requirement to reconfigure the Melbourne Basin airspace. A detailed review of this already complex airspace structure will be required with Essendon Fields Airport (ESS), Avalon Airport (AVA), and Moorabbin Airport (MBM), and RAAF Base Point Cook to identify interdependencies and design efficiencies, and safe flightpaths."

Skydive Australia

Skydive Australia has been operating in Victoria for the past 20 years and from the Point Ormond Drop Zone (Danger Area 342) for the last 10 years. In their submission, they reference that the St Kilda drop zone is:

"our premium product in Victoria and quite possibly our 2nd busiest Drop Zone in Australia …
On a yearly basis (pre covid figures) has been taking over 9,200 tourists per year"

The submission outlines the current working relationship with the current Melbourne terminal control unit but expresses concerns regarding the proposed flight paths. In particular, the Mixed Mode Runway 34 and Runway 16 flight paths which encroach on the existing Danger Area 342.

The submission expresses a concern on the lack of consideration for their current operations and lack of solutions / alternatives being presented as part of the plan:

"It has been implied that we would not be able to operate at our St Kilda DZ once the new runway opens, however nothing has been put forward as to how you may propose to make this work with our existing Drop Zone in D342 or provide any alternative locations in this immediate area.

I am very concerned that M3R has not thought how our operations may coexist and there have been no suggestions as to how we will continue to operate. In fact, I feel that M3R has no regard for our business"

Melbourne Ballooning Industry

A submission was received from Global Ballooning Australia organisation requesting that:

"Melbourne Ballooning Industry is consulted in regards to the impact of changes of airspace in regard to the third runway and other approach and departure flight paths in to the future."

The submission also highlighted concerns of the impacts on the hot air ballooning industry that an increase in traffic at Melbourne Airport may have.

MACCI

The submission from MACCI made references to concerns regarding future changes to airspace within the Melbourne Basin. In particular there were concerns to any impacts to the following Visual Flight Rule (VFR) lanes:

- Melbourne Inland Route (referenced as MIR) from the Kilmore Gap to Sugarloaf Reservoir
- Melbourne Coastal Route (MCR) from Laverton BOM Tower to Carrum

The submission recommends the following:

> *"1. APAM and Air Services Australia should strive to maintain all Class G Airspace within The Basin. Any such reductions should have extensive, meaningful and collaborative consultation with MACCI and other Basin VFR aircraft users prior to making any decisions on airspace reduction.*
> *2. That there is no reduction to Class G Airspace steps north of YMML, effectively closing the MIR*
> *3. There is no reduction to the Class G Airspace at 11NM from YMML to the south from 2000ft, effectively closing the MCR*
> *4. There is no reduction to the Class G Airspace steps over Port Phillip Bay*
> *5. Airservices Australia be required to consider VFR routes through current/proposed Class C Airspace that allows aircraft to traverse in and out of The Basin over YMML and/or YMEN outside the Class C Airspace*
> *6. Should a flexible airspace model be adopted, then this must be included on the relevant ATIS/AWIS at YMML, YMEN, YMAV and YMMB."*

B5.4 M3R MDP References

Within the MDP Part C Chapter C2 Airspace Architecture and Capacity, the following sections include discussion of the interaction with other Melbourne Basin airports and operators:

- C2.5.11 Interaction with Essendon Fields Airport operations
- C2.5.12 Interaction with Avalon International Airport
- C2.5.13 Interaction with RAAF Base Point Cook Aerodrome
- C2.5.14 Interaction with Moorabbin Airport
- C2.5.15 Proposed controlled airspace for M3R

B5.5 APAM Position

Melbourne Basin

The introduction of a parallel runway (M3R) at Melbourne Airport and associated flight paths will require a holistic review of all flight paths within the Melbourne Basin. It is anticipated that this review will be completed during the detailed design process. We appreciate the acknowledgement from Qantas Group in their submission that this will need to occur.

Should the M3R MDP be approved, a detailed airspace design process will begin with Airservices. We are committed to working collaboratively with all users of the Melbourne Basin during this process. We will include the recommendations from MACCI for review as part of detailed airspace design.

Before opening M3R the airport will need to prepare an Airspace Change Proposal (ACP) following the detailed airspace design process. The ACP will require its own approval (separate to the MDP) which must include evidence of consultation with relevant stakeholders. In reviewing the ACP, the Office of Airspace Regulation (OAR) may also conduct their own consultation or instruct the proponent to conduct more. APAM is committed to actively engaging with all users of the Melbourne Basin as part of the ACP. This will include but not limited to:

- Essendon Fields Airport and operators at the airport
- Avalon International Airport and operators at the airport
- RAAF Base Point Cook aerodrome and operators
- Moorabbin Airport and operators
- Skydive Australia
- Global Ballooning Australia
- AusALPA
- General Aviation operators within Melbourne Basin
- Operators at Melbourne Airport

APAM acknowledges that this Airspace Change Proposal process is not clearly described within the pdMDP under 'C2.5.15 Proposed controlled airspace for M3R'. The commitment to continue to engage and consult with community and Melbourne Basin operators is also missing from this section. APAM are proposing to add more information in this section. This is discussed in Issue C5 Detailed Airspace Design and Airspace Change Processes.

Community concern with Essendon Fields

APAM understands and acknowledges concerns regarding the compound effect of aircraft noise from all operators within the Melbourne Basin, in particular around Essendon Fields.

The flight path that community members could be referencing would be the Standard Instrument Arrival commonly referred to within the aviation industry as the 'SHEED Approach' (refer to Figure 26). This flight paths allows aircraft to come from the east of the airports, fly over Essendon Fields runway 26 and then turn west of Essendon Fields to approach Melbourne Airports current runway 34.

As part of the concept design this flight path was retained when M3R is operating in Segregated Modes in the 34 direction (Segregated Mode 1 and 3).

Recent changes to the use of this flight path (referenced in submissions from Airservices and AusALPA) are discussed in detail in Issue D4 Flight Path Design.

Whilst this flight path is currently used, with the greater use of the runway 34 direction, the frequency of noise events is forecast to increase with M3R (as highlighted by the Noise tool and reflected in submission concerns).

In developing the concept airspace design, wherever possible existing flight paths were used. This particular flight path is only allowed to be used by select operators (such as Qantas, Jetstar, Virgin Australia). This flight path provides reduced track miles / fuel burn compared to other runway 34 approaches from the east of the airports.

APAM will leverage the Australian Government's commitment to an Aviation White Paper to explore a mechanism that combined aircraft noise from multiple airports can be presented to the community.

APAM understands the community concerns around aviation safety, particularly due to the Beechcraft King Air crash at Essendon Fields Airport in 2017. Specific submissions relating to M3R and Essendon Fields safety referred to either an increased likelihood of mid-air collisions (due to increased traffic) or from pilot error referencing examples of aircraft landing at Essendon Fields rather than Melbourne Airport.

In response to some of the submissions referencing a plan to close Essendon Fields Airport when Melbourne Airport was opened, we have not found any records stating this as a condition of opening Melbourne Airport.

APAM are aware of a study jointly commissioned by the then- Victorian Department of State and Regional Development and Department of Infrastructure looking into the *'Capacity of aviation facilities in the port Phillip Region, September 2000'*.

APAM will be making the Commonwealth Government and EAPL aware of the submissions regarding the history of any intent to close Essendon Fields Airport.

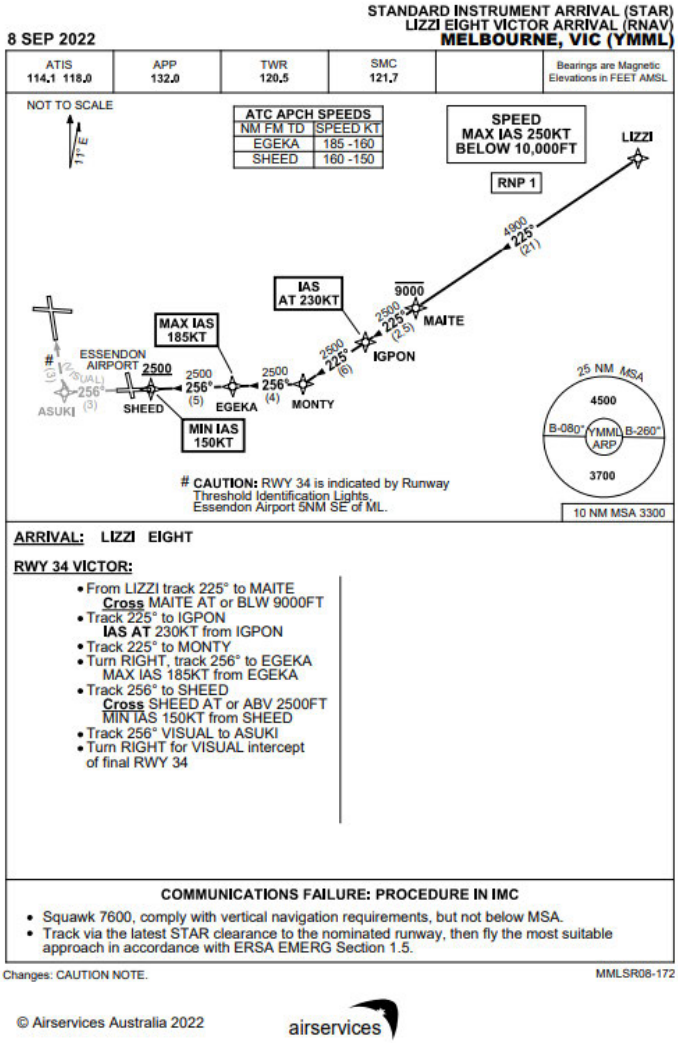


Figure 26: Airservices AIP - STAR LIZZI EIGHT V ARR (RNAV)

EAPL Concerns

APAM welcomes the submission from the Essendon Fields Pty Ltd and appreciates the acknowledgement within their submission of the working relationship between the two airports.

There are not many airports in Australia or the world that are located within eight kilometres of another airport. With this close proximity, the airports already have a number of interactions. Most of the time, complementary runway mode selections can be made that facilitate independent operations at the two airports. However, in certain wind conditions, dependencies occur. For example departures off Runway 16 at Melbourne Airport and departures off Runway 26 at Essendon Fields.

M3R will require changes to the way Essendon Fields operates, in particular during mixed mode operations. APAM is committed to continuing the strong working relationship with EAPL and will ensure that they are included in the detailed airspace design process should the MDP be approved.

APAM provide the following responses to specific issues raised by EAPL in their submission:

1.1 Protection of grandfathered facilities

APAM has committed to maintaining its constructive relationship with EAPL, and undertakes to continue including Essendon's 'grandfathered' facilities in M3R design and operational planning. Should any future infrastructure changes be necessitated by this process, APAM and EAPL will collaborate to achieve a mutually acceptable resolution.

1.2 Maintaining existing capacity at EFA; providing for forecast growth; avoid economic loss

APAM appreciates EAPL's concerns regarding potential impact of M3R on Essendon capacity, growth and revenue. APAM notes that M3R's most likely effect on capacity at Essendon Fields occurs during mixed mode operations.

APAM is committed to determining the extent of these impacts on capacity, growth and revenue with EAPL during the detailed airspace design process.

APAM notes that future parallel runways have been included in all Master Plans since 1998. Both future parallel runways would require changes to the operations at Essendon Fields Airport.

1.3 The importance of EFA runway 08/26

APAM understands the importance of Runway 08/26 - being the longer of the two runways at Essendon Fields. APAM is not able to commit to continuing to provide at least equivalent airspace access in all conditions until the detailed airspace design process has been completed.

APAM commits to ensuring that the importance of Runway 08/26 is considered during this detailed airspace design and a better understanding of the interactions with M3R be developed as part of this process.

1.4 Financial impacts of predominantly single-runway operations at EFA

APAM notes EAPL's concern about potential financial implications of a single-runway operating scenario and reiterates commitment to working with EAPL to understand impacts on their business.

2.1 Five Runway Concept of Operations Plan (five runway CONOPS) Endorsement

APAM acknowledges that more work needs to be done on how the five-runway system (three runways at Melbourne Airport and two runways at Essendon Fields). The airports continue to work collaboratively to further improve collective understanding of how the five runways could operate. The intent of this work is to flag items to be taken into Detailed Airspace Design upon approval of the M3R MDP.

This task is of critical importance to the detailed airspace design process. APAM note that the mixed mode operations are the critical operations to resolve with Essendon Fields.

2.2 Proposed EFA runway 35 instrument approach

APAM notes EAPL's concern on the potential implications of the instrument approach onto Runway 35. APAM discussed the specific wording within the Preliminary Draft MDP related to this procedure prior to public exhibition.

APAM believe further work is required regarding the need, benefits (to EAPL and/or APAM) and challenges associated with this procedure. APAM will continue to work collaborate with EAPL to support this work.

2.3 Establishing and managing an Essendon Fields Slot Scheme

APAM notes there has been some confusion regarding the reference to the Essendon Fields Slot Scheme. APAM are not proposing to introduce a slot scheme as part of M3R. The slot scheme is a current management process developed by Airservices to manage periods or poor weather when non-complementary runway modes are in use. This information is covered within the ERSA for Essendon Fields (01 DEC 2022):

> *"12.1. Essendon Arrivals during Melbourne GDP*
> *a. When the Melbourne TAF indicates a visibility of less than 5,000M and a ceiling of less than 1,600FT an Essendon Slot Scheme may be operating. This is dependant on weather and runway configurations planned to be in operation between the two Airports during the GDP, as Essendon Arrivals may become part of the arrivals sequence into Melbourne.*
> *b. Fixed wing ACFT arriving at Essendon during these periods must contact the Network Coordination Centre (NCC) on 1800 020 626^ to book a slot for arrival into Essendon.*
> *c. Operators who upload a schedule into Metron Harmony or provide a schedule to the NCC will have their ACFT automatically assigned a slot. ACFT operators will still need to confirm their allocated slot time with the NCC.*
> *d. All ACFT subject to the Essendon slot scheme must arrive within -5/+15 minutes of their allocated Slot. Pilots unable to operate within the compliance window must contact the NCC to obtain a new Slot.*
> *e. Failure to obtain or comply with a Slot and/or to submit a flight plan for a flight to Essendon Airport may result in extensive airborne holding or Airways Clearance being withheld if Essendon Airport has no compatible arrival Slots available.*
> *f. A NOTAM will be issued notifying times the Essendon Slot Scheme is in operation or cancelling it if weather conditions change.*
> *g. Priority Flights as defined in AIP ENR 1.4, are exempt from this procedure*

It is APAM's understanding that the management (including number of slots allocated to Essendon Fields) of this slot scheme is detailed within a Letter of Agreement between the two control towers (internal Airservices document).

APAM understands EAPL's concern of the limitation this slot scheme places on their operations. APAM believes this topic should be further discussed during the Detailed Airspace Design process.

2.4 Operational improvements that may affect the need for and the numbers available for tactical slots in non-compatible operations

APAM are committed to exploring all options during the detailed airspace design process to manage non-compatible operations between the two airports. APAM will also seek to ensure that both airports are involved in any slot management or ground delay programs managed by Airservices.

APAM notes Airservices AIP, ENR 1.4 Regulation of Flight – Assessment of Priorities, Section 8.2.c:

> *"for flights in Class C terminal control areas associated with Brisbane, Melbourne, Perth and Sydney, ATC will apply priorities in the following order;*
> *(i) with equal priority, flights compliant with their ATFM requirements, flights exempt from ATFM measures and Medical Aircraft (HOSP) operations; and*
> *(ii) flights not compliant with their ATFM requirements;*
> *(iii) all other aircraft."*

ATFM refers to Air Traffic Flow Management. At major airports within Australia, Air Traffic Flow Management procedures are applied to manage demand and capacity at specific airports Essendon Fields Airport is not part of this management scheme.

APAM will ensure that EAPL are included in the M3R detailed airspace design process regarding introduction of any new procedural SIDS and STARS for Essendon Fields runways.

2.5 Application of the Airports (Protection of Airspace) Regulations and relevant safeguarding during the five runway CONOPS and airspace design phase

APAM recognises EAPL's challenges regarding airspace protection and is facing similar challenge in safeguarding the M3R design with PANS-OPS surfaces not yet being gazetted. APAM is committed to ensuring that the detailed airspace design process enables appropriate airspace protection for both airports.

2.6 Lowering of Controlled Area (CTA) steps – Melbourne CBD/Port Phillip Bay

APAM note EAPL's comments regarding impacts of any lowering of Controlled Area steps. As noted, once the detailed airspace design is complete, APAM will need to prepare an Airspace Change Proposal requiring extensive consultation. Noting the community feedback of the 2019 lowering of Controlled Area to the south of the Melbourne Airport by Airservices, APAM will also ensure the community is appropriately consulted on any airspace changes.

3. Aircraft noise impacts to communities surrounding EFA

Whilst APAM notes EAPL's belief that a preliminary assessment of noise impacts surrounding Essendon could be included in M3R MDP.

APAM notes the following reference in the Preliminary Draft MDP:

> *"it is expected that M3R will result in an increase in the proportion of total movements at Essendon Fields Airport using the north-south runway (17/35) and a reduction in the proportion of movements using the east-west runway (08/26). This may result in some increase in aircraft noise impacts to the north and south of Essendon Fields Airport, and also result in a decrease of aircraft noise impacts to the east and west.*
>
> *The actual impacts on operations and aircraft noise will be a function of M3R in combination with Essendon Fields Airport's forecast operations."*

In acknowledgment of EAPL's feedback, the statement 'may result in' was updated to 'likely increase' for the Draft MDP.

It is worth noting that in APAM's engagement with community members around Essendon Fields, Essendon Fields CACG and Moonee Valley City Council (the Local Government Area for Essendon Fields) during public exhibition APAM was clear to call out the changes to the operations at Essendon Fields because of M3R and the increase in Runway 17/35 usage.

APAM will continue to support EAPL in the development of the ANEF to support their new Master Plan. APAM have also offered to support EAPL in their public exhibition period in the event questions are raised about M3R.

APAM note that EAPL are adopting a composite ANEF as part of their new Master Plan that reflects the various runway developments at Melbourne Airport over time. This includes an ANEC covering current operations, and ANEC covering three runways at Melbourne Airport (M3R) and an ANEC covering four runways at Melbourne Airport (long term).

Royal Australian Air Force Concerns

APAM welcomes the submission from the Royal Australian Air Force and appreciated the opportunity to discuss the proposed concept during the exhibition period with the department and operators of RAAF Base Point Cook.

As highlighted in Figure 27, RAAF Base Point Cook (YMPC) has a number of Restricted Areas (R330A and R330B) and Danger Areas (D383A, D383B) around the aerodrome.

M3R's concept flight path design for mixed mode arrivals onto Runway 34L and 34R would require changes to controlled airspace around RAAF Base Point Cook. The flight path for an ILS / GLS approach (indicated as green in **Error! Reference source not found.**) onto Runway 34L passes over RAAF Base Point Cook. It is anticipated that 80 percent of arriving aircraft will use the shorter RNP-AR or visual approaches rather than the ILS / GLS. It is also worth noting that mixed mode operations are not forecast to regularly required upon opening of M3R. For segregated mode, arrivals onto Runway 34L are similar

As part of the ILS / GLS procedure, it commences approach over Port Philip Bay at 3,000ft. This is 1,000ft lower than the approach for Runway 34R. Runway 34R was selected as the higher intercept altitude to keep aircraft higher above residentials areas until crossing the east coast of Port Philip Bay. This also provides some benefits in the management of Moorabbin Airport and General Aviation traffic.

As there are fewer terrain concerns to the south of the airport it may have been possible to reduce the heights of the commencement points and move them closer to the airport – thus reducing the number of miles flown and therefore fuel burn and emissions. However, to do this would require aircraft to be lower over residential areas to the south-east and south-west of Melbourne. The design team worked to keep aircraft higher until they had crossed the coast to generate better noise outcomes.

An alternative solution would be to move the turn point further south preserving the existing restricted and danger areas. This would increase the number of miles flown and therefore fuel burn and emission.

APAM is proposing to explore alternative solutions within the detail airspace design process in consultation with Royal Australian Air Force, RAAF Base Point Cook operators and Airservices.

Figure 27: Location of RAAF Base Point Cook and associated Restricted / Danger Areas relative to 34L instrument approaches.

Skydive Australia Concerns

APAM welcomes the submission from Skydive Australia and appreciated the opportunity to discuss the proposed concept during the exhibition period.

As noted within the submission, the greatest impact on operations within the drop zone utilised by Skydive Australia (Danger Area D342) is during mixed mode operations. Departures from Runway 16L and arrivals onto Runway 34R have an interaction with this drop zone. Note the departure off Runway 16L for Segregated Mode 2 and 4 is similar to the mixed mode flight path.

APAM understands Skydive Australia's disappointment that no solution or alternative location has been provided. Unfortunately, due to the concept nature of the design APAM are not yet in a position to explore solutions or alternatives, however these will be pursued in detailed airspace design.

APAM commits to keeping Skydive Australia informed during the detailed airspace design process.

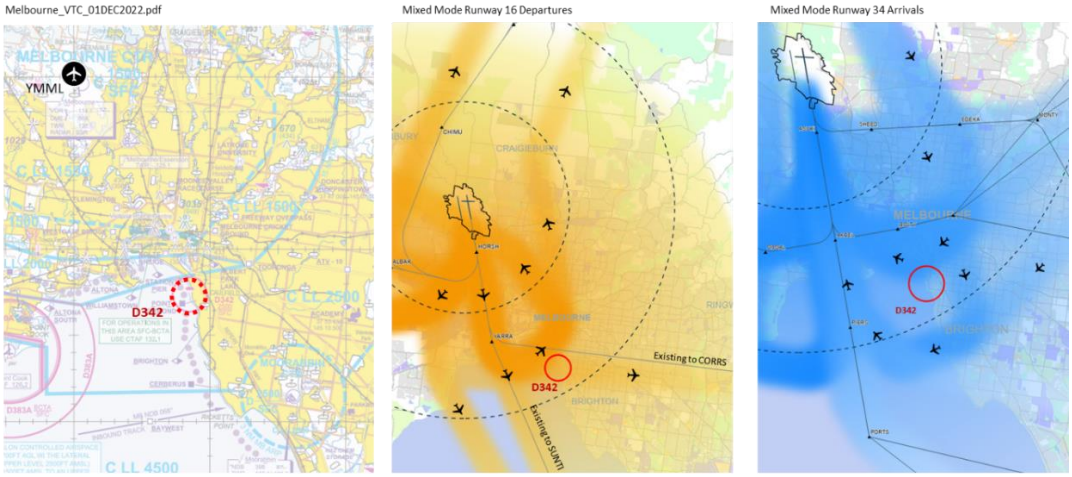


Figure 28: Location of D342 relative to mixed mode runway 16 departures and mixed mode runway 34 arrivals.

B5.6 Changes to Preliminary Draft M3R MDP

APAM have changed the wording regarding the Section C2.5.11.1 where we will update the wording from 'may result in' to 'will likely'. This results the following sentence:

> *"This **will likely** result in some increase in aircraft noise impacts to the north and south of Essendon Fields Airport"*

B5.7 Summary and Conclusion

APAM acknowledges that M3R will have a range of interactions with other airports and operators within the Melbourne Basin. APAM appreciates the feedback and concerns raised by submissions regarding the concept design, in particular with mixed mode operations, and we are committed to working collaboratively with the aviation industry during the detailed design process.

Any changes required to resolve concerns raised that fall outside of the M3R MDP approval envelope will require further assessment and consultation with the community.

B6 Construction

B6.1 Summary of Issue

An overview of the construction methodology for Melbourne Airport's Third Runway (M3R) was outlined in Chapter A5: Project construction of the Major Development Plan (MDP). The chapter also outlined the scope of key construction activities required to deliver the project, including:

- Major works phases
- Preliminary works
- Earthworks
- Pavement construction
- Drainage
- Navigational aids
- Airfield ground lighting (including equipment rooms and control system)
- HV power supply strategy
- Temporary works
- Construction delivery
- Construction phase risk management

In addition To Chapter A5: Project construction, a number of other MDP chapters also include sections on the construction impacts.

<u>Overview of submissions</u>

The submissions that contain reference to the 'Construction' issue vary in nature, but mostly include concerns or comments raised around the construction traffic and congestion, environmental and climate impacts, construction related noise and dust, staffing and resources, and disturbance from new lighting infrastructure. Submissions were also received supporting the job opportunities provided by the construction works.

Overall, the submissions under the 'Construction' Issue have been reviewed and grouped into the following sub-issues:

- Construction traffic and congestion
- Emissions and other environmental concerns

- Opposition to the construction of the runway in general at Melbourne Airport with alternative locations proposed
- Construction noise and dust generated by the works
- Construction employment resources
- Construction duration and proposed opening date
- Disturbance from high intensity lighting system to residents

A description of each sub-Issue is provided below, along with an outline of APAM's response to the concerns raised in relevant submissions.

Of the sub-issues identified above, a number fall into topics addressed by other themes. When this occurs, reference is provided to the relevant theme and section.

B6.2 Number and Types of Submissions

41 submissions contain reference to the 'Construction' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Maribyrnong City Council, Hume City Council, Brimbank City Council, and the Victorian State Government)

B6.3 Discussion of Submissions

Construction traffic and congestion

The impacts of construction vehicle traffic and associated staff movements is a key concern and is raised in 12 submissions, with specific mention of traffic and congestion on Sunbury Road.

This sub-issue is addressed under Issue E8: Off-Airport Road Network Performance and Plans.

Emissions and other environmental concerns

A number of concerns have been raised with regard to emissions generated by construction works, contaminated materials, and other environmental issues including impacts to surrounding water ways and the Grey Box Woodland.

This sub-issue is addressed as part of Theme F - Environmental Impacts under the following Issues:

- F1 - The airport site (inc. contamination)
- F2 – Waterways, covers impact to sounding creeks and rivers
- F3 – Ecology (on-airport), including impacts to the Grey Boc Woodland
- F7 - Airport contribution to climate change (inc. Greenhouse emissions), covers emission generated from the construction works

Opposition to the construction of the runway in general at Melbourne Airport with alternative locations proposed

Opposition to M3R construction was raised generally in a number of submissions including suggestions to consider alternative options to the East or West of Melbourne to support additional capacity.

This sub-issue is address as part of Theme B – The Project under the following Issues:

- B2 – Options and alternative, includes considerations for alternative locations for increased runway capacity to serve the demand from Melbourne and Victoria
- B3 - General Objections to M3R, covers all dissatisfaction to the project

Construction noise and dust generated by the works

Noise and dust generated by the construction works or construction traffic was raised in six submissions with specific concerns around impacts to local communities. The submission focused on lack of sleep, air quality issues, and general objection to noise and dust. The submissions were received from both community and government.

This submission from a member of the community, which was similar to three other submissions, raised concerns with regards loss of sleep caused by a number of aspects of the project, including the construction works and increased road traffic:

> *"Loss of sleep when extra flights are allocated in and out bound during peak times and or events held in Melbourne such as.*
>
> *a. I already experience additional noise and have loss of sleep due the from the current airport flight traffic.*
> *b. Road traffic going through Bulla from people going to and from the airport in cars and trucks who work at in and around the airport.*
> *c. Vibration of my windows when larger planes start their engines late at night and take off on the current runways.*
> *d. Quality of life and loss of quiet in my own backyard.*
> *e. Construction noise of the third runway and roads surrounding areas to*
> *i. Cater for extra traffic of people using the roads in and around Bulla.*
> *ii. Extra trucks if there is construction of the third runway.*
> *iii. Construction of new housing developments to cater for the increase of jobs at the Melbourne Airport."*

The submission from Brimbank City Council expressed concerns regarding the levels and extent of nuisance dust emissions caused by the construction activities and requests monitoring be implemented to ensure impacts are confined:

> *"The initial risk level for the M3R construction was assessed as high, but consideration of additional mitigation measures decreased this risk level to medium (Section B10.6). The Air Quality Assessment concludes that the potential for air quality impacts due to dust emissions from construction activities is anticipated to be mitigated to satisfactory levels through the application of dust suppression techniques implemented through the CEMP. The predicted concentration of nuisance dust as shown in Figure B10:13 extend beyond the airport boundary into the Brimbank LGA. The contour extends close to the residential receptor on Overnewton Road. Monitoring should be implemented at this location during the construction to ensure that the impacts are being managed so that any impacts are confined within the airport boundary and not impacting on sensitive receptors within Brimbank"*

A submission by another member of the community, as well as commenting on other issues, included concerns around noise and dust created by the construction works:

> *‘”the prospect of doubling the movements of aircrafts departing or arriving from the north or west, the number of taxis or private vehicles clogging the freeway to the airport and back, the noise and dust the construction will create, even if it boosts employment and takes 20 years to finalise, do not appeal to our family.”*

Construction employment resources

Four submissions raised regard for employment for the construction works.

This sub-issue is addressed under Issue E5: Economic Activity and Issue E6: Employment.

Construction duration and proposed opening date

Two submissions have been raised on the subject of construction duration or proposed runway opening date.

The submission from the Community Aviation Consultation Group, Melbourne Airport, noted the importance of providing realistic completion dates to help manage public expectations:

> *“MA initially estimated M3R’s completion to be in 2026 but subsequent messages from MA have indicated the completion is delayed. CACG acknowledges that this is subject to government approval and a variety of other factors. However, this information on media report can give rise to expectation on the completion date.*
>
> *What would be ways in which MA can provide more realistic estimation and manage public expectation?”*

A community member’s submission also questioned if the opening date of 2026 is real, and provided reference to the

> *“Is completion of the runway by 2026 realistic? Noting it took Brisbane airport 8 years to build their new runway. It will be beneficial for the community to understand a more realistic timeframe so we can plan our lives accordingly.”*

Disturbance from high intensity lighting system to residents

One submission from a community member to the south of M3R raised a concern with regards impacts of the airport lights to residences, with specific mention of residences to the south of M3R:

> ”*I note a whole section devoted to lights affecting airport but note no responsibility of airport lights affecting residences, especially residences south of proposed M3R. This I believe is a glaring omission. (excuse the pun)*”

B6.4 M3R MDP References

Construction noise and dust generated by the works

Chapter B9 - Ground-Based Noise and Vibration of the M3R MDP includes a section on Construction Noise and Construction Traffic Noise. Section B9.5 sets out the relevant construction and operational noise and vibration criteria used, followed by Section B9.6 which details the scenarios, methodology and assessment of impacts.

Results of the assessment (B9.6.1.2) indicate that noise from the construction is predicted to be lower than the existing operational noise from the airport, with impacts expected to be negligible. Also, notwithstanding compliance with the project construction objectives is generally predicted, best-practice construction-noise mitigation measures will be implemented to control adverse noise effects arising from construction activity at all location.

The incorporated mitigation measures are also presented in Section 9.8, including confirmation that M3R construction activities will be managed in accordance with the requirements of EPA's Civil, building and demolitions guide (EPA 1834) which will require the appointed contractor to develop and implement a construction and noise management plan.

Chapter A5 – Project Construction includes descriptions on key construction activities which could cause dust. Section A5.4.6.3 – Earthworks, notes that the Excavation methodologies have been developed based on the ground conditions to be encountered, and to minimise the impact from dust and vibration. Fill placement, which is described in Section A5.4.5.4 also notes requirement for dust suppression. Table A5.2 – Risks that could occur during the construction phase, also notes the risk of dust causing disruption to operations or local community and indicated that a Construction Management Plan be developed to manage dust issues and dust suppression program implemented where required.

Construction duration and proposed opening date

MDP Chapter A1 – The Project - Introduction, Section A1.5.3 indicates that the construction of M3R is projected to take between four and five years. The Section also notes that M3R will be operational no earlier than 2026, with Section A1.5.4 stating that the nomination of 2026 as M3R opening year will be revised as the aviation industry recovers from COVID-19 and the feasibility of the commercial agreements needed to fund the project. Further details on the forecast demand is included in MDP Chapter A2 - Need for the Project, including further commentary on the impacts of COVID-19.

Also, in Section A1.5.4, APAM requested consideration of an extended validity period (to 2035) for Ministerial approval of the MDP. The flexibility of 10 years is noted as being requested to allow APAM to execute the project when commercial considerations are optimised, and to introduce associated impacts only when necessary.

Disturbance from high intensity lighting system to residents

MDP Chapter A4 – Project Description, Section A4.9.1 documents the proposed approach lighting system. The lighting for runway 16R will be designed for Category II/III conditions with a 720m approach lighting system. The lighting for the runway 34L will be designed for Category I Special Authorisation so will not require approach lights. Lighting arrangements for the existing runway are also documented.

B6.5 APAM Position

Construction noise and dust generated by the works

By nature of the work involved in the construction of M3R, which includes the excavation, transportation, and placement of large volumes of material has the risk of generating noise and dust which could cause disruption to local community.

Analysis has indicated that noise from the construction is predicted to be lower than the existing operational noise from the airport and a detailed list of incorporated mitigation measures which will be implemented to control adverse noise effects arising from the works is included in the MDP.

The construction works will be managed in accordance with the requirements of EPA's Civil, building and demolitions guide (EPA 1834), which will include the preparation of a detailed construction management plan. The construction management plan will include detailed section on the management of noise from the construction works and dust, including approach to monitoring.

Construction duration and proposed opening date

The construction duration of M3R of between four and five years is documented in MDP Chapter A1, and is an accurate estimate of the length of time expected to complete the project. The construction duration has been informed with consideration for the Victorian contractor market, availability of resources, expected productivity and ground conditions.

The nominated reference year for the opening of M3R is 2026 and represents the earliest date that the runway could be operational. The exact opening date for the project is subject to the approval of the MDP, industry recovery from COVID-19 and a commercial agreement. Flexibility is also request in the MDP in the form of a validity period to 2035 which helps to indicate bookends for the operational date for M3R.

Disturbance from high intensity lighting system to residents

MDP Chapter A4 – Project Description, Section A4.9.1 sets out the proposed high intensity lighting systems for the new runway. No approach system is proposed for Runway 34L, which would have approach lighting directed to the south. This approach is consistent with current Runway 34 (future 34R), which does not have an approach lighting system.

B6.6 Changes to Preliminary Draft M3R MDP

Based on the commentary included in 'APAM Position', APAM proposes no change to the Preliminary Draft M3R MDP.

B6.7 Summary and Conclusion

The M3R MDP provides an account of the impacts associated with the construction activities required to build the project. The construction works are described in MDP Chapter A5 – Construction with a number of the other MDP chapters also including assessments covering the construction period.

A total of 40 submissions that referenced 'Construction' were received. These covered a range of sub issues, including construction traffic and congestions, environmental and climate impacts, construction related noise and dust, staffing and resources, and disturbance from new lighting infrastructure.

Of the 40 submissions 18 are addressed under other issues, including Issues, B2 - Options and alternative, B3 - General Objections, and E5 – Economic Activity E8 Off-airport Road Network Performance and plans, and Theme F – Environmental Impacts.

The remaining nine submissions have been reviewed and divided into three sub-issues, construction noise and dust generated by the works, construction duration and proposed opening date, and disturbance from high intensity lighting system to residents.

The six submissions received with concerns around noise and dust express concerns around impacts to sleep, extent of dust emission caused by construction activities and poor air quality. Monitoring was also suggested to ensure impacts are managed.

The mitigation measures to control dust and noise generated by the construction works are well documented in MDP Chapter B9 – Ground-Based Noise and Vibration and MDP Chapter A5 – Project Construction, with requirement to prepare more detail noise and dust management plans as part of the development of a Construction Management Plan.

Two submissions were received with concerns around the accuracy of the construction duration or the opening date. While APAM notes the concerns, MDP Chapter A1 provide details of the construction duration and runway operational date, with further information provided in MDP Chapter A2 – Needs for the project.

One submission from a resident to the south of the airport expressed concerns over the need for high intensity lighting systems as part of M3R to the south of the airport. MDP Chapter A4 – Project Description outlines the runway lighting systems proposed for the new runway and indicated that no approach system is proposed for Runway 34L. This runway will operation as per Runway 34 (Future 34R) without an approach lighting system.

Based on the commentary included, no change to the Preliminary Draft MDP is proposed.

5.2.3 Theme Summary and Conclusion

This theme has considered general feedback received on the project, the absolute requirement for the new infrastructure, including alternative ways of achieving the required capacity, and other macro impacts such as those on other airports and as a result of construction.

APAM had considered all submissions received and believes that most issues raised by submissions were adequately addressed within the Preliminary Draft MDP. Some minor updates were made to the MDP with respect to the viability of non-aviation means of travel as an alternative to constructing the new runway.

5.3 Theme C: Engagement and Approval

5.3.1 Overview of Theme

This theme covers the M3R MDP approval process, the impact assessment methodology used to prepare the document, and the engagement activities undertaken to inform the community about the proposal and its impacts and to collate public feedback.

The Airports Act 1996 stipulates the minimum requirements for public exhibition of a preliminary draft Major Development Plan, stating that the airport must:

- *cause to be published in a newspaper circulating generally in the State or Territory in which the airport is situated, and on the airport's website, a notice:*
    - *stating that the company has prepared a draft version of the plan; and*
    - *specifying the consultation period under subsection (2A); and*
    - *stating that copies of the draft version will be available for inspection and purchase by members of the public during normal office hours throughout the consultation period specified in the notice; and*
    - *specifying the place or places where the copies will be available for inspection and purchase; and*
    - *in the case of a notice published in a newspaper—stating that copies of the draft version will be available free of charge to members of the public on the airport's website throughout the consultation period specified in the notice; and*
- *in the case of a notice published in a newspaper—specifying the address of the airport's website; and*
- *in any case—inviting members of the public to give written comments about the draft version to the company within the consultation period specified in the notice; and*
- *make copies of the draft version available for inspection and purchase by members of the public in accordance with the notice; and*
- *make copies of the draft version available free of charge to members of the public on the airport's website:*
    - *in a readily accessible format that is acceptable to the Minister; and*

- *in accordance with the notice.*

Some submitters questioned the use of concurrent public exhibition periods for the 2022 Master Plan and M3R MDP, the length of time provided for public review, and the adequacy of the information being provided.

Some issues raised informally by the community regarding the public exhibition were able to be addressed by APAM during the consultation phase and incorporated into the final program.

Submissions also addressed the methodology and/or independence of the studies, modelling and assessments used to develop the M3R MDP, with some requesting further studies.

There were also queries regarding future steps, detailed airspace design and changes to flight paths.

Most submissions related to this theme came from community members, however some government bodies also expressed a view.

The ‘Engagement and Approval’ Theme was raised in 518 submissions.

The following Issues are considered within the ‘Engagement and Approval’ Theme:

C1: Impact Assessment Methodology

This issue relates to concerns that have been expressed in a number of submissions questioning the methodology, rigour, transparency, level of detail and/or independence of the studies, modelling and assessments used to develop the M3R MDP.

There were also a number of requests for further information and studies to be completed.

It is noted that specific issues relating to the assessment methodology used for specific MDP assessments are dealt with elsewhere in this report. For example, the issue of the noise modelling methodology, a key concern expressed in many submissions, is dealt with separately under Theme D in this report. Specific concerns about the health assessment methodology are dealt with under Theme E.

This issue deals with the MDP’s overarching assessment methodology and scope.

C2: MDP Approval Process

This issue relates to the process the MDP is following through to approval by the Minister. The submissions raise various concerns, criticisms and perceived deficiencies relating to the approval process.

This issue overlaps to some extent with the previous issue relating to assessment methodology, which includes discussion about independent assessments.

C3: Public Exhibition

This issue relates to the Public Exhibition phase of the project, and concerns from submitters who were unhappy with the process or felt it was inadequate. This includes concerns about previous community engagement and the concurrent exhibition of the MDP with the 2022 Master Plan.

C4: Online Engagement ('Virtual Visitor Centre' and 'Flight Path and Noise Tool')

This issue relates to the online engagement tools used during public exhibition to help inform the community about the preliminary draft M3R Major Development Plan. It includes concerns about

accessing the desired information, trouble understanding what was presented or problems making online submissions.

C5: Detailed Airspace Design and Airspace Change Processes

This issue refers to submissions regarding the future steps in the airspace design process for M3R. It includes community queries about how an operating option would be chosen and submissions from the aviation industry expressing a desire to be part of the detailed airspace design process.

5.3.2 APAM Response to Issues

This section of the Supplementary Report addresses the Issues grouped into the 'Engagement and Approval' Theme. This section:

- Summarises each Issue in the context of Melbourne Airport and the M3R project
- Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment
- Explains if/how the M3R MDP addressed the issue in its Preliminary Draft version
- Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM's response/position where balances between impacts and benefits must be sought
- Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.

C1 Impact Assessment Methodology

C1.1 Summary of Issue

This issue relates to concerns that have been expressed in a number of submissions questioning the methodology, rigour, transparency, level of detail and/or independence of the studies, modelling and assessments used to develop the M3R MDP.

There were also requests for further information and studies to be completed.

It is noted that issues relating to the assessment methodology used for specific MDP assessments are dealt with elsewhere in this report. For example, the issue of the noise modelling methodology, a key concern expressed in many submissions, is dealt with separately under Theme D in this report. Specific concerns about the health assessment methodology are dealt with under Theme E.

This issue deals with the MDP's overarching assessment methodology and scope.

C1.2 Number and Types of Submissions

344 submissions contain reference to the 'Impact Assessment Methodology' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government:
    - Victorian Government
    - Brimbank City Council

- Hume City Council
- Western Health
- Maribyrnong City Council

C1.3 Discussion of Submissions

The submissions that have raised this issue generally have concerns about the scope, independence or extent/details of the assessments or modelling undertaken for the MDP. They include statements such as:

> *"We object to the proposal and ask that a hold be placed on submitting the MDP to Commonwealth Minister until the following are provided and made publicly available for review:*
>
> - *Independent assessment of the environmental impact claims listed in the MDP, including PFAS and air born fine particulates emitted by aircraft.*
> - *Independent review of the methodology undertaken so far to deliver the most accurate noise impact to residents.*
> - *That all modelling be undertaken on moderate to high levels of usage, not on the conservative forecasting used in the MDP.*
> - *That the Melbourne Airport Authority be bound to commit to fight paths being modelled.*
> - *Independent traffic modelling for the Melbourne road network be undertaken to ensure the road network can cater for the movement of the conservative figure of 29 million international passengers and 47 million domestic passengers by 2042. The modelling is to include the growth projected in Melbourne's population over this time, particularly in the north and western suburbs."*
>
> *"The assessment of impacts in Keilor is incomplete and insufficient to assess cost of mitigating human health impacts."*
>
> *"Human health impacts caused by noise is unassessed in terms of hearing loss caused by peak noise."*
>
> *"It appears that sufficient health studies have not been done to protect residents and children in line with WHO recommendations."*
>
> *"I fail to see the corporate responsibility in this situation, and I don't believe a proper environmental impact assessment has been done, for if it had, the only logical conclusion you would have come to would be to not go ahead with this project."*
>
> *"We need an independent investigation into the effects of this proposed runway."*
>
> *"The aircraft noise forecast prediction modelling is incorrect, containing shewed data for long term effects to residents. It undermines the true detrimental impact assessment for local residents leading to health issues and social community concerns."*
>
> *"No assessment of loss of business caused by increased noise or pollution in Keilor. There is no assessment of local impacts or any discussion on mitigation of those impacts."*
>
> *"However, impact to persons who may lose or be forced to move from their homes, or loss of business, is disregarded in the assessment. There is no assessment on lost*

productivity caused by students unable to achieve their maximum learning outcomes due to unmitigated noisy learning environments. There is no discussion or assessment of vulnerable groups in the community who may be impacted by aircraft noise. Notably children and those with Autism."

"It is apparent that a lack of consideration has been given to suitable alternatives that would provide far greater community benefits than the proposed 3rd runway."

"That human health impacts associated with noise be fully assessed and mitigation documented. This includes, as a minimum, calibrated noise and air quality monitoring and modelling calibrated with data captured on site and monitored for the life of the Airport."

One community member's submission correctly identifies that it is Section 91 of the Airports Act that dictates the scope of the MDP, but states:

"Transparency of the manner and extent to which the environment impacts are addressed is dramatically lessened when, under the MDP process, only the matters listed under Section 91 of the Airports Act are to be self-assessed by the proponent. An independent, fully resourced and transparent assessment is avoided for environmental characteristics and impacts, including the effects of the 3rd runway on communities and the 'environment' in its broadest sense, for example, in relation to noise, air quality, airport hazards and risk, public health, economic and social/community issues.

Reliance on Section 91 prevents the public from knowing what exactly is being assessed over what time period and by what method, the level and detail of analysis and modelling that is undertaken, the alternatives to the 3rd runway, and the full suite of possible options for managing environmental impacts. It also creates uncertainty about the public availability of detailed technical studies that would normally be appended to an EIS."

Some submissions also call for:

- A new study of the community responses to aircraft noise
- A review of the methodology used to forecast aircraft noise
- A study of actual aircraft noise in residential areas around Australian airports
- Independent assessment into the economics of the third runway proposal
- EPA review and endorsement of the emissions, air quality and noise assessments
- Revised passenger growth forecasts taking into account competitor risks such as high-speed rail.

The City of Brimbank's submission, requests, for example:

"Prepare a legitimate, well founded and valid health impact assessment (HIA) in relation to the off-site noise impacts associated with the Master Plan and MDP, in accordance with World Health Organisation (WHO) Noise Guidance and the Environmental Protection Act 2017."

"Commission an independent air quality assessment of the existing and proposed emissions from onsite and off-site operations."

"Commission an independent assessment reviewing the existing and proposed noise emissions from Melbourne Airport and its operations on the Brimbank and surrounding community, assessed against the Environment Protection Act 2017."

"An adequate assessment is undertaken of the impact that Melbourne Airport Rail will have on the future road access to the Airport in relation to potential reduction on reliance of vehicle access."

"A more detailed assessment on the delivery of improved cycling connections is required (including along Arundel Road), with a focus on reducing car and bus transport to and from the airport."

"Engaging an independent expert to conduct a climate change impact assessment to model the impact of the third runway on emissions."

Brimbank City Council's submission also states:

"Council further submits that human rights are a relevant consideration in the determination (including conditionally) of the Master Plan and MDP."

Brimbank's submission includes a detailed attachment relating specifically to human rights.

The CACG's submission includes:

"Who prepared the health impact assessment? The chapter includes very limited scope and findings. How was the scope determined?"

"CACG notes the assessment of impacts is predominantly 'permanent'. How has the study considered potential long term ongoing impacts? Examples could be: stress, hypertension, asthma, long term use of medications; or affected people relocating from their homes to other areas."

"It appears the noise modelling focus of MA's planning (and subsequent costing) does not highlight worst case scenarios: this is normally a part of risk management. Would MA please clarify why this is the case?"

"What is MA doing to 'futureproof' their 2022 assessments of future noise and the potential risks to their operations? For example: it seems likely the ANEF/MAEO to the west could extend when and if the 4th (east/west) runway is constructed."

C1.4 M3R MDP References

Chapter A8: Assessment and Approval Process describes the overall:

- Statutory mechanisms applicable to the M3R approval process
- Process for assessing environmental impacts
- Consistency of M3R with relevant legislation.

Each individual impact assessment chapter also includes a 'Methodology and Assumptions' section for that particular assessment.

Chapter C3 explains the 'Aircraft Noise Modelling Methodology' in detail.

C1.5 APAM Position

It is APAM's position that the assessment methodology and level of detail in the MDP complies with the requirements of the Airports Act and EPBC Act. It is consistent with other similar MDPs.

The MDP document as a whole is nearly 1,800 pages long and comprises 36 chapters including 18 individual impact assessments. This is understood to be one of the most comprehensive MDPs, if not the most comprehensive MDP, ever prepared in Australia since the Airports Act came into operation.

Many of the comments raised in submissions relating to this issue are dealt with in more detail under other specific themes / issues in this report. For example, comments specifically relating to the growth forecasts methodology are dealt with in Issue A4: Forecasts and Growth. Comments relating to the noise modelling, including the WHO guidance, are dealt with in Theme D: Airspace and Aircraft Impacts. Comments relating to environmental studies are dealt with under Theme F: Environmental Impacts.

Legislative Basis of Assessments

As stated in Chapter A8: Assessment and Approval Process:

> *"As Melbourne Airport occupies Commonwealth land, Victorian state planning and environmental legislation does not directly apply. M3R is also exempt from local planning scheme requirements. The Airports Act 1996 (Cth) (subsequently referred to as the Airports Act) does, however, require that any master plan prepared for the airport reflect due consideration of the provisions of planning schemes under the law of the state in which the airport is located. The assessment process covered in this chapter is in line with the relevant requirements of the Airports Act."*

The M3R MDP has been prepared in accordance with the requirements of the Airports Act and associated regulations. The Airports Act specifies what a MDP must include in terms of assessments. A checklist demonstrating compliance with each of the requirements of the Act is contained in Chapter A1 of the MDP (Table A1.2). The Airports Act is the primary legislation under which M3R is assessed and which the scope of assessments must meet.

The *Environment Protection and Biodiversity Conservation Act 1999* (referred to as the EPBC Act) is further Commonwealth Government environmental legislation relating to the environmental impact of developments. As stated in Chapter A8, provisions of the EPBC Act apply to M3R and were also incorporated in the assessment methodology for the MDP. This included consideration of the document '*Actions on, or impacting upon, Commonwealth land, and actions by Commonwealth agencies, Significant impact guidelines 1.2, Environment Protection and Biodiversity Conservation Act 1999*' (Significant Impact Guidelines 1.2).

Significant Impact Guidelines 1.2

The Significant Impact Guidelines 1.2 consider the 'whole of environment' impacts to be the 'total adverse impact of the action in the entire context of the environment which will be impacted' by the proposed action (particularly those elements of the environment which are sensitive or valuable). The guidelines identify a series of criteria to determine whether an action is considered 'significant', relating to:

- Landscapes and soils
- Coastal landscapes and processes
- Ocean forms, ocean processes and ocean life
- Water resources

- Pollutants, chemicals and toxic substances
- Plants
- Animals
- People and communities
- Heritage.

A checklist setting out the Significance Impact Guidelines 1.2 significance criteria and the correlating M3R MDP chapter/s that provide the assessment information is provided in Appendix A8.A of the MDP. A summary assessment against each of the significance criteria is provided in Appendix E6.A to Chapter E6: Summary Commitments and Conclusion. These demonstrate that the MDP assessments have also addressed significant 'whole of environment' impact issues under the EPBC Act, including impacts on 'people and communities'.

Impact Assessment Method

As outlined in Chapter A8, a consistent process was generally applied to the assessment of impacts associated with each technical study, as outlined below:

1. Describe the existing baseline conditions relevant to the technical study.

2. Assess the anticipated impacts of M3R, incorporating standard mitigation (e.g. statutory compliance and measures incorporated in the design).

3. Assess the significance of each impact – by considering the severity and likelihood of the impact in accordance with the framework described in Section A8.3.2 and assessment scenarios outlined in Section A8.3.4.

4. Where an extreme or high adverse impact is identified, consider additional mitigation measures to reduce the severity and/or likelihood of the impact.

5. Revised assessment of impact significance, incorporating the additional mitigation measures to determine the residual impact.

The M3R assessment process incorporates relevant guidance (Significance Impact Guidelines 1.2). Further, any disturbance or impact that M3R has on the whole of the environment has been considered in line with guidance from the Department of Climate Change, Energy, the Environment and Water.

Consideration was also given to 'indirect', 'downstream' or 'downwind', 'upstream', 'facilitated' and 'cumulative' impacts, in order to ensure a holistic impact assessment of the whole environment.

This assessment methodology is considered comprehensive and robust.

Exposure Draft MDP

An 'exposure draft' of the MDP was provided to the Commonwealth Government and Victorian Government for review prior to exhibition of the Preliminary Draft MDP.

The exposure draft process is not a legislative requirement but is a key component of APAM's government stakeholder engagement for MDPs. A range of comments were received from the government reviews, and these were addressed, which helped ensure that the scope, content and assessment methodology of the MDP was compliant and/or appropriate.

Independent Assessments / Reviews

Independent assessments or reviews are not required under the Airports Act. However, all assessments in the MDP were undertaken by expert consultants, and it is important to note that the Exposure Draft MDP was reviewed by the Commonwealth and State Governments prior to public exhibition, including DAWE (now DCCEEW), DELWP (now DTP) and EPA Victoria (amongst others) as outlined above.

Independent assessments, however, is a matter that may be considered as part of the government's proposed Aviation White Paper discussed elsewhere in this report.

Options and Alternatives

Options and alternatives have been assessed in the MDP (Chapter A3: Options and Alternatives) and this issue is further discussed in this Supplementary Report under Issue B2. The latter includes commentary on alternative airports and high-speed rail.

Human Rights

The provisions of the Airports Act relating to MDPs do not include a specific requirement relating to human rights, and the international treaties referred to by Brimbank City Council have not been incorporated into Australian domestic law. The provisions of the Airports Act relating to MDPs do include requirements to address (amongst other matters) aircraft noise, environmental impacts and the effect of development on the local and regional economy and community. These matters are addressed in the MDP, as required, and are also discussed under other themes in this report, particularly the Community Impacts theme and the Environmental Impacts theme.

Subject to the discussion under the other themes in this report, it is considered that the MDP adequately addresses the issue of community impacts in accordance with the Airports Act.

APAM does not have a formal requirement to consider and respond to the human rights issues raised by Brimbank City Council, but it has responded to the underlying substantive noise and environmental issues set out in Brimbank's submission.

C1.6 Changes to Preliminary Draft M3R MDP

No change, subject to changes identified under other themes.

C1.7 Summary and Conclusion

It is APAM's position that the assessment methodology, scope of issues dealt with and the level of detail in the MDP complies with the requirements of the Airports Act and EPBC Act. It is consistent with other similar MDPs.

Whilst there are differing opinions on the findings of the assessments in the MDP, and specific technical parameters of some assessments, which is perhaps understandable, it is considered the overarching methodology and scope of the MDP is robust and consistent with best practice for a new runway at a Commonwealth-leased airport in Australia.

C2 MDP Approval Process

C2.1 Summary of Issue

This issue relates to the process the MDP is following through to approval by the Minister. The submissions raise various concerns, criticisms and perceived deficiencies relating to the approval process.

This issue overlaps to some extent with the previous issue relating to assessment methodology, which includes discussion about independent assessments.

C2.2 Number and Types of Submissions

295 submissions contain reference to the 'MDP Approval Process' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government:
    - Brimbank City Council
    - Hume City Council
    - Maribyrnong City Council

C2.3 Discussion of Submissions

Several submissions have argued that the approval process should include an independent review panel or committee. For example:

> *"I would like to call for an expert panel not affiliated with the airport to study noise impacts on community health of Bulla Residents."*
>
> *"I believe that an independent commission needs to be established to study the noise impacts of the proposed third runway to obtain an independent and accurate assessment of the true impact of noise pollution that communities will be subjected to with the third runway at Tullamarine."*
>
> *"An independent expert panel review of the Planning for the 3rd Runway proposal be carried out before there is any more official consideration of the current heavily economic weighted and profit driven proposal and plan."*
>
> *"Need to establish an independent committee to review the impact of noise pollution caused by the 3rd runway construction."*
>
> *"We trust these concerns can be adequately addressed before the project is approved, and respectfully suggest that independent expert reviews may be necessary to ensure public trust in the process."*
>
> *"The airport company at that presentation stated the meeting was at "the beginning of the process" and that M3R approval by the minister "is just the first step", as published by the airport company. This may have misled the public, because the airport approvals process does not require a council vote or have a panel review. What are called "preliminary drafts" are from the public's perspective, the primary means of community input which may not have been realised by participants or the general public reading the minutes."*

The Brimbank City Council submission argues:

> *"The need for the Federal Government to commit to a transparent, independent and public approvals process, including a public review process that enables impacted stakeholders to present their submissions for independent and expert consideration."*

The Town and Country Planning Association's submission makes several comments regarding this issue. It states:

> *"The Airports Act does not allow for a mandatory independent review process for airport developments, despite the success of the approach for the MAS. This is a somewhat unique arrangement when compared to planning for other major transport infrastructure investments of state and national significance. Each of the following transport projects in Victoria has been subject to planning and environmental assessment independent review processes:*
>
> *• Western Highway Duplication (various sections)*
>
> *• North East Link*
>
> *• Suburban Rail Loop Stage 1*
>
> *• Port of Melbourne – Webb Dock EES*
>
> *• Port of Melbourne – Channel Deepening Project (twice)*
>
> *• Westgate Tunnel Project*
>
> *• Melbourne Airport Rail Link (twice so far)*
>
> *In none of the above cases was the project proponent expected to perform the role of independent reviewer that federally leased airports appear to play under the Airports Act 1996.*
>
> *The state and territory governments of Australia are legitimate and key stakeholders in protecting the amenity and health of their communities in hand with supporting future airport growth. State and territory governments were and remain key participants in the development of the agreed NASF and its incorporation in their planning systems, including in Victoria's case, the Victoria Planning Provisions (VPP).*
>
> *Like the Victorian projects listed above, significant airport development projects, such as the additional runways at Brisbane and Melbourne Airports, deserve a similar collaborative approach to preparation and assessment of these strategic plans and projects and the benefits of an independent review.*
>
> *The TCPA believes that the Melbourne Airport Third Runway is of such significance and there are lessons to be learnt from Brisbane Airport the Draft M3R MDP 2022 to warrant to a joint federal-state independent review along the lines of that used in the 1990 MAS."*

Some other submissions also criticise the Airports Act, arguing that the MDP processes are flawed or inadequate compared to State law. For example:

> *"That the higher standard between Commonwealth and State Law (Environment Effects Act and Transport Integration Act) law be applied with a full EES Assessment undertaken for all the airport environs and surrounding suburbs. Recognising the established precedence in 'Victoria's Big Build' and the significant shortfall in the Airports Act to appropriately assess and mitigate impacts to the community."*

"A typical infrastructure project delivered in accordance with Victorian Laws would be held to a higher standard than that afforded by the Airports Act 1996 (Cth). With reference to the Environmental Effects Act 1978 (Vic) the process is not only more transparent to the public, but it forces a more equitable outcome for impacted parties."

"Although Victorian planning and environmental legislation is not directly applicable to M3R (because Melbourne Airport is on Commonwealth land) Victorian law has been considered where relevant (e.g., where there is the potential for impacts beyond airport land). There is no evidence that this consideration has changed the way the project has been assessed."

"… the clauses in the Act covering the processes for the preparation of Airport Master Plans, Airport Environment Strategies and Major Development Plans do not provide the key external stakeholders, being the State and local Government, appropriate input into the airports' analyses and decision making prior to calling for public submissions."

The City of Brimbank's submission argues that the following should be required as part of the approval process:

"Entering into a bilateral agreement with the State Government in relation to any further development of the 2022 Draft Melbourne Airport Master Plan (or other Master Plan) and or the Major Development Plan for the Third Runway, specifically including:

- *Appointing a community forum, similar to the composition of that established for Brisbane Airport, or alternatively, appointing an Advisory Committee under section 151 of the Planning and Environment Act 1987, to provide a transparent, independent and public review process that enables impacted stakeholders to present their submissions for independent consideration.*
- *Requiring an Environment Effects Statement under the Environment Effects Act 1978 including:*
    - *A Health Impact Assessment for off-site impacts, specifically including the assessment of noise impacts against the World Health Organisation Environmental Noise Guidance 2018, and relevant state legislation like the Environment Protection Act 2017*
    - *Prevention and amelioration measures to adequately address noise exceedances, including options for a federally funded noise insulation program, a noise curfew, voluntary property acquisition or other measures.*
- *Requiring a Comprehensive Impact Statement process under the Major Transport Projects (Facilitation) Act 2009.*
- *Requiring that Melbourne Airport meet Victorian legislation, guidelines and standards in relation to the offsite impacts from the existing and any expanded operations of Melbourne Airport."*

Other submissions make comments about the role of the EPBC Act in the approval process. For example:

"The Department of Agriculture has made the decision not to subject the Third Runway Major Development Plan to an environmental assessment allowing the third runway MDP to be assessed under the Airports Act 1996, Major Development Plan process, this is in spite of the known problems already acknowledged at other PFAS contaminated airports."

"It is a requirement that the Melbourne Airport "MDP is referred to the Department of Agriculture, Water and the Environment (DAWE) seeking assessment accreditation and advice under the EPBC Act for:

- *On-ground environmental impacts - Australia Pacific Airports (Melbourne) Pty Ltd (APAM) as proponent*
- *Volume-of-airspace environmental impacts – Civil Aviation Safety Authority (CASA) as proponent*
- *Change of flight-path environmental impacts – Airservices Australia as proponent"*

Where and when has the assessment accreditation and advice under the EPBC Act obtained from the Department of Agriculture, Water and the Environment been made available to the people of Melbourne?"

Some submissions have also expressed concern about the Master Plan and M3R MDP processes running concurrently. For example:

"Presenting the M3R MDP for public comment ahead of an approved master plan assumes the approval for the 2022 Draft Master Plan is

- *A formality*
- *Undermines public confidence*
- *Public comments will not influence decisions already made by Melbourne Airport*
- *Interferes with the public's right to know of government approval decisions and conditions for the 2022 Draft Master Plan."*

"Seeking public comment on the M3R MDP ahead of an approved 2022 Master Plan interferes with the public's right to know of the minister decision and conditions which may be attached resulting from public comment specific to the draft master plan."

"Concurrent running of master plan and MDP simultaneously is not described in the airports act 1996 and is inconsistent with the process described by the productivity commission report."

"The process of presenting more than one major plan – whether it is a Master Plan or Major Development Plan - over the same public comment period is not approved within the Airports Act 1996. The department of Infrastructure and Transport have advised by email; "There is nothing in the Act which precludes consultation periods being run concurrently." This appears to be based on interpretation rather than fact. This process disadvantages the public and is inconsistent with established practice occurring at other Australian airport administered by the Department of Infrastructure."

The submission from Essendon Fields Airport seeks resolution of a number of matters prior to approval of the Master Plan. It states:

"Our comments in this paper focus on those issues that we believe must be represented and resolved in the Plans prior to their approval, either through mitigation strategies, commitments or positive obligations imposed on MA.

These items generally relate to airspace, noise, EFA aerodrome facilities and commercial impacts. To not address these items prior to approval may establish a situation where there are incompatible approved master plans between two federally leased airport sites,

result in significant commercial and operating constraints to EFA, its RPT operators and the general aviation community, and deny the community its opportunity to understand the full consequential impacts of the M3R orientation change."

There are also some comments regarding the future detailed airspace design and change process. For example one submission states:

"It is important to note that while Melbourne Airport has outlined a proposal in how the new runway could operate, the final flight paths and modes of operation will be designed by Airservices Australia through a process called Detailed Airspace Design. This process will occur once approval for the runway is received and a few years before the runway will open.

How can this be approved without all the information given to the community. Once approved you can design how you want.

I understand Air Services cannot approve till the Minister approves and so we are denied due process so cannot comment on MPD as it may not eventuate. It is important to keep in mind that all design decisions made while developing the third runway will be revisited by Airservices when they undertake the detailed airspace design."

Other submissions simply state:

"How can residents be assured that their concerns are taken into account and acted upon."

C2.4 M3R MDP References

Chapter A8: Assessment and Approval Process describes the overall:

- Statutory mechanisms applicable to the M3R approval process
- Process for assessing environmental impacts
- Consistency of M3R with relevant legislation.

Figure A8.2 in Chapter A8 shows the overall M3R MDP approvals process.

C2.5 APAM Position

Overview

As stated in Chapter A8 of the MDP, Melbourne Airport is a Commonwealth-leased airport, and therefore the approval process for the M3R MDP is governed by the Airports Act 1996. The MDP approval process is following the legislated requirements that apply to all MDPs prepared by APAM and prepared for every other Commonwealth-leased airport in Australia.

All of the issues and concerns raised in submissions are essentially addressed in Chapter A8, which summarises the approval process as follows:

"Melbourne Airport is required to seek Commonwealth Government approval for any major airport development by preparing a Major Development Plan (MDP) in accordance with the Airports Act 1996 (Cth).

The Melbourne Airport's Third Runway (M3R) project must also comply with the Commonwealth Government's Environment Protection and Biodiversity Conservation Act 1999 (the EPBC Act).

The Department of Agriculture, Water and the Environment has determined that M3R will be assessed under the EPBC Act via an accredited assessment process, being the MDP process as defined under the Airports Act.

The MDP process requires Melbourne Airport to undertake extensive community and stakeholder consultation. This includes making a Preliminary Draft MDP available for 60 business days to facilitate public comment.

Although Victorian planning and environmental legislation is not directly applicable to M3R (because Melbourne Airport is on Commonwealth land) Victorian law has been considered where relevant (e.g. where there is the potential for impacts beyond airport land).

The assessment framework has incorporated the requirements of the Airports Act and the 'whole of environment' as defined in the Actions on, or impacting upon Commonwealth land, and actions by Commonwealth agencies, Significant impact guidelines 1.2 (pursuant to the EPBC Act)."

Independent Review Panel

As stated in the previous issue response (Issue C1), whilst the future Aviation White Paper may consider this, there is currently no requirement or ability under the Airports Act for an independent review panel or similar to be involved in the MDP approval process.

However, as previously stated, an 'exposure draft' of the MDP was provided to the Commonwealth Government and Victorian Government for review prior to exhibition of the Preliminary Draft MDP.

The exposure draft process is not a legislative requirement but is a key component of our government stakeholder engagement. A range of comments were received from the government reviews, and these were addressed, which helped ensure that the scope, content and assessment methodology of the MDP was compliant and/or appropriate.

The process also provides the opportunity for public review of the MDP, and review by the State Government (including the EPA) and local councils, who all made submissions. Any decision to approve the MDP is made by the Commonwealth Minister for Infrastructure, not the airport operator, and includes consideration by DCCEEW, CASA and Airservices.

State Legislation

Section A8.2.2 of the MDP discusses Victorian legislation. It states:

"As previously noted, planning and development at Melbourne Airport is primarily regulated by the Airports Act. Part 5 of the Airports Act is particularly relevant as it relates to land use and planning, the airport's Master Plan and this MDP. Section 112 sets out the Commonwealth's intention that Part 5 of the Airports Act applies to the exclusion of the law of a state, and specifically laws of the state relating to land use and planning.

- *Notwithstanding section 112, section 91(1)(ga) requires the MDP to detail:*
- *Effects on traffic flows at and surrounding the airport*
- *Employment influences at the airport, and in the local and regional community*

Analysis of how the proposed development fits within the community and local planning schemes for commercial and retail development.

Additionally, section 91(4) requires that, in specifying a particular objective or proposal in section 91(1)(ga), the MDP will address the extent (if any) of consistency with planning schemes in force in Victoria and, if this MDP is not consistent with those planning schemes, the justification for the inconsistencies.

Therefore, while it is not necessary that M3R comply with relevant local and state planning provisions on the airport site, Melbourne Airport has considered the requirements of Victorian legislation as they are relevant to M3R, and recognises that certain M3R impacts interact with the surrounding environment."

Section 3.2.2 (Environmental legislation) of the approved Master Plan 2022 states:

"Melbourne Airport has a responsibility to comply with all relevant Commonwealth legislation as it relates to the airport and to the environmental aspects addressed in the Melbourne Airport Environment Strategy. In addition to the Airports Act, Melbourne Airport must comply with two overarching pieces of Commonwealth environmental legislation:

- *Airports (Environment Protection) Regulations 1997*
- *Environment Protection and Biodiversity Conservation Act 1999.*

Melbourne Airport also has due regard to Victorian legislation where relevant, including where airport activities have the potential to affect specific environmental aspects of off-airport land."

The preparation of the MDP is not required to comply with the requirements of the Planning and Environment Act 1987 (Vic.), the Environment Effects Act 1978 (Vic.) or the Major Transport Projects (Facilitation) Act 2009 (Vic.).

EPBC Act

Section A8.2.1.3 of the MDP outlines how the EPBC Act applies to M3R and the MDP and how it has been addressed. This includes information about the requirement to take account of the Environment Minister's advice (section 160) and the associated referral of the project to the Minister. It states:

"To formalise this process and the approach to the assessment of the action, a referral is submitted to the Minister for the Environment specifying the authorisation the Commonwealth agency or employee is intending to consider. The Minister then confirms the assessment approach to be adopted under the EPBC Act.

For major airport developments, the referral process must take place prior to the required public consultation period. APAM submitted the Exposure Draft of the M3R MDP to DITRDC (as set out in Figure A8.1) and DITRDC subsequently referred it to DAWE for consideration under section 160 of the EPBC Act.

In March 2021, DAWE formally advised that the Environment Minister's advice is required to be obtained and considered before the MDP is approved by the Minister for Infrastructure and adopted or implemented. DAWE also decided that the proposal requires further assessment under the EPBC Act by an accredited process, being the MDP process as defined under the Airports Act.

In relation to provision (2)(c) of EPBC Act s160 (regarding the adoption or implementation of a Plan for Aviation Airspace Management (PAAM)), Airservices and CASA submitted a joint referral to DAWE. In November 2021, DAWE subsequently determined that the Environment Minister's advice is required before the PAAM is authorised by CASA or

> *Airservices. DAWE also decided that the airspace proposal requires further assessment under an accredited process, being the M3R MDP."*

The project has complied with section 160 of the EPBC Act as it has been referred to DCCEEW (formerly DAWE) who have determined that it will be assessed under an accredited process being the M3R MDP.

The MDP has also been prepared having regard to the document Actions on, or impacting upon Commonwealth land, and actions by Commonwealth agencies, Significant impact guidelines 1.2 Environment Protection and Biodiversity Conservation Act 1999 (Significant impact guidelines 1.2).

Concurrent Processes

In relation to the comments about the Master Plan and M3R MDP processes running concurrently, it must be recognised that it was only the exhibition processes that ran concurrently, not the actual approval processes.

There is nothing in the Airports Act which precludes consultation periods being run concurrently. This was confirmed with DITRDCA. Indeed, it is APAM's view that the concurrent exhibition periods had significant benefits for the community's understanding of what was been proposed.

Furthermore, there has not been simultaneous approval of the Master Plan and the M3R MDP. They have been considered by the Minister separately and sequentially.

As stated in Section A1.1.2.5 of the Preliminary Draft MDP:

> *"The Preliminary Draft Master Plan 2022 and Preliminary Draft M3R MDP will be exhibited concurrently. This strategy endeavours to reduce potential confusion in the community arising from duplicated engagement processes.*
>
> *Following exhibition of both documents, the Draft Master Plan 2022 will be submitted to the Minister for Infrastructure for consideration followed by the Draft M3R MDP. The Draft Master Plan 2022 approval decision will occur first, and consideration of approval of the M3R MDP will follow. This is because the M3R MDP cannot be approved while Master Plan 2018 remains applicable."*

Detailed Airspace Design and Change Process

Section A8.2.3.1 of the MDP outlines the airspace change process. It states:

> *"Proposed airspace changes will not be formally approved until a time closer to the opening of the changed infrastructure, and hence details of the airspace procedures in this MDP are indicative and conceptual at this stage.*
>
> *On the basis the MDP is approved, Melbourne Airport will support the subsequent processes for the proposed changes to the airspace (including flight paths, procedures and management) which will be undertaken by Airservices Australia and CASA.*
>
> *As previously stated, an EPBC Act referral was submitted by Airservices Australia and CASA for the airspace aspects of M3R. DAWE will consider this MDP as having described and addressed the environmental impacts associated with M3R airspace changes."*

This process is discussed further under Issue C5: Detailed airspace design and airspace change process.

In relation to Essendon Fields Airport seeking resolution of various matters prior to approval of the Master Plan, this is dealt with elsewhere in this report (Issue B5: Interaction with other Melbourne Basin Airports and Operators).

Due Regard to Comments

The community can be assured that their concerns are taken into account as the Airports Act requires APAM to have due regard to all comments received (as demonstrated in this report) and also requires the Minister to consider the consultations undertaken in preparing the plan including the outcomes of the consultations.

C2.6 Changes to Preliminary Draft M3R MDP

No changes required, as the statutory requirements of relevant legislation have been and are met.

C2.7 Summary and Conclusion

Melbourne Airport is a Commonwealth-leased airport, and therefore the approval process for the M3R MDP is governed by the Airports Act 1996. The MDP approval process is following the legislated requirements that apply to all MDPs prepared by APAM and prepared for every other Commonwealth-leased airport in Australia.

The requirements of the EPBC Act have also been addressed.

APAM also has had due regard to Victorian legislation where relevant, including where airport activities have the potential to affect specific environmental aspects of off-airport land.

C3 Public Exhibition

C3.1 Summary of Issue

This issue relates to the Public Exhibition phase of the project, and concerns from submitters who were unhappy with the process or felt it was inadequate.

C3.2 Number and Types of Submissions

290 submissions contain reference to the Public Exhibition Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (including Hume City Council, Brimbank City Council, Moreland City Council, Yarra Ranges Council, Maribyrnong City Council)

C3.3 Discussion of Submissions

Submissions in this category can be divided into a number of sub-sections.

Concurrent Exhibition

Several submitters complained about the concurrent exhibition of the Preliminary Draft 2022 Master Plan and the Preliminary Draft M3R Major Development Plan.

The Melbourne Airport Community Action Group wrote:

> *"APAM have allowed 70, rather than the minimum 60, days for the public comment period, but this is far short of the combined 120 days the community would ordinarily have if they were presented sequentially."*

The group also submitted that:

> *"Concurrent running of airport development plans denies the public a right to comment on the Major Development Plan in the knowledge of ministerial decision on the Master Plan. If the consultation process for the dMP identifies issues that must be addressed prior to approval, this may lead to changes to the dM3R MDP. Any such changes will not be reflected in the Major Development Plan the community is commenting on."*

And its submission continued:

> *"Concurrent running of airport development plans has the potential to prejudice ministerial decisions."*

A resident of Bulla wrote:

> *"Objections are to be made to this proposed runway before the Airport Master Plan is approved/adopted? How is this reasonable or procedurally correct?"*

Previous Flight Path Consultation by Airservices Australia

Some submitters raised concerns about inadequate consultation by Airservices Australia regarding previous changes to existing flight paths.

One resident from Kinglake West wrote:

> *"The original relocation of the flight path over our region was done without any consultation."*

A South Melbourne resident submitted:

> *"We reject the growth pans and recent jet rerouting and easement forming over the inner zones of the CBD. The recent movements around the Yarra and Albert Park Lake zones are creating broadscale precinct impact, single and multiple craft the noise increases and affects home and work life, now extending through day and night. We are concerned for the lack of consultation and representation of options ahead of implementing this plan."*

Another West Footscray resident wrote:

> *"Airservices Australia has not taken the time to understand the impact to communities."*

And a Kingsville resident wrote:

> *"Since the lowering of the flight path a few years ago I find it very difficult to get a proper sleep any day or night of the week. The community was not consulted then and it makes a difference in all of our lives."*

Consultation Process and Material

Numerous submitters raised issues with the consultation process, documents and other materials used for the public exhibition of the Preliminary Draft M3R Major Development Plan.

A Keilor resident submitted.

> *"I am also disappointed in the 'community consultation' process that has been undertaken. Having attended some sessions and watched a number of recordings, I have found the information presented did not address concerns or queries, and was far from transparent or consultative."*

Another Keilor resident wrote:

> *"The consultation sessions are nothing more than PR spin sessions with little or no open and constructive dialogue."*

A Keilor Downs resident wrote:

> *"We feel there has been inadequate consultation and no independent surveys done. We need an independent investigation into the effects of this proposed runway."*

And another Keilor resident wrote:

> *"I have the utmost respect for the Melbourne Airport employees and consultants involved in the consultation process. My observation is that they always treated the Community and myself with the respect and transparency possible, especially given the difficult position they would have been placed in, in the face of the questions and emotions presented to them.*
>
> *However, I have concerns that some aspects of the public engagement and consultation process have not provided the optimal opportunity for all those concerned to have their say in whatever form it could take. I am also concerned that some other aspects resulted in lost opportunities for everyone concerned to have their say due to the feeling of powerlessness caused by what was conveyed, and the feeling of false hope by what was, at times, not conveyed."*

A Bulla resident submitted:

> *"Being such a small town we know that we don't have a voice and have no hope against Airport Giants."*

Another resident from Bulla wrote:

> *"Your community meeting was a farce, it was done because it's mandatory, the community made clear their concerns and objections."*

A submitter who did not provide their name responded to the airport's mailout:

> *"You did a letter drop which looks like junk mail and most people would have thrown it out not realising what it is. As there will be people with English as a second language would not understand what this is (like my parents) and again would not be understanding what is happening and you will not be getting the feedback you should be receiving."*

And another resident submitted:

> *"Your flyer introducing the 3rd runway had the English explanation on the last page. Is that because our opinion matters the least. This is an English Speaking country. Yes we are multicultural and rightfully so but putting the mother tongue on the last page was bad judgement."*

A Braybrook resident wrote:

> *"Your letters (our household received three in total) to us requesting for feedback is just a sham. You are just here to announce your bigger and more profitable plan, pretend to care, but will not allow residents' feedback to be formal."*

And a resident in Kew submitted:

> *"Information promulgated regarding the impact of the additional runway has been disingenuous at best and duplicitous at worse. Claims have been made that a million leaflets have been delivered to Melbourne homes. Our property is and will be directly overflown by aircraft flying to the airport, yet neither we nor any of our neighbours have received any communication from the Airport.*
>
> *Media reports citing Melbourne Airport staff have deflected noise issues and have focused on suburbs such as Hawthorn and Camberwell. The latter focus is inexplicable: the proposal's online noise tool demonstrates that Kew is much more affected by current and proposed air traffic than these suburbs."*

Some submitters were concerned that consultation had not extended far enough out from the airport.

This Surrey Hills resident wrote:

> *"It is only just come to our attention through recent press reporting of the proposed third runway at Melbourne Airport. I have never received correspondence or information about flight paths and noise impacts resulting from the third runway."*

And a resident from South Melbourne wrote:

> *"While there might be a high level of community interaction or awareness in areas close to the airport I do not think that residents who live far away but who might be affected by the runway have had enough communication about the planned changes."*

One Pascoe Vale resident expressed doubts about the submissions process, writing:

> *"I have given feedback already, but I doubt anyone will take the slightest bit of notice"*

That sentiment was echoed by a submitter from Avondale Heights:

> *"We feel confident this feedback will not change your decision making, and once again, those communities with the least resources to challenge a decision bear the brunt of another environmental hardship."*

In their submission, a West Footscray resident described a:

> *"Community consultation process that was tokenistic and too much information for residents to read through and make a submission (lots of very confusing maps and 100's of pages)."*

A Keilor resident wrote:

> *"Melbourne Airport says the community can state a preference for either Option 1 or Option 2, one of which affects more homes with less noise and the other fewer homes with more noise. This only works until 2046 when the airport expects to be operating at full capacity and won't have that flexibility anymore. However there must be a transition point along the*

way, so we don't really know what we are signing up for. Melbourne Airport also say if we don't like it then we should move, again, demonstrating that engagement is not genuine."

The Melbourne Airport Community Aviation Consultation Group posed a number of questions regarding the public exhibition:

"CACG notes that the voluminous material available has only 21 pages on Stakeholder Engagement of which less than 250 words concerns actual feedback received during the engagement: and there are no responses to those issues.

61. Did the airport produce more comprehensive reports on consultation?

62. If not, why not, and if so, why have they not been released?

63. How was feedback provided to those involved in the engagement and the wider community?

CACG acknowledges the consultation for the MDP and M3R has been much more extensive than previous consultation programs. However, it relies on the community to recognise they may be affected by future impacts. CACG is concerned that planning material can be difficult for lay people to interpret; and that information delivered to the wider community is often seen more as 'news' or even advertising about the airport's growth. Many may be adversely affected in ways that have not been brought to their attention. This could include increased flights over their homes, impacts on their ability to develop their properties, or ground traffic issues.

64. Will MA undertake to actively advise the community of potential impacts

65. What has MA done to ensure community and businesses have an understanding of Australian Standard 2021-2015: Acoustics – Aircraft noise intrusion – building siting and construction?

66. Can MA explain why the 'summary' documents (those more easily found in the material available to the public) seem to focus on findings that were favourable (ie low or negligible impact) and not mention the higher impacts?

67. Has MA noted any changes in community expectations regarding noise, and how have they responded?

68. Does MA agree there was no community consultation on this change (in runway orientation): that the engagement was passing on information that the decision was already made?"

The Melbourne Airport Community Action Group wrote:

"As a general comment, like the dMP, the M3R dMDP is one of the most difficult documents our team has ever tried to work with, not solely because of the nature of the content, but because of document format. The use of a double page spread layout, poorly formatted table of contents, small font, and feint colours for key features such as page numbering and short titles combine to make it extremely difficult to navigate. These features undermine the purpose of the document and the integrity of the consultation process."

Maribyrnong Council submitted:

> *"Council submits that the documentation supplied with the MADPM and M3R DP is not clear about the adverse impacts on particular communities and how those communities can influence the process of deciding on the third runway's location and operations. The documentation does not contain location-specific detail that would assist residents and landowners to understand both the projected increase in aircraft noise in already affected locations and the impact on new locations."*

There were also some complementary submissions, including this resident from Craigieburn who wrote:

> *"You have kindly run me through the different runway orientations and the flight path simulation. It was very informative and clear."*

Moreland Council commended Melbourne Airport for:

> *"…translating the consultation material into languages spoken in communities around the airport to reach the broader community."*

And Hume City Council wrote:

> *"Council commends Melbourne Airport for the extensive community notification and engagement that has been undertaken for these documents, including the mailout to over 900,000 households and advertisements in multiple languages. Given the impact that the third runway will have on these communities, Council urges Melbourne Airport to continue to meaningfully listen and respond to the submissions that are made by the community, particularly those affected by the third runway."*

C3.4 M3R MDP References

Chapter A6 of the preliminary draft Major Development Plan addresses Stakeholder Engagement, including community engagement during and post public exhibition.

This chapter outlines how APAC planned to inform the community about the proposal and encourage feedback.

Section D4.7.1 of the preliminary draft Major Development plan discusses Community Engagement relating to the operation and impacts of the new runway.

Section D4.5.2.2 discusses existing noise sensitivities and complaints to Airservices Australia.

C3.5 APAM Position

As discussed in Section 3, APAM went over and above the consultation requirements set out in the Airports Act 1996. APAM used a mailout to approximately 900,000 residents, plus media coverage and print, radio and online advertising to inform the community about the 2022 Master Plan and third runway project exhibition period, and to encourage them to engage. Letters were also sent to properties located in Public Safety Areas, and to properties in Bulla to ensure occupants were aware of the preliminary draft documents, and to encourage them to engage.

APAM attempted to make the Preliminary Draft M3R Major Development Plan documents as widely available as possible by providing them online, and in hard copy at the airport office and local libraries. The information in the documents was supplemented by an online noise and flight path tool. This online tool allowed users to explore forecast noise and flight path impacts at any location of their choosing- allowing homeowners to understand how the changes would affect their properties. APAM hosted more than 50 in-person and online information sessions where staff were

available to answer questions from members of the community. APAM also responded to queries submitted online, by email and by phone.

Throughout the public exhibition period, community feedback was taken on board. This resulted in Melbourne Airport scheduling an extra community meeting in Bulla, sending out an additional information letter to residents of Bulla, replacing planned carpark walk-through sessions with community pop-ups, and scheduling an additional public drop-in session in Keilor.

The public exhibition period followed community consultation on the runway orientation change undertaken between July and August 2019, during which 20 community workshops were held across 14 locations.

Concurrent Exhibition

Given the primary driver of the Master Plan 2022 was the change in orientation of the third runway, APAM made the decision to exhibit the Preliminary Draft Master Plan 2022 concurrently with the Preliminary Draft M3R Major Development Plan. This was to ensure the community had access to as much information as possible, and to reduce confusion due to duplicated engagement processes. In recognition of the volume of information being presented, the exhibition period was extended from the required 60 to 71 business days (104 calendar days in total). There is nothing in the Airports Act which precludes consultation periods being run concurrently. This was confirmed with DITRDCA. Indeed, it is APAM's view that the concurrent exhibition periods had significant benefits for the community's understanding of what was been proposed.

Consultation Process and Material

Recognising the higher impact of flight paths closer to the airport, the majority of APAM's in-person information sessions were held in suburbs within a 15km radius. However, in-person information sessions were also held in locations such as Gisborne, Doncaster and Oakleigh, and APAM encouraged people living further afield to check the impacts on their properties through the online noise tool. Suburbs including Hawthorn, Camberwell and Altona were specifically called out in local media reports to make the point that potential impacts extended much further than the airport's immediate surrounds.

APAM worked hard to encourage community members from across Melbourne and surrounding areas to engage with the third runway consultation program, using a combination of mailouts, online, print and radio advertising as well as traditional news media. Radio and online advertising explicitly called out changes to flight paths, to highlight the potential for new impacts and encourage people to check their specific location.

In 2021 APAM extended an invitation to numerous councils (including Hume and Macedon Ranges Shire Councils) to have an officer join CACG. Macedon Ranges Shire Council has since taken up that opportunity. As part of the exhibition process, councils were offered briefings on the Master Plan and runway project, with a specific focus on the impacts in their area. The information provided in these briefings is reflected in some council submissions.

APAM has committed to ongoing rigorous community engagement to provide feedback to the public on submissions received, with a continued commitment to engaging with CALD communities and other hard to reach groups. Regular updates will continue to be provided to the Melbourne Airport Community Aviation Consultation Group, and the airport remains available to brief Brimbank Councillors whenever they would like.

The airport has also committed to making the Master Plan and third runway supplementary reports public at the end of the runway approvals process, to give community members confidence their feedback was given due regard. Exactly how this will be undertaken is yet to be fully resolved.

As a direct result of feedback received during the public exhibition period, Melbourne Airport has engaged a provider for three temporary noise monitors, to provide the community with more data on aircraft noise related to the airport's existing operation at key locations.

Previous Consultation by Airservices Australia

Airservices Australia has made several improvements to its public communication and engagement processes since the previous flight path changes raised by some submitters, including introduction of its Flight Path Design Principles in 2020 and Community Engagement Framework in 2021. Airservices has confirmed to APAM that future engagement with the Melbourne community will be conducted in keeping with these new standards and contemporary approaches.

This issue is discussed in more detail in Section D4 Fight Path Design.

C3.6 Changes to Preliminary Draft M3R MDP

No changes required.

C3.7 Summary and Conclusion

APAM went well above its legislated requirement for public exhibition, to ensure community members were aware of the runway project and encouraged to engage. The airport was upfront with the community about the benefits and impacts associated with the M3R project. This resulted in more than 2,100 submissions being received from across Melbourne and Victoria.

APAM is now delivering a post-public exhibition community engagement plan, which aims to continue the airport's ongoing dialogue with the public. Where possible in the construction, delivery and detailed airspace design phases of the M3R project, APAM will seek to identify opportunities for the community to further influence outcomes.

C4 Online Engagement 'Virtual Visitor Centre' & 'Flight Path and Noise Tool'

C4.1 Summary of Issue

This issue relates to complaints about the online engagement tools used during public exhibition to help inform the community about the preliminary draft M3R Major Development Plan. This includes difficulty accessing the desired information, trouble understanding what was presented or problems making online submissions.

C4.2 Number and Types of Submissions

70 submissions contain reference to the issue of Online Engagement. They were received from:

- Community
- Community organisations

C4.3 Discussion of Submissions

Submissions on this issue can be divided into two broad sub-sections.

Virtual Visitor Hub

The virtual visitor hub was designed as a central online portal to provide access to the detailed Preliminary Draft M3R Major Development Plan, as well as fact sheets, information videos and a link to the noise and flight path tool.

One submitter wrote:

> *"I hated the website and couldn't really tell the expected date for the new runway to be completed."*

An Altona resident wrote:

> *"The interactive website is very shiny but little detail on the specifics or what is being displayed."*

And a resident from Glenroy wrote:

> *"Your website is awful and your sound and flight path map is useless. Do you even test it before you make it or do you make it so useless so that people can't get the information they need."*

This Williamstown resident submitted:

> *"I am unable to make an informed decision based up your webpage and resources. Your portal is not functioning. The inability to gather the necessary information is a fundamental failure on the part of the project management team.*
>
> *There should be community forums, discussions and information sessions rather than a sole web page and portal, that doesn't even work."*

Another submitter from Benloch said:

> *"The high multi-media site was too slow to display on lower-powered devices or over slow satellite links such as those affected in the Macedon Ranges Shire, so was not readily accesible.*
>
> *The high multi-media site presented the user with a confusing array of options regarding aircraft noise instead of a certain proposal to be commented upon.*
>
> *The high multi-media site did not clearly label the M3R Major Development Plan for download but instead relied on the user to explore to find it*
>
> *Making a comment required the user to agree to the airport company's privacy policy, which included allowing one's personal details to be passed onto others for marketing purposes."*

The Melbourne Airport Community Aviation Consultation Group wrote:

> *"The Virtual Visitor Centre provides a particular way of experiencing the information. Of course it is difficult to provide an experience to suit everyone; but it does seem somewhat sanitised, and aligned to what MA finds most interesting and important."*

A West Footscray resident wrote:

> *"The information contained on the Melbourne Airport Virtual Visitor Centre fails to adequately address the impact of noise and disruption to those who live under or near the flight paths. Using a measure of 60 or 70 dB, whilst recognising general government 'acceptable' limits, does not take into account the actual impact of noise on individuals in the community."*

Another Keilor resident submitted:

> *"Many individuals and groups in the impacted Communities would not be regular users of the internet, either because they are averse to using computer technology, or because in their busy lives, they can only afford time to use the internet for basic needs, such as paying bills and emails."*

And another Keilor resident wrote:

> *"Your web page showed on the 27th of April that I had 14 days left to submit feedback and yet submissions are still open? It is not acceptable for such poor workmanship from a webmaster to still be showing inaccurate data that late into the submission time period, especially concerning public interest was requested by the airport."*

Noise and flight path tool

A number of submitters voiced complaints about the interactive noise and flight path tool.

One Keilor resident wrote:

> *"I am not convinced that the tool predicts noise levels accurately. I believe the tool significantly underestimates the potential noise impact of the new runway."*

Another Keilor resident submitted:

> *"The noise tool is confusing and has not been functional or has been missing features for a large part of the engagement period."*

This resident from Brunswick said they found the data overwhelming:

> *"I appreciate the transparency of data, however there is so much data in the interactive noise tool that it's all a bit overwhelming and hard to understand the real impact of it."*

A Taylors Lakes resident wrote:

> *"Board sweeping maps or website tools do not get to the end point of how we would be living after a third runway became operational. Every individual property in the council areas of Brimbank, Hobsons Bay, Hume, Maribyrnong, Melton, Moonee Valley and Wyndham should be directly provided with personalised airport/aeroplane noise information."*

A number of submitters complained of inaccurate modelling:

> *"Current and future noise modelling, for our property address, is not accurately shown. The modelling program over our property has been updated/changed since our initial enquiry in March 2022 and now appears to be misleading in relation to the 3km buffer zones and the actual proposed impacts on our property. (ie Flights at >10000 feet versus 5800 feet.)"*

A Preston resident submitted:

> *"Once the consultation period went live, there's an implied duty to provide accurate and complete information throughout the entire consultation period. This is not what occurred and there's a risk that those engaging early in the process (in particular) were misled."*

A Hadfield resident wrote:

> *"How can my property be under a new suggested Flight path with almost 80 more flights during the day but when applying the Noise Contour option, it shows no noise events?*
>
> *Very confusing when apparently "THIS ADDRESS IS LOCATED BENEATH A PROPOSED FLIGHT PATH" but at the same time I also get "THIS ADDRESS IS NOT LOCATED BENEATH THE SELECTED NOISE CONTOUR"."*

This resident from Keilor wrote:

> *"There are still errors appearing in the Flight Path and Noise Tool as on some locations, only departure or arrival altitude will appear. According to your representatives this should not be happening and yet it still has not been updated to correctly show the information. If the information on the website is showing accurately, then why did your representative not know this and why were they unable to explain this oddity in data?"*

An Avondale Heights resident submitted:

> *"I have documented the tool providing me different results when I have used on different occasions. The commentary on the left bar does not align with the map overlay. The inconsistency around the measures when switching between views can only be viewed as intentional and in favor of minimal responses. A decibel reading of my own on current noise does not align with the tool provided. Appreciate an explanation for this."*

And a Williamstown resident wrote:

> *"There web tool does not show any arrivals over my property although expert at the consultation believed there would be."*

However numerous submitters highlighted the tool's usefulness in understanding their circumstances:

> *"Having used the tool on your website I have discovered that I will be highly impacted by a lot of additional noise."*
>
> *"I have reviewed the 3rd Runway and Noise Tool with my family and we are very concerned about the effect the third runway will have on our area."*

C4.4 M3R MDP References

Section C3.5 and Section C3.6 of Chapter C3 discuss the Aircraft Noise Modelling Methodology used to inform the Noise and Flight Path Tool.

Section D4.7.1 of the preliminary draft M3R Major Development plan discusses Community Engagement relating to the operation and impacts of the new runway.

C4.5 APAM Position

Neither a website or a noise tool is required by the Airports Act but both were developed by APAM as part of its commitment to best practice, to enhance community understanding of and engagement with the Preliminary Draft M3R Major Development Plan and Master Plan 2022.

Virtual Visitor Hub

The website was designed to replicate a traditional in-person community drop in event, in the event that COVID-19 restrictions forced the entire engagement process online. It included videos, fact

sheets and chapter summaries to help distil complex information, and help visitors find the information they were looking for. Recordings of online information sessions were also posted on the site so that people who had been unable to attend the session “live” had access to the information.

There were very occasional issues with the website submissions portal, which APAM worked to fix as quickly as possible. Provision of a dedicated email address and phone number meant community members were able to alert the airport team to problems they encountered with the website.

Towards the end of the public exhibition the website counter was changed to reflect the number of business days remaining for people to make a submission. It was realised this was confusing, and so it was changed back to reflect the number of calendar days remaining.

APAM has noted the difficulties some people experienced navigating the site on their mobile devices and will factor this into future engagement.

Online Noise and Flight Path Tool

The noise tool was designed to provide community members with the ability to identify forecast impacts at any reference point of their choosing. It allowed the public to visualise potential flight paths and noise impacts by providing users with a map depicting N-above contours, ANEF and flight paths. As this tool was refined, further data was added to enhance the user’s understanding of forecast impacts.

There were a small number of issues with the noise tool that did not become apparent until it went live. As APAM became aware of them they were rectified as soon as possible.

Through the course of the engagement period, APAM added extra information to the noise tool, such as average overflight height. These changes were noted on the site to ensure transparency.

Later in the engagement period, APAM made a concerted media push to encourage people to explore or revisit the noise tool. This resulted in a noticeable spike in site visitation.

The noise tool remains online and will continue to be available to community members as a source of information throughout the approval, construction and commissioning phases of the project.

C4.6 Changes to Preliminary Draft M3R MDP

No changes required.

C4.7 Summary and Conclusion

APAM went above and beyond the requirements of the Airports Act to provide community members with online access to data, documents and information. APAM has committed to keeping the website and noise and flight path tool online through the construction and delivery of the M3R project, to ensure the community has access to as much information as possible.

While APAM notes the difficulties experienced by some users, it is confident that for majority of users the Virtual Visitor Hub and Noise and Flight Path tool were valuable engagement tools that helped provide useful information and insights into the project and its forecast impacts.

Comments received during the public exhibition period will be factored into future engagement.

C5 Detailed Airspace Design and Airspace Change Processes

C5.1 Summary of Issue

This issue refers to submissions regarding the future steps in the airspace design process for M3R.

Community submissions expressed concerns regarding future changes to what is presented within the preliminary draft Major Development Plan or queried how an operating option would be chosen.

Submissions from the aviation industry expressed a desire to be part of the detailed airspace design process.

C5.2 Number and Types of Submissions

35 submissions contain reference to the 'Detailed Airspace Design and Airspace Change Processes' Issue. They were received from:

- Community
- Community organisations:
  - Melbourne Airport Community Action Group (MACAG)
- Non-government organisations and commercial entities:
  - Essendon Fields Pty Ltd (EAPL)
  - Global Ballooning Australia
  - Qantas Group
  - Skydive Australia Experience Co Pty Ltd (Skydive Australia)
  - Beulah International (Property development business)
  - Melbourne Airport Community Aviation Consultation Group (CACG)
  - Moorabbin Airport Chamber of Commerce Inc. (MACCI)
- Government:
  - Royal Australian Air Force, Department of Defence

C5.3 Discussion of Submissions

Community Submissions

There was concern in some submissions regarding the process of selecting which option will be progressed:

> *"Who decides which option to go with"*
>
> *"There is no information on which Option will be chosen or how that decision will be made."*

Some community submission expressed a concern that the MDP could be approved before the completion of the detailed airspace design:

> *"The final flight paths and modes of operation will be designed by Airservices Australia through a process called Detailed Airspace Design. This process will occur once approval for the runway is received and a few years before the runway will open… How can this be approved without all the information given to the community? Once approved you can design how you want."*

This sentiment and concern was also outlined within the submission from the Melbourne Airport Community Action Group:

> *"Perhaps even more important to point out is that according to the M3R dMDP these flight paths have been designed by Melbourne Airport. Our advice from Airservices Australia, who are of course responsible for flight path design, is that they will not begin work on them until the new second runway project is approved. This runs the risk that current and future residents will be misled by the publicly available information as they make decisions about where to live"*

A separate submission stated:

> *"Variance from the intended plans must not be permitted without further community consultation."*

Aviation Industry Related Submissions

Aviation industry submissions related to concerns regarding the current design and future airspace changes.

The submission from the Royal Australian Air Force said:

> *"Defence remains willing to work closely with Melbourne Airport at all stages of the preliminary and detailed design process to identify a viable airspace and flight path concept that adequately addresses both organisations' requirements."*

Qantas Group highlighted the need for a detailed review of the Melbourne Basin airspace:

> *"A detailed review of this already complex airspace structure will be required with Essendon Fields Airport (ESS), Avalon Airport (AVA), and Moorabbin Airport (MBM), and RAAF Base Point Cook to identify interdependencies and design efficiencies, and safe flightpaths."*

A submission from Global Ballooning Australia requested further consultation with the Melbourne balloon industry regarding changes to airspace as a result of M3R.

The submission from MACCI requested opportunity to discuss recommendations with Melbourne Airport.

Essendon Airport's submission references detailed airspace design and airspace change process. These items are discussed in detail with Issue B5: Interaction with Other Melbourne Basin Airports and Operators.

Other Non-government organisations and commercial entities

Beulah International expresses concerns about the impact M3R could have on the future investment and development potential within City of Melbourne.

They specifically reference a development at 118 City Road that:

> *"…has been delayed due to the uncertainty around the impacts of the third runway to flight procedures at Essendon Fields Airport. This is compromising a $1billion+ private investment into Victoria and many thousand of jobs. A project with government, council, public and commercial support is compromised due to the impacts of this proposed runway."*

As part of their submission they requested more detailed modelling of:

- Detailed flight path modelling in and out of Melbourne Airport,

- Detailed modelling of impacts to PANS-OPS, OLS and RTC levels,
- Detailed modelling of impacts to future height controls on construction in all affected areas,
- Detailed design of changes required to Essendon Fields flight procedures to be modelled.

The Melbourne Airport Community Aviation Consultation Group (CACG) requested information regarding future community engagement on the impacts of new flight paths:

> *"Will MA commit to being more proactive in ensuring the community understands the impacts of the new flight paths? This is another area in which doing the minimum required by Airservices does not result in MA being a 'good neighbour'?"*

C5.4 M3R MDP References

Within the MDP Part C Chapter C2 Airspace Architecture and Capacity, the following sections include discussion around the future airspace design / change processes should the MDP be approved:

- C2.5.9 Airspace Architecture
- C2.5.15 Proposed controlled airspace for M3R

Post-approval engagement is discussed in Part A Chapter A6 Stakeholder Engagement under Section A6.11.1 Post approval engagement.

C5.5 APAM Position

Airspace Design Process

During the public exhibition, APAM explained to the community that a preliminary airspace concept had been developed to inform the M3R MDP impact assessment. APAM outlined the future airspace design steps should the MDP be approved:

- Detailed Airspace and flight path design
- Airspace change proposal
- Operational readiness acceptance and testing (ORAT)
- Runway opening
- Post implementation review

Whilst APAM understands the community's desire to have a final design as part of the MDP impact assessment, a critical aspect of the detailed airspace design is ensuring that the final airspace design is within the airspace concept envelope presented in the M3R MDP.

Based on the commentary within the MDP and during public exhibition APAM does not believe a change is required to the MDP regarding the detailed airspace design process.

Detailed Airspace Design

Typically, detailed airspace and flight path design will commence three years prior to the opening of a new runway. APAM believes it is important to start this process as soon as possible to help inform interested parties such as the community, EAPL, the Royal Australian Air Force and other Melbourne Basin operators. Whilst this process is typically led by Airservices, APAM is committed to working collaboratively with Airservices to achieve this goal.

The detailed design process will further refine the airspace concept (as detailed within the approved MDP) to develop an operable structure and plan for flight paths. The final airspace design shall conform with, and be bound by, the airspace concept presented in the M3R MDP.

In detailed airspace design, flight paths will be designed according to the published Flight Path Principles.

During the detailed airspace design process, APAM is committed to working collaboratively with all users of the Melbourne Basin.

APAM is committed to ongoing community engagement through the construction phase of the project and will work in collaboration with Airservices regarding further engagement of the detailed airspace design with the community.

Option 1 and 2

To ensure the MDP assessment captured the possible runway operating modes, three options have been assessed and are described within this document. Community preferences are discussed in Issue D3 Draft Runway Operating Plan.

The community-preferred operating mode will be considered in the detailed design process as far as possible. Noting that there are some flight path design principles that will take precedence over the community preference (e.g. safety), so we cannot guarantee it will be the determining factor. Detailed airspace design consultation will be held prior to runway opening. APAM will work in collaboration with Airservices regarding further engagement of the detailed airspace design with the community.

Airspace Change Processes:

As outlined in Issue B5: Interaction with Other Melbourne Basin Airports and Operators, before opening M3R, Melbourne Airport will need to prepare an Airspace Change Proposal (ACP) following the detailed airspace design process.

The ACP will require its own approval (separate to the MDP) which must include evidence of consultation with relevant stakeholders. In reviewing the ACP, the Office of Airspace Regulation (OAR) may also conduct their own consultation or instruct the proponent to conduct more. APAM is committed to actively engaging with all users of the Melbourne Basin as part of the ACP.

This will also include engagement with the local community and the development / building industry regarding changes to airspace requirements.

Whilst APAM understands the concerns raised by Beulah International, it does not agree that M3R is in conflict with the Victorian Government's strategic planning objectives for the future development of Melbourne.

Challenges with developments, crane activities and the protection of airspace is not unique to Melbourne. APAM will leverage the Australian Government's commitment to an Aviation White Paper to explore better ways to support collaborative engagement regarding developments and airspace protection within government and council approval processes.

APAM recognises that the Airspace Change Proposal process and requirements, including further consultation, is not described within Section C2.5.15 Proposed controlled airspace for M3R. APAM proposes to add more information within this section (refer to C5.6 for details).

C5.6 Changes to Preliminary Draft M3R MDP

APAM has made the following addition to Section C2.5.15 Proposed controlled airspace for M3R:

> *"Changes to Australian airspace are made through the Office of Airspace Regulation (OAR) and are facilitated through an Airspace Change Proposal (ACP). This ACP must contain*

the safety case that drives the proposal and demonstrate evidence of consultation with relevant stakeholders. An ACP will be prepared once detailed airspace design is completed for M3R."

Summary and Conclusion

APAM believes it has appropriately addressed the detailed airspace design process through the MDP document, public exhibition material and messaging to the community.

It acknowledges that the section within the pdMDP did not call out enough detail regarding the Airspace Change Proposal, and additional wording has been added to Section C2.5.15 Proposed controlled airspace for M3R.

APAM is committed to ongoing engagement with the community and the aviation industry through the construction phase of the project including the Airspace Change Proposal required for M3R. It will work in collaboration with Airservices on further engagement of the detailed airspace design with the community.

5.3.3 Theme Summary and Conclusion

It is APAM's position that the assessment methodology, scope of issues dealt with and the level of detail in the MDP complies with the requirements of the Airports Act and EPBC Act. It is consistent with other similar MDPs.

Whilst there are differing opinions on the findings of the assessments in the MDP, and specific technical parameters of some assessments, which is perhaps understandable, it is considered the overarching methodology and scope of the MDP is robust and consistent with best practice for a new runway at a Commonwealth-leased airport in Australia.

APAM went above and beyond the requirements of the Airports Act 1996 in its delivery of the M3R MDP Public Exhibition. The exhibition plan was evolved in direct response to community feedback, to increase the opportunities for public participation.

The concurrent exhibition of the M3R MDP with the 2022 Master Plan provided the community with more detailed information on the runway plan and avoided the potential for confusion associated with consecutive exhibitions.

APAM is already acting on feedback received during the public exhibition period, with the procurement of three portable noise monitors to help provide the community with more data and further correlate the project's modelling.

APAM has committed to ongoing community engagement throughout the post-approval, construction and commissioning phases of the M3R project, both online and in-person.

APAM has also committed to further community consultation in conjunction with Airservices Australia as part of the detailed airspace design to help inform the final flight paths.

5.4 Theme D: Airspace and Aircraft Impacts

5.4.1 Overview of Theme

The 'Airspace and Aircraft Impacts' Theme was raised in 1,313 submissions.

The following Issues are considered within the 'Airspace and Aircraft Impacts' Theme:

D1: Noise Modelling Methodology

This issue deals with concerns raised by submissions regarding the noise modelling methodology used in the MDP. This included concerns regarding independent review, accuracy of modelling (compared to experience and noise monitors), calibration of model and the noise descriptors used.

D2: Future Use of 09/27 (East-West Runway)

This issue deals with submissions expressing a concern regarding the future use of runway 09/27. This included concerns that runway 09/27 was not included within the noise modelling and that the proposal of shortening runway 09/27.

D3: Draft Runway Operating Plan

This issue deals with submissions relating to the proposed draft runway operating plan within the MDP. This includes any preference given within submissions to the propose operating options, concerns over omissions within the plan, proposed alternatives and adherence to noise abatement procedures.

D4: Flight Path Design

This issue deals with submissions relating to the flight path design adopted as part of the concept design for M3R. This includes community concern regarding the proposed location of flight paths, design features, historic plans, adopting learnings from Brisbane Airport as well as the inclusion of an independent body to review the design.

D5: Noise Projections

This issue deals with submissions relating to the noise projections included in the MDP including concerns on magnitude of projections, comparisons with personal monitoring values, comparisons with previous contours and the WHO Guidelines as well as suggestions on ways to reduce and or share the noise projections.

D6: Flight Safety Hazards

This issue deals with the submissions relating to flight safety hazards from M3R and aviation activities in general. This included general safety concerns, concerns regarding interaction with other aviation (such as Essendon Fields, general aviation, helicopters), references to previous instances, concerns from falling objections, wildlife strikes and fuel dumping.

D7: Aircraft-Induced Vibration

This issue deals with submission referencing aircraft induced vibrations. This focused on references to current experiences due to aircraft operations, a concern this will increase due to M3R and concerns that there is no solution to the impact offered.

5.4.2 APAM Response to Issues

This section of the Supplementary Report addresses the Issues grouped into the ‘Airspace and Aircraft Impacts’ Theme. This section:

- Summarises each Issue in the context of Melbourne Airport and the M3R project
- Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment

- Explains if/how the M3R MDP addressed the issue in its Preliminary Draft version
- Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM's response/position where balances between impacts and benefits must be sought
- Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.

D1 Noise Modelling Methodology

D1.1 Summary of Issue

This Issue relates to submissions commenting on the noise modelling methodology used within the MDP. This included references to:

- Calls for independent reviews
- The accuracy of modelling compared to community experience and noise monitors (such as Explane)
- Modelling has not been calibated with baseline monitors within community
- The noise descriptors used (calls for review of ANEF and use of WHO Guidelines).

D1.2 Number and Types of Submissions

251 submissions contain reference to the Noise Modelling Methodology Issue. They were received from:

- Community
- Community organisations:
  - Melbourne Airport Community Action Group (MACAG)
  - Keilor Residents and Ratepayers Association (KRRA)
  - Kinglake West Residents
  - East Melbourne Group
  - Climate Action Moreland
  - South Melbourne Residents / Respondents
  - Friends of the Earth Melbourne
- Non-government organisations and commercial entities:
  - Essendon Airport (EAPL)
- Government:
  - Maribyrnong City Council
  - Wyndham City Council
  - Brimbank City Council
  - Airservices Australia.

D1.3 Discussion of Submissions

The discussion of the submissions is grouped under the following headings:

- Calls for an independent review of noise modelling methodology
- Accuracy of modelling compared to community experience
- Noise monitoring

- Detailed modelling queries and questions
- Community action groups and proforma submissions
- Local council submissions
- Essendon Fields.

Call for Independent Review

The most frequently requested action from submissions was for independent review of noise modelling.

Some examples of community quotes:

> *"We request independent organisations to do the noise level assessment again."*
>
> *"Without independent reviews of the noise levels over port Melbourne/ Albert Park i will oppose the third runway proposal."*
>
> *"Need to establish an independent committee to review the impact of noise pollution caused by the 3rd runway construction."*
>
> *"This third runway is being progressed without a fully independent expert commission review the proposal. We need independent experts to assess the noise levels and impact on the community BEFORE it is built."*
>
> *"We need more studies done by independent parties."*
>
> *"I request an independent assessment be carried out to really identify the environmental noise issues from the aircraft in our suburb and surrounding suburb."*
>
> *"Please ensure an independent analysis of the project is carried out with an in-depth look at the impact on the local community, noise pollution etc."*
>
> *"Really concerned about the noise and potential environmental impact, would prefer an independent impact study."*
>
> *"I can't believe you let the airport do the evaluation of this project. It's like asking Ronald McDonald if he likes happy meals!! We want an independent inquiry!!"*
>
> *"I am concerned there has not been in independent federal government assessment of this project and the impacts to the community"*
>
> *"I am concerned that their is no independent panel or review being performed to this decision"*
>
> *"…missing a significant amount of independent expert information for public review"*
>
> *"An expert and independent panel needs to conduct a health and noise level assessment."*
>
> *"The establishment of an independent committee is a MUST to review noise impacts. This needs to be done before the runway is built, and not post-development such as Brisbane."*
>
> *"If it does go ahead: there must be continuous, robust, independent monitoring of noise and flight paths."*

"Melbourne Airport's Third Runway modelling should be independently audited and verified by experts."

"A truly independent assessment by the government or an independent third party should be made"

"I would welcome independent observation, data recording, analysis and strategy on this project - in its current format, it can be likened to a vampire looking after a blood bank."

Accuracy of Modelling Compared to Community Experience

There were a wide range of submissions that called into question accuracy of the noise modelling based on their own experiences and the recent example at Brisbane Airport when the new runway was opened.

"Current and future noise modelling, for our property address, is not accurately shown."

"The flights seem to go into full power acceleration when the reach Riddells Creek so i don't believe the noise contour lines on your modelling."

"The predicted noise level data and the projected impact to our home due to the 3rd runway is not believable. Right now we easily hear aircraft passing overhead."

"I question the validity of the 60 dba measurement in the current noise tool. We have multiple events per day currently and this doesnt seem to be represented."

"The online tool shows that I don't live in the noise contour but at night the plane noise etc are enough to wake me up."

"I say this because I'm looking at the Flight Path and Noise Tool, and based on the current operations I should not be experiencing this level of noise. The 'N70 24hr' gradient does not even overlap my house and yet I currently experience such high airplane noise levels. I am terrified to think of what the real lived experience of airplane noise will be once the third runway is operational.
For this reason, I have zero faith in the current noise modeling and any planning decisions informed by it."

"It is clear that everyone is drastically underestimating the amount of noise that we are subjected to in Kealba, under the new loop U-turn pathway, and I fear that any health and safety investigations that have been conducted, have been nothing but token box-ticking exercises. It is doubtful that anyone has accurately measured the noise levels in our suburbs"

"Current and future noise modelling, for our property address, is not accurately shown."

"Option 2 is preferred (if your noise modelling tool is correct)."

"The flight Path tool provides general and sometime varying information on a location, but is far from accurate."

"I previously lived in Brisbane, where the construction of a new airport runway has led to residents in suburbs under the new flight paths being much more affected than the pre-construction projections. Volume and frequency of disturbances were many times more than had been projected, and even larger areas were projected, because the real-life flight paths were outside of what the projections had shown."

"Brisbane showed this lack of trust is not misplaced. Actual flight paths deviated significantly from those presented (Jetstar particularly was notorious for low, slow and loud approaches), noise was measured by some affected houses at 10dB more than the worst cases presented in modelling."

"concerns about the Aircraft Noise Modelling Methodology and the impacts of Aircraft Noise and Vibration"

"The aircraft noise forecast prediction modelling is incorrect, containing shewed data for long term effects to residents. It undermines the true detrimental impact assessment for local residents leading to health issues and social community concerns. The contours indicate the number of events (flights) above a specific noise level. The health assessment within the MDP is based on the long-term exposure of noise. Absolutely distorted data."

"I have looked at Melbourne Airport's Noise monitoring tool and I am not convinced that the tool predicts noise levels accurately."

There was also a query around whether Airservices had verified that the tool is realistic:

"My understanding is that Airservices Australia is responsible for Noise monitoring and complaints. Has Airservices verified that the tool is realistic?"

One submission references what guaranties the airport is providing that the actuals for day one is inconsistent with modelling:

"What guarantee to address the noise impacts does Melbourne Airport offer us if the actual impact is as we state and not as you state?"

<u>Noise Monitoring</u>

Noise monitoring submissions fell into three different categories:

- The calibration had not occurred with any baseline noise monitoring in certain areas
- Current challenges with having Airservices introduce noise monitoring in their area (most notably Keilor Village)
- Submissions highlighted their own monitoring results.

Some examples of submission quotes are below:

"Noise modelling has not been calibrated to any existing baseline noise monitoring station in Keilor. The nearest noise monitoring station is located in Avondale Heights."

"There are no noise monitoring stations in West Footscray"

"A resident from Keilor Park has requested that an additional EMU be placed in that area."

"The Keilor Residents and Ratepayers Assoc. Inc. undertook their own research at considerable expense but this sound survey and the results of that analysis illustrated how much higher the noise levels would be rather than those that are stated in this document."

"a lack of facts supplied (They seem more reliant on computer modelling) which do not accurately depict our situation/location.
We have found noise decibels that have been stated in Melbourne Airport's noise

contours are much lower than those showing on the Explane App, which we have been utilising/recording since 2019.“

“D4.7.3.7
Noise monitoring
What a mockery the statement indicates when we have had to endlessly and tirelessly tried to get an EMU reinstated into Keilor Village. It would warrant copious notes to illustrate this point but there is lots of evidence to show no such progress has been made to have any Noise Monitoring and Management Plan so how could the community have faith that this will happen in the future?”

“There is no noise monitoring unit in the Keilor village/Keilor Park area. The current noise data lacks relevance as a baseline for predictions made by the noise tool.”

“As per our comments above, where are the noise monitoring systems installed, are there points installed at sites that incur significant flyover or are many kilometres from the airport boundary? There is no mention of this and this is a key concern for communities like ours that are in flight paths. If Melbourne Airport is going to be considered a responsible community citizen then it needs to ensure it knows of the impacts its services have on communities. Again, you cannot afford to leave this aspect to Airservices as it has little if any credibility with communities as far as monitoring and actioning aircraft noise impacts on communities.”

“I have conducted my own sound meter level readings and have in most instances recorded noise levels at greater then 75db with the current 2nd runway, adding the 3rd runway could only increase these levels.”

“I do not believe that by 2024 that my home will only be affected by 27 flight per day!!! I don't think this information is correct!!”

Detailed Modelling Queries & Questions

There were a number of technical queries and questions contained within the submissions, which covered the following topics:

- Modelling does not include a maximum noise level
- Claim that conservative forecasting was used in the modelling
- Decibels do not help understand how planes impact community
- That the L_{den} metric is not used in the MDP and the limitations / outdated use of Australian Noise Exposure Forecast (ANEF)
- Exposure duration and impact to hearing loss (references to a 1974 US Environmental Protection Agency study)
- The standard being adopted for waking-up thresholds is insufficient
- Airlines are not required to adopt the fleet consistent with the airport Master Plans
- Concerns that the modelling did not include a projection for the east-west runway
- Has modelling included two aircraft at the same time?
- The influence of weather on noise modelling.

“The Noise monitoring tool does not give a maximum possible noise level. This gives residents no confidence in the tool.”

“That all modelling be undertaken on moderate to high levels of usage, not on the conservative forecasting used in the MDP”

"The way noise is measured ignores the impact of a plane flying overhead - decibels do not help understand how it breaks the quiet neighbourhood background noise and forces conversations to stop, drives people indoors."

"Currently there is only one world-wide noise metric that is a reliable measure of noise harm. Europe's Db.Lden. It is not perfect metric, but it is the one most used in noise research and the one that WHO uses in its evidenced based, strongly recommended maximum safe environmental noise levels.
IN 2018 WHO appointed 80 odd leading scientist and academics to revew all research to 2015. They calculated maximum safe levels for road transport was(53dbLden), rail was(55dbLden. and for aircraft was db. Lden 45. (Australia's unique ANEF10 is reasonable equivalent to 45db.Lden (simply subtracting 35 from the European metric)"

"Melbourne Airport still employs 1970's ANEF noise metrics, which are severely out of date and majorly understate noise impacts to surrounding areas. "

"The Commonwealth should update the last study on community re-action to aircraft noise of 1982 ahead of future airport development across the nation.
The results of this study are 40 years old and have no relevance today."

"In 1974 the US Environmental Protection Agency determined a 24-hour exposure limit level of 70 dB would produce minimal hearing loss."

"That the standard noise level being employed by the Airport authority of 60db is insufficient as indicated by research by Maschke et al.
'Using appropriate statistical methods, maximum levels of under 48 dB(A) are assessed as waking-up thresholds at ear level in sleeping persons, in contrast to maximum levels of 60 dB(A) calculated by Griefahn et al. in 1976'. Noise Health Jul-Sep 2004;6(24):21-33."

"In previous master plan new quieter aircraft were factored in to provide a reduction of noise impact, Qantaslink operates eighteen B717-200 aircraft with an average age of 20.3 years. This clearly indicates airlines are not required to operate the fleet consistent with airport master plans which goes to the credibility of airport forecast"

"The interactive map also doesn't seem to account for any use of the East/West runway in any mode of operation. Is this runway now not being used for commercial air flights? It appears everything is being forced down two north/south runways while the 3rd runway is underutilised."

"For those of us already within the Essendon Airport runway corridor for the east/west runway (like myself) it is unclear if the interactive map takes the flights from that airport into account. If it doesn't there will be possible instances where two planes might fly over at the same time which will cause extreme noise."

"The noise estimates and calculations do not take into consideration the scenario of 2 planes taking off/landing at the same time/simultaneously. 60 and 70dbs is calculated on one aircraft at the same time. This is a major (and I believe deliberate) omission. 2 aircrafts taking off at the same time is above these noise levels."

"Climate change is having the effect of more high wind days and in particular more days with strong "northerly" winds. The result more arrivals from the south and more departures to the north and on these windy days far more noise will be blown southward. How is this taken into account with the operational planning and it is allowed for in the noise modelling ?"

There were some noise modelling questions regarding the flight path and runway preference. These questions will be responded to in detail within the Issue D3 Draft runway operating plan and D4 Flight path design. Some quotes are included below for reference:

“north south runways between the hours of midnight & 6am for take of towards the north and to land from the north. to reduce aircraft noise over the residential areas of taylors lakes, keilor , etc.”

“I was wondering if it was possible to only utilise the airspace to the north of the new runway so that aircraft are not flying low directly over houses, schools and businesses in Keilor Village.”

“Adding additional flight paths from the East as I see there are none might decrease the noise levels on western suburbs.”

Community Action Group / Proforma Submissions

The submission from KRRA includes a number of points regarding the noise modelling assumptions. Concerns include in relation to the sources of actual noise monitoring and a review of the ANEF contours against some noise monitoring data commissioned by KRRA. Below are some of the quotes from the submission:

“5.2 Noise data that is presented by Melbourne Airport and Airservices Australia is only modelled noise, and is often presented as a video game. Keilor Residents are only concerned with real noise and how it effects their lives.
5.3 The modelled noise is calculated from dubious selected sources.”

“To obtain sufficient reliable data on noise measurement that could be trusted of aircraft KRRA commissioned an independent survey from a recognised consultant.
…
5.7 The brief was to obtain a set of noise measurements that could be used to obtain an accurate idea of what noise levels would result from an additional flight path over Keilor from the proposed second N/S runway. To do this two noise monitoring stations were set up late in 2019 (Pre covid). One at the Keilor Bowling Club which is under the proposed flight path and as such is representative of many properties effected. The second station was positioned at the equilivant distance from the end of the existing N/S runway ona roof top in Keilor Park. The monitoring was done over a two week period. This provided real figures for review.
5.8 Of note from the survey
5.8.1 Airport Master plan and the ANEF both forecast that on Average there will be considerably more arrivals than departures in the area south of the proposed parallel north-south runway. During the two week monitoring period, there were significantly more departures than arrivals. Noise from departure operations are notably higher than noise from arrival operations, and therefore the ANEI and number above events measured during the monitoring period are significantly higher than those presented in the master plan. The data presented in the master Plan must be challenged and presently considered un reliable and not justifiable as an acceptable reason for approval of runway expansion.”

The validity of the noise modelling compared to the noise monitoring commissioned by KRRA appeared in the proforma commentary shared by KRRA with the community and thus submissions from Keilor, Avondale Heights and Sunshine West. The proforma referred to:

> *"Aircraft noise from the proposed third runway has not been accurately estimated and practical indications are it will be greater than claimed in the airport master plan"*

The proforma submission prepared by Keilor Primary School Council was submitted a number of times and raised questions regarding the noise modelling. These concerns include lack of baseline noise monitoring in Keilor, the aircraft types used in the modelling and no inclusion of the long term four runway system by 2026 (opening day for M3R). Quotes from the proforma include:

> *"Noise modelling has not been calibrated to any existing baseline noise monitoring station in Keilor."*
>
> *"Omits Antonov aircraft known to be used by freight carriers regularly in Melbourne. There is concern that their omission understates the noise impacts calculated in the noise modelling. Further, business jets known to be operated by Melbourne Jet Base also appear to be omitted from the list of aircraft. Smaller and nosier business jets are now regularly observable in Keilor."*
>
> *"There is no modelling or discussion on implementing the final configuration of the airport in 2026."*

The end of the submission requests the following regarding noise modelling:

> *"That human health impacts associated with noise be fully assessed and mitigation documented. This includes, as a minimum, calibrated noise and air quality monitoring and modelling calibrated with data captured on site and monitored for the life of the Airport."*
>
> *"That noise modelling and the split of aircraft be independently reviewed and amended to include a more representative list of aircraft. Noting with the increase freight traffic in Melbourne, noisier aircraft such as the Antonov's AN-225 and AN-124 are utilising the airport."*
>
> *"That noise and air quality modelling and impacts be reviewed annually against onsite monitoring. Any observed discrepancy should be remediated promptly by APAM."*

MACAG's submission includes a peer-review report provided to MACAG by Dr Eric Ancich. The conclusion within this peer-review report references:

> *"It is noted that formal applications were made to Airservices Australia on 21 March 2022 and 1 April 2022 for access to the NFPMS data used by SoundIN in their noise modelling. Airservices Australia has not responded to either request. Without these data, informed commentary is severely compromised as the relevance of the noise modelling methodology calibration procedure cannot be independently verified.*
> *…*
> *The accuracy and reliability of the N-above contours presented in the subject MDP is seriously questioned as, it appears, the LAmax data used to generate the N-above contours are based on average rather than instantaneous data. And, in a similar manner to the WSA EIS, the method used for averaging the LAmax data is neither defined nor disclosed. Furthermore, there is additional concern relating to the accuracy of both Nabove and ANEF contours. In relation to the accuracy of N-above contours, reference was made to comment in an Airservices report [7] relating to Sydney Kingsford Smith Airport. And, in relation to ANEF contours, reference was made to the Foreword to the relevant Australian Standard [8].*
> *…*
> *There was nothing in the subject MDP to indicate that height variability was ever considered in the aircraft over-flight noise modelling reported."*

In summary the concerns are regarding the accuracy of the calibration of the modelling using NFPMS data, that an average was used to determine L_{Amax} data and that variability in aircraft height was not considered. The peer review notes:

> *"The in-accuracies identified in this report have the potential to mislead the relevant decision makers involved in that approval process."*

The MACAG submission also provides the following commentary regarding noise modelling accuracy:

> *"We also wish to highlight inaccuracies acknowledged to be inherent in noise forecasts. AS2021 states that the location of the 20 ANEF contour is 'at best' accurate ± 500m,[4] and Airservices Australia gives the same advice with respect to N contours.[5]"*
>
> *"Explane data suggests that aircraft noise may not reduce significantly as aircraft gain altitude and distance from the end of the runway or from where the device is capturing the noise on the ground. In some areas close to Melbourne Airport, noise levels appear to remain above 70dB for 2-3 minutes for each overflight six or more kilometers from the end of the runway. We understand that both loudness and duration contribute to ANEF contours, however it is evident from Explane data that prior to COVID areas not within ANEF contours for the existing north/south runway may be exposed more aircraft noise than areas within the 25-30 ANEF contour."*
>
> *"Australian research also indicates that aircraft noise does not attenuate laterally, however lateral attenuation is a feature of INM modelling.[6] Whilst Cooper refers to INM modelling, AEDT modelling uses the same basic algorithms. Turning this feature off yields noise contours that correlate with noise measurements taken lateral to the flight path of aircraft, whereas incorporating attenuation in the modelling leads to anomalies. It is important to establish whether this feature was used in generating the noise forecasts for the M3R dMDP."*
>
> *"No other comprehensive survey has been conducted in Australia since 1982, although more recent studies overseas indicate community tolerance of aircraft noise has decreased over that past four decades[8]. This suggests the NAL Report underestimates the proportion of people who are moderately to seriously annoyed by aircraft noise. Indeed, Professor Andrew Hede, co-author of the NAL Report, has called for an updated survey,[9] and his co-author Dr Rob Bullen has personally communicated the same view to us."*
>
> *"N contours are intended to inform members of the public about the level of aircraft noise exposure they can expect where they live or are considering buying a home. They outline areas that can expect, for example, an average of twenty or more events per day above 70dB. They do not typically mention that this could in fact be 200-400 events that could be as loud as 85dB, nor is it typically clear from the way they are presented that each increase of 10dB equates to a doubling of perceived loudness, meaning that each overflight could be 2-3 times as loud as expected based on the N contour information."*
>
> *"Section 2.2.15 Climb and descent procedures state that in general the higher the aircraft the lower the noise impact on the ground. Data captured by members of the community using the Explane app indicate this is not the case. These data are publicly available. Furthermore, an independent study of aircraft noise conducted by Dr Eric Ancich and Don Carter on behalf on Blacktown City Council found that noise events expected to drop below 70dB beyond 5km from the runway remained at 70dB up to 19.8km from the runway. It is for these reasons that we asked Brimbank Council to commission a similar independent noise study. Assumptions about the effect of altitude of aircraft at particular*

distances from the end of the runway form part of the noise modelling. If these assumptions are incorrect the noise forecasting cannot be relied upon. The noise forecasting is used for land use planning and as the basis of some aspects of the health study, thus it is important that the forecasts be accurate and reliable."

MACAG summarised their concerns regarding the noise modelling noting:

"We are concerned that without independent review of the studies, assumptions and data that form the basis of this Major Development Plan it is impossible to assess whether the benefits and harms described are accurate. We have provided reports that show the noise forecasts are highly likely inaccurate and that the flaws that cause this are known to the public and Department of Infrastructure.
…
If the noise modelling is flawed and the noise forecasts are inaccurate, not only will these impacts be worse than indicated by the health study, but the entire community engagement and public comment process is tainted. We do not mean to suggest that the community were deliberately misled, rather that APAM relied on information that may not be accurate in informing their presentations to the community of the likely impacts of the new second runway."

A submission from South Melbourne residents/respondents included the following comments regarding noise methodology:

"A critical concern is the industry knowledge around noise and denial and scarce acknowledgment of noise impact and alternative models used by the aeroacoustics industry, including frequency-based modelling and C-weight penalty applications.
…
All the low range frequency harm and cause of public complaint; single and multiple craft frequency loadings are cancelled out under the A-weight framework and the day averaging system in a place of no curfew or adequate review process."

In addition the submission includes the following requests:

"we call for an independent review of the activity impacts and noise modelling heuristic."
"Where outside can be 36-40dBA and inside is under that, we find jets have doubled that value, and as frequency or C rating exceed the noise chart assumptions you have provided. Since the A-weight does not represent the real world distinct range of noise craft generate we believe the authority must:
i. Review the impacts according to frequencies, for single and multiple craft, including mixed craft scenarios common to the intensifying inner city area.
…
v. Provide and evaluation based on C/ frequencies to compare the A-weight assumptions at 1000m
…
ix. Provide a noise evaluation of single and aggregate craft noise using frequency /C modelling."
"The A weight model and day averaging system converge to give a false account of real world the impacts experienced by those living in proximity to jets at and under the 1000m mark.
i. The types of jets noise peaking well above the A-weight should be considered yet aren't.
ii. A320 and quad jets have profiles well above normal conditions now using the Yarra route under 1000m; outgoing jets have a high fuel rate -noise emissions.
…
iv. The durations and succession and overlays should be considered, yet aren't."

The submission from Friends of the Earth Melbourne incorporated additional concerns raised by organisations such as the 'No 3rd Tulla Runway' coalition which included:

> *"concerns about the Aircraft Noise Modelling Methodology"*

The submission from East Melbourne Group questions the accuracy of the modelling considering the low number of dwellings within the 30 ANEF:

> *"how do you estimate that only 33 dwellings are predicted to be within the 30 ANEF by 2052? This seems absurd, you need to justify this estimate."*

In addition, the submissions include commentary on noise monitoring values:

> *"Depending on the atmospheric conditions noise levels emanating from those aircraft have been recorded up to 75dba, The average ranges between 45-65dba depending on how close the aircraft is to the measurement point. Also, we have on some days coinciding with the RPT up to 100 VFR consisting of fixed wing and helicopters, with many of the helicopters hovering and doing circuits. Noise emissions have been recorded up to 82dba."*

The submission from Climate Action Moreland makes reference to the need for an independent committee to review noise impacts.

Brimbank City Council

As part of their submission Brimbank City Council proposed a review of the aircraft noise system.

Quotes below highlight concerns raised regarding the current ANEF and N-above contours and concern that the World Health Organisation Environmental Noise Guidance 2018 has not been used:

> *"Undertaking a review of the aircraft noise system to minimise harm to human health and provide health impact guidance to protect community from aircraft noise. This should include the establishment of appropriate noise metrics that accord with health guidance established by World Health Organisation Environmental Noise Guidance 2018 (WHO Noise Guidance)"*
>
> *"Review the use of Australian Noise Exposure Forecast (ANEF) as the measure of noise disturbance to the community and use more appropriate measures that more accurately show noise impacts in the planning of new runways and flight paths."*
>
> *"Support an independent expert review of the existing ANEF/N-contour systems to adequately protect the community's health and wellbeing, correctly identifying where high levels of aircraft noise/overflights will occur and development of a new noise metric to protect human health."*
>
> *"Commission an independent assessment reviewing the existing and proposed noise emissions from Melbourne Airport and its operations on the Brimbank and surrounding community, assessed against the Environment Protection Act 2017"*
>
> *"Council's principal concern with the Master Plan and the MDP is that the documents ignore world's best practice regarding noise and its impacts on public health. The WHO Noise Guidance highlights noise metrics and the impact on human health when exceeded, demonstrating that the current approach to airport planning is inadequate and out of date. Notably, the ANEF metric was intended to guide planning outcomes but is not a measure of harm from noise. Recent research around noise harm identifies that noise*

impacts are occurring at a lesser metric i.e. ANEF10, as opposed to the current accepted metric ANEF20. As is outlined later in this submission, the Master Plan and MDP need to be reviewed to consider and respond to contemporary research and best practice."

The submission included a summary of focus group sessions and some individual discussions with residents and schools under the current and proposed flight paths:

"Some of the residents in Kealba and Keilor Village questioned the accuracy of the noise predictions developed by the Airport Corporation as part of their Master Plan. A number said that according to the interactive noise tool their houses are shown as not currently being impacted by the noise from aircraft, however they are unable to sleep due or enjoy their outside areas due to the aircraft noise. Some had conducted noise monitoring at their homes and had recorded noise levels between 70 and 80 dB which is not consistent with the information provided in the noise tool when their addresses were entered into the system. This has raised concerns about the accuracy of future predictions of noise when the current experience at their homes is that they are impacted more severely than the noise tool is predicting."

This is summarised in Brimbank City Council's submission:

"Council submits the noise and health impact assessment is seriously deficient in the Master Plan and MDP as they do not assess the actual impacts or likely noise exposure to be experienced by the community. Nor do they assess whether the impact of aircraft noise on affected community is reasonable or whether a judgment is required identifying the impacts."

A large part of the submission relies on a conversion of the ANEF contours into the WHO adopted metrics.

"To generate the relevant health metrics T+T engaged Marshall Day Associates to convert the ANEF values to Lden and Lnight values. Lden is a weighted measure of day, evening and night noise levels while Lnight is the noise level experienced between 11pm and 7am. Both are annual averages. The Marshall Day report is in Attachment 1. Marshall Day used data from various airports in Australia and New Zealand for which they had noise modelling data to derive the association between the ANEF contours and the Lden and Lnight metrics. The results of their analysis is shown in Table 4-4:

Table 4-4: Correlation between ANEF values and Lden and Lnight metrics

ANEF	Lden (dB)	Lnight (dB)
ANEF 20	61	53
ANEF 25	66	58
ANEF 30	71	67
ANEF 35	76	68

"

The submission includes the Marshall Day report, which describes the process undertaken to generate the conversion factors:

"In the absence of publicly available information associated with Melbourne Airport operations in the form of the above metrics, Marshall Day Acoustics (MDA) has estimated a relationship between the ANEF and these metrics. The estimated conversion factors between the metrics are detailed in Table 1. Details on the method to establish these factors is described in Appendix B.

> …
> *To establish conversion factors between the various aircraft noise metrics, noise model data for airports which are currently similar in size and operation (number of annual movements) to Melbourne Airport has been used. Specifically, the forecast annual noise models prepared for Auckland Airport and Christchurch Airport were recalculated for each noise metric of interest. The noise levels were calculated for a 10 nautical mile (nmi) grid around each airport, at discrete points spaced at 0.2 nmi (370 m) apart.*
>
> *For each discrete point, the difference between the calculated ANEF value and other respective metrics was determined. An analysis of the differences was undertaken, and an average value used as the estimated conversion factors presented in Table 1.*
>
> *This process demonstrated good agreement and limited spread in the differences across the grid (±1-3 dB across the 10 nmi study area for the various metrics).*
>
> *However, it is noted that, ideally, the equivalent process should be undertaken by those responsible for the preparation of the Melbourne Airport noise contours to recalculate and determine the airport-specific aircraft noise levels in the requisite noise metrics."*

Maribyrnong City Council

The submission by Maribyrnong City Council expressed a concern regarding the use of the survey informing the ANECs:

> *"In addition, the use of estimated percentages of people who will be 'highly annoyed' based on applying British surveys to the ANEC contours (p.20 of Chapter D3) is not relevant to Maribyrnong. Maribyrnong lies outside the ANEC 20 contour but parts are within all the N-above contours described in the masterplan."*

They also express a concern regarding the options explored for alternatives to the north-south runway:

> *"Re-examining the options explored for alternatives to a new north-south runway with a focus on reducing noise impacts on long-standing residential communities."*

Melbourne Airport CACG

The submission from the Melbourne Airport CACG queried that the modelling does not highlight the worst case scenario and whether the airport would consider taking a more active position on noise monitoring:

> *"It appears the noise modelling focus of MA's planning (and subsequent costing) does not highlight worst case scenarios: this is normally a part of risk management. Would MA please clarify why this is the case?*
> …
> *Would MA consider taking a more proactive position on noise monitoring, specifically by installing noise monitoring equipment?"*

Essendon Fields

The submission from Essendon Fields Airport Limited queries whether the noise modelling within M3R MDP included changes and impacts to Essendon Fields. This submission has been addressed within Issue B5: Interactions With Other Melbourne Basin Airports and Operators. The specific quote from the submission is highlighted below for reference:

"These noise impacts will be felt by residents to the north in Gowanbrae and to the south in both Essendon North and Essendon. However the MDP is silent in terms of addressing the extent of this change and associated impacts.
Indeed, Section C2.5.11.1 (page 80) goes further stating: "Based on the best information currently available to Melbourne Airport, it is expected that M3R will result in an increase in the proportion of total movements at Essendon Fields Airport using the north-south runway (17/35) and a reduction in the proportion of movements using the east-west runway (08/26). This may result in some increase in aircraft noise impacts to the north and south of Essendon Fields Airport, and also result in a decrease of aircraft noise impacts to the east and west. The actual impacts on operations and aircraft noise will be a function of M3R in combination with Essendon Fields Airport's forecast operations."
If these paragraphs are read in conjunction with Figure C2.51 Runway Mode compatibility, which indicates that Essendon Fields may be operating up 95% of the time in a north-south runway bias, the statement that "This may result in some (emphases added) increase in aircraft noise impacts to the north and south of Essendon Fields Airport" significantly understates the effect of the change.
Given the relatively stable air traffic at Essendon Fields Airport a preliminary assessment using publicly available forecasts could have been used in the M3R MDP to give a clearer picture of the potential significant changes in relation to noise impacts in the areas surrounding both airports as a result of the five runway CONOPS proposed for the M3R project.
…
Airspace within the M3R MDP references considerations of the effect of airspace change to Essendon Fields Airport (p37), however limited detail is provided of an assessment to the consequential impact from the changes as part of a five runway CONOPs involving the strong preference for parallel north-south at Melbourne influencing the significant change in future runway usage patterns at Essendon Fields Airport and the noise impact on the surrounding communities. It states as part of C2.5.11.1 that, "…actual impacts on operations and aircraft noise will be a function of M3R in combination with Essendon Fields Airport's forecast operations…" and that the absence of such information is why such detail has "…not been included in this MDP.
These changes to operations and aircraft noise impacts would not occur but for the reorientation of M3R north-south and should therefore be considered in detail as part of the M3R MDP, providing information to the community for its consideration prior to the approval of the Plans."

D1.4 M3R MDP References

An entire chapter within the MDP is dedicated to the noise modelling methodology, Chapter C3: Aircraft Noise Modelling Methodology. This chapter covers the following subjects:

- Statutory and policy requirements
- Description of significance criteria
- Aircraft noise assessment methodology
- Aircraft noise prediction methodology
- Assumptions.

D1.5 APAM Position

APAM's position is split into the following sub-headings in response to the submissions:

- Independent review
- Accuracy of modelling
- Noise metrics – ANEF, N-above and L_{den}

- Noise monitoring
- Generation of N-above contours (L_{Amax}).

Independent Review

The noise modelling presented has been produced in accordance with the requirements of the Airports Act, and the ANEF has been endorsed for technical accuracy by Airservices.

Approval for any Master Plan or MDP is independent of the airport (i.e. the plans are prepared by the airport, provided to community and stakeholders for comment, and then submitted to the Minister for approval - along with consultation feedback and the airport's response). As stated in Issues C1 and C2, there is no requirement under the Airports Act for independent assessments or reviews.

However, all assessments in the MDP were undertaken by expert consultants, and it is important to note that the Exposure Draft MDP was reviewed by the Commonwealth and State Governments prior to public exhibition, including CASA and Airservices (amongst others).

APAM notes the Australian Government's commitment to an Aviation White Paper and will advocate that the scope includes items raised in submissions regarding independent review of aircraft noise forecasts.

Accuracy of Modelling

APAM understands community concern regarding calibration of modelling against baseline monitors. Noise measurement data for calendar year 2019 was obtained from Airservices' NFPMS. The data was recorded at nine monitoring stations, including eight permanent monitoring stations and one temporary station. The data was correlated with radar data provided from the same system. Data from 167,641 flights were correlated with noise measurement data.

The predicted aircraft noise level verification is discussed within Section C3.6.4.3 of the MDP. The calibration exercise was to verify and calibrate the noise model against NFPMS data. The rationale being to establish a noise modelling methodology that capably predicted aircraft noise levels from existing operations so that the same noise model, including calibration adjustments, could be relied upon to predict noise levels from future forecast operations.

Having noise monitors within areas with little, or no, current aircraft operations would not support this verification exercise. APAM do however note the community interest in baseline monitoring and additional commentary is provided under the heading of Noise Monitoring.

Regarding concern about which aircraft types have been used within the noise modelling, it is best practice in generating the noise forecasts to not include very infrequent aircraft types - for Melbourne Airport this includes some notable aircraft (such as the Antonov freighters). Though the airport has had AN-124 (averaging less than four movements per year since 2007), the AN-225 has never been to the airport. APAM will continue to follow best practice in generating noise modelling reflecting aircraft types known/expected to visit the airport.

Regarding the submission that airlines have not incorporated fleet upgrades from previous plans, APAM takes the best available information to include future aircraft types within the modelling methodology. APAM notes that recent announcements by domestic carriers of fleet replacements (Qantas with Airbus A321XLR and Airbus A220, Virgin Australia with Boeing 737 MAX8 and MAX10) have been included as aircraft types in the modelling. APAM will continue to update noise modelling forecasts through the master planning process to reflect the latest information on fleet orders.

Weather assumptions are inputs into the noise modelling software. In addition to default annual average meteorological conditions for Melbourne Airport, 10 years of meteorological data for Melbourne Airport was acquired from the Bureau of Meteorology (BoM), from 1 January 2010 to 31 December 2019. It was recorded every 10 minutes (excluding a small percentage of missing data) and includes mean wind speed, maximum wind gust, mean wind direction, visibility and cloud cover for three layers, including height and amount (oktas).

The weather data was used to forecast airport operating modes and runways, in the allocation of aircraft operations and in the calculation of aircraft performance, profiles and noise emissions within AEDT.

Analysis was undertaken of predicted aircraft performance and resulting noise levels under various conditions, covering the range of meteorological conditions present at Melbourne Airport (based on the BoM data described above). The following conditions were considered:

- Temperature - 0 to 40°C, grouped in 10°C intervals
- Station level air pressure - 990 to 1,020 hPa, in 10 hPa intervals
- Relative humidity - 25 to 100 per cent, in 25 per cent intervals
- Headwind - 0 to 25 knots, in five-knot intervals.

The combination of these parameters produced 480 condition sets. Condition sets were then grouped based on those having a similar resulting aircraft trajectory (profile) and predicted noise levels on the ground. This reduced the number of permutations to 23 ‘met classes’, each consisting of numerous condition sets and able to be represented by a single condition set for the purpose of noise modelling. The condition set selected to represent each met class was that most prevalent in the BoM data.

APAM believes it has taken steps to go beyond default weather assumptions within the MDP modelling methodology.

Regarding concerns that the methodology is conservative, the noise contours are based on ‘busy week’ schedules that represent activity greater than an average week. They are considered to be slightly conservative compared to using an average week. This is to ensure that the contours do not underestimate potential noise effects.

On top of utilising ‘busy week’ schedules, APAM has included typical busy day N-above contours (NX(90)). The production of a ‘typical busy day N-above’ diagram was achieved by calculating the 90th percentile of the N-above values across the assessment period. That is, the ‘typical busy day N-above’ describes the N-above value exceeded on 10 per cent of days (or one in 10 days). When combined with information on respite, these metrics communicate a more complete synopsis of aircraft noise.

The ability to turn lateral attenuation on or off in AEDT is limited to helicopter and propeller aircraft (not jets). Noting the current and forecast fleet at Melbourne Airport, modifying the treatment of lateral attenuation for those aircraft is predicted to have a negligible impact on the outcomes.

Notwithstanding, the verification and calibration exercise included data for operations that would have included lateral attenuation in the AEDT calculations. Though it was not specifically investigated, APAM did not note any systemic over-prediction of a subset of aircraft or operations that would indicate a gross error in the aircraft noise level predictions.

The paper referenced by MACAG (Cooper, 2006) suggests that a sudden and pronounced decline in noise levels is evident at a certain point in the lateral propagation of noise from a predicted aircraft flight path. Individual maximum noise level predictions for many discreet operations were produced and observed, and no such effect was identified. It may be that the phenomenon was

specific to military helicopters, or the relatively low aircraft heights and consequent angles above the horizon that Cooper was investigating.

To APAM's knowledge, it has never been Airservices' position that modification to the handling of lateral attenuation in AEDT is required as part of the ANEF technical endorsement.

The potential for individual events to have lower or higher noise levels than those predicted in the noise modelling is noted. Though substantial efforts have been undertaken to extend the aircraft noise modelling beyond the prediction and use of average noise levels, it remains a limitation of noise modelling that it is an approximation of reality only, and the fidelity of the model cannot capture all the variables of the real world, nor predict the individual noise level for every potential operation.

It is impossible to predict the absolute maximum noise level that will ever be experienced at any point on the ground. Predictions have accounted for some of the variation in noise levels, through the application of a varied fleet, profiles and MET conditions. The indicative event noise levels communicated in the noise tool, which are in fact single event maximum noise levels, include this variation and are provided for the median and 90th percentile conditions.

APAM is not aware of any precedent of using C-weighting in the assessment of aircraft noise. APAM is aware of its use as an indicator of low frequency noise in assessment of wind farms. However, despite often being described a as having large low frequency content, jet aircraft noise typically has a very broad spectrum. APAM does not believe, based on current evidence, information and practices, that there is a need to include C-weighting within the MDP, however will make the Australian Government's Aviation White Paper aware of this commentary and the need to review adoption of C-weighting assessment of aircraft noise.

Regarding the methodology not including two simultaneous aircraft operations, this has not been considered in the modelling. It is important to note that due to separation requirements of aircraft, the noise generated from two aircraft is unlikely to be double the noise of a single aircraft. For reference, two aircraft noise events with the same noise level would sum to increase the noise level by only 3 dBA.

APAM understands the community desire for the inclusion of the east-west runway as well as the long-term four runways within the Major Development Plan. In order to avoid understating the potential impacts of M3R, noise modelling did not consider utilisation of runway 09/27 in M3R scenarios. The future use of runway 09/27 is discussed in Issue D2: Future Use of 09-27 (East-West Runway). Additionally, the Major Development Plan does not include building the future east-west parallel runway and thus was not included within the noise modelling methodology. The four runway noise contours are contained in the approved Master Plan 2022.

APAM maintains the position of not including these runways in noise modelling methodology. APAM commits to exploring the future use of runway 09/27 as part of the detailed airspace design. The noise modelling has been and will continue to be appropriately considered within the airport's master plans.

Regarding the inclusion of other aviation noise within the MDP, currently it is the responsibility of each airport lease company to prepare noise contours for their respective airports. APAM notes the new Commonwealth government commitment to an Aviation White Paper and will advocate that the scope includes a discussion on the compound effect of multiple aviation noise sources and ways to present and assess this impact for communities.

Noise Metrics – ANEF, N-above and L_{den}

APAM notes the new Commonwealth government's commitment to an Aviation White Paper and will advocate that the scope include discussion of items raised in submissions regarding aircraft noise descriptors and a review of the ANEF metric.

APAM acknowledges the community concern and interest in the noise projections associated with future plans. To help inform the community, APAM adopted the following descriptors of aircraft noise outlined within the National Airports Safeguarding Framework (NASF) Guideline A, these are discussed further in Issue D5: Noise Projections.

The WHO Aircraft Noise guidelines features heavily in feedback from all types of submitters. The WHO prepared a report titled 'Environmental noise guidelines for the European Region' in 2018. Within the document, the following recommendations are made:

- For average noise exposure - reduce noise levels produced by aircraft below 45 dB L_{den}
- For night noise exposure - reduce noise levels produced by aircraft during night time below 40 dB L_{night}.

Australia is a foundation member of the United Nations' International Civil Aviation Organisation (ICAO). Australia's international involvement spans all of ICAO's 5 global strategic objectives including #5 Environmental protection:

> *"Minimize the adverse environmental effects of civil aviation activities. This Strategic Objective fosters ICAO's leadership in all aviation related environmental activities and is consistent with the ICAO and UN system environmental protection policies and practices."*

The three core areas of this objective are:

- Climate change and aviation emissions
- Aircraft noise
- Local air quality.

ICAO released an Environmental Report in 2019 which included several topics related to aircraft noise (in Chapter Two). Within the section covering 'Aircraft Noise Annoyance', on page 91 a specific reference is made to the WHO recommendations:

> *"The World Health Organization (WHO) has recently published new environmental noise guidelines for Europe that state that the annoyance has increased, and it therefore recommends a limit of Lden 45 dB for aircraft noise in order to prevent adverse health effects. WHO's newly identified noise exposure levels are an order of magnitude lower than those identified by WHO in 2000.*
>
> *However, this recommendation has been based on a selection of non-representative and non-standardized surveys with results that cannot be applied to a general airport population. The recommendation is therefore unwarranted and unsupported by the reported evidence."*

It is clear that the new WHO guidance is not supported by ICAO. However, within the ICAO 'Aviation Noise Impacts White Paper' it is noted:

> *"Generally, health studies to date have used L_{den}, L_{day} and L_{night} metrics, most likely as these were available and had been extensively validated in annoyance studies. There is a need to examine other noise metrics that may be more relevant to health endpoints – some of the more recent studies are starting to include other metrics, including intermittency ratio,*

maximum noise level and to examine specific time periods, especially for night-time exposures. These new metrics should be additional, but not replace the standard equivalent metrics (L_{Aeq}, L_{den}) to allow for comparability of results, at least at present while the evidence base is being compiled."

APAM notes the new Commonwealth government's commitment to an Aviation White Paper and will advocate that the scope include discussion of items raised in submissions regarding aircraft noise descriptors and adoption of L_{den}.

Some of the information presented regarding the WHO guidelines and shared by certain members of the community is inaccurate. The inaccuracy relates to simple conversion or 'ANEF equivalence'. For example, the VTAG submission infers:

- Australia's ANEF 20 metric is roughly equivalent to 55db L_{den}
- ANEF 10 metric is comparable to 45 db L_{den}

Both referred to adding '+35' to the ANEF value – inferring a simple correlation.

The L_{den} applies a 5dB penalty for operations 6pm-10pm (evening) and 10dB penalty for operations 10pm-7am (night). The ANEF metric utilises an Effective Perceived Noise level in EPNdB. There is a penalty of 6dB for operations during 7pm to 7am. Depending on the distribution of movements between the evening and night period, this can greatly influence the difference between an L_{den} compared to the ANEF metric.

Within Brimbank City Council's submission, Marshall Day prepared a table correlating the ANEF contours into both L_{den} and L_{night} values. The ANEF 20 was correlated to a 61 L_{den} and 53 L_{night}. The report includes "noise model data for airports which are currently similar in size and operation (number of annual movements) to Melbourne Airport has been used. Specifically, the forecast annual noise models prepared for Auckland Airport and Christchurch Airport were recalculated for each noise metric of interest".

Regarding "current similar size and operation" - comparison is shown in Table 34 using Auckland Airport's '2019 Financial Year Annual Noise Management Report', Christchurch Airport's '2019 Noise Monitoring Report' (nb. both prepared by Marshall Day) and the 2019 Noise Flight Path Monitoring System (NFPMS) data from Airservices for Melbourne Airport.

Table 34: Comparison of Auckland, Christchurch and Melbourne Airports pre-COVID demand

Parameter	Auckland FY2019	Christchurch 2019	Melbourne CY2019
Total Aircraft Movements	181,356	109,307	242,225
Comparison to Melbourne	-60,869	-132,918	
Night Movements[1]	20,338	11,893[2]	33,727
Night %	11%	10.9%	14%
Comparison to Melbourne	-13,389	-21,834[2]	
Jet %	58%	39%[2]	91%
Non-Jet %	40%	61%[2]	9%
Jet Movements	105,186	42,910[2]	220,891
Comparison to Melbourne	-115,705	-177,981[2]	

Table Source: APAM, 2022

Table Notes:

Night definition for New Zealand is 10pm to 7am. This has been adopted for Melbourne to serve comparison.

Data for Christchurch is provided for the busy three months in noise report. A uniform distribution across the year has been adopted for comparison.

Forecast activity at both New Zealand airports is shown in Table 35, which compares annual movements from Auckland Airport's 'Airport of the Future' report and Christchurch Airport's 'Master Plan'. It should be noted that these reports do not outline specific fleet or operational changes (day/night split) forecast.

Table 35: Comparison of Auckland, Christchurch and Melbourne Airports forecast demand

	Auckland	Christchurch	Melbourne
Forecast year	2044	2040	FY2042
Annual aircraft movements	260,000	111,000	429,000

Table Source: APAM, 2022

Based on the comparisons above, and without the detail on changes to fleet and operations, it cannot be determined how current operations or "forecast annual noise models" for these airports could reasonably be considered comparable/equivalent to Melbourne Airport.

The limitations of this estimate were not stated within the report completed by Tonkin & Taylor.

Noise Monitoring

While APAM commends KRRA for exercising initiative in commissioning noise monitoring in their local area, the analysis of only two weeks' data with operations in one direction does not render the ANEF inaccurate. The ANEF is a forecast of noise movements and is an average across the year, reflecting operations in all directions and conditions. Other metrics, such as the typical day N-above, provide more information on noise levels during short-term events, including periods exhibiting wind-dictated runway bias.

It is important to note that one of the key noise mitigation measures proposed is to direct more departures to the north with the third runway, which will result in different noise contours/outputs compared to the two-week period of southerly departures observed in this noise monitoring. APAM also notes that the submission did not provide analysis on how the measured noise levels for individual operations (though a histogram chart indicating L_{ASmax} levels was included within the submission) compare to the projections within the MDP.

Regarding the Keilor monitor that was removed by Airservices in 2016, Airservices provided a response to the Melbourne Airport CACG in May 2021:

> *"[Airservices have] completed a review of noise monitoring effectiveness in 2011. This found that the noise information being captured by the permanent noise monitor formerly located at the Scout Hall in Keilor Village, had several issues in relation to the consistency and validity of the data. The review identified there were a number false positive readings in the data occurring on regular basis, where noise events were attributed to aircraft when this was not the case, and vice versa.*
>
> *These issues were highlighted and discussed with the CACG and Brimbank Council on the 17 March 2012. The findings of the review were also captured in a report - Melbourne Environmental Monitoring Units Review - February 2012 - which was shared with the CACG at the time. The main issue was stated to be the angle between the noise monitor*

and approaching aircraft, noting it did not meet the ISO20906; 2009 Acoustics (ISO20906) standards, which resulted in the data not being reliable."

APAM cautions against reliance on ExPlane data for noise assessment. Community desire to measure noise in their area is understandable, however ExPlane is not an accurate tool - its own website states that "Although the data gathered with ExPlane app will not be perfect, we aim to collect so much data what it will force stakeholders to take it into account". It is not clear how the ExPlane app generates a decibel reading or links this to an aircraft. APAM team members have trialled the app and received widely varying results. APAM's consultant has also evaluated ExPlane side-by-side with a professional sound level meter. The reported noise level itself is potentially inaccurate and likely dependent on the phone being used. There is also no process to confirm the source of the measured noise level within ExPlane. Accuracy is critical, so APAM preferences installation of noise monitoring stations around the airport, with commitment to sharing accurate data with the community.

The use of hand-held sound level meters can be informative. In general, sound level meters purchased and used by members of the public are often not class-certified, and thus may have limited accuracy. Further, APAM's experience indicates that sound level measurements undertaken by untrained personnel often employ incorrect settings, such as appropriate frequency and time weightings. A further limitation of hand-held monitoring equipment is the number of operations that are able to be practically measured. Aircraft noise varies from event-to-event, day-to-day, etc, being influenced by many variables such as aircraft operation parameters and meteorological conditions. In general thousands of aircraft operations are measured during unattended noise monitoring campaigns, whereas relatively few operations are measured during attended noise monitoring with hand-held equipment. Nonetheless, attended noise monitoring, when undertaken using appropriate equipment with the correct settings, does provide some useful information about aircraft noise levels in a particular area, even noting the limitations described above.

APAM purchased three noise monitors for deployment within the local community which were deployed in January 2023. APAM will continue to work with the community and Airservices to share the data generated by this equipment is appropriately shared and consulted. It is worthy of note that the units are movable, so there is opportunity to monitor different locations over time.

APAM also notes that Airservices will complete a review of noise monitor locations based on the final flight path design, to ensure noise monitors are in the most appropriate locations to capture noise data.

Generation of N-above contours (L_{Amax})

The modelling methodology used at Melbourne Airport is completely removed from that used in the new parallel runway assessment at Brisbane Airport (as inferred within the MACAG submission). To APAM's knowledge, the type of calibration exercise undertaken at Melbourne, which included the comparison of measured and modelled noise for approximately 167,000 flights, was not undertaken at Brisbane.

In addition, the noise modelling methodology used in Melbourne Airport M3R is entirely removed from that used on WSA EIS (as inferred within the MACAG submission).

APAM provide the following comments in response to the claims within the MACAG submission that the L_{Amax} data used to generate the N-above contours were based on average rather than instantaneous data:

- L_{Amax} from the industry standard prediction model (AEDT) were used, and was not averaged. Note the MACAG submission even states “the unreliability of the noise modelling software may be confidently discounted”.
- All NFPMS data was used in the verification. This includes the L_{Amax} for each measured noise event. That L_{Amax} is understood to have been calculated by Airservices in accordance with the definition of that noise metric (noting L_{Amax} is a standard noise metric). The L_{Amax} metric itself is not an average.
- The NFPMS L_{Amax} were not averaged in any analysis. Individual measured L_{Amax} were compared against a modelled equivalent of that aircraft operation. The differences between the measured and modelled noise levels for every event were considered and used to inform the calibration measures, such that any tendency to under- or over-predict noise levels was avoided wherever possible.

Melbourne Airport and its consultants actively included elements in the assessment to avoid obscuring outcomes through the use of averages. The inclusion of multiple meteorological conditions and the presentation of ‘typical busy day’ N-above metrics are examples of such.

It should be noted that noise modelling is not ‘reality’ but only an approximation of reality. As such, the predicted L_{Amax} may align with an average of actual L_{Amax} for a particular type of operation, even considering the numerous variables included in the modelling (aircraft type, operation, mission length, temperature, headwind, pressure, humidity, VNAV restrictions or preliminary design particulars). If this is what is meant by an ‘average’ within the MACAG submission, then APAM asserts that it is a necessary limitation of all predictive modelling, but certainly not an effort to obscure impacts.

The standard N-above, as well as other metrics such as ANEC and various L_{Aeq}, are calculated across a whole year (or many years) and results are presented as the average of those metrics for one day.

In efforts to actively avoid obscuring impacts through the use of averages in the N-above metrics, the predictions were undertaken for many days and the highest 10% of resulting N-above were used to calculate ‘typical busy day’ N-above contours.

Furthermore, in recognition that meteorological conditions result in variations in aircraft performance and noise propagation, a variety of meteorological conditions were used in the prediction model.

D1.6 Changes to Preliminary Draft M3R MDP

Based on the discussion within the APAM position above, Melbourne Airport does not believe there are any changes required to the MDP relating to noise modelling methodology.

D1.7 Summary and Conclusion

APAM believes it has adopted the best practice methodology for modelling of aircraft noise. APAM notes the Australian Government’s commitment to an Aviation White Paper and will advocate that the scope includes:

- Independent review of aircraft noise forecasts prepared by airports for the community
- Discussion on the compound effect of multiple aviation noise sources and ways to present and assess this impact for communities.
- Discussion of items raised in submissions regarding aircraft noise descriptors and adoption of L_{den}.

APAM also notes a factor in generating community trust in noise modelling methodology is the use of more noise monitoring locations. APAM purchased three noise monitors for deployment within the local community which were deployed in January 2023. APAM will continue to work with the community and Airservices to ensure they are appropriately located and that data is shared and consulted with the community and Airservices..

D2 Future Use of 09/27 (East-West Runway)

D2.1 Summary of Issue

This Issue relates to submissions commenting on the use of Runway 09/27 within the scope of M3R. This includes references to:

- Concerns Runway 09/27 is not included within the M3R plans
- Concern that Runway 09/27 is being shortened and thus becoming constrained (including calls for the existing capacity to be retained).

D2.2 Number and Types of Submissions

159 submissions contain reference to the Future Use of 09/27 (East-West Runway) Issue. They were received from:

- Community
- Community organisations:
  - Melbourne Airport Community Action Group (MACAG)
- Non-government organisations and commercial entities:
  - Keilor Primary School Council
  - Melbourne Airport Community Airport Consultation Group (CACG)
  - Austrailan Airline Pilots Association (AusALPA)
  - Qantas Airways Limited (Qantas)
- Government:
  - Brimbank City Council

D2.3 Discussion of Submissions

Submissions relating to the future use of Runway 09/27 can be grouped into the following topics:

- Retain the existing capacity of Runway 09/27
- Concern over Runway 09/27 not being a viable alternative or used in modelling
- Why is the runway being shortened?
- Consistency with the 1990 Melbourne Airport Strategy (1990 MAS).

In addition to the above topics, the submissions from AusALPA and Qantas also reference future use of Runway 09/27.

AusALPA submitted:

> *"3. AusALPA was not aware, until the briefing, that RWY 09/27 was to be reduced in length to 1950m. Whilst understanding the rationale, owing to the difference in the height of the ground, we note that this may be limiting for all except the domestic traffic. This, in turn, will require larger/heavier aeroplanes to take-off and land on the parallels with a crosswind above 20 knots when the wind, is say, from the west. This is likely to prejudice*

configuration changes by ATC to use the cross runway in strong westerlies (or occasional strong easterlies).

4.Given the difference in runway heights, what will be the impact on the overrun environment for RW27?"

Qantas' submission includes the following query:

"Has modelling occurred to demonstrate the impacts of utilising the east-west runway as a taxiway intermittently (in lieu of constructing a dedicated taxiway) to manage off peak periods? What were the results?"

Retain the Existing Capacity of Runway 09/27

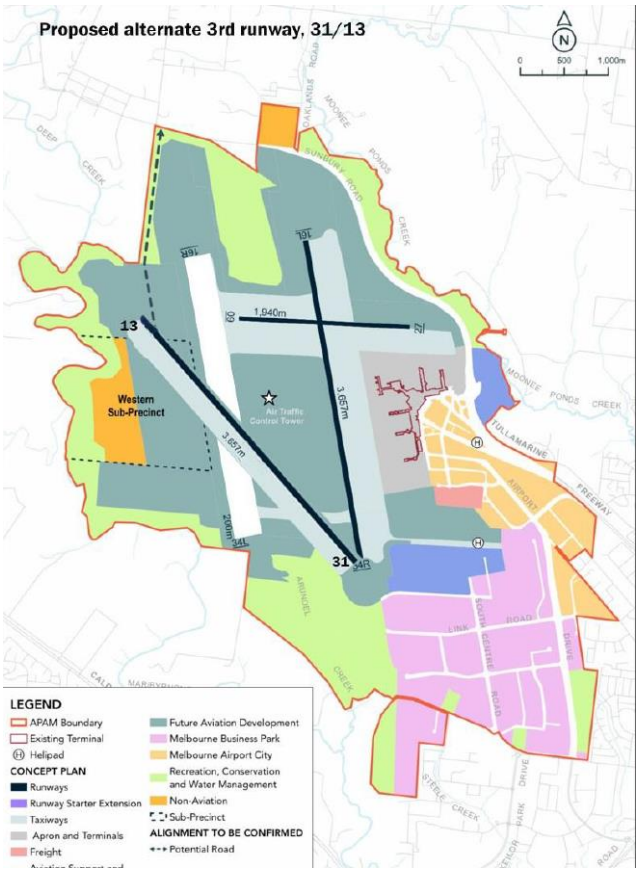
Brimbank City Council's submission called on the airport to:

"In the interim, extend the existing runway 27 to the east, to allow an increased use of the east/west runway, which provide a greater opportunity to noise share and deliver some respite to communities to the south and north of the airport"

The submission from Keilor Primary School Council also called for the capacity of Runway 09/27 to be retained:

"That the Airport retain the full functionality of the East/West Runway to minimise the noise load on Keilor in the short term. That is retaining the capacity for Heavy Aircraft to take off and land on the East/West Runway."

One submission suggested an alternative alignment of the third runway to retain the full length of Runway 09/27. This was referred to as the '31/13' runway, the figure provided is highlighted below. Note this is discussed in Issue B2: Options and Alternatives.



Concern Over Runway 09/27 Not Being a Viable Alternative or Used in Modelling

This topic refers to submissions that expressed a concern over the usability of Runway 09/27 within the M3R MDP.

A submission from Keilor Primary School Council expressed a concern over the shift of current traffic on Runway 09/27 to the north-south parallels:

> *"a significant portion of the existing traffic will be shifted away from those affected by the current east/west runway to those north and south of the airport. Those newly affected will be much more likely to notice the negative impacts than those likely to benefit from the decrease in aircraft noise."*

The MACAG submission expressed a concern on the future use of Runway 09/27:

> *"close reading of the dMP reveals that the existing east/west runway will be partially demolished and therefore only available for use 3% of the time as it will no longer be able to accommodate larger aircraft. For this reason, we refer to the new north/south runway as 'the new second runway' in the interests of transparency."*

MACAG also indicate that M3R MDP should:

> *"clearly and explicitly explain how the reduction of the existing east/west runway changes operational modes and the impact this will have on the ability to offer respite to communities to the north and south of the airport, currently only afforded them when the east/west runway is in use."*

Submissions from community members that utilised the proforma commentary provided by KRRA referenced a concern of the viability of shortening Runway 09/27 as well as a concern of the 24/7 use of the north-south runways:

> *"It appears that the north/south parallel runway system will be used 24/7. Which means that Keilor Village will have at all times of every day and night aircraft either landing or taking off.*
> *…*
> *Proposed shortening ofthe existing east/west runway indicates that the runway will not be a viable alternative that can be used to have aircraft depart to the west over a corridor of open, nonresidential land"*

Melbourne Airport CACG provided the following question as part of their submission:

> *"If the third runway is constructed in the proposed location, what options are there to increase use of the east/west runway(s) and/or impose operating restrictions on the north/south runway(s) to provide respite to communities north and south of the airport?"*

Community submissions also expressed a concern regarding the usability of Runway 09/27 per the plans for M3R. Some example submissions are highlighted below:

> *"You are trying to change a 2 runway system that spreads out noise across multiple zones and replacing with an alternate 2 runway system that concentrates it to the north and south by phasing out or significantly reducing any existing E / W runway traffic."*

> *"Melbourne Airport speak about noise abatement by way of using alternate runways, however their plans to shorten the existing East/West runway suggest primarily the North/South movements which severely limit any noise abatement in our area by way of runway selection."*

"MA are currently planning to shorten the E/W runway and thus there will be no alternative but to have all larger aircraft travel N/S"

"Melbourne Airport have indicated that under the proposed third runway model that the east west runway will only be used during rare wind conditions – estimated to impact 4 per cent of flights and around 11 days of the year. Use of the east west runway when conditions allow provides much needed respite for adjacent communities as well as being an effective noise abatement tool to mitigate night time noise.

As the east west runway will no longer be a viable alternative, it is evident that the airport would be moving to a two runway airport system"

"The MDP demonstrates a complete disregard for the night time noise over suburbs to the south as the existing E-W runway has not been included as a night time mode of operation.
…
The MDP does not list any modes of use of the East West runway. According to the MDP the E-W runway will be shortened by 346 meters with unknown consequences to its effective utility. I have put questions to Melbourne Airport regarding the effects of shortening the EW on its utility and have not received a meaningful answer."

"Shortening the existing EW runway is significant in this proposal. It means that there will be no respite whatsoever, irrespective of options, to the Communities most impacted. The reasoning around the financial costs to level off the terrain of the proposed new NS and existing EW is unfounded when compared to the costs in the lives of those impacted by the overall proposal"

Why is the Runway Being Shortened?

A submission from Keilor Primary School Council questioned the logic behind shortening Runway 09/27:

"Statement regarding 'deconflicting the Runway End Safety Area' does not make sense when considering the ultimate configuration with dual parallel runways. Shortening the East West runway forces all heavy aircraft traffic on to the north south runways exclusively."

Other community submissions also question the reasons behind shortening of Runway 09/27, some examples are highlighted below:

"There has not been a clear cut verification why the existing East West runway had to be shortened."

"it is beyond understanding why there is to be a reduction in length of the existing east-west runway."

"The documentation refers to a fourth runway plan with the existing east west being extended. It's also noted that the existing east west runway would be shortened under the third runway proposal. It doesn't make sense to shorten this runway and then extend it later."

"Over the last few weeks, the prevailing wind conditions have allowed the existing EW runway to be used quite extensively, with the result being that Keilor has been relatively quiet. Therefore, it beggars belief that a NS runway orientation is better than an EW runway orientation based on forecast prevailing wind conditions."

Consistency with the 1990 Melbourne Airport Strategy (1990 MAS)

The MACAG submission posits:

> *"It has been the understanding of communities affected by aviation operations at Melbourne Airport that they were protected by provisions in the EIS and EIS Supplement (together, the Final EIS) of the 1990 MAS, which provided for the bulk of aircraft movements to depart to and arrive from the north and west*
> *…*
> *The new second runway and partial demolition of the existing east/west runway completely undermines those protections."*

Regarding the layout and planning of the north-south runway, the MACAG submission further notes:

> *"a key feature of the MAS was the plan to use the second north/south runway for overflow of smaller, lighter aircraft, as evidenced by the fact that it was intended to be only 3km in length and not to cross the second east/west runway"*

D2.4 M3R MDP References

References to the future use of Runway 09/27 are covered in the following sections of the MDP:

- Part A The Project, Chapter A3 Options and Alternatives, Section A3.3.7.2 Existing east-west runway length (09/27)
- Part C Airspace, Chapter C2, Section C2.5.5 Single runway operations
- Part C Airspace, Chapter C2, Section C2.6.7 Runway modes of operation
- Part C Airspace, Chapter C4, Section C4.5.4 Runway modes of operation
- Part E Management Framework, Chapter E4 Draft Runway Operating Plan, Section E4.5 Modes of operation for M3R
- Part E Management Framework, Chapter E4 Draft Runway Operating Plan, Section E4.5.4 Single runway operations
- Part E Management Framework, Chapter E4 Draft Runway Operating Plan, Section E4.6.1 Nominating duty runways and modes

D2.5 APAM Position

Before providing a position on this issue, APAM believes it is important to cover the following topics:

- Historic plans for Runway 09/27 up to the 2018 Master Plan
- Pre-COVID (2019) usage of Runway 09/27
- Pre-COVID (2019) adherence to Noise Abatement Procedures
- Rational for reduction in length of Runway 09/27
- Runway 09/27 Capability (existing and planned)
- Assumed usage in M3R MDP
- Assumed usage in Noise Tool
- Assumed usage in M3R MDP compared to 1990 Supplement Report

Historic Plans for Runway 09/27 Up to the 2018 Master Plan

Provision for extending the existing Runway 09/27 has been within the plans for Melbourne Airport since the 1960s.

The 1960s Master Plans indicated a western extension of 714m to bring the total length to 3,000m. As part of the 1989 Melbourne Airport Strategy (1989 MAS), an additional extension east was included to bring the total runway length to 3,500 metres.

It should be noted that the north-south runway plans for the 1989 MAS included a close-spaced parallel north-south runway (400 metre separation) that did not cross Runway 09/27. This layout was however updated as part recommendations from the P&D Technologies review (commissioned by the then municipalities of Broadmeadows, Keilor and Bulla) to be a 1,311 metre-spaced parallel north-south runway that was shifted north by 1,900 metres. Figure 29 highlights the layouts and indicates that the 1990 Supplement Report included a north-south runway that crosses near the end of the existing Runway 09/27. This is the 'hashtag' layout that was approved in the final MAS and has formed the basis of every master plan for the airport since.

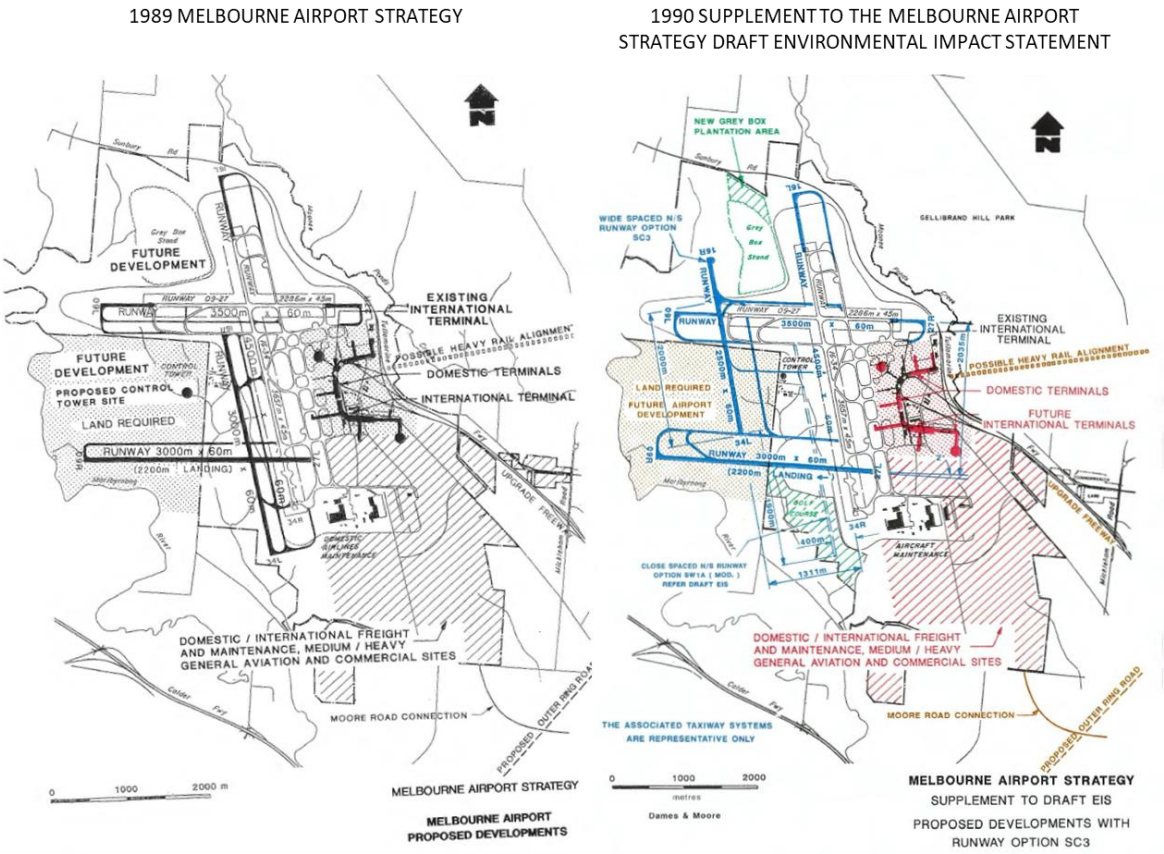


Figure 29: Runway Layouts within the 1989 Melbourne Airport Strategy and 1990 Supplement to draft EIS

Whilst a decision on the runway construction sequence was not nominated in the 1998 Master Plan, the 20 year airport development drawing showed a north-south parallel runway which included the 714 metre extension to the west for Runway 09/27. The Master Plan notes that the next runway could be equally in the east-west direction.

The concept of extending Runway 09/27 to 3,000 metres during the next 20 years was retained within the 2003 Master Plan. Again, no detail was provided within the document regarding the need for this extension west over the next 20 years.

This concept was also retained within the 2008 Master Plan with additional commentary under 'Other Noise Management Considerations' which included the reference:

> *"There are a number of other noise management issues being considered by Melbourne Airport including:*

…
• Extension of the existing east-west runway to mitigate noise impacts to the south of the airport"

As part of the 2013 Master Plan, a decision was made on the selection of the third runway being the east-west option. Also included in the Master Plan, was the intent on extending the existing Runway 09/27 by 714 metres to the west within the next five years (2018-2022). This was in line with the decision to build the parallel east-west runway and be operational by 2018-2022.

As part of the 2018 Master Plan, the extension of the existing Runway 09/27 was included within the scope of the Runway Development Program (RDP). The scope of RDP included the western extension of 714 metres and eastern extension of 378 metres to provide a total runway length of 3,378 metres.

Pre-COVID (2019) Usage of Runway 09/27

The usage of Runway 09/27 is dependent on several factors including its length, the weather (wind / wet or dry conditions), the aircraft type operating, the route (stage length) and the payload.

The existing runway length for Runway 09/27 is 2,286 metres. The following details are taken from the Runway Distance Supplement (Airservices AIP, RDS YMML -1, 01 Dec 2022):

- Take-off Run Available (TORA) is 2,286 m
- Take-off Distance Available (TODA) is 2,436m (this includes clearway distance of 150m)
- Accelerate Stop Distance Available (ASDA) is 2,346m (this includes the stopway distance of 60m)
- Landing Distance Available (LDA) is 2,286m.

The following taxiway landing exit distances (LED) are taken from the Airport Efficiency Procedures (Airservices AIP, MMLNA04-151_01DEC2022):

Runway 27 landings:

- Taxiway N is 1,630m (preferred exit and a Rapid Exit Taxiway – RET)
- Taxiway M is 2,286m (full length)

Runway 09 landings:

- Taxiway A is 1,658m (preferred exit for turboprops)
- Taxiway P is 2,286m (preferred exit for other aircraft)
- Taxiway Q is 2,286m

The information above influences the aircraft types and routes that are able to operate on Runway 09/27.

Runway 09/27 is prioritised within the top three noise abatement procedures for day (6am to 11pm – including high capacity operations) and night (11pm to 6am). These modes include crossing runway operations and Single Runway Operations (SRO) on Runway 27.

The noise abatement procedure priorities directly influence and are reflected by utilisation of Runway 09/27 - 40 percent of all aircraft movements in 2019 (based on NFPMS data), of which 39 per cent used Runway 27.

There is substantial difference in Runway 09/27 usage between day and night. Despite being nominated in the top three priority modes during the night period, usage drops to 28 per cent.

Furthermore, the use of Runway 09/27 in 2019 was not uniform across the different aircraft types and destinations. A combination of the aircraft type and route being serviced influences the ability to use Runway 09/27 (in addition to weather and Noise Abatement Procedures). 2019 NFPMS data has been analysed in Figure 30 and Figure 31.

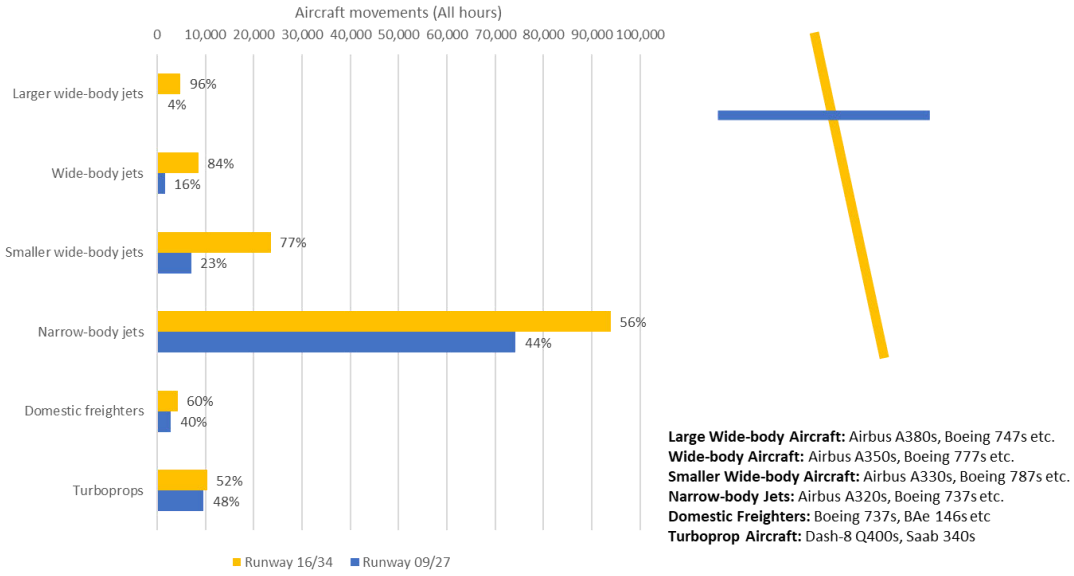


Figure 30: Runway usage by aircraft group (all hours)

Source: APAM analysis of 2019 NFPMS data

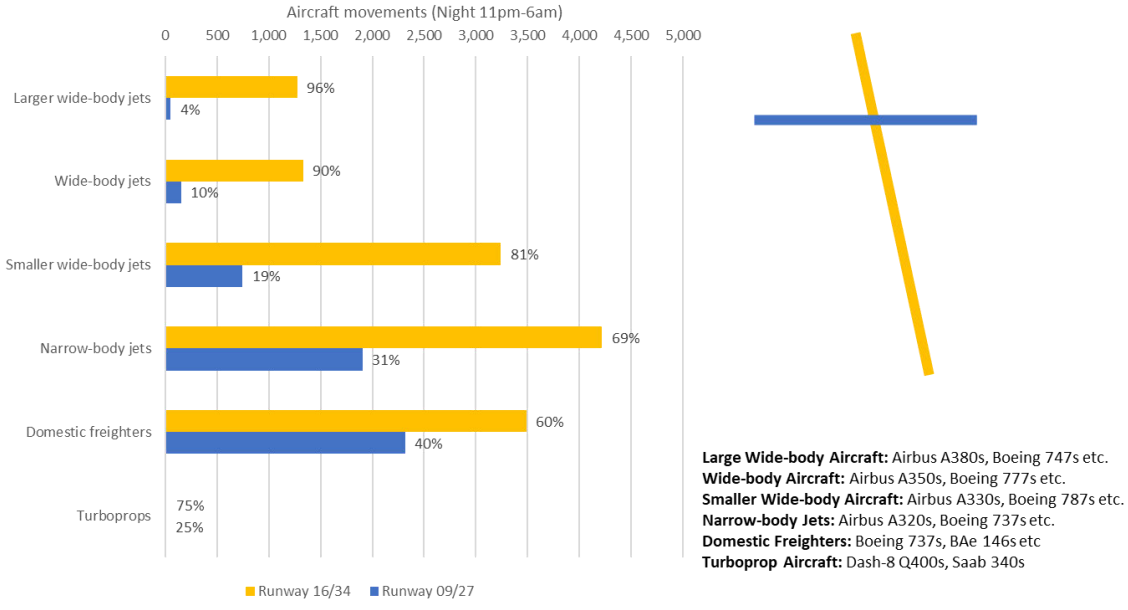


Figure 31: Runway usage by aircraft group (night hours 11pm to 6am)

Source: APAM analysis of 2019 NFPMS data

Figure 31 details use of Runway 09/27 in 2019 by arrival/departure for dominant aircraft types. Over 63 per cent of these movements are departures.

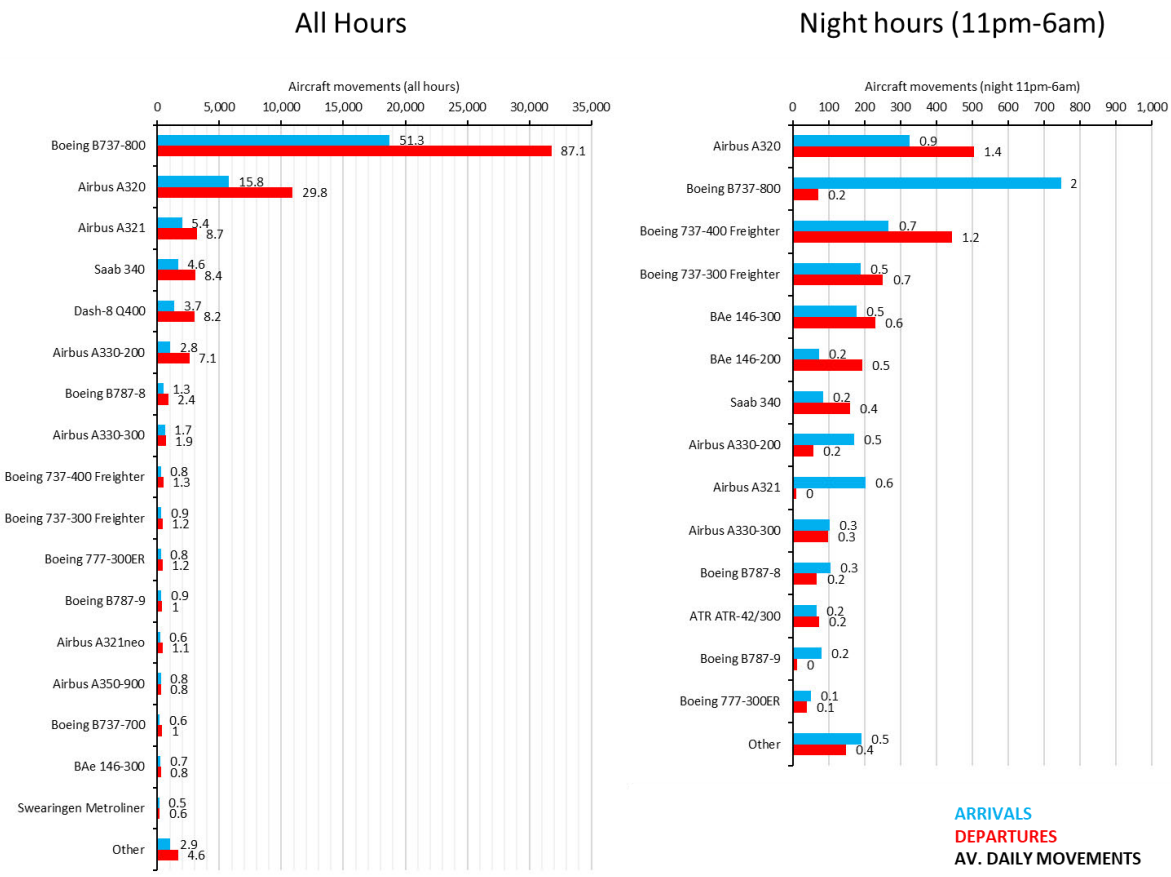


Figure 32: Aircraft types using runway 09/27 by operation

Source: APAM analysis of 2019 NFPMS data

An important factor in take-off performance (therefore pavement length required) is balance between aircraft weight and power and flight length. It is thus useful to understand the distribution of flight routes that are typically served by movements using Runway 09/27.

Departures from Runway 09/27:

- For narrow-body fleet (refer to Figure 33), over 84% of the departures using Runway 09/27 are within Stage Length 2 (within 1,000 NM) and over 98% are within Stage Length 3 (within 1,500 NM). These encompass all domestic ports (except Darwin and Broome) and New Zealand.
- For turboprops, all departures using Runway 09/27 (average 16 per day) are within Stage Length 1 (within 500 NM) which covers regional Victoria, northern Tasmania and some regional New South Wales and South Australia destinations.
- For smaller wide-body jets (refer to Figure 34), over 63% of departures using Runway 09/27 are within Stage Length 3 (within 1,500 NM). The most prominent operations in this category (over 84%) are A330-200 servicing high-capacity demand for Perth and Sydney.
- Around 29% of wide-body departures from 09/27 are to destinations within Stage Lengths 4 and 5 (between 2,500 and 3,500 NM). Prevalent destinations include Bali, Singapore, Manila and Kuala Lumpur.

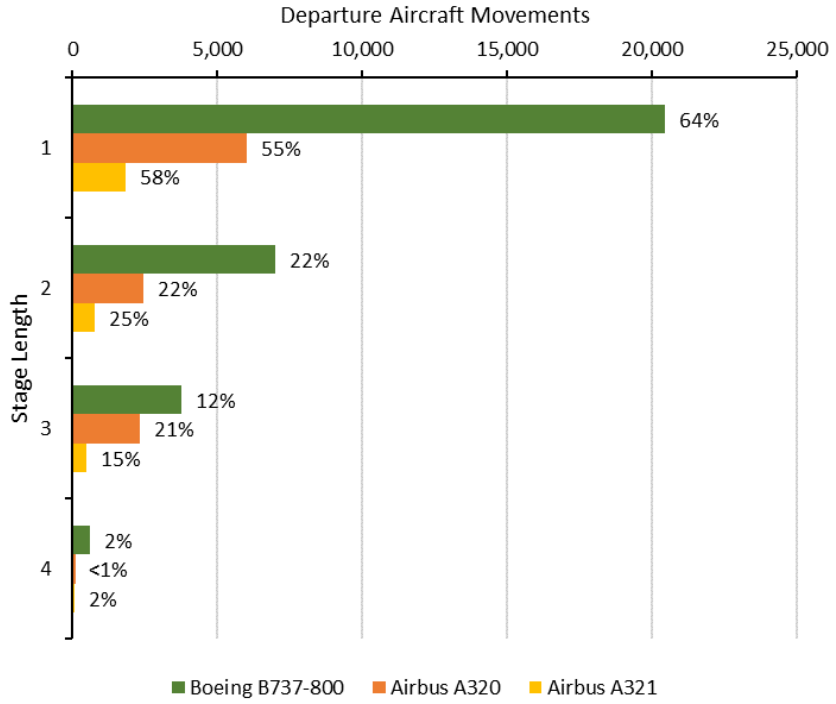


Figure 33: Runway 09/27 narrow-body aircraft departures usage by Stage Length

Source: APAM using 2019 NFPMS data

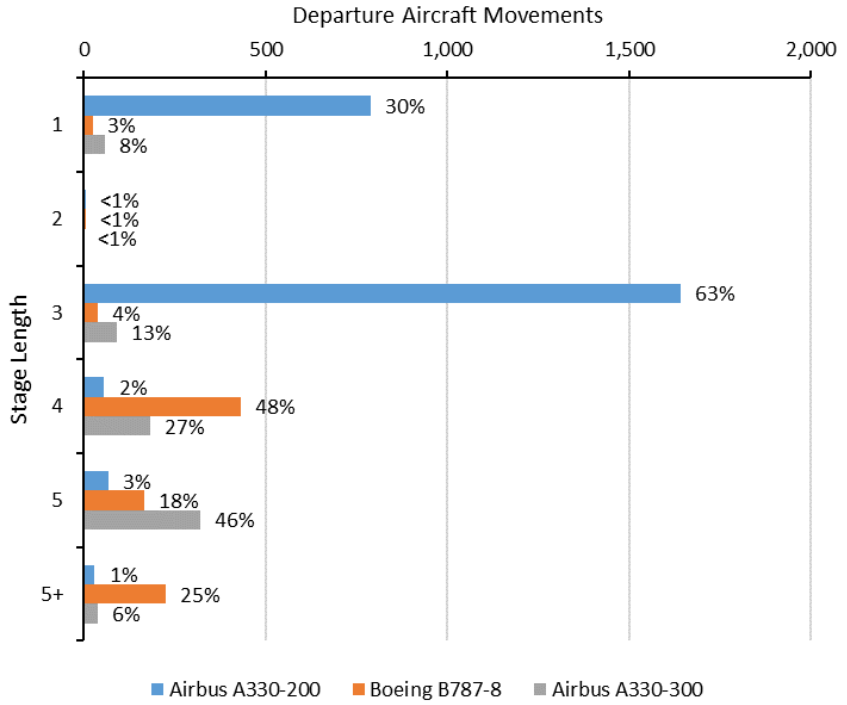


Figure 34: Runway 09/27 wide-body aircraft departures usage by Stage Length

Source: APAM using 2019 NFPMS data

Arrivals to Runway 09/27:

- For narrow-body fleet (refer to Figure 35), over 84% of the arrivals using Runway 09/27 are within a Stage Length 2 (within 1,000 NM) and over 97% are within Stage Length 3 (within 1,500 NM). There were nine arrivals by A320 aircraft from Singapore (Stage Length 5) in 2019.
- For turboprops, all arrivals using Runway 09/27 (average eight per day) are within Stage Length 1 (within 500 NM). There was one exception, which came from Brisbane (Stage Length 2).
- For smaller wide-body jets (refer to Figure 36), over 41% of arrivals using Runway 09/27 are within Stage Length 3 (within 1,500 NM). The most prominent operations in this category (over 79%) are A330-200 servicing high-capacity demand for Sydney and Perth.
- Around 29% of wide-body arrivals to 09/27 are from airports within Stage Lengths 4 and 5 (between 2,500 and 3,500 NM). Prevalent routes include Bali and Manila. Arrivals from ports in Stage Length 5 (over 3,500 NM) also feature - predominantly Tokyo and Hong Kong. These routes are enabled for arrivals because landings generally require less runway (largely because aircraft land at lower weight having used fuel load during departure/flight).

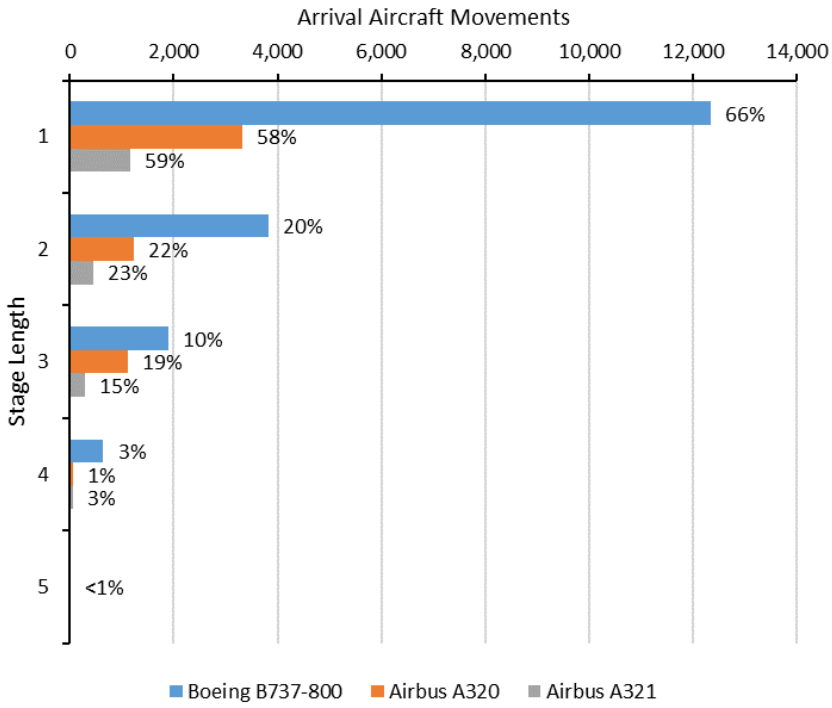


Figure 35: Runway 09/27 narrow-body aircraft arrival usage by Stage Length

Source: APAM using 2019 NFPMS data, 2023

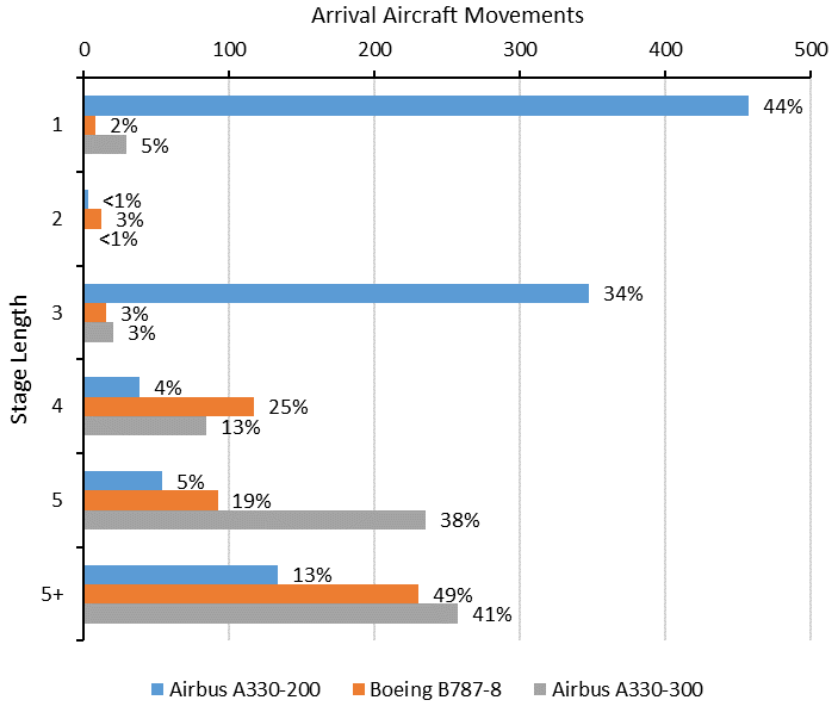


Figure 36: Runway 09/27 narrow-body aircraft departures usage by Stage Length

Source: APAM using 2019 NFPMS data, 2023

In summary, Runway 09/27 was not used frequently, pre-COVID (2019), by all aircraft types and destinations:

- For departures, Runway 09/27 was typically used by narrow-body jets (average 125 per day) and turboprop aircraft (average 8 per day). These routes were largely domestic destinations within Stage Length 2 (such as Sydney and Brisbane). There were some small wide-body aircraft departures (11 per day) to destinations within Stage Length 3 (such as Perth)
- For arrivals, Runway 09/27 was typically used by narrow-body jets (average 72 per day) and turboprop aircraft (average 16 per day). These routes were largely domestic destinations within Stage Length 2 (such as Sydney and Brisbane). There were some small wide-body aircraft departures (6 per day) from ports within Stage Length 4 (such as Sydney, Perth and Bali).

<u>Pre-COVID (2019) Adherence to Noise Abatement Procedures</u>

As communicated during the public exhibition, there are a number of factors that influence which runway is selected by Air Traffic Control. The Noise Abatement Procedures will not be a determining factor in runway selection where (unless required by Noise Abatement legislation):

- Conditions of low cloud thunderstorms and/or poor visibility are present
- Crosswind and tailwind components exceed specific speeds
- Wind shear has been reported
- In the opinion of the pilot in command, safety would be prejudiced by runway conditions or any other operational consideration.

The last factor mentioned above can influence the use of Runway 09/27, for example:

- If a pilot requests the use of Runway 16/34 rather than Runway 09/27 it can be granted by air traffic control.
- If a pilot requires the use of Runway 16/34 rather than Runway 09/27, air traffic control must grant this access.

Detailed analysis of the NAP compliance is covered in Issue D3: Draft Runway Operating Plan. As highlighted in Table 36, there are a significant number of aircraft using an alternative runway compared to the runway mode nominated by Air Traffic Control for modes involving Runway 09/27. Specific details regarding the off-mode movements are described below:

For the day period (0600-2300):

- For runway mode 16A / 27D, the off-mode operations occur due to Runway 16 departures. These are typically international, Perth and Burnie flights, with some Darwin flights.
- For runway mode 27A / 27&34D, the off-mode operations occur to Runway 34 arrivals. These are typically international and Perth flights, with some Adelaide, Brisbane and Sydney flights.
- For runway mode SRO 27, the off-mode operations occur to both arrivals and departures on Runway 16/34. These are typically international and Perth flights, with some Adelaide, Brisbane, Gold Coast and Sydney flights.

For the night period (2300-0600):

- For runway mode 16A / 27D, the off-mode operations occur due to Runway 16 departures. These are typically international and Perth flights.
- For runway mode 27A / 27&34D, the off-mode operations occur at night due to Runway 34 arrivals. These are typically international and Perth flights, with some Hobart and Launceston flights.
- For runway mode SRO 27, the off-mode operations occur at night due to both arrivals and departures on Runway 16/34. These are typically international and Perth flights. There are some flights to / from Sydney and Brisbane that also require Runway 16/34.

Table 36: APAM analysis of noise abatement procedure compliance

Runway Mode		Day (0600-2300)		Night (2300-0600)	
		On-Mode	**Off-Mode**	**On-Mode**	**Off-Mode**
16A / 27D Arrivals runway 16 Departures runway 27	Arrivals	Over 96%	Under 4%	Under 98%	Over 2%
	Departures	**Under 85%**	**Over 15%**	**Under 56%**	**Over 43%**
	Total	Under 91%	Over 9%	Over 82%	Under 18%
27A / 27&34D Arrivals runway 27 Departures runway 27 & 34	Arrivals	**Over 80%**	**Under 20%**	**Over 55%**	**Under 45%**
	Departures	Over 99%	Under 1%	Over 99%	Under 1%
	Total	Under 91%	Over 9%	Over 72%	Under 28%
SRO 27 Arrivals runway 27 Departures runway 27	Arrivals	Over 94%	Under 6%	**Over 83%**	**Under 17%**
	Departures	**Over 87%**	**Under 13%**	**Over 71%**	**Under 29%**
	Total	Over 90%	Under 10%	Over 78%	Under 22%

Table Source: NFPMS and ATIS Data, 2019

In summary, despite Runway 27 being prioritised through the Noise Abatement Procedures, there are a number of occasions where off-mode operations occur on Runway 16/34. This is especially present at night. This could be a result of requirements with respect to the aircraft type and route

(for example large international aircraft) or could be aircraft requesting a runway for operational efficiency (either on-ground taxiing or airborne track miles).

APAM is willing to work with Airservices to review the application of the Noise Abatement Procedures and any consultation with the community and pilots. However, based on this analysis APAM is concerned that any commitment on using Runway 09/27 as a noise sharing mode (such as a target) must consider the operational factors to avoid falling short of community expectations.

Sydney Airport is an example of an airport that has noise sharing targets, under the Long Term Operating Plan (LTOP). Information in Table 37 below highlights operational performance against the LTOP targets.

Table 37 Sydney Airport LTOP operational performance

	LTOP Target	2017	2018	2019	2020	2021
Northern Runway End Impact	**17%**	32.9%	33.4%	33.5%	40.3%	33.5%
Eastern Runway End Impact	**13%**	14.4%	14.6%	15.0%	6.9%	11.8%
Southern Runway End Impact	**55%**	51.4%	50.7%	50.3%	52.5%	53%
Western Runway End Impact	**15%**	1.3%	1.3%	1.3%	0.2%	1.6%

Table Source: Airservices Aircraft In Your Neighbourhood, Visited in Nov 2022

The LTOP target is consistently not achieved (below 5% since 2011) for the Western Runway End Impact. Movements for this area involve Runway 07 arrivals and Runway 25 departures (using the cross runway). Note, the Eastern Runway End Impact, includes departures from Runway 34R (one of the parallels) in addition to the cross runway.

As part of the detailed airspace design process, extensive work with airlines, Airservices and CASA will need to occur to understand the limitations of preferencing Runway 09/27 before any commitment is made to the community on noise sharing.

In summary, based on a review of adherence to Noise Abatement Procedures at Melbourne Airport and LTOP targets at Sydney, APAM is cautious in proposing a Runway 09/27 preference at night to the community when history shows this is not achieved.

Rationale for Reduction of Runway 09/27 Length

Proposed Runway 16R/34L was carefully located and aligned in the 1990s through the Melbourne Airport Strategy process. Separation of the runway alignments by at least 1,310 metres enables them to be operated independently, which optimises the airport's flexibility, capacity and resilience. M3R places the new runway 1,311 metres to the west of the existing north-south runway.

The topography of the Tullamarine site along (and beyond) the 3,000-metre alignment of Runway 16R/34L significantly influences its physical design. The site elevates from south to north with a

varied landscape and geology. M3R design compliance criteria include regulatory specifications for longitudinal and lateral runway slopes.

The elevation of the runway is also partially limited by obstacles outside the airport's boundary that must be incorporated into the design of the runway via Obstacle Limitation Surfaces (OLS) which function to safeguard the critical arrival and departure flight paths close to the airport. The most critical of these applicable to M3R is clearance above vehicles using Sunbury Road to the north, which affects the OLS approach and take-off climb surfaces.

Figure 37 shows the alignment of Runway 16R/34L (including the associated runway strip) overlaid on the western end of existing Runway 09/27 (including associated stopway, runway strip and Runway End Safety Area) and Taxiway Mike.

Figure 37: Interaction between Runway 09 threshold and the planned alignment of Runway 16R/34L.

Additionally, Section A3.3.7.2 of the MDP refers to the differences in elevation of Runway 16R/34L and Runway 09 threshold:

> *"The profile of the existing east-west runway also slopes down from east to west, being located approximately two metres below the proposed level of the new runway (which has been established to ensure obstacle clearance to the north)."*

Figure 38 demonstrates that the elevations of Runway 16R/34L and Runway 09/27 are approximately two meters apart at their intersection. This configuration presents a range of design challenges - particularly regarding the 09/27 Runway End Safety Area (RESA) of Runway 09/27.

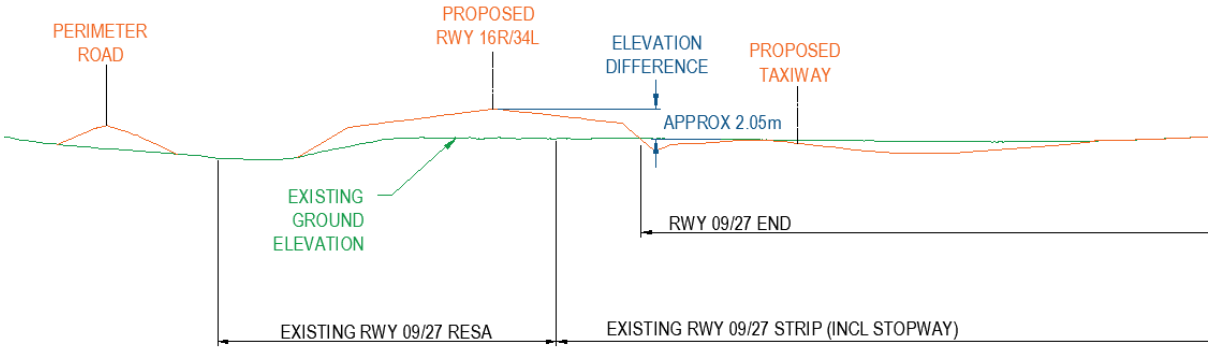


Figure 38: Cross Section of the existing runway 09/27 with the proposed elevation of runway 16R/34L

RESA are important elements of runway infrastructure, with related compliance requirements defined by Part 139 (Aerodromes) Manual of Standards 2019 (MoS 139). MoS 139 includes the following references to Runway End Safety Areas (RESA):

> *"6.26(1) Subject to subsections (2) and (3), a runway end safety area (RESA) must be:*
> *…*
> *(b)(ii) ensure an aeroplane encounters no hazards if it runs off the runway*
> *…*
> *(9) No portion of a RESA may project above the approach or take-off climb surfaces of the runway*
>
> *(10) A RESA must be free of fixed objects or structures, other than visual or navigational aids for the guidance of aircraft of vehicles.*
> *(11) Any fixed object or structure permitted to be on a RESA must be of low mass and frangibly mounted"*

Whilst there is no specific commentary within the MoS 139 regarding the convergence of runways that do not intersect, the US Department of Transportation Federal Aviation Administration (FAA) have an Advisory Circular regarding Airport Design (AC 150/5300-13B, 31st March 2022). Under section 3.7.5 Overlapping RSAs (Runway Safety Area), the standards and recommended practices include:

> *"3.7.5.1* ***Standards***
> *1. Configure runway ends, taxiways and holding positions to allow taxiing and holding aircraft to remain clear of all RSAs.*
> *…*
> *3.7.5.2* ***Recommended Practices***
> *1. For multiple runways that converge but do not intersect, configure runway ends for the optimum condition of independent RSAs."*

A description of the rational for reducing the length of Runway 09/27 is provided in Section A3.3.7.2 Existing east-west runway length (09/27) of the MDP:

> *"The western end of existing east-west runway (09/27) and existing Taxiway Mike (providing access/egress from western end of 09/27) is within the runway footprint for the new runway. It is airport-industry best practice to avoid this configuration in the interests of safety and operational efficiency."*

Having determined that there is a need to change the existing Runway 09 threshold location, a number of options were explored to address the conflict between alignment/elevations, including (illustrated in Figure 39):

- Relocating Runway 09 threshold east to clear Runway 27 RESA of the M3R parallel taxiway. Runway 09/27 length reduced by approximately 516 metres.
- Reduction of Runway 09/27 to approximately 1,770 metres significantly impacts its utility for most aircraft, including the domestic narrow-body jet fleet. This option has not been pursued as it unacceptably constricts the ongoing utility of Runway 09/27.
- Relocating Runway 09 threshold east to clear Runway 27 RESA of the M3R graded strip. Runway 09/27 length reduced by approximately 346 metres.
- Reduction of Runway 09/27 to approximately 1,940 metres impacts its utility for some wide-body fleet. This option retains current narrow-body capability to ports such as Brisbane and Sydney.
- Extension of Runway 09/27 east (Figure 40). This option was considered in combination with above options in order to maintain existing runway length.
- Extending Runway 09/27 to the east would require a significant construction project, involving extended closure of the runway. To pursue this option prior to M3R would restrict all operations to Runway 16/34, rendering the airport vulnerable to complete closures for weather, maintenance and incidents.
- Relocating Runway 09/27 threshold west to clear Runway 09 threshold beyond M3R runway strip - supporting taxiway entry/exit separation from M3R runway compliant. Runway 09/27 length increased by approximately 300 metres.

Extending Runway 09/27 to intersect Runway 16R/34L would require resolving the elevation variance by raising Runway 09/27 through a significant demolition and reconstruction project. To pursue this option would incur extended closure of the runway – if undertaken prior to M3R this would restrict all operations to Runway

Though Melbourne Airport’s master plans continue to safeguard extensions of Runway 09/27, the benefits afforded by pursuing these prior to M3R do not justify correlating costs and impacts to resilience.

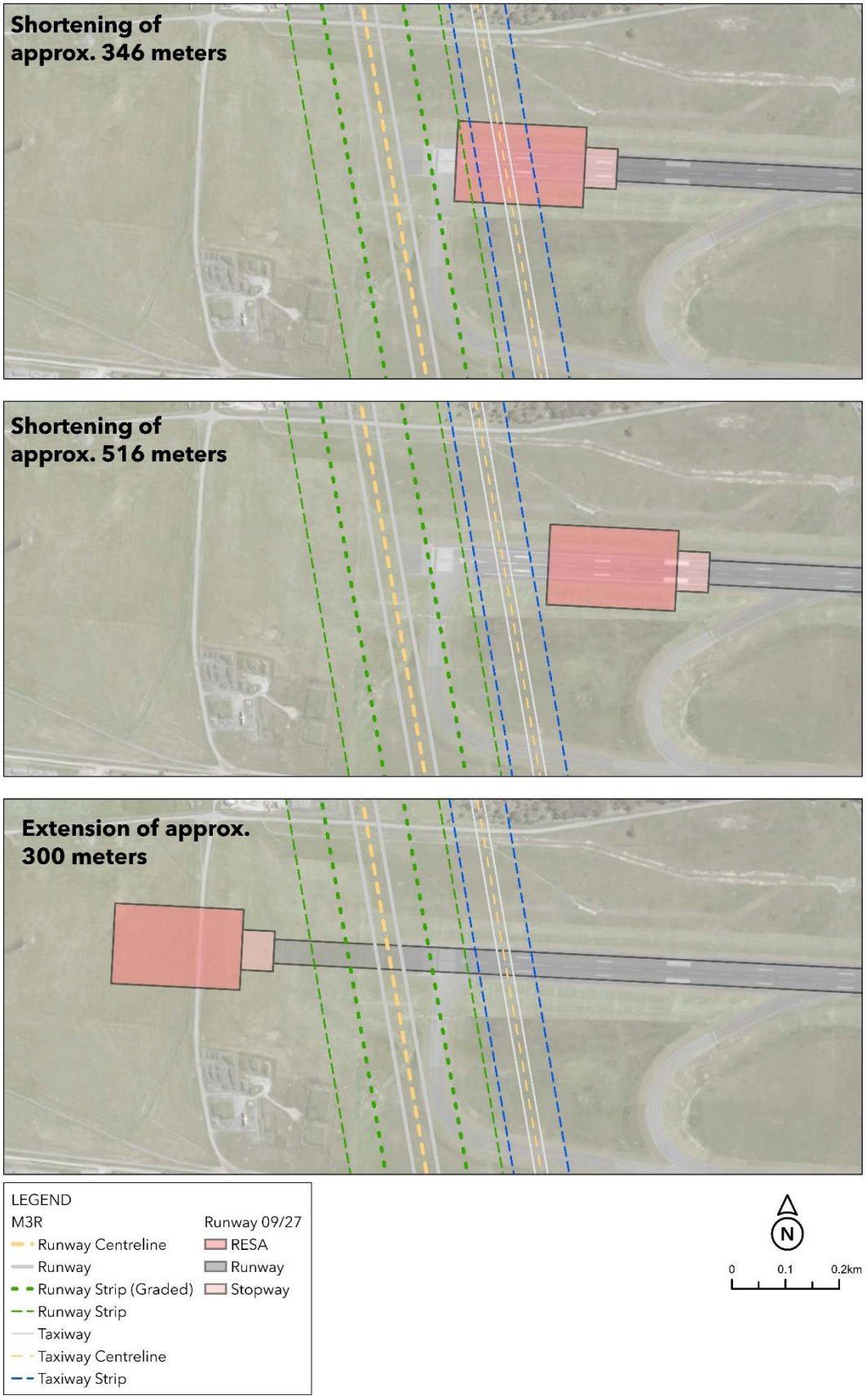


Figure 39: Runway 09/27 options

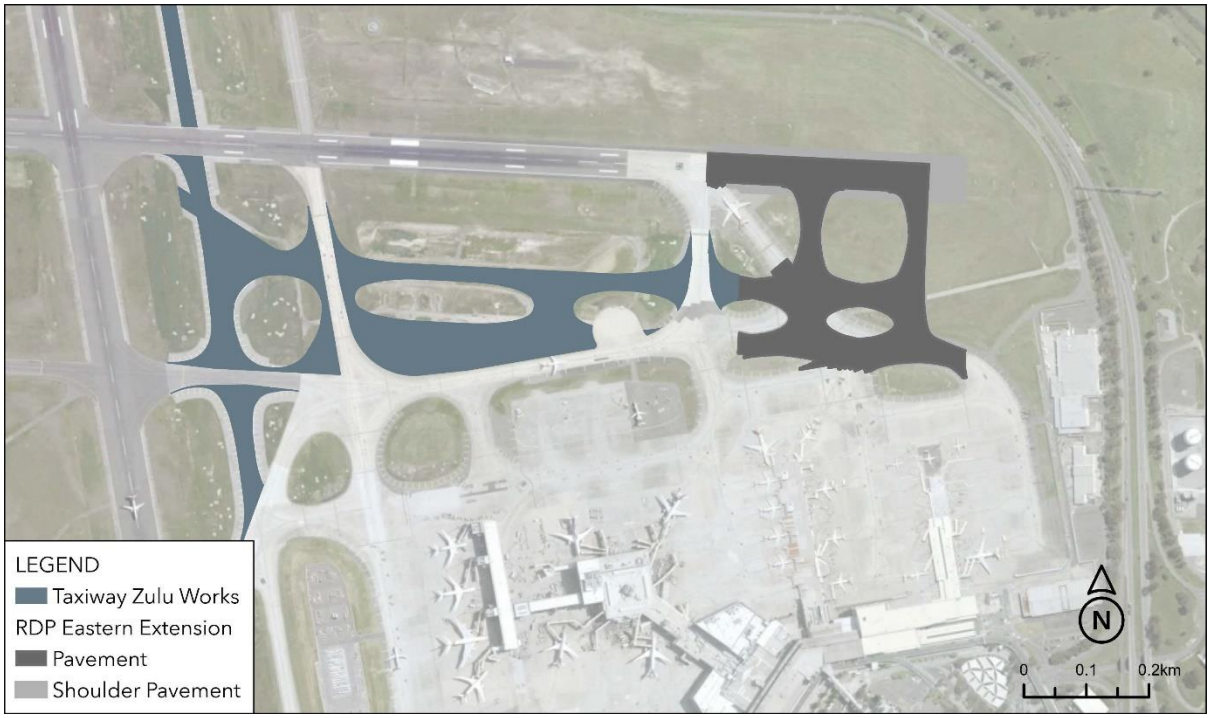


Figure 40: Runway 09/27 eastern extension

In response to the concern raised by AusALPA regarding the impact of the overrun environment with the differences in runway height, the design of the proposed shortening ensures a compliance Runway End Safety Areas (RESA) of 240 metres. In addition, the height of the Runway 09 threshold is higher as part of the shortening as it is located further west. The shortening also allows for compliant OLS be achieved for Runway 09/27.

Runway 09/27 Capability (Existing vs Planned)

A comparison of the existing runway distances with the proposed changes due to M3R are shown in Table 38.

Table 38: Comparison of runway distances for runway 09/27

	Runway 27		Runway 09	
	Existing	Proposed with M3R	Existing	Proposed with M3R
Runway Length Stopway Clearway	2,286m 60m 150m	1,940m 60m 60m	2,286m 60m 150m	1,940m 60m 150m
TORA TODA ASDA LDA	2,286m 2,436m 2,346m 2,286m	1,940m 2,000m 1,940m 1,940m	2,286m 2,436m 2,346m 2,286m	1,940m 2,090m 2,000m 1,940m
LED	TWY N – 1,630m TWY M – 2,286m	TWY N – 1,630m TWY M – 1,940m	TWY A – 1,630m TWY P – 2,286m TWY Q – 2,286m	TWY A – 1,294m TWY P – 1,940m TWY Q – 1,940m

Table Source: Existing Airservices AIP and Proposed APAM, 2022

APAM acknowledges the observation from AusALPA that the shortening would be limiting for all except the domestic traffic. Regarding the concern of larger/heavier aircraft having to take-off and land on parallels above 20 knots, APAM makes the following observations:

- Based on 2019 NFPMS data, larger / heavier aircraft are not frequent users of Runway 09/27
- Based on a review of adherence to Noise Abatement Procedures, aircraft appear to be requesting Runway 16/34 despite Runway 27 being nominated as the sole duty runway.
- Based on analysis of weather patterns and current runway nomination criteria (20 knot cross wind), a cross-wind above 20 knots (incl. gusts) occurs less than 4% of the time.

To determine any impacts of the shortening to the existing capability of Runway 09/27, aircraft planning manuals have been used to identify impacts to route distance considering departures at maximum take-off weight.

Noting that domestic airlines typically operating on Runway 09/27 for departures will be replacing their narrow-body fleet over the next decade, analysis has been completed on A321neo (Qantas replacement for B737-800 and Jetstar replacement for A320/A321), Boeing B737 MAX8 (Virgin replacement for B737-800). Note that take-off runway length requirements for MAX10 aircraft are not available within the aircraft manual (Revision G, May 2022).

A review of take-off and landing requirements for the future domestic fleet (covering A321neo and Boeing B737 MAX8) was completed using aircraft manufacturers manuals for standard day conditions. The outcomes are summarised below:

- Airbus A321LR and Boeing B737 MAX8 aircraft can take-off using a runway length of 1,940 metres and reach Sydney and Brisbane
- Airbus A321LR and Boeing 737 MAX8 aircraft can land at maximum landing weight on a runway length of 1,940 metres in dry conditions.

Additional analysis was completed on landing capability for larger aircraft (Airbus A330-200, Airbus A330-300 and Boeing 787-8). According to aircraft manuals these aircraft can land at maximum landing weight on a dry runway of 1,940 metres. It is worth noting that the preferred exit for runway 27 (Taxiway N) does not change with the proposed shortening.

As noted within the manufacturer manuals, it is important to engage with airline operators for specific operating procedures. Melbourne Airport will continue to consult with airline operators through the detailed airspace design process and exploration of Runway 09/27 modes to ensure their specific operating procedures are appropriately incorporated.

Assumed Usage in M3R MDP

Within MDP Part C, Chapter C2: Airspace Architecture and Capacity, single runway modes (including the use of Runway 09 and Runway 27) are discussed under C2.5.5 Single runway operations. The section notes that:

> *"these modes will only be used when the parallel north-south runways are not available due to strong crosswinds, during periods of low demand, or when one of the north-south runways is closed for maintenance."*

Under Section C2.6.7 Runway modes of operation, there is reference to Runway 27 departures:

> *"during periods when demand is lower the improvements to runway infrastructure and facilities proposed under M3R will allow a wider range of practical operating modes. These possibilities include:*
> *…*
> *• The use of runway 27 for departures when the weather conditions require."*

Under Section C4.5.4 Runway Modes of Operation, rationale is provided for not including usage of the existing east-west runway in M3R noise modelling:

> *"In order to avoid understating the potential impacts of M3R, noise modelling did not consider utilisation of existing east-west runway (09/27) in M3R scenarios. However, its use could be incorporated in the future if it is considered to yield operational and/or noise benefits."*

Within Part E, Chapter E4: Draft Runway Operating Plan, Section E4.5 Modes of Operation For M3R, single runway modes for Runway 09/27 are discussed with the following statement on priority:

> *"To maximise airport capacity, use of the existing east-west runway will be limited to when weather conditions (primarily wind speed and direction) preclude use of the parallel runways.*
> *…*
> *Single runway modes of operation will, during most periods of the day, offer insufficient capacity to process traffic without significant delay and congestion. Therefore, these modes will only be used when the parallel north-south runways are unavailable."*

Section E4.6 indicates when Runway 09/27 will be nominated as the duty runway:

> *"When wind conditions allow neither 16 nor 34 direction operations, either runway 09 or 27 would be required as the duty runway. During these occasions, despite the east-west runway being nominated as the duty runway, pilots may prefer to depart and arrive using the existing north-south runway (16L/34R) due to its larger dimensions. These off-mode flights effectively result in a crossing mode operation, which has limited capacity and is expected to be used very infrequently."*

Runway 09/27 is listed as priority 3 during the day (6am-11pm) after mixed mode / segregated modes in the 34 direction (north) and 16 direction (south).

Runway 27 is listed as priority 4 and Runway 09 as priority 5 during the night (11pm-6am) behind SODPROPS, segregated modes in 34 direction (north) and 16 direction.

This was summarised in Table E4.6 within this chapter of the MDP (refer to Figure 41 below).

Regarding the query from Qantas on the intermittent use of Runway 09/27 as a taxiway, whilst we understand the intent to reduce the initial build infrastructure (and therefore cost), there are other factors to consider such as risk management of infrastructure being used as both a runway and taxiway. Further consideration shall be explored for this option through the detailed infrastructure and airspace design process. It is noted the option will have no impact on the runway usage which has been undertaken as part of the MDP as Runway 09/27 would only be considered for use as a taxiway when it is not required for use as a runway.

Table E4.6
Proposed Draft Runway Operating Plan

Time	Priority	Landing	Take-off	Notes
Day (6am-11pm)	1	Runway 34L and 34R	Runway 34L/R	Runways will be operated in mixed mode when demand requires between 6am and 11pm.
	2	Runway 16L and 16R	Runway 16L/R	Where demand permits, segregated mode options may be operated in the 'day mode' period
	3	Runway 09 or 27	Runway 09 or 27	-
Night (11pm – 6am)	1	Runway 16R	Runway 34R	SODPROPS
	2	Runway 34L or 34R	Runway 34R or Runway 34L	Runways will be normally be operated in segregated mode between 11pm and 6am. Use of Runway 34L for arrivals and Runway 34R for departures results in the fewest impacted dwellings (Option 1). Alternating the arrival and departure runways daily distributes the noise impacts between existing and newly affected dwellings more evenly and with a predictable regime of respite (Option 2).
	3	Runway 16 R or 16L	Runway 16L or 16R	Runways will be normally be operated in segregated mode between 11pm and 6am. Use of Runway 16R for arrivals and Runway 16L for departures results in the fewest impacted dwellings (Option 1). Alternating the arrival and departure runways daily distributes the noise impacts between existing and newly affected dwellings more evenly and with a predictable regime of respite (Option 2).
	4	Runway 27	Runway 27	-
	5	Runway 09	Runway 09	-

Source: APAM, SoundIN, Rehbein & Airservices, 2020

Figure 41: Proposed Draft Runway Operating Plan – referencing the use of Runway 09/27

Assumed Usage in Noise Tool

During the public exhibition, Airservices provided feedback on the Online Flight Path and Noise Tool that there was no information regarding the future use of Runway 09/27 as part of M3R.

As indicated in the MDP, no modelling of Runway 09/27 was included to avoid understating the potential impacts of M3R. As a result, no specific opening day or opening day plus 20-year contour was available. Any concerns regarding this approach were not raised prior to public exhibition.

To help address this concern and highlight to the community that Runway 09/27 will be used in the future, the N-above contours for 2019 were updated to reflect Runway 09/27 movements only. These contours were then added as a layer to each N-above contour group (N70 day and evening, N70 24hrs, N60 24hrs and N60 night) for the various options and years within the noise tool. Figure 42 highlights the end result for a N60 24hr contour.

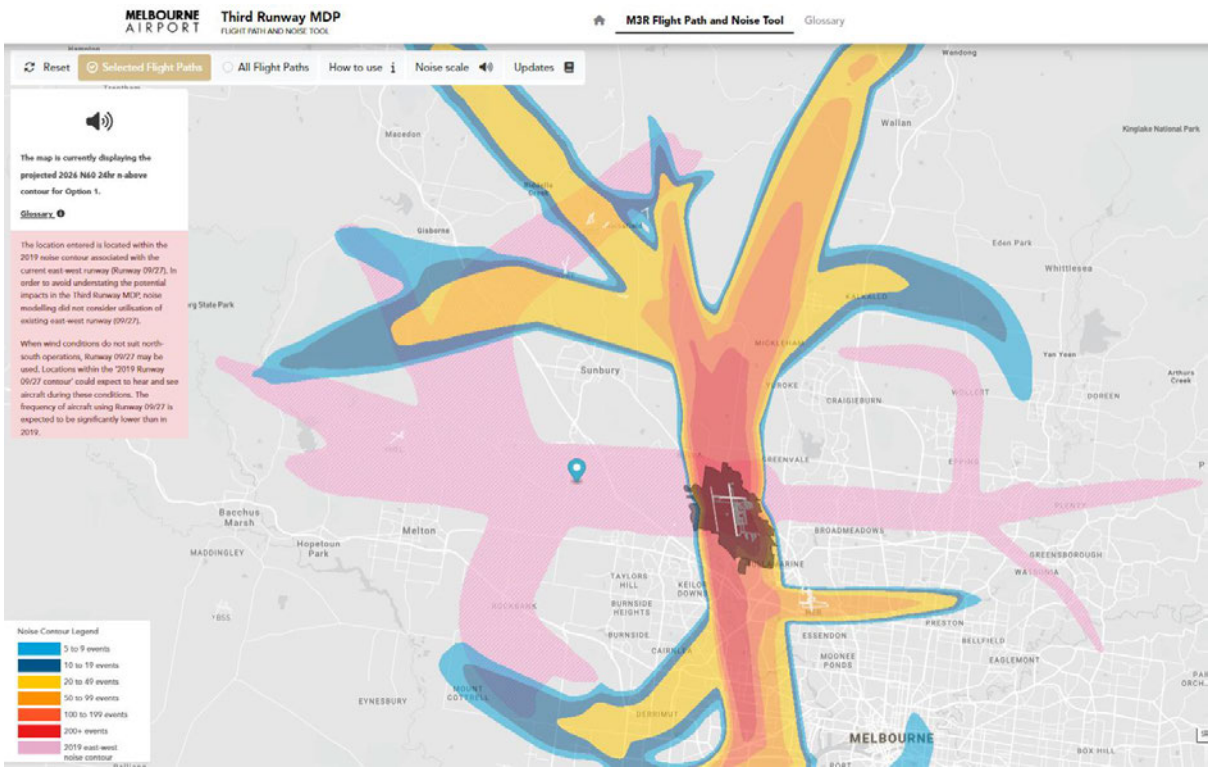


Figure 42: Updated online flight path and noise tool to reflect future Runway 09/27 usage

If an address was located within this '2019 east-west noise contour', then a pink box would appear with the following text:

> *"The location entered is located within the 2019 noise contour associated with the current east-west runway (Runway 09/27). In order to avoid understating the potential impacts in the Third Runway MDP, noise modelling did not consider utilisation of existing east-west runway (09/27).*
> *When wind conditions do not suit north-south operations, Runway 09/27 may be used. Locations within the '2019 Runway 09/27 contour' could expect to hear and see aircraft during these conditions. The frequency of aircraft using Runway 09/27 is expected to be significantly lower than in 2019."*

This update to the online noise tool was added on the 7th April 2022.

Assumed Usage in M3R MDP Compared to MAS 1990 Supplement Report

The submissions relating to the 1990 plans focus on the four runway layout that allows the use of more operations to both the north and west. These submissions do not reference that the MAS 1990 Supplement Report includes modelling for a three runway system for a wide-spaced north-south runway (V324).

The modelling for this scenario includes an extension to the existing north-south runway (to the north) and extensions to the existing east-west runway (both east and west). This ANEC is also based on 250,000 annual movements.

Whilst 13.8 per cent of all movements for this ANEC were planned to use Runway 09/27 and despite the ANEC indicating an extension to both ends of Runway 09/27, the majority are landings onto Runway 27 rather than Runway 27 departures. The modelling also included the majority of movements on Runway 09/27 are aircraft representing domestic aircraft (Airbus A300) and Boeing 767. Key stats of the ANEC include:

- 2.6% of all departures in ANEC model utilise Runway 27
- 25% of all arrivals in ANEC model utilise Runway 27
- 23% of domestic aircraft and B767s utilise Runway 09/27
- 2% of 'jumbo jets' (Boeing 747-200) utilise Runway 09/27
- 7% of '21st Century Jets' utilise Runway 09/27.

This is reflected in the size of the ANEC contour to the east of the airport compared to west (refer to Figure 43)

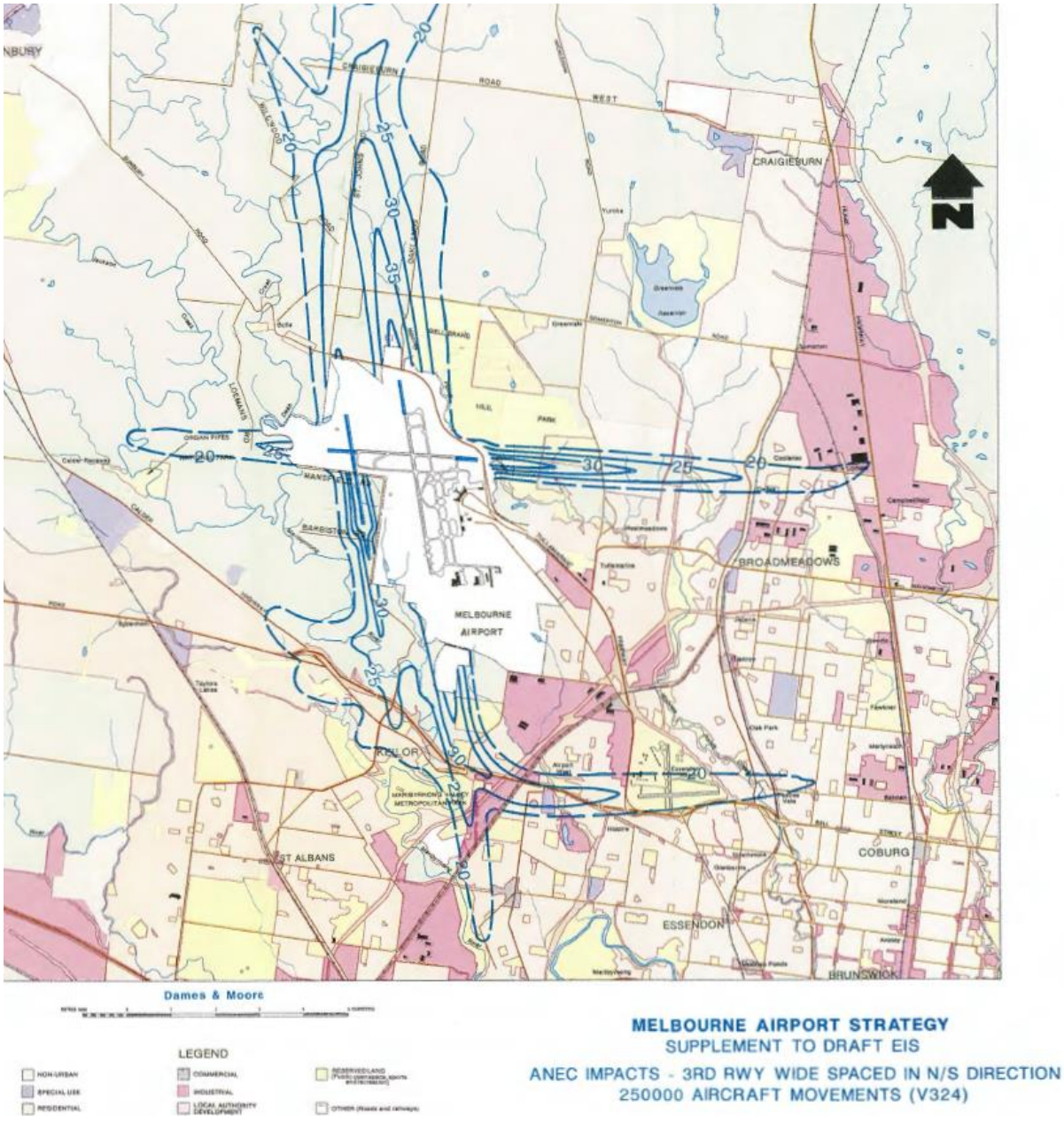


Figure 43: Three Runway ANEC (V324) from MAS 1990 Supplement Report

Source: MAS 1990 Supplement Report

In addition to the three runway ANEC not being mentioned in submissions, the evolution of planned runway usage over the last five Master Plans prior to Master Plan 2022 is not mentioned.

Examples of Airports Moving Away From Crossing Runways

Whilst APAM has not proposed to decommission Runway 09/27 as part of M3R, but retain the runway through shortening its length, it is noted that there are a number of airports across Australia that have moved away from a crossing runway layout through decommissioning of runways. These airports are highlighted in Figure 44 and Figure 45 and are explained below:

- Essendon Fields Airport previously had three runways (in the 1960's) with a Runway 04/22 that was later decommissioned
- Perth Airport previously had three runways (1974) with a Runway 11/29 which was later decommissioned and turned into a taxiway
- Brisbane Airport decommissioned Runway 14/32 prior to opening of the new parallel runway
- Sunshine Coast Airport decommissioned Runway 18/36 as part of the new Runway 13/31 being built.

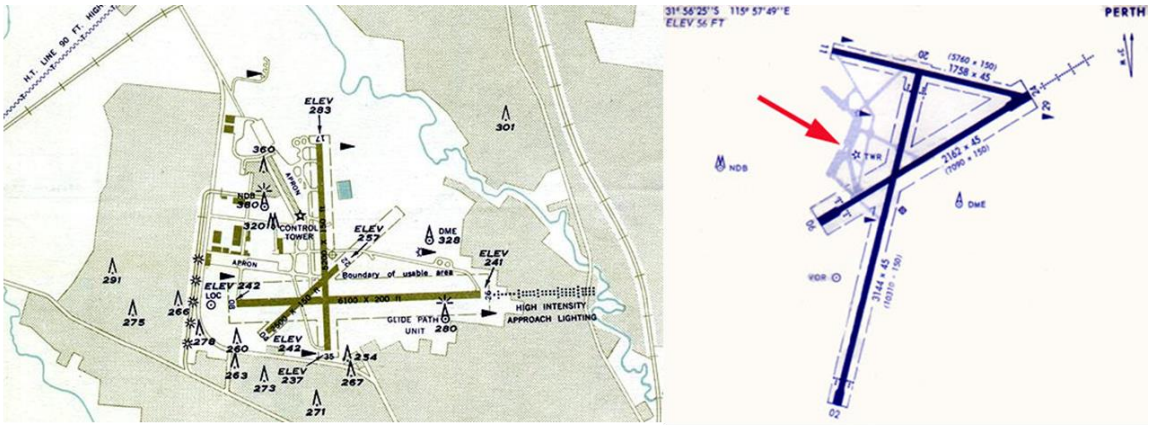


Figure 44: Essendon Fields and Perth Airport Historic Runway Layouts

Source: airways museum website, accessed 2022

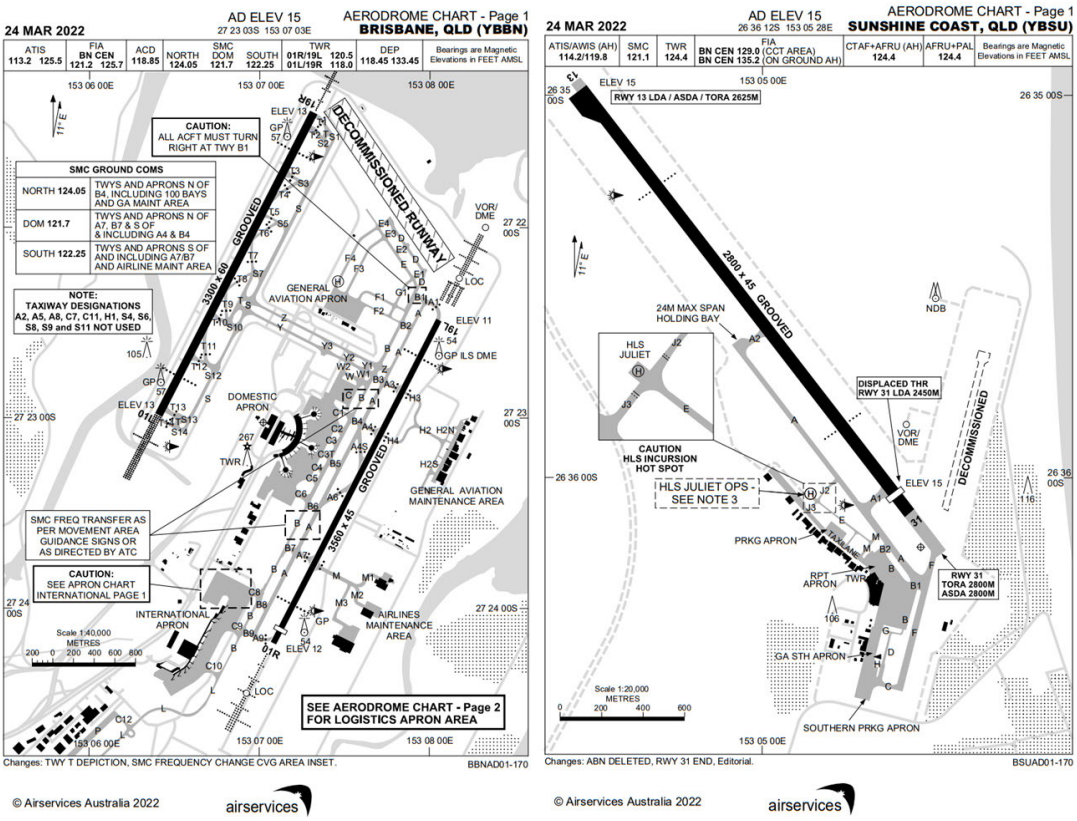


Figure 45: Brisbane Airport and Sunshine Coast Airport current aerodrome charts

Source: Airservices AIP, accessed 2022

APAM also notes that as part of their parallel runway plans, Perth Airport are considering decommissioning the current crossing runway (Runway 06/24). An extract from the Major Development Project is shown in Figure 46.

21.5 Cross Runway

The CONOPS showed that the continued use of the cross runway (06/24) once a parallel runway is operational would reduce the efficiency and overall runway capacity at Perth Airport, therefore negating the benefits of the new runway.

Consistent with the Master Plan 2014, Perth Airport is considering closing the cross runway (06/24) when the parallel runway is constructed and operational. An assessment of whether the cross runway will be required to accommodate aircraft operations, post commissioning of the parallel runway system, was completed. Among numerous other factors, this study principally looked at the impact on safety and usability of the parallel runway system if the cross runway was decommissioned. A large part of this assessment comprised analysis of weather including wind speed and direction, and the resulting crosswinds that could be expected on the parallel runways if no cross runway was available.

The internationally adopted standards are published in the ICAO Annex 14 – Aerodromes Volume 1 Aerodrome Design and Operations. Annex 14 states that the usability factor of a runway of an aerodrome is not less than 95 per cent for the aircraft that the aerodrome is intended to serve. (Usability factor is the percentage of time during which the use of a runway or system of runways is not restricted because of the crosswind component).

Usability of the main runway 03/21 and cross runway 06/24 direction in Perth was calculated for aircraft with maximum crosswind components of 10, 13 and 20 knots respectively. This was done by taking historical wind observation data from the Bureau of Meteorology since 01 May 1944 and calculating how many of these observations had a crosswind component (that is, a component perpendicular to the runway in excess of 20 knots). A key output from this process was that the cross wind on the parallel system is less than 20 knots for 98.9 per cent of the time. The majority of the aircraft fleet operating at Perth Airport have documented maximum crosswind limitations well above 20 knots. Therefore, per the ICAO standards, the cross runway is not required when the new runway (03R/21L) comes into operation.

The cross runway cannot be closed prior to the day of opening of the new runway and commencement of parallel operations. If the cross runway (06/24) remains open, it will only be used when the crosswind of the parallel runway system exceeds 20 knots.

The cross runway was closed for aerodrome works for a period of seven months in 2013-14, and for significant periods of time in 2016 and 2017 for runway works. During these closures, no diversions to alternate airports were required because of excessive crosswind.

Several factors will influence the decision to decommission the cross runway, including operating costs and consultation with aircraft operators and regulators. The final decision on the future of the cross runway is yet to be made and will require further consultation with airlines and Airservices.

Figure 46: Perth Airport Cross Runway Commentary

Source: Perth Airport New Runway Project Major Development Plan, accessed 2022

APAM also notes that prior to progressing with the parallel runway layout at Western Sydney Airport, there were options that included three runways (parallels with a cross runway). These alternative arrangements are highlighted in Figure 47, however plans for a cross runway were not adopted.

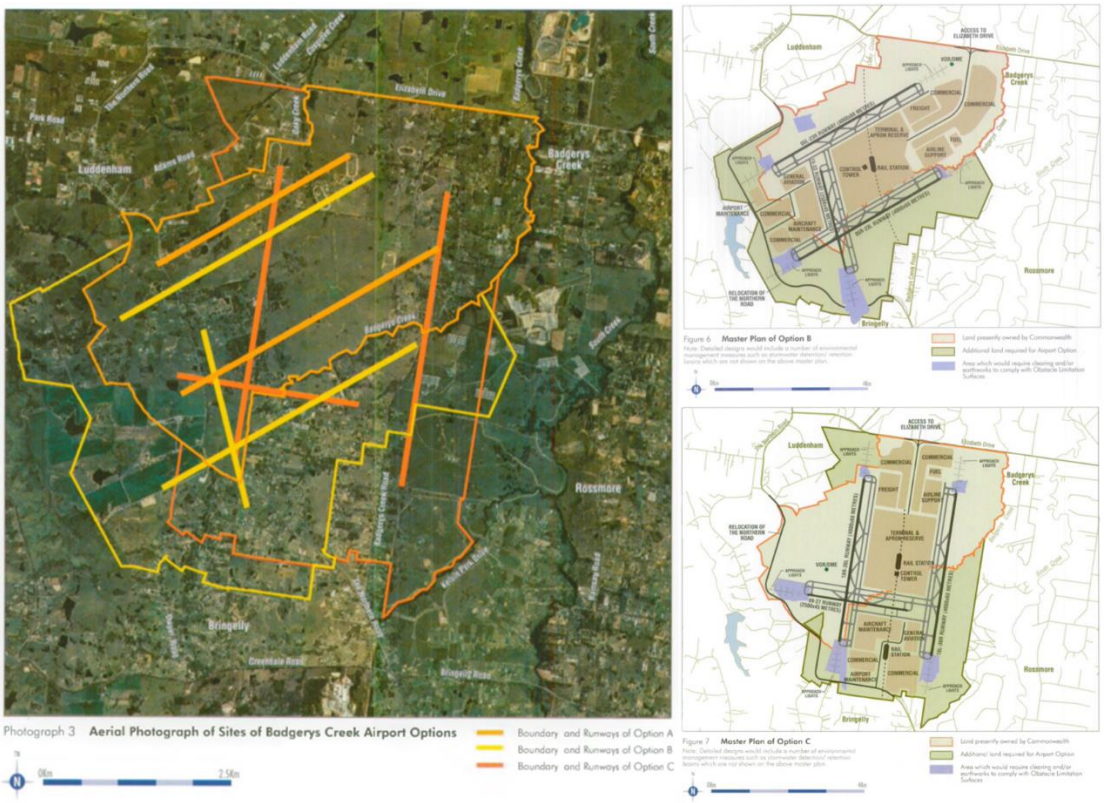


Figure 47: Runway layouts considered for second Sydney Airport

Source: Summary of the environmental impact statement for the proposed second Sydney airport at Badgerys Creek, 1999

APAM Position on Concern Over Shortening Runway 09/27

The community to the south and north of the airport are understandably concerned by the prospect of majority operations on the parallel north-south runways. The decision to not include Runway 09/27 within the modelling was to avoid understating the impacts of M3R on these communities.

The analysis included in this section highlights that, whilst Runway 09/27 provides some respite from domestic narrow-body jets, larger/heavier aircraft already do not routinely use Runway 09/27 (even when the Noise Abatement Procedures prioritise Runway 27) and thus that perceived loss of practical utility is a misnomer.

Based on the analysis regarding adherence to Noise Abatement Procedures and the LTOP target example, APAM is concerned that any commitment on using Runway 09/27 as a noise sharing mode must consider operational factors to avoid falling short of community expectations.

APAM believes that better community awareness of the current allocation of traffic between the two runways is needed and is committed to providing reporting on runway usage and adherence to Noise Abatement Procedures along with the resulting noise contours from actual operations.

APAM acknowledges that there is room to review and explore alternative runway modes that incorporate the use of Runway 09/27 during the airspace detailed design. This is discussed further in Issue D3: Runway Operating Modes.

APAM Position on Shortening Runway 09/27

APAM believes change to Runway 09/27 is required to accommodate M3R. This is largely due to the interaction of the current Runway 09 threshold and the alignment of Runway 16R/34L (consistent with the MAS 1990 Supplement Report).

Runway 09/27 is predominantly used by short haul domestic operations by narrow-body aircraft. This is largely a function of the existing runway length constraints.

In reviewing the options available, APAM still believes shortening the length of Runway 09/27 remains the best option for M3R. APAM notes that the ability to extend Runway 09/27 to its long-term length (of 3,500 metres) is still retained within the 2022 Master Plan. Timing and drivers for this extension will be continually reviewed as part of the Master Plan cycle.

As outlined in Issue D3: Draft Runway Operating Plan, there are additional operating modes that incorporate the use of Runway 09/27 that APAM is proposing to explore as part of the detailed airspace design. APAM does note that the ability to adopt and use these modes will depend on a range of factors and are hesitant to nominate any noise sharing targets (similar to Sydney Airport LTOP) as in practice these targets are not met providing further frustration to communities.

D2.6 Changes to Preliminary Draft M3R MDP

Based on the submissions received, APAM has included a new Appendix E4A within the MDP under Chapter E4: Draft Runway Operating Plan, outlining some of the analysis presented within this Issue. The appendix includes the following sections:

- Introduction
- Historic Planning
- Historic (2019) usage of Runway 09/27
- Rational for reduction in length
- Runway capability (existing, post M3R, long term)
- Ongoing use of Runway 09/27
- Conclusion.

D2.7 Summary and Conclusion

APAM believes that change to Runway 09/27 is required to accommodate M3R. This is largely due to the interaction of the current Runway 09 threshold and the alignment of Runway 16R/34L (consistent with the MAS 1990 Supplement Report).

APAM understands community concern regarding the future use of Runway 09/27 as part of M3R, however the decision to not include Runway 09/27 within the modelling was to avoid understating the impacts of M3R on these communities.

APAM still believes shortening the length of Runway 09/27 remains the best option for M3R. APAM notes that the ability to extend Runway 09/27 to its long-term length (of 3,500 metres) is still retained within the 2022 Master Plan. The timing and drivers for this extension will be continually reviewed as part of the Master Plan cycle.

APAM notes that there is a lack of up-to-date information for the community to understand the capability and use of Runway 09/27. We acknowledge historically APAM relies on Airservices and the Master Plan cycle to provide this information which is no longer meeting community needs. APAM is committed to providing reporting on runway usage and adherence to Noise Abatement Procedures along with the resulting noise contours from actual operations.

As outlined in Issue D3: Draft Runway Operating Plan, there are additional operating modes that incorporate the use of Runway 09/27 that APAM is proposing to be explored as part of the detailed airspace design. APAM does note that the ability to adopt and use these modes will depend on a range of factors and is hesitant to nominate any noise sharing targets (similar to Sydney Airport LTOP) as in practice these targets are not met providing further frustration to communities.

D3 Draft Runway Operating Plan

D3.1 Summary of Issue

This Issue relates to submissions commenting upon the proposed Draft Runway Operating Plan. The draft plan, as presented in the Preliminary Draft M3R MDP, describes how the proposed system of runways could be utilised to meet the airport's operational requirements. It explains that the use of operating 'modes' is influenced by a range of factors (including, but not limited to: safety, capacity, community impact mitigation).

Public exhibition submissions categorised within this issue include references to:

- Explicit preference between the Segregated Mode operating options presented (Option 1 or Option 2)
- Challenges and queries relating to the presented operating plan (e.g. absence of curfew, future use of the east-west runway, the ultimate 'four runway' configuration)
- Noise Abatement Procedure adherence (current and proposed operations)
- Proposals for additional/alternative operating modes.

D3.2 Number and Types of Submissions

271 submissions contain reference to the Draft Runway Operating Plan issue. They were received from:

- Community
- Community organisations:
  - Melbourne Airport Community Action Group (MACAG)
  - Melbourne Airport Community Aviation Consultation Group (CACG)
- Non-government organisations and commercial entities:
  - Keilor Primary School Council
  - Essendon Fields Airport Pty Ltd (EAPL)
  - Qantas Airways Limited (Qantas)
  - Virgin Australia (Virgin)
  - Australian Airline Pilots Association (AusALPA)
  - Skydive Australia, Experience Co Pty Ltd (Skydive Australia)
- Government:
  - Department of Defence
  - Hume City Council
  - Brimbank City Council
  - Maribyrnong City Council

D3.3 Discussion of Submissions

Preference for an Operating Mode 'Option'

Some submissions indicate a clear preference between the operating mode options presented - a select few generally object to M3R but state a preference should the project proceed. These submissions tally as follows:

- Segregated Mode Option 1 – 11 submissions
- Segregated Mode Option 2 – 22 submissions
- Mixed Mode – 16 submissions

Examples of quotes from these submissions include:

> *"I support the third runway Option 1. The noise impact is minimal and does not effect many homes."*
>
> *"Prefer option 1"*
>
> *"Much prefer flight plan one"*
>
> *"I would prefer the Option 2 flight path"*
>
> *"I believe option 2 is the fairest option as it distributes noise more evenly across homes."*
>
> *"From information provided at community sessions my preferred option is option 2 mode priorities to alternate between runways to give some relief to residents."*
>
> *"If this goes ahead, I would prefer the Mixed option as it decreases the amount of noise significantly for my property"*
>
> *"Given our location, we would seek to see the mixed option implemented."*

Additional submissions chose to declare opposition for certain options:

- Not in favour of Option 1 – 2 submissions
- Not in favour of Option 2 – 1 submission
- Not in favour of Option 1 or 2 – 5 submissions

Examples of quotes from these submissions include:

> *"Option 1 will increase the air traffic over our already over polluted suburb. Noise levels from aircrafts are already excessive and this will increase even more, especially with option 1. please reconsider a different option"*
>
> *"Both Options are highly undesirable in our perspective, however Option 1 is the least desirable."*
>
> *"I would suggest NOT to go ahead with 'option 2' as it will increase noise pollution for these suburbs"*
>
> *"The thought that this will become our every day life if option 1 or 2 go ahead makes us unbelievably upset."*
>
> *"We would be extremely disappointed if either option 1/2 proceed"*

"I am not in favour of Options 1 or 2 and remain undecided for the Mixed which needs more explanation."

More broad examples of community commentary about operating modes include:

- Concern that options become similar towards 2046, and how/when distinctions between options will be material:

  "Melbourne Airport says the community can state a preference for either Option 1 or Option 2, one of which affects more homes with less noise and the other fewer homes with more noise. This only works until 2046 when the airport expects to be operating at full capacity and won't have that flexibility anymore. However, there must be a transition point along the way, so we don't really know what we are signing up for"
- Recommendation that a mix of Option 1 and 2 be adopted:

  "Having looked at the third runway interactive map, it only seems fair and equitable that the noise is spread evenly with a mix of option 1 & 2 being used."
- Query about availability of mixed mode at night:

  "The Options 1 & 2 appears to show overnight flights, impacting our area. The mixed results doesn't appear to have 11pm- 6am flights, and this would be the better outcome."
- No specific option nominated – but request least noisy for personal circumstances:

  "Please choose the least noisy option for me"
- Preference for whichever option spreads noise across community:

  "On the dilemma of choosing more noise for a few or less noise spread across more people, my preference would be to spread less noise across a greater number of people."
- Preference for more SODPROPS:

  "SODPROPs is terminology not familiar to me but if the preferred mode of operation for managing the impact of aircraft noise on residential areas during the period 11pm to 6am could be practised or observed but this has not been the experience of residents in our region when there is a lot of departures for instance from the 16 runway they just push them out our way anyway!"
- Options are irrelevant because runway modes are dependent on weather:

  "We have been told over and over again, including by Air Services Australia, that operating according to the options depends on many variables, including wind conditions, wet runway and also pilot requests which have to be respected! Therefore, doesn't this make these options irrelevant?"
- Challenge against principle of 'respite' as a means of mitigating the effects of noise for communities very close to the airport:

  " What is the respite?

  i. *During peak hours, this is irrelevant for the "off day" of the runway. These peak hours coincide with people needing to do their gardening before it gets hot and during the time they want to socialise with an outdoor bbq.*
  ii. *Curfew hours – how can you call this respite when people need a solid sleep routine. How is it expected that people will adjust to sleeping on the "off day" for their runway and then not sleep and having to put up with the aircraft noise during the night on the "on day" the next day?"*

  "For us , according to your internet tool, we will have no respite with either proposed option. It will be like having a freeway over our heads 24 hours a day."

Challenges to Operating Plan Principles

A substantial portion of submissions expressed concern that the proposed operating plan does not include a curfew:

> *"no details have been provided on measures such as:*
> *…*
> *2. Implementing curfews"*

> *"A night time curfew must be seriously considered for all impacted residential areas."*

> *"This plan cannot progress without compensation and a night curfew."*

> *"Without a curfew, dealing with syncronised take-offs from north-south runways, excessive noise and increased pollution, the lifestyle of Keilor residents with be severely impacted."*

> *"I know we need the third runway but please consider the curfew on the third runway between 10pm and 7am."*

A share of submissions also queried plans for use of Runway 09/27 (the existing east-west runway) in the M3R context, and expressed concern that concentration of aircraft traffic to the parallel north-south system would limit opportunity to distribute/share noise in affected communities:

> *"You are trying to change a 2 runway system that spreads out noise across multiple zones and replacing with an alternate 2 runway system that concentrates it to the north and south by phasing out or significantly reducing any existing E / W runway traffic."*

> *"The East West runway should continue to be used where possible to divert noise away from residential areas."*

> *"The 3rd runway should not increase the percentage of flights that use the north/south runway – the east/west runway should continue to be used for the same ratio of flights that it currently is."*

> *"It is understood that the new north-south runway will result in the north-south parallel runway system becoming the airport's primary operating mode. This will result in more aircraft arriving and departing to the north and south, and fewer aircraft arriving and departing to the east and west."*

> *"Melbourne Airport speak about noise abatement by way of using alternate runways, however their plans to shorten the existing East/West runway suggest primarily the North/South movements which severely limit any noise abatement in our area by way of runway selection."*

There was a challenge to the orientation of M3R, based on wind conditions and historical use of Runway 09/27:

> *"Over the last few weeks, the prevailing wind conditions have allowed the existing EW runway to be used quite extensively, with the result being that Keilor has been relatively quiet. Therefore, it beggars belief that a NS runway orientation is better than an EW runway orientation based on forecast prevailing wind conditions. Moreover, how can such a significant and multiple life impacting decision be justified when an EW orientation has been doing the job for so long including in recent times when aviation has been very busy over the Easter holiday break?"*

The 1990 Melbourne Airport Strategy Environmental Impact Statement (1990 MAS EIS), and noted differences compared to M3R, was raised by community representatives:

> *"This airport was planned to have 50% of the airport's aircraft not flying over Melbourne at all, AND all Melbourne flights using planned noise corridors over parks and factories, NEVER flying directly over homes and schools from Keilor, Kealba, Calder rise to Sunshine, St Albans and Cairnlea and Bulla. That is why in 1990 the planned airport ultimate flight capacity was only 350,000 flights per annum till 2050."*
>
> *"The MAS EIS 1990 agreement stated the ultimate 2050 capacity of Melbourne Airport would be 37 Million passengers per annum. This capacity was met pre Covid 2019. Now Melbourne Airport forecast doubling this passenger movement moving forward."*

Noise Abatement Procedures

Application, monitoring and governance of current Noise Abatement Procedures was discussed in a substantial share of submissions – often followed by commentary about how future operations should be managed:

> *"As a resident of Sunshine living in one of many beautiful dwellings built when this suburb was established well before Melbourne Tullamarine Airport, it is clear to me that current noise rules with only two runways are completely inappropriate for a peaceful and quiet community."*
>
> *"Also, what procedures are in place to ensure compliance by aircraft operators? I cannot find any guidelines for this."*
>
> *"A matter for Noise Abatement and also for any consideration for new runway development to establish a system as used at Heathrow and some other airports in Europe – that's to have more monitors and if the airlines exceed a certain noise level then they can be fined."*
>
> *"The same applies for the "options" offered by Melbourne Airport. What is the governance over these and how are we guaranteed that these options apply and followed over the long term?"*

Recommendations for Alternative Operational Strategy

A number of submissions provided suggestions to the way the runways should operate. These suggestions included:

- Concentrate flights to and from the north (and, to a lesser degree, west) to minimise residential impact:

  "I am not completely opposed to the third n/s runway if it takes traffic off the existing n/s runway. If most flights arrive from the north on the existing n/s runway then noise is reduced over established residential dwellings. ditto if the new runway is used for departing flights. If you can commit to this then I will not protest.?"

  "I was wondering if it was possible to only utilise the airspace to the north of the new runway so that aircraft are not flying low directly over houses, schools and businesses in Keilor Village. This would mean that when runway 34 is in use, aircraft depart off 34L and arrive to 34R; when runway 16 is in use, aircraft arrive to 16R and depart off 16L."

  "Can the planners provide more assurances on how the noise will be managed to ensure 1 area doesn't receive all of the noise? Can the planners mandate that aircraft take off and

land from the north end of the runway unless the wind direction makes it absolutely necessary?"

"more flights takeoff/land from north instead of over densely populated areas."

"There are many other things that the airport could do, like have the planes take off in the opposite direction, which is not directly over houses, but rural areas where there would be less health issues that arise from the increased levels of pollution."

"Any additional third runway must not increase take offs and landings to the south of the airport. There is clear green space to the northerly aspect, and regardless of increased fuel costs or limitations on flights, these options must be used at all times. Simply put, absolutely no additional flights must take off or land towards or from the populated southerly direction. In fact, an additional runway should be viewed as a means to ensure current numbers be reduced also."

"i ask that the third runway be used sparingly between midnight & 6am. And, Or to use the north south runways between the hours of midnight & 6am for take of towards the north and to land from the north. to reduce aircraft noise over the residential areas of taylors lakes, keilor"

"All airport landings and takeoffs should be restricted to only being allowed West and North of the airport only."

- Alternate active use of runways:
  "Why can't flights land from the North there is more vacant land on that side of the airport. Why not alternate it arrivals from North, South, East and West."
  "There needs to be alternatives at various times of the day."
  "Alternating the use of the runways is preferable for landings and takeoffs"

- Concentration of activity on existing north-south runway:
  "If a 3rd runway is built – it should only be used when the existing runway is at 100% capacity and the new runway should only for flights that cannot use the existing runway."

  "only use the old North South runway going northbound at night time."

- Operational procedures:
  "Any runway design also needs to factor in community impacts.
  …
  There also needs to be clear rules regarding not allowing intersectional departures"

  One submission referenced need to maximise the efficiency of the current two-runway system – citing international airports with two runways (Heathrow, Hong Kong and Dubai):

  "Melbourne Airport should maintain a two runway system at maximum and accommodate more flights on these runways lessening the impact to surrounding communities but still allowing growth"

Keilor Primary School Council

The submission from Keilor Primary School Council and related proforma community submissions include the following concerns regarding the Draft Runway Operating Plan:

"There is no modelling or discussion on implementing the final configuration of the airport in 2026. That is both the 3rd and 4th Runways, in constructed and both operating in full by 2026."

"Melbourne Airport's Curfew free status was based on the use of 4 runways over farmland and 2 planned aircraft noise corridors over parks and factories. This new noise corridor over homes and schools was created in 1998 without any community consultation. Melbourne airport's curfew free status should be totally conditional on the airport protecting its neighbours by honouring the fully documented original reason the second North-south runway was moved."

"Shortening the East West runway forces all heavy aircraft traffic on to the north south runways exclusively."

"Part 4.6 does not deal with preferencing of runways or strategies for utilising parts of the runway with a view to minimise noise impacts. For example, aircraft that do not need the full length of the runway can be instructed to utilise parts of that runway to minimise impacts to Keilor. Short field take off procedures could be required for all smaller aircraft to maximise vertical distance over Keilor."

"That Operational Controls be applied for all aircraft taking off on runway 16R to fully utilise the runway extension for every take off to maximise vertical clearances to Keilor and Keilor Primary School. Likewise, where safe to do so, aircraft requiring shorter landing lengths should be directed to land further away from the runway limits."

Keilor Residents & Ratepayers Association (KRRA) Proforma

Proforma objections from KRRA include items related to the operating plan:

"It appears that the north/south parallel runway system will be used 24/7. Which means that Keilor Village will have at all times of every day and night aircraft either landing or taking off."

"Proposed shortening of the existing east/west runway indicates that the runway will not be a viable alternative that can be used to have aircraft depart to the west over a corridor of open, nonresidential land."

"A curfew should be put in place for Melbourne Airport, similar to Sydney, Adelaide and Surfers Paradise."

"The Master Plan does not appear to provide any procedures to reduce or limit the effect of noise on those living close to the airport. What are the noise abatement rules, will aircraft noise be monitored around the airport, what procedures are in place to ensure compliance by aircraft operators?"

Melbourne Airport Community Action Group (MACAG)

The MACAG submission contained detailed analysis of the proposed operating plan:

"Importantly, a key feature of the MAS was the plan to use the second north/south runway for overflow of smaller, lighter aircraft, as evidenced by the fact that it was intended to be only 3km in length and not to cross the second east/west runway. The M3R dMDP should clearly explain whether and how this affects aircraft noise impacts from the new second runway so that the community can fully understand how the current plan differs from the protections they understood had been assured them."

"…explain how the reduction of the existing east/west runway changes operational modes and the impact this will have on the ability to offer respite to communities to the north and south of the airport, currently only afforded them when the east/west runway is in use."

"Section 2.2.14: It is also important to be transparent about the fact that noise abatement procedures are largely voluntary and there is no mechanism for enforcing them. Furthermore, there is no detail on whether these procedures can or do make a material difference to the noise exposure of any given community. It may be misleading to conclude that noise abatement procedures are in any way meaningful or afford any protection to communities. This should be clarified to ensure the Department and Minister do not overinterpret the information is this section."

"Community engagement events held by Melbourne Airport in Keilor presented different operating modes and encouraged residents to focus on stating a preference for Option 1 or Option 2 in their submissions. It is concerning that the proponent sought to influence the content of submissions in this way as it may give a false impression that these residents are broadly supportive of the new second runway. Those in attendance were certainly not broadly supportive of the project, and were informed quite bluntly that Keilor would bear the brunt of the noise impact and they should use the noise tool and engagement process to determine whether they should consider moving. It may therefore be important not to put too much weight on whether submissions are supportive rather than pragmatic."

Melbourne Airport Community Aviation Consultation Group (CACG)

The submission from CACG draws references to opportunity for noise sharing and respite through operating strategy measures:

"47. The studies assume the primary operation will be the parallel north/south runways – ie there is little opportunity for noise sharing.
Has MA adequately considered the possibility of night curfews to provide respite?

48. If not, what would trigger such a consideration?

49. If the third runway is constructed in the proposed location, what options are there to increase use of the east/west runway(s) and/or impose operating restrictions on the north/south runway(s) to provide respite to communities north and south of the airport?"

Hume City Council

Hume City Council's submission includes section 'Options of runway operation modes'. Council supports minimising the scale of community impact but observes no apparent difference in impacts to Hume communities between Option 1 and Option 2 segregate modes. Hume calls for further community engagement to reach sound outcomes:

"Council supports an operational system that minimises the number of people exposed to aircraft noise, particularly at night, and provides consistent and regular periods of respite. The Simultaneous Opposite Direction Parallel Runway Operations (SODPROPS) runway operating system, that will see most flights arriving and departing over Hume's rural areas to the north, appears to be a preferential operational mode.
…
Council understands that within Hume the amount of dwellings impacted in either option for the operation of the north south runway aircraft noise impacts of either option are relatively similar and that the regular periods of respite offered under Option 2 will be felt mostly in

the areas south of the Airport, outside of Hume. Although prioritising north-south runway operations will reduce the use of the existing east-west runway.
As the benefits of these different operating systems do not appear to have a substantive difference in impacts to Hume communities, this again highlights the need for Melbourne Airport to continually engage with these communities who will be impacted by aircraft noise and seek new and innovative noise abatement processes and practices.
Council appreciates that Melbourne Airport are seeking community input on their preference for runway operations and Council encourages Melbourne Airport to meaningfully consider community preference in the decision making for runway mode operations. This should extend beyond the consultation for the current 2022 Master Plan and Third Runway MDP processes to include consultation on proposed amendments to operation modes and flight paths at Melbourne Airport."

The submission includes the following recommendations:

"Include a commitment to the ongoing exploration and implementation of new noise abatement strategies and processes."

"Commit to further community engagement on all future changes to runway operation modes and flight paths."

Brimbank City Council

The submission from Brimbank City Council recommended revisiting the airport's four-runway layout, or through a range of operating system recommendations:

"Melbourne Airport address noise abatement procedures particularly at night-time and review the potential for noise sharing, by reconsidering the four runway configuration in consultation with neighbouring Council's, their communities and State and Federal Government, alternatively the following should be considered.

- *A curfew between 11pm and 6am to minimise sleep disturbance that can lead to other adverse health impacts*
- *Where possible limit the take-offs over the populated area within the Brimbank LGA*
- *Alternate the direction of take-offs to provide some respite to Brimbank residents from the aircraft noise*
- *Limit aircraft during these hours to more modern and quieter aircraft*
- *In the interim, extend the existing third runway 27 to the east, to allow an increased use of* the east/west runway, which provide a greater opportunity to noise share and deliver some respite to communities to the south and north of the airport."

Maribyrnong City Council

The Maribyrnong City Council submission includes recommendations for revision of the plan that include operating limitations influenced by engagement with affected residents:

"Further examine alternatives to the third N-S runway, including combination of a selective night time curfew at Melbourne Airport"

"A mechanism for instating a night time curfew (either full or partial) on the use of the added north-south runway in the event that other noise mitigation measures do not address the deleterious health impacts of the noise exposure."

"Design the airport to avoid imposing more noisy flights and new noise impacts in existing suburbs."

"Council and residents will need more information on the potential sleep disturbance impacts of the various runway operating options, including both moderately and highly disturbed sleep, before further engagement about the preferred operating option."

"Implement a clear plan for consulting with affected Maribyrnong residents and allowing them to influence the final outcome of runway operations decisions in a way that is fair"

"*Council calls for further investigation of curfew and flight-quota options to protect existing residential areas from aircraft noise. Options include:*

- *A night curfew on all arrivals and departures*
- *A night curfew on arrivals and departures except for low-noise freight and business jets, such as at Sydney Airport*
- *A requirement for night flights to approach over non-residential areas, such as at Los Angeles International Airport, which requires night arrivals to come in over the Pacific Ocean*
- *A limited annual quota on the number of night time flights or on the number of movements at the start or end of the curfew, such as at London's Heathrow Airport*
- *A daytime quota, such as Sydney's limit of 80 flights per hour*"

Airlines (Qantas group and Virgin Australia)

The submission from Qantas encourages use of a Runway Demand Management System (RDMS) to maximise efficiency prior to M3R, and optimise the timing of the project's delivery:

"QFG notes that Melbourne Airport does not currently operate a Runway Demand Management System (RDMS), resulting in oversubscription of capacity during peak periods. The prime objective of an RDMS is to ensure the most efficient declaration, allocation and use of available airport capacity in order to optimise benefits to consumers, taking into account the interests of airports and airlines. Prior to operationalising M3R, QFG believe it is essential to implement an RDMS over the course of a number of flying seasons to enable industry and airlines to understand demand and have informed discussions about M3R timing."

Qantas also queried some elements of runway usage modelling related to the M3R operating plan:

"Flight Operations

- *Section A2.5.1 notes that M3R will ensure parallel runway operations are available for at least 97 percent of the year, including during unfavourable weather. What data and assumptions is this calculation based on?*
- *How will the utilisation rate above be impacted by increasing the current maximum cross wind limit?*
- *Has modelling occurred to demonstrate the impacts of utilising the east-west runway as a taxiway* intermittently (in lieu of constructing a dedicated taxiway) to manage of peak periods? What were the results?"

The submission from Virgin Australia includes the following commentary on the Draft Runway Operating Plan:

"While we are cognisant of the need to carefully manage and reduce the effects of aircraft noise on local communities, the imposition of inefficient operational restrictions, curfews or Noise Abatement Procedures (NAPs) will have the effect of both constraining already strained capacity and increasing our fuel usage and subsequent CO2 emissions.

…
We largely support the proposed runway operation modes utilising compass operations rather than terminal operations. However, given that the majority of flights from Melbourne go north rather than south, VA holds concerns around any potential operational restrictions that will require our aircraft to arrive or depart from the south when operating to or from the north, as part of noise-sharing arrangements.
While we appreciate that the preference is for the majority of aircraft noise generated by aircraft to be over the north of the airfield, it is imperative that this is future-proofed to minimise any potential negative noise impacts post-runway opening as the city of Melbourne continues to grow and expand.
…
We support the Concept of Operations prepared and presented to the runway's Aviation Advisory Group (AAG) and will continue to be an active member in this valuable forum. This Concept of Operations should remain as the single source of truth post-runway opening, so that we are not in a position where noise conditions compel our aircraft to track further than currently planned.
It is important that any future operational changes as a result of the MDP or M3R MP are minimised and/or future-proofed to ensure we can manage our future planning and related costs appropriately. Airlines are often negatively impacted when these events occur. Effective and robust engagement with local communities is essential to increase awareness and reduce community frustration with increased aircraft noise when the new runway opens."

Melbourne Basin Operators (EAPL, AusALPA, Skydive Australia and Department of Defence)

The submissions from EAPL, Skydive Australia and the Department of Defence are discussed in detail within Issue B5: Interactions with other Melbourne Basin Airports and Operators. Key items raised relevant to the Draft Runway Operating Plan include:

- EAPL:
  - Operation of the 'five runway system' encompassing the three runways at Melbourne Airport and two runways at Essendon Fields Airport – particularly during mixed mode operations
  - Impacts of single runway use at Essendon Fields
  - Safeguarding capacity at Essendon Fields, and the current slot scheme.
- Skydive Australia:
  - Concerns about impacts of mixed mode operations on the St Kilda drop zone (Danger Area 342)
  - Segregated Modes 1, 2, 3 and 4 impact on current operations.
- Department of Defence:
  - Potential effect of the proposed Runway 34L ILS/GLS approach (for mixed mode operations) to airspace in vicinity of Point Cook.
- AusALPA:
  - Support for orientation based on prevailing winds
  - Commentary about crosswind and tailwind criteria used for runway nomination (including SODPROPS).

D3.4 M3R MDP References

The proposed Draft Runway Operating Plan is referenced in several sections of the M3R MDP.

Part C Airspace, Chapter C2 Airspace Architecture and Capacity:

- Section C2.5.2 Modes of operation for M3R
- Section C2.5.6 Noise Abatement preferred modes of operation
- Section C2.5.8 Mode grouping options

Part C Airspace, Chapter C4 Aircraft Noise and Vibration:

- Section C4.5.4 Runway modes of operation

Part E Management Framework, Chapter E4 Draft Runway Operating Plan.

In addition to the MDP material, facts sheets where prepared to explain the operating modes during public exhibition, including:

- Proposed Runway Operating Modes
- Predicted Mode Availability – Option 1
- Predicted Mode Availability – Option 2

D3.5 APAM Position

Several related topics raised within this issue are discussed in detail elsewhere in this Supplementary Report:

- Plans for ongoing use of Runway 09/27 (existing east-west runway) are addressed in Issue D2: Future Use of 09/27 (East-West) Runway.
- Considerations of curfew, movement caps and slot management schemes are addressed in Issue E4: Noise Mitigation.
- Project implications for other Melbourne basin airports and associated aircraft operators are addressed in Issue B5: Interactions with Melbourne Basin Airports and Operators.

Selection of Segregated Mode optionality (Option 1 or 2)

During the M3R public exhibition period APAM carefully and deliberately explained that the Draft Runway Operating Plan presented a choice – between segregated modes Option 1 and Option 2 - which would influence the concentration of noise impact for certain communities very close to the airport. This decision point was particularly detailed in events in communities where that distinction is likely to have material impact. Attendees were encouraged to nominate their preference clearly in their submissions.

Unfortunately, the volume of submissions referencing the choice was very low (less than 60 submissions) and clear preference did not emerge from submissions that nominate a preferred option. It is worthy of note that a substantial share of submissions referencing the choice, thus acknowledging their opportunity to influence the outcome, did not clearly state a preference.

Further and ongoing engagement with the community will be necessary to responsibly progress airspace design. APAM remains committed to engaging with the community to empower their influence over impact outcomes throughout the M3R project.

Challenges to the draft plan

- Efficiency Improvements for Existing Two-Runway System

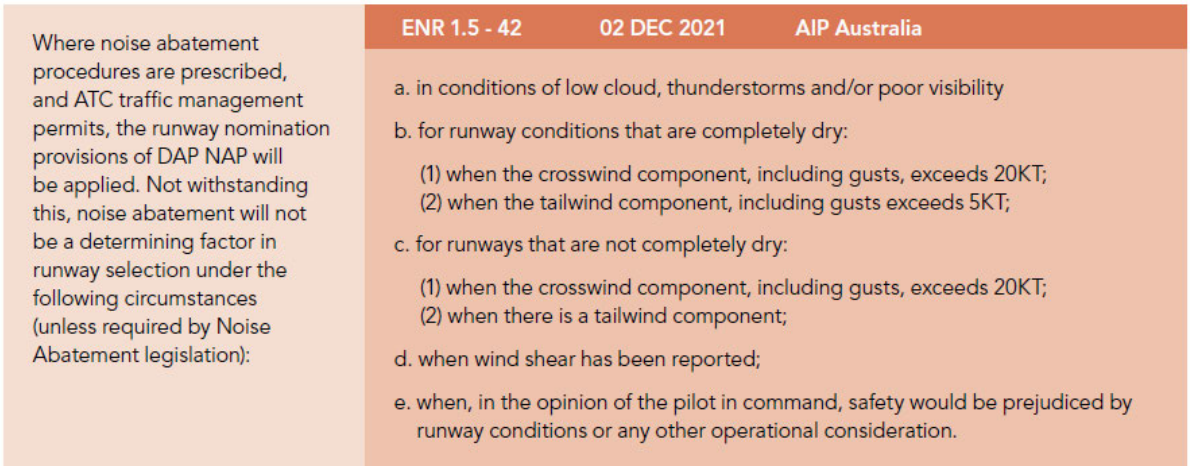
Suggestion that Melbourne's existing infrastructure should be more efficiently utilised to match throughput of other dual-runway airports (Heathrow, Dubai and Hong Kong cited) misses some key operational distinctions. The airports referenced all have parallel runways which enable higher capacity than Melbourne Airport's current intersecting runway arrangement. These large

international airports also primarily serve very large wide-body aircraft, in contrast to Melbourne's dominance of domestic narrow-body aircraft, thus processing more passengers within comparable numbers of movements. Demand at these hub/transfer airports also tends to spread throughout the full day – as opposed to cycles of peaks typified by the Australian network.

APAM acknowledges the Qantas group's request for RDMS to support optimising the airport's operation and timing of M3R. This, amongst all available measures for enhancing existing infrastructure performance, will continue to be discussed with relevant industry stakeholders. Capacity management at Melbourne Airport is conducted in accordance with the IATA World Slot Guidelines (WSG). Melbourne Airport is currently designated WSG Level 3 for international and Level 1 for domestic. Level 3 requires appointment of a coordinator to allocate slots to airlines and thus manage declared capacity. Level 1 is defined as where the capacity of the airport infrastructure is generally adequate to meet the demands of airport users at all times.

- Noise Abatement Procedures & Runway Nomination

Runway nomination criteria are outlined in M3R MDP Chapter C2: Airspace Architecture and Capacity (Section 2.2.11 Runway nomination rules). Reference is made to Section 9.1.2 of Airservices AIP ENR 1.5-42 (refer to Figure 48). 10 years of meteorological data for Melbourne Airport has been used to predict mode availability by applying rules defined by CASA. To avoid understating potential impacts of M3R, noise modelling has not considered utilisation of the existing east-west runway in M3R scenarios.



Where noise abatement procedures are prescribed, and ATC traffic management permits, the runway nomination provisions of DAP NAP will be applied. Not withstanding this, noise abatement will not be a determining factor in runway selection under the following circumstances (unless required by Noise Abatement legislation):

ENR 1.5 - 42 02 DEC 2021 AIP Australia

a. in conditions of low cloud, thunderstorms and/or poor visibility

b. for runway conditions that are completely dry:

(1) when the crosswind component, including gusts, exceeds 20KT;
(2) when the tailwind component, including gusts exceeds 5KT;

c. for runways that are not completely dry:

(1) when the crosswind component, including gusts, exceeds 20KT;
(2) when there is a tailwind component;

d. when wind shear has been reported;

e. when, in the opinion of the pilot in command, safety would be prejudiced by runway conditions or any other operational consideration.

Figure 48: Extract from Section 9.1.2 of AIP ENR 1.5-42 (02 Dec 2021)

Source: Airservices Australia

As noted by Qantas, if current crosswind limitations were increased, utility of the north-south system would accordingly increase. However, because using these nomination criteria is not feasible according to current regulations, it has not been modelled for M3R.

The current weather ruleset has also been modelled for SODPROPS, including tailwind component not greater than five knots (including gusts) on a dry runway. APAM has been cautious, because of these strict conditions, not to overstate SODPROPS availability and thus justification as respite for residents south of the airport.

Whilst a predicted availability of less than 30 per cent during the night-time across the year was highlighted in the M3R MDP, the predicted mode availability fact sheets highlighted the changes in SODPROP availability across the months of the year as well as by clock hour (on an annual basis). An example from the 'Predicted Mode Availability' Fact Sheet is shown in Figure 49.

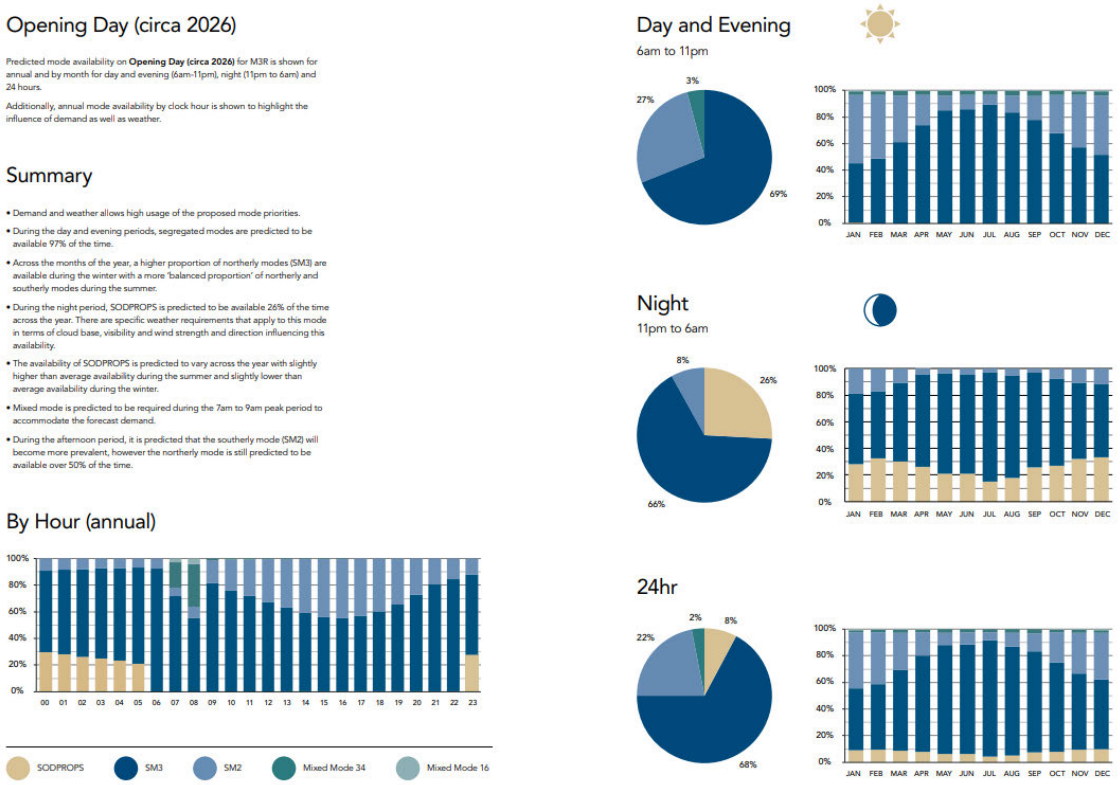


Figure 49: Extract from Predicted Mode Availability – Option 1 fact sheet

Current operational compliance with Noise Abatement Procedures was raised at several public exhibition events. At a community event in Keilor community members expressed concern that aircraft were not following the Noise Abatement Procedures even when there was no wind at night with departures heading south. As communicated during the public exhibition, there are several factors that influence which runway is selected by Air Traffic Control. These rules are highlighted in Figure 48.

The last point (e) can influence use of Runway 09/27, for example:

- If a pilot requests the use of Runway 16/34 rather than Runway 09/27 it can be granted by air traffic control.
- If a pilot requires the use of Runway 16/34 rather than Runway 09/27, air traffic control must grant this access.

To analyse compliance to Noise Abatement Procedures at Melbourne Airport, APAM have compared the runway used by aircraft within the 2019 Noise and Flight Path Monitoring System (NFPMS) data set with Air Traffic Information Service (ATIS) data indicating the nominated runway mode. A summary of the analysis is presented in Table 39 and Table 40 for day and night operations.

It is clear from this analysis that non-conformance with Noise Abatement Procedures occurs when Runway 09/27 (east-west) is nominated as the sole runway for either arrivals or departures - some flights request/require Runway 16/34 (north-south).

Table 39: Noise Abatement Procedure Compliance – Day (0600-2300)

Priority	Runway Mode		Percentage of movements	
			On-mode	Off-mode
1 (equal)	Arrivals - Runway 16 Departures - Runway 27	Arrivals	Over 96%	Under 4%
		Departures	**Under 85%**	**Over 15%**
		Total	Under 91%	Over 9%
1 (equal)	Arrivals - Runway 27 Departures - Runway 27 & 34	Arrivals	**Over 80%**	**Under 20%**
		Departures	Over 99%	Under 1%
		Total	Under 91%	Over 9%
1 (LAHSO)	Arrivals - Runway 27 & 34 Departures - Runway 27	Arrivals	Over 99%	Under 1%
		Departures	**Over 86%**	**Under 14%**
		Total	Under 94%	Over 6%
2	Arrivals - Runway 09 Departures - Runway 16	Arrivals	*Less than 2% utilisation*	
		Departures		
		Total		
3	Arrivals - Runway 27 Departures - Runway 27	Arrivals	Over 94%	Under 6%
		Departures	**Over 87%**	**Under 13%**
		Total	Over 90%	Under 10%
4 (equal)	Arrivals - Runway 34 Departures - Runway 34	Arrivals	Over 99%	Under 1%
		Departures	Under 97%	Over 3%
		Total	Under 98%	Over 2%
4 (equal)	Arrivals - Runway 16 Departures - Runway 16	Arrivals	Over 99%	Under 1%
		Departures	Under 95%	Over 5%
		Total	Under 97%	Over 3%
5	Arrivals - Runway 09 Departures - Runway 09	Arrivals	*Less than 1% utilisation*	
		Departures		
		Total		

Source: APAM using NFPMS and ATIS data, 2022

Table 40: Noise Abatement Procedure Compliance – Night (2300-0600)

Priority	Runway Mode		Percentage of movements	
			On-mode	Off-mode
1	Arrivals - Runway 16 Departures - Runway 27	Arrivals	Under 98%	Over 2%
		Departures	**Under 56%**	**Over 43%**
		Total	Over 82%	Under 18%
2	Arrivals - Runway 27 Departures - Runway 27 & 34	Arrivals	**Over 55%**	**Under 45%**
		Departures	Over 99%	Under 1%
		Total	Over 72%	Under 28%
3	Arrivals - Runway 27	Arrivals	**Over 83%**	**Under 17%**

	Departures - Runway 27	Departures	**Over 71%**	**Under 29%**
		Total	Over 78%	Under 22%
4 (equal)	Arrivals - Runway 34 Departures - Runway 34	Arrivals	Under 99%	Over 1%
		Departures	Over 99%	Under 1%
		Total	Over 99%	Under 1%
4 (equal)	Arrivals - Runway 16 Departures - Runway 16	Arrivals	Over 99%	Under 1%
		Departures	Over 97%	Under 3%
		Total	Under 99%	Over 1%
5	Arrivals - Runway 09 Departures - Runway 09	Arrivals	*Less than 1% utilisation*	
		Departures		
		Total		

Source: APAM using NFPMS and ATIS data, 2022

APAM will work with Airservices to review this analysis and understand the drivers for non-conformance with the Noise Abatement Procedures. APAM will also advocate for regular reporting of conformance to the Noise Abatement Procedures to the community.

Analysing performance of the Long Term Operating Plan (LTOP) at Sydney Airport is also useful for understanding challenges to runway nomination procedures. Sydney's LTOP defines noise sharing targets to the north, east, south and west of the airport. Analysis in Table 41 highlights that the LTOP targets set to the north (towards the CBD) are not achieved with movements above 30 per cent. The western runway end target is never met with less than two per cent of movements utilising the east-west runway to the west.

Table 41: LTOP Noise Sharing Targets and operational performance – Sydney Kingsford Smith Airport

	LTOP Target	2017	2018	2019	2020	2021
Northern Runway End Impact	17%	32.9%	33.4%	33.5%	40.3%	33.5%
Eastern Runway End Impact	13%	14.4%	14.6%	15.0%	6.9%	11.8%
Southern Runway End Impact	55%	51.4%	50.7%	50.3%	52.5%	53%
Western Runway End Impact	15%	1.3%	1.3%	1.3%	0.2%	1.6%

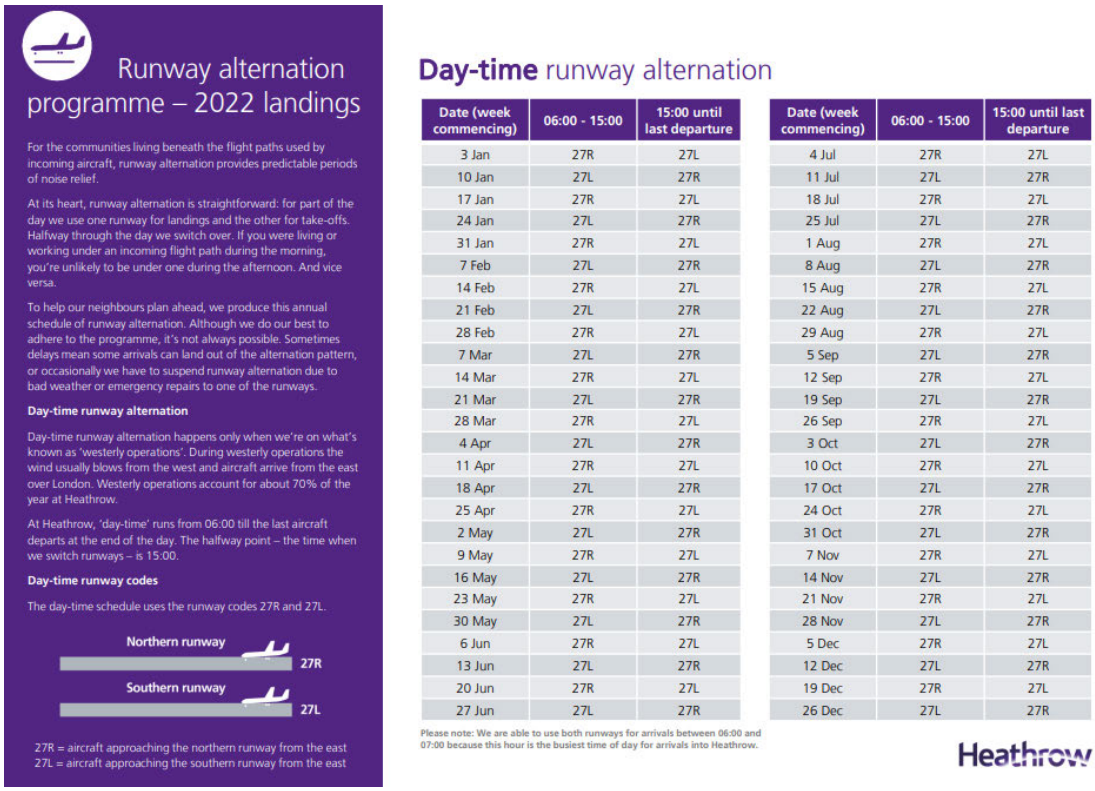
Source: Airservices 'Aircraft In Your Neighbourhood', accessed November 2022

- Respite

Option 2 for segregated modes was included in the M3R proposition as it enables a predictable regime of respite. Similarly, SODPROPS mode facilitates some respite to communities south of the airport. Respite charts were prepared to demonstrate the percentage of days when little or no aircraft noise events are expected during the nominated time.

The opportunity to provide respite using Option 2 (or to a lesser extent Option 1) is dependent on the runway demand remaining within the capacity of these segregated modes.

Runway alternation has been applied elsewhere as a mitigation for community noise impacts through predictable relief – most notably at Heathrow Airport, as shown in Figure 50.



Date (week commencing)	06:00 - 15:00	15:00 until last departure
3 Jan	27R	27L
10 Jan	27L	27R
17 Jan	27R	27L
24 Jan	27L	27R
31 Jan	27R	27L
7 Feb	27L	27R
14 Feb	27R	27L
21 Feb	27L	27R
28 Feb	27R	27L
7 Mar	27L	27R
14 Mar	27R	27L
21 Mar	27L	27R
28 Mar	27R	27L
4 Apr	27L	27R
11 Apr	27R	27L
18 Apr	27L	27R
25 Apr	27R	27L
2 May	27L	27R
9 May	27R	27L
16 May	27L	27R
23 May	27R	27L
30 May	27L	27R
6 Jun	27R	27L
13 Jun	27L	27R
20 Jun	27R	27L
27 Jun	27L	27R

Date (week commencing)	06:00 - 15:00	15:00 until last departure
4 Jul	27R	27L
11 Jul	27L	27R
18 Jul	27R	27L
25 Jul	27L	27R
1 Aug	27R	27L
8 Aug	27L	27R
15 Aug	27R	27L
22 Aug	27L	27R
29 Aug	27R	27L
5 Sep	27L	27R
12 Sep	27R	27L
19 Sep	27L	27R
26 Sep	27R	27L
3 Oct	27L	27R
10 Oct	27R	27L
17 Oct	27L	27R
24 Oct	27R	27L
31 Oct	27L	27R
7 Nov	27R	27L
14 Nov	27L	27R
21 Nov	27R	27L
28 Nov	27L	27R
5 Dec	27R	27L
12 Dec	27L	27R
19 Dec	27R	27L
26 Dec	27L	27R

Figure 50 Heathrow Airport – Runway Alternation programme 2022 landings

Source: Heathrow Airport, 2022

- Runway Crossings and Intersection Departures

Taxiway infrastructure for the parallel north-south runway system has been designed to minimise capacity restriction (including by negating justification for end-around taxiways). Locating crossing taxiways 'behind' intersection departure points on the existing runway supports efficient crossing operations. It is important to note that a significant share of existing traffic using Runway 16/34 operates from intersection departure points – particularly domestic, narrow-body aircraft.

APAM notes that a trial, recently implemented by Airservices as part of the Post Implementation Review for Brisbane Airport's recent third runway commissioning, involved a restriction on intersection departures from the new runway. The trial "identified a maximum of 1 decibel difference in pre-trial versus trial operations results for jet aircraft and no identifiable difference for turboprop aircraft". APAM acknowledges that, though small, such a difference could be important to the community and should be further explored through the detailed design of the proposed runway.

- Preferential Allocation of Flights To/From North and West

APAM have proposed a SODPROPS mode that prioritises flights to and from the north. Availability of this mode is limited by strict conditions necessary for its operation, which include that it can only be adopted at night (11pm to 6am). APAM notes that Brisbane Airport's recent Post Implementation Review (PIR) include trial of extension to SODPROP hours to 8am on weekends

when weather conditions permit. APAM undertakes to explore similar periods of operation for SODPROPs during detailed M3R airspace design.

Limitation of departures to the south, as requested by Brimbank City Council, has been adopted within the Draft Runway Operating Plan. When weather permits, departures to the north (using Runway 34 direction) are preferenced over departures to the south, however southerly winds require use of Runway 16 once nomination criteria is reached.

- Operational Strategy Recommendations

Daily alternating use of runways has been adopted regarding Option 2 for segregated modes, though this retains preference for Runway 34 (rather than alternating between 16 and 34).

Use of the new runway only when the existing runway is at capacity was not considered in the Preliminary Draft M3R MDP. Whilst single runway modes are mentioned within the modelling, the default utilised segregated modes rather than single runway modes.

Limiting the use of the new runway at night was included in the segregated mode and SODPROPS operations (where the new runway was only used for arrivals or departures). However, adoption of a single runway mode at night for the existing north-south runway was not included.

Requests to incorporate the four-runway system within M3R scope are not consistent with the 1990 Melbourne Airport Strategy (which did not commit to building both runways) or the Master Planning of Melbourne Airport since 1998. The 2022 Master Plan continues to safeguard the four-runway system and Melbourne Airport will continue to review the appropriate triggers and timing for the fourth runway.

- Runway Modes to Explore During Detailed Airspace Design

As noted earlier, there are runway modes referenced within the Preliminary Draft M3R MDP (such as single runway modes for the north-south runways) that have not been adopted as part of the Draft Runway Operating Plan.

There are also exemplar runway modes at Sydney Airport (refer to Figure 51) and Brisbane Airport (refer to Figure 52) that could be explored by M3R in further detailed airspace design, including:

- Sydney Airport:
  - Mode 1 (but towards the north for Melbourne rather than bay)
  - Mode 5 & 14a (arrivals on Runway 27 with departures to the north)
  - Mode 7 (departures on Runway 27, arrivals from the north)
- Brisbane Airport:
  - Mode 11 & 12 (Dependent Opposite Direction Parallel Runway Operations - DODPROPS)
  - Mode 4 & 8 (arrivals on Runway 34R and departures on Runway 34R and 34L)
  - Mode 5 & 9 (arrivals on Runway 16L and 16R, departures on Runway 16L)

Note the use of DODPROPS has a lower capacity (movement rate), however a higher crosswind tolerance than SODPROPS as an aircraft would not be permitted to take-off from Runway 34R until an aircraft landing on Runway 16R is safely on the ground.

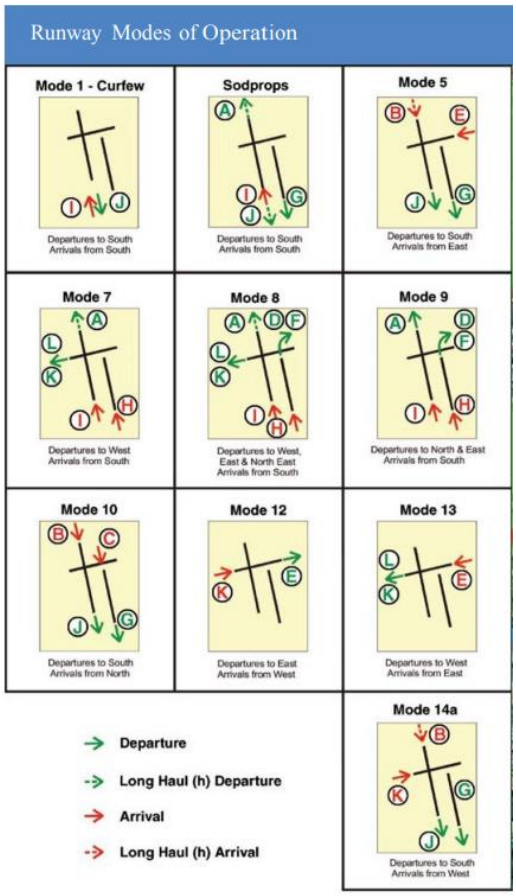


Figure 51: Sydney Airport – LTOP modes

Source: Sydney Airport Community Forum, accessed in 2022

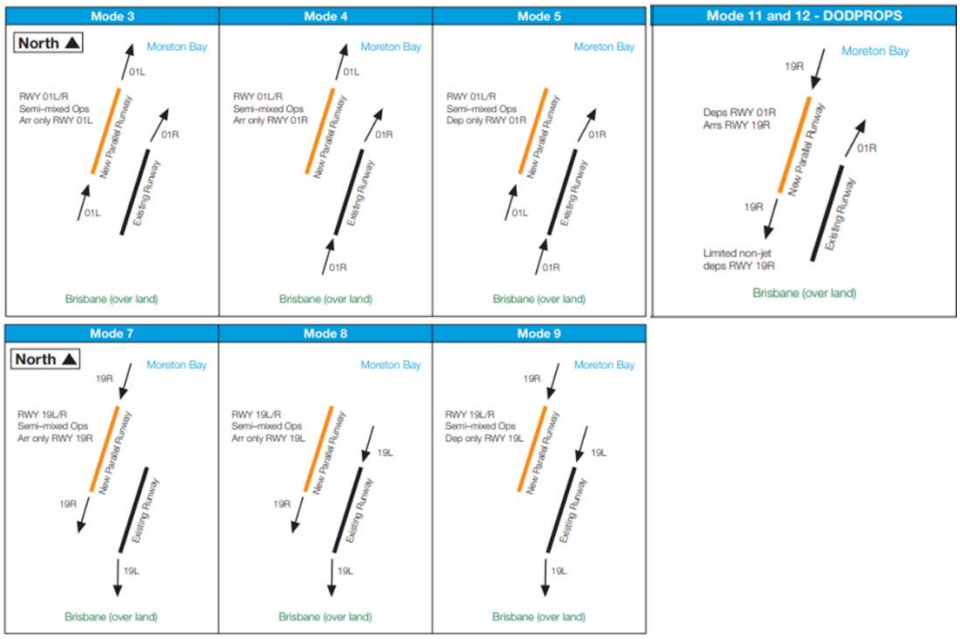


Figure 52: Brisbane Airport – New Runway Project EIS/MDP Draft Parallel Runway Operating Plan

Source: Brisbane Airport New Runway Project EIS/MDP, accessed in 2022

In addition to the exploration of the benefits of single runway modes during detailed airspace design, APAM are proposing additional modes for review (refer to Figure 53). It is important to note that the impacts of these modes on other Melbourne basin airports and operators will need to be considered as well as any benefits to the community (regarding noise/respite).

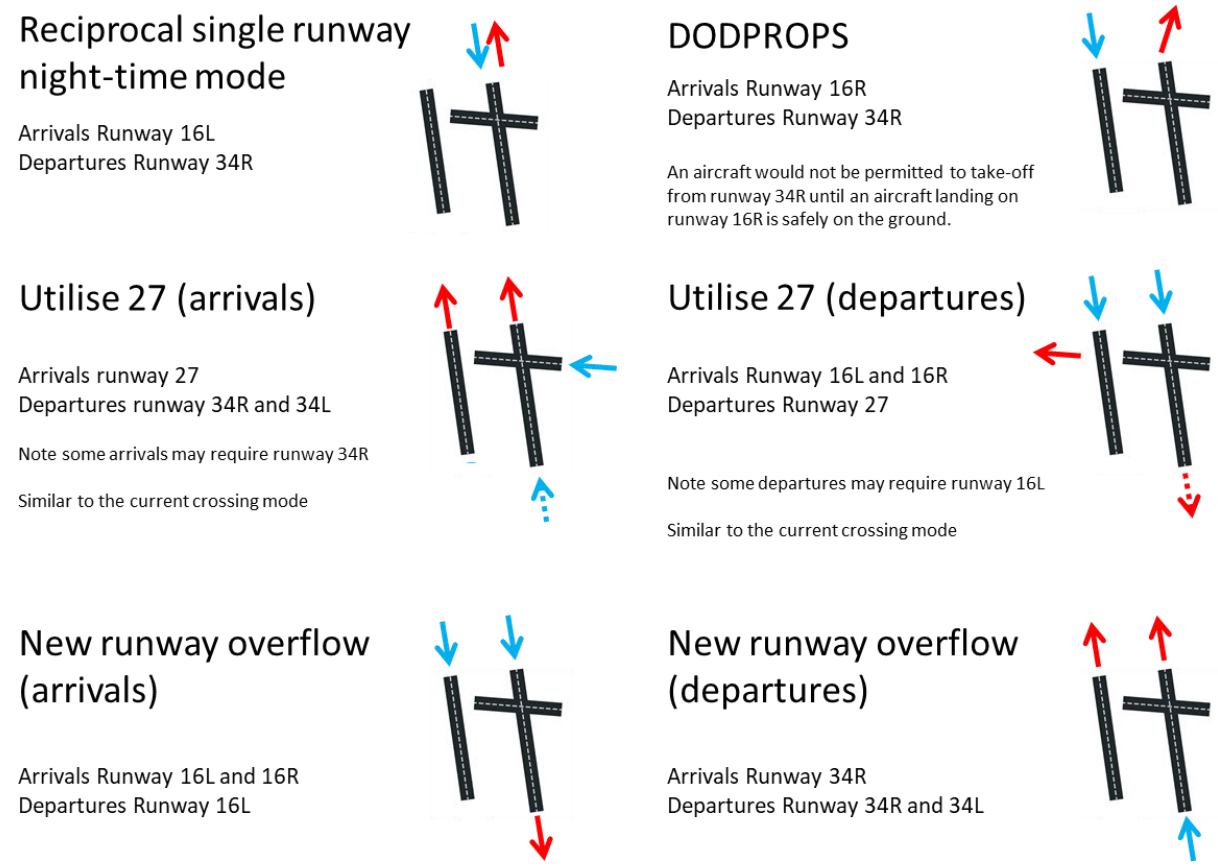


Figure 53: Proposed runway modes to explore during detailed airspace design

- Historical Plans for Airport

The submissions relating to the 1990 plans focus on the four-runway layout that allows more operations to the north and west. These submissions do not reference that the MAS 1990 Supplement Report includes modelling for a three-runway system for a wide-spaced north-south runway (V324).

In addition to the three runway ANEC not being mentioned in submissions, the evolution of planned runway usage over the last five master plans prior to Master Plan 2022 is not mentioned.

D3.6 Changes to Preliminary Draft M3R MDP

No changes are proposed to the M3R MDP related to the Draft Runway Operating Plan. There will, however, be substantial additional exploration and consultation of operating modes and impact that shall be completed through the detailed airspace design process.

Per Issue D2: Future Use of 09/27 (East-West) Runway, additional material has been Appended to MDP Chapter E4: Draft Runway Operating Plan to address infrastructure and future operation of existing Runway 09/27.

D3.7 Summary and Conclusion

APAM is confident that the M3R MDP incorporates appropriate runway modes that effectively manage and mitigate, insofar as practicable and in accordance with applicable regulations and industry standard, impacts of noise on the community. It is however acknowledged that further improvements are likely achievable and thus further exploration of alternative modes is to be incorporated in the detailed airspace design process. Importantly amongst these will be modes that incorporate distribution of traffic to the east-west runway to facilitate noise sharing.

APAM cautions implementation of noise sharing targets (similar to Sydney) unless the targets reflect current runway nomination restrictions – otherwise they risk being unachievable. Specific noise sharing targets should be considered against operational limitations to ensure that targets can be achieved consistently for the community.

Community consultation and engagement will be a crucial element of finalising the airspace design and runway operating plan.

D4 Flight Path Design

D4.1 Summary of Issue

This Issue relates to submissions commenting on the proposed flight path design for M3R. This includes references to:

- Flight paths not supported
- Insufficient information provided on the flight paths
- Previous flight path changes and their impacts
- Historic flight paths from previous Melbourne Airport plans
- Concerns that flight paths are located above residential areas
- Concerns over the altitude of aircraft and specific design parameters (such as turn locations, descent location, angle of approach, track spread, ‘short cuts’
- Suggestions for flight path design improvements, such as avoid residential areas, spread flight paths, use RNP-AR approaches etc.
- Adopt learnings from Brisbane Airport and inclusion of an independent body to review design.

D4.2 Number and Types of Submissions

416 submissions contain reference to the Flight Path Design Issue. They were received from:

- Community
- Community organisations:
    - Melbourne Airport Community Action Group (MACAG)
    - Keilor Residents and Ratepayers Association (KRRA)
    - East Melbourne Group
- Non-government organisations and commercial entities:
    - Essendon Fields Pty Ltd (EAPL)
    - Qantas Airways Limited (Qantas)
    - Virgin Australia
    - Australian Pilots Association (AusALPA)
    - Skydive Australia, Experience Co Pty Ltd (Skydrive)

  - Global Ballooning Australia
  - Beulah International
  - Keilor Primary School Council
  - Melbourne Airport Community Aviation Consultation Group (CACG)
- Government:
  - Department of Defence
  - Maribyrnong City Council
  - Wyndham City Council
  - City of Yarra
  - Boroondara City Council

D4.3 Discussion of Submissions

The submissions relating to this Issue have been grouped into common sub-themes.

Against Proposed Flight Paths

There were a number of submissions clearly stating opposition to the proposed flight paths:

- Oppose / dislike / object to / not in favour of the proposed flight paths
- More work needs to be done on proposed flight paths
- Replan / review / change the proposed flight paths.

Some example comments include:

> *"I oppose the third runway flight Plath."*
>
> *"A complete overhaul of the flight paths - existing and proposed - needs to occur to not make this any worse for the community"*
>
> *"This flight path and associated pollution need to be reviewed"*
>
> *"Dislike flight path"*
>
> *"Do not like the new flight path for the third run way."*
>
> *"Please relocate the runway, replan the flight paths, and mandate aircraft to take off more steeply and over an area with no housing."*
>
> *"I strongly object to the proposed flight paths for the new 3rd runway at Melbourne Airport."*
>
> *"I strongly object to the proposed flight paths for the new third runway at Melbourne airport."*

Concerns With Information Provided

The most frequently raised point within submissions was related to having no prior knowledge of the proposed flight paths as part of M3R. Some examples of submissions are highlighted below:

> *"Our house located under the flight path, I did not purchase a million dollar property to now be under a flight path, I'm strongly against the introduction of this new flight path."*

“We purchased this house and were clearly advised that this house was not and would not be in any flight path.”

“We bought the property because it was not under a flight path, you should not be allowed to change it and impact our amenity.”

“The proposed third runway creates a flight path directly over my home. I purchased a home in this area to avoid air traffic.”

“One consideration I made when I purchased the property was to make sure it was not directly under a flight path.”

“I am very disappointed that this will be over my address especially the flight during the night. This is not acceptable given we purchased our property knowing where the flight paths were already”

“However, when I purchased my home I NEVER imagined that I would be under a flight path.”

“I chose this place without large planes coming overhead and I’m dammed if I want to change that because of the third runway.”

“People who have homes in these areas did not choose to live in a fly zone. They chose a quiet seaside community.”

“When purchasing our new home in Altona we believed we would be further away from flight paths and now find we are going to be under the new flight paths from the proposed new 3rd runway.”

There were a number of submissions that stated there was insufficient information provided related to the flight path design. Some example submissions include:

“Provide updated more detailed information about new flight paths for aircraft taking off/landing to those properties in areas that will be under a newly created flight path.”

“To enable greater traffic at Tullamarine airport and a third runway I am assuming that the flight paths will change and the information lacks clarity re this issue.”

“We need detailed information about the number of planes, the routes and the height they will fly ie runway noise tool and noise tool over suburbs.”

“I am concerned at the noise levels that will impact me with the third runway and the lack of engagement with those under the flight path. We have been given almost no opportunity to understand how this will impact us.”

“This information not very clear and transparent what you are planning on doing and where the new flight paths will go. What areas will be majorly impacted with the excessive noise of additional planes flying with this third runway”

“Independent flight path modelling is necessary that provides realistic information upon which noise impact and environmental impact can be assessed by those effected.”

“The online information is very disappointing. Hard to navigate, and I’m not sure it would pass an accessibility test.
Most people, I would assume, really want to know “how will this impact me”. The

information fails to provide any information on the current status (as a point of comparison)"

There was a submission referencing that the online tool did not reflect their current experience of flight paths in their area:

"The modelling shows the existing arrivals corridor over Lancefield (attachment 2) to be very narrow with flights at around 6000-6500 feet. This arrivals corridor, in reality, is much wider than the 3km buffer zone shown. Many times, daily, planes do not enter at the top of this narrow corridor above Lancefield, but planes travelling from the west significantly cut the corner to it and travel over/adjacent to our property and join the corridor between Lancefield and Romsey"

"There are still errors appearing in the Flight Path and Noise Tool as on some locations, only departure or arrival altitude will appear"

In addition there was a submission that requested the exact flight paths for the third runway:

"We'd like to see the exact flight paths for the third runway. The one you have online doesn't show me exactly where above my property the planes will be flying."

Existing Flight paths – Previous Changes and 'SHEED'

A clear contingent of comments critically discussing previous flight path changes was lodged. They referenced changes south of the airport (lowering of flight paths), a change in Kinglake and a change over Kealba.

Some example submissions regarding the lowering of flights paths to the south of the airport are highlighted below:

"Ever since the planes were allowed to fly in at a lower height, we are disturbed by the noise."

"Airservices Australia claims to analyse and report on complaint trends and focus on the number of complainants and the issues they raise. Comparing Quarter 2 data 2019 to Quarter 1 data 2019 (the period when the decrease in flight path altitude was implemented) you can see that 60 complaints were registered vs 40 in the Q1 period. Remembering that Airservices Australia only permits one complaint per household period, ever. The suburbs recording the most complainants were; West Footscray (8), Yarraville (4) Kingsville (4) and Thomastown (3). Interestingly the report notes that these suburbs were affected by Runway 34 arrivals but without any mention of the impact of the new lower Smart Path approach.
To me this highlights that Airservices Australia has not taken the time to understand the impact to communities."

"Some thing happened in those 12 months that made the plane noises unbearable. The planes started appearing much lower and much louder. A little bit of research and I realised the planes had been lowered due to new technology with promise that there would be no change in noise levels. That turned out to be incorrect as I wasn't even aware of the planes or that I was under a flight path until that happened. It's only once they were lowered we realised how much impact the planes had on us."

"Please consider communities that are far from the airport, who would have never in a million years thought about the possibility of air services lowering the altitude of the planes (by claiming there would be no change in noise) however causing such an impact on us residents 13 kms from the airport."

"The impact of aircraft noise is not being managed now within the reduced flight height limits (introduced in 2018)"

"We have planes flying low overhead every few minutes due to flight path changes which were implanted without proper community consultation."

"They were bad a number of years ago but only the height of the flights was reduced they became unbearably loud"

"Since the lowering of the flight path a few years ago I find it very difficult to get a proper sleep any day or night if the week. The community was not consulted then and it makes a difference in all of our lives. I find it absolutely unacceptable that they now want even more plans to disrupt our lives."

"On the 8th November 2018, the airspace at the edge of Port Philip Bay was lowered. The airspace changes were made to accommodate the use of 'Smart Path' technology on incoming flights as they approach Melbourne Airport to land from the south."

"The proposal is unacceptable and having been affected by the lowering of the flight paths over our house a few years back I am very aware of the negative effects of airport noise."

Some example submissions regarding Kinglake and Kealba are highlighted below:

"Not only are multiple planes launching in quick succession, but Kealba is under a new loop U-turn flight path (diagram attached).
…
Before Corona restrictions, the airplanes were flying over paddocks, but now the airplanes are flying over our heads! Why have these new flight paths and schedules been approved?"

"Several years ago, the Airport diverted the flight path from Kinglake to Kinglake West without consultation. This resulted in our peace and quiet being disrupted with regular flights going overhead during the day and especially the inward bound international flights which are particularly disruptive in the evenings."

"Local residents have been long-suffering due to the invasion of noisy and unwelcome aircraft. The original relocation of the flight path over our region was done without any public consultation. It was imposed upon us without appropriate and inclusive consultation with the community."

Other submissions referencing changes:

"In that time, I have noticed there are many more planes that fly near and over my house, than when I first moved into the area."

"…with changing laws allowing for planes to be significantly lower than they used to be."

"When I moved to Altona 40 years ago there were NO flights across Altona, suddenly there were flights on 'windy days' according to Melbourne Airport, which seemed to have now become permanent."

In addition, there were a number of submissions referencing the current flight path over Essendon Fields (known as the 'SHEED' approach). Some example submissions are highlighted below:

"The existing Essendon airport flight path should not be expanded to include the extra Tullamarine air traffic."

"Strathmore and Essendon residents severely penalised by your flight path. We already have Essendon Airport flight traffic."

"In creating a commercial flight path over my Coburg area for the third runway will exponentially increase the air traffic above my area."

"I wish to object in the strongest terms to the proposed incoming flight path for the third runway that runs over Essendon Airport."

"Now we're told that Essendon airport is staying plus the flight routes for Tullamarine are going to be altered and significantly increased so that Strathmore will be directly under the major flight paths."

Other submissions referencing existing flight paths covered the following topics:

- Current flight paths being restricted to less populated areas
- Concern about track divergence (aircraft not following the 'normal' flight path)
- Impacts of aircraft circling overhead
- Concern about M3R flight paths being 'trialled':

"The flight path to accommodate a third runway is going to affect too many people. The current set up means flight paths are restricted to less populated areas, and this change is going to put a lot of planes directly over the inner north suburbs."

"Currently a lot of planes do not follow the exact flight path and ogle over my house"

"Planes not only take off and land but also circulate around adjoins suburbs so noise is continuous for residents over current nth to sth runway."

"I am writing to object to the master plan and development plan that Melbourne Airport has release and the north-south runway and new flight paths currently being trialled. "

"Many houses especially those in Kealba were not built to withstand the aircraft that have flying over our houses, especially since Melbourne Airport for the past few years started their trial flight paths."

Historic Flight Paths

There were a number of submissions that made reference to the '1990 flight paths'. Some example submissions are shown below:

"My understanding is that the 1990 plan involved no further aircraft corridors (and related noise impacts) being developed."

"This airport was planned to have 50% of the airport's aircraft not flying over Melbourne at all, AND all Melbourne flights using planned noise corridors over parks and factories, NEVER flying directly over homes and schools from Keilor, Kealba, Calder rise to Sunshine, St Albans and Cairnlea and Bulla. That is why in 1990 the planned airport ultimate flight capacity was only 350,000 flights per annum till 2050."

"The currently proposed runway is not what was promised in 1990."

"Melbourne Airport originally obtained permission to operate and plan its future on the provision that neighbouring communities' health and welfare were not impacted. The original 1990 (and still binding) contract between the Federal and State Government and the Victorian People was carefully crafted to ensure the people of Keilor, Gladstone Park

and Bulla were protected from aircraft noise. The second runway was to be used only for lighter and quieter aircraft in busy periods and mainly to the north."

"We are concerned that Melbourne Airport have totally dismissed the Dames and More report and its recommendations and want to move to parallel Two runway system which will see simultaneous landings and take-offs effectivity doubling the capacity of the airport with no regard to the impact of noise will have on the wider communities of Melbourne"

Concerns Over Residential / Properties

The vast majority of submitters (nearly 250) indicated concern that the proposed flight paths are located over residential areas or over their property. This included the following concerns:

- Flight paths over personal area, community or property
- Flight paths over general residential areas or densely populated areas
- Flight paths over sensitive facilities (including schools, hospitals, CBD and planned PSPs)
- Unfair distribution of impacts specific to western suburbs and low socio-economic areas
- Preference for flight paths over industrial or non-populated areas.

Some example quotes from submissions are shown below:

"it is completely unconscionable to place a new flight path over established housing estates"

"It seems the positioning of the proposed third runway is to maximize flight over residential areas. You have the majority of the compass that you can utilize for a flight path (North, East, West), yet you still decide to have planes flying South and South East."

"An absolute disgrace to put Brooklyn in the position of nice again being hit with pollution from aircraft flying overhead."

"I live in Hobsons Bay and am devastated by the idea of planes going over our area."

"Bringing a major flight path over Williamstown - with over a 100 planes a day and no curfew - is unreasonable and unfair. None of us bought homes here expecting to be under the major flight path for Melbourne Airport."

"The third runway project flight paths results in significant increase of air traffic over Sunbury and Gisborne, growth corridors in North, indicating poor planning"

"it seems the proposed new runway disproportionally disadvantages certain densely populated suburbs, yet the northern less populated areas are unaffected, doesnt make any sense."

"The proposed flight path for the 3rd runway will result in unacceptable increase in noise from aircraft flying over Canterbury and other nearby suburbs, which are under the flight path."

"Obviously I'd prefer to see that flight path noise is spread more evenly over inner Melbourne and not concentrated above East Melbourne 3002 which is predominantly residential."

"Represents an unacceptable increase in level of noise over a highly populated area"

"I am not happy about the proposed flight path for the third runway flying directly over our property."

“What an absolute disaster for us, my wife and I live directly under all the flight paths proposed and seem to be collateral damage for the development of the airport and its profits, we have lived in this house for 40 years and like living in the Kealba community”

“I have just moved to Greenvale and have discovered my house will now be in a direct flight path if the third runway goes ahead. Had I known I would never have purchased land and built here”

“Our house located under the flight path, I did not purchase a million dollar property to now by under a flight path”

“We arecery concerned and absolutely against the proposal. We bought the property because it was not under a flight path, you should not be allowed to change it and impact our amenity.”

“Against new run way having flight path over property or suburb”

“It is once again people who live in lower socio-economic areas in the West, whose health and wellbeing are being exploited for corporate profit.”

“It seems that the aircraft will be flying over densley populated areas including Craigieburn where I live.”

“I'm greatly concerned about the increase in noise and pollution over a densely populated part of Melbourne.”

“The proposal will direct thousands of noisy aircraft over densely populated areas that currently do not have significant numbers of aircraft movements. The increase in plane movements over densely populated innercity suburbs, such as Albert Park will significantly reduce my quality of life”

“It is concerning how often it is mentioned that the Melbourne Airport must maintain its curfew free status at any cost despite there being such a large increase in the number of planes and the proposed flight paths being straight over the nearby communities”

“I feel this will place an unreasonable burden of noise to a few suburbs of Melbournes western suburbs.”

“I note the plans disregard the existing communities and age of houses that were built prior to the airport existing or were built prior to the newly proposed runaway changes and flight paths.”

“The current PSPS and Planned PSPS around Sunbury fall in part directly under many flight paths.”

“This new run way should not be flying over the cbd and inner surounds. affecting millions of people! the flight path comes in from the east then bends to the north over inner melbourne! “

“Our community will be in an even worse situation with Keilor Primary School and Overnewton College being much closer to the end of the North South runway. How can a teacher be expected to teach with planes interrupting classes every 2-3 minutes. Keilor Library is right under the flight path so 1 assume it will have to close. Keilor Bowls Club is next door and Keilor Football Club next door to that. Keilor Private Hospital and Keilor Village Preschool are just 160 metres from the proposed flight path.”

"You also need to take into consideration other amenities and services in the Port Melbourne areas that may be affected by noise such as the Port Melbourne Primary School and Port Melbourne Secondary College!"

"The proposal does not seek to consider flying over industrial areas / non-populated regions as a preference which currently aircraft guidelines state should be utilised as a priority."

Concerns About Other Areas of Interest

A number of submissions also expressed a concern of the proposed flight paths being over wildlife areas, recreation areas, heritage areas and areas considered hazardous (e.g. fuel tanks). Some example submissions are below:

"After looking at the flight paths I am alarmed that nearly all flights seem to loop over Jawbone Marine Sanctuary which is adjacent to an important wetland area that has birds that fly in from all over the world. The sheer number of planes that will be in their airspace is bad enough, but the noise will affect their nesting/breeding patterns and habitats."

"I do not approve of the proposed corridor over Williamstown, a recreation district for many. Especially flying over precious wetlands where rare birds live."

"Not only is the new runways going to now impact an enormous amount of houses not in the flightpath before but also a significant amount of wildlife in Brimbank Park which at present does not have planes flying overhead."

"not only does the flight path impact noise and no doubt disturb native wildlife"

"I've always wondered about planes flying over the large grouping of Oil Tankers in Spotswood and Yarraville. The very large tanks belonging to Caltex, Mobil and Shell contain Petrol, Diesel and Jet Fuel."

"Williamstown Beach provides a natural haven for people from all over the west of Melbourne to relax and enjoy nature at either the beach or along the many walking paths through the wetlands. If Williamstown is to host more than 90 planes a day cruising overhead this natural amenity (one of few) for people of the west will be lost."

"The flight path seems to be over Jackson's Hill in Sunbury. Jackson's Hill contains a heritage listing that is earmarked to be turned into an arts precinct. There, also, exists two primary schools. Due to the altitude of this area, all aircraft should be rerouted to avoid Jackson's Hill altogether."

"the extended flight path directly above my home and Hanging Rock. This noise increase will have an adverse impact on achieving the declared Victorian Government and Macedon Ranges Shire Council strategic plan objective to '...enhance the secluded ambiance...of Hanging Rock and its surrounds'"

Altitude of Aircraft and General Aviation / Helicopter Operations

Submissions referenced the altitude of aircraft in their area and references to General Aviation (GA) and helicopter operations in their area. Some example submissions are referenced below:

"I live in an area where we have low planes."

"now we will have to put up with the intrusion of low flying aircraft"

"Please do not do this, planes are noisy and fly too low over Lancefield as it is"

"I have for 20 plus years chased excessive noise, low flying, planes going over residential areas and so on."

"Since early 2022, the planes seem to be flying lower than usual, and the noise disturbance is far greater. I am frequently woken by planes at night."

"No new flight paths over Cremorne. We suffer enough noise harassment by being buzzed by low flying helicopters daily and don't need more noise from your aircraft."

"The new runway will impact directly on me as the number of planes flying overhead of my property and at such a low height will greatly increase"

"I sit here with many a large LOW planes currently flying over ahead, every 2 minutes currently. Sunday morning! I have complained already as the planes fly in too low. With a comment that you've got no control over them."

"We already have a lot of local small aircraft because of the Laverton airbase and patrols along the water so we definitely don't need an extra lot of large aircraft, with increased flight numbers, flying over our house."

In addition to the concerns regarding altitude, there were queries regarding the standards applicable to aircraft altitude. Some example submissions are referenced below:

"There needs to be limits on how low the planes can fly - at the moment they are often flying much lower than in the past and creating much more disturbance."

"and yet no details have been provided on measures such as: 1. Minimum altitudes over residential areas"

"There are already too many aircraft flying well below the legal height and disturbing residents along flight paths, and complaints do nothing to help."

"Regulation 157 of the Civil Aviation Regulation 1988 states that pilots must not fly over towns and populated areas at a height lower than 1,000 ft. Yet, my family and I and homes in my area, under the proposal, will have constant large aircraft flying above us at 600ft and 700ft (per the Noise Tool provided by Melbourne Airport)! If it is illegal for aircraft to fly below 1000 ft above populated areas, how can Melbourne Airport be proposing for hundreds of large passenger and freight aircraft to be flying only 600ft above me, my home and the whole suburb of Keilor?"

"Where we are situated incoming flights turn thus a higher level of noise - two main airlines Qantas and Emirates fly lower than 100m (mostly their A380s) what mechanisms will you employ to police and thus fine offending airlines"

Concerns With Design / Aircraft Operations

Submissions from the community referred to the following points:

- Concern that a turning location is over their area / property
- Calls for more utilisation of the north
- Concern about non-standard routes (i.e. track spread, shortening, short cuts, early turns etc)

- Query about why departures have to turn rather than stay on runway heading, and restriction on turns to the south-west
- Concern about non-standard approaches (e.g. angle of approach, location of descents, stepped down approaches not being followed)
- Concern about impact of flight paths combined with other aviation activity.

"Where we are situated incoming flights turn thus a higher level of noise"

"My suburb is where the arriving planes swing around and start their descent to the north-south runway. "

"Further, our property appears to be located at a turning point - so it is not just the noise of the aircraft flying in a straight line, but the loud whistling noise as they adjust throttle and pitch to prepare for landing. Aircraft also regularly have their wheels down, or lower their wheels over our house, further increasing the noise."

"opportunities to make aircraft turns happens over green space or over the bay wherever possible. Being based in the Newport / South Kingsville area there is already a lot of noise on certain days and wind conditions. In particular where the turn from the West for a southern approach occurs my current and previous property vibrate quite a bit, including at night."

"yet the northern less populated areas are unaffected, doesnt make any sense."

"Why can't the runway be positioned do that planes approach from less populated areas for example come in from north west rather than current approaches."

"Prioritising north incoming runways"

"From observations we have also seen aircraft for years but noise or vibration was never an issue as the aircraft followed the M80 ring road out then turned, now for some reason they cut the corners "probably to save fuel as they now turn directly over the hospital almost above my residence and start their climb leaving me in the wake and the noise continues for approximately 10 seconds"

"clear some pilots decide to take shortcuts to their flight plans and just fly across the city whenever they want instead of flying around the outskirts of the city."

"However, it is important to note that even those who live outside a particular contour might still experience a higher level of noise or some noise. This is because aircraft can fly anywhere in a designated flight path and not just in the middle of a flight path."

"As our house resides in the way of many flight paths and also resides at the inner ring of the flight path we get the brunt of most of the overhead flights and noise pollution for simply the reason it cost less to fly a shorter distance since pilots are incentivised save on fuel they will chose that shorter distance when making a u-turn to align itself with the direction of the runway"

"We are also heavily impacted by noise during strong northerly winds when aircraft turn right immediately after take off at low altitude over Bulla township.
The township is subjected to additional noise by over flying aircraft if Melbourne Air Traffic Control vector aircraft directly over us for shortened approaches."

"I do not see why the future flight path of the 3rd runway doesn't just follow that new runway direction, ie just stay straight along the exact direction of the runway line, just as it seems the planes currently do with the existing north/south runway.

Why make the flight path head in a more easterly direction and why does it have to have a turn at the northern end, instead of straight in & out?"

"Sydenham Rail Mast – why must it stay in that particular place?"

"The lower approach angle will have huge noise impacts on our community. Which is unacceptable"

"as due to where Sunbury is located aircraft are beginning their decent and decreasing throttle; the noise of which is quite loud and disruptive, especially in the early hours of the morning"

"planes also seen to be ignoring the step down approach, meaning that they are much lower for much longer."

"As you might be already aware Flight Path means not only commercial flights, private flights, emergency aircrafts but since we are close to RAF base and Aircraft pilot training, we have seen massive increase in number of flights and choppers travelling on the top of the house."

Suggestions – Avoid Residential Areas

Common suggestions from community submissions request avoidance of residential areas as a core element of flight path design. These submissions referenced:

- Adjust to avoid residential or otherwise important / sensitive locations (e.g. Keilor, Sunbury, Romsey, Hanging Rock, wetlands) and designate restriction areas
- Reduce impacts to residential areas
- Target areas already impacted
- Utilise green space, rural, industrial, non-residential and roads rather than suburbs.

Some example submissions are included below:

"Find another path. Does not need to go other residential houses in Keilor"

"Melbourne New runway should avoid residential area especially at night as we are light sleepers"

"It is TOTALLY UNACCEPTABLE to allow another runway when already our residential living in Wattle road, Hawthorn is in the Flight path and we have far too many planes flying over our house. It is UNACCEPTABLE AND UNFORGIVABLE to allow planes to fly over houses day and night as has been the case prior to Covid"

"It cannot be flying over houses"

"Direct planes over an area of less population density for the health of our community"

"Change the flight path to go over less populated areas."

"Why is it that the flight paths of all these planes aren't being routed between Sunbury and Mickleham where there are minimal to no housing estates? Instead, the choice is to go over heavily populated suburbs/areas. It doesn't seem very logical"

"Proposed flight plans could avoid sunbury more."

"The flight path should be moved to where there are less residential homes."

“Would it possible for aircraft to set their flight paths at least 2 km north of Barry Road? The north side of Barry Road is industrial. This would abate the noise levels currently experienced by Campbellfield residents.”

“I live in Pheasant creek, Victoria. Currently there is a flight air path that is about 3-4km north of Pheasant creek.
With the expected increase air traffic that the third runway will bring, will the Melbourne Airport / Aviation industry consider moving this flight air path 15km north of pheasant creek.”

“3rd runway should go ahead but the flight path needs to be adjusted to least impact of residents.”

“why is the new flight path not going over the west side of the airport which is way less densely populated”

“From looking at the interactive map it seems silly that the flight path is going through a whole stream of Melbourne suburbs, it's almost like the flight path has been selected to go over some of Melbourne's wealthiest suburbs. Is it not possible to cut through Port Phillip Bay and then go over the least amount of housing, selecting where there is lower density living as well...”

“Suggest flight paths be directed over less densely populated or industrial areas”

“Build in restriction areas into the flight path modelling and show the options.”

“I think it would be great to divert the flights over the busy roads instead of over the suburbs.”

“Are you able to design it so that the noise is over the industrial areas rather than residential?”

“It seems the positioning of the proposed third runway is to maximize flight over residential areas. You have the majority of the compass that you can utilize for a flight path (North, East, West), yet you still decide to have planes flying South and South East. Surely there are better orientations and flight paths.”

“Why do fly paths have to be over heavily populated areas? Why can’t the runway be positioned do that planes approach from less populated areas for example come in from north west rather than current approaches.”

“There are viable alternatives to have the flightpath moved to be over the vast farmland nearby - why would you destroy our lovely home and community rather than take that option.”

“I kindly ask you to conisder alternative flight paths over areas that are already subject to high levels of noise polution.”

“further there are no flights operating at night taking off over Keilor on the new runway this is not an acceptable option”

“This submission believes that there should be a 5km buffer zone around Romsey and that flight paths should be orientated to fly over the area between the towns of Romsey and Wallan.”

"Standard departure routes need to be moved to less densely populated routes, particularly at night."

"Yes I am in favour of a third runway. But change the flight path location please as we get enough flights over our house."

Suggestions – Brisbane Airport Learnings, Independent Body, Commitment to Flight Paths

Submissions referenced the recent opening of a parallel runway at Brisbane Airport and suggested that M3R design should consider lessons learned through the implementation of that project:

"Lessons must be learnt from the recent opening of Brisbane Airport's second runway- which has caused much community upheaval and already has resulted in flight paths being needing to be redrawn."

"The well known impact of noise on residents around Brisbane Airport due to recent runway and flight path changes should be a guide for any future changes at Melbourne Airport. Specifically the change in noise levels and the effect of them on residential areas was under estimated or hidden in order for an airport to implement changes to its own commercial benefit. Lessons from this should be learrned and applied by all statutory bodies considering changes to permit a 3rd runway at Melbourne Airport."

"Melbourne Airport must learn from the Brisbane Airport second runway project where flight paths are being torn up and redesigned to address community noise impacts."

"4. Making better use of Port Phillip Bay (learnings from Brisbane and Sydney)
The image above shows flights entering and leaving the bay at Williamstown and St.Kilda on the new north-south flight path. Port Phillip Bay should be used more extensively, i.e. planes fly further into the bay to gain (for departures) and lose (for arrivals) altitude."

In addition there were submissions referencing the need for an independent body to review flight paths (and noise modelling):

"I feel more research must be done by an independent body over the noise and flight path."

"Independent flight path modelling is necessary that provides realistic information upon which noise impact and environmental impact can be assessed by those effected"

In addition there was a submission that requested that M3R is bound to the flight paths being modelled:

"That the Melbourne Airport Authority be bound to commit to flight paths being modelled"

"'keep flight paths consistent to expose the least amount of people to new noise' - in other words, keep affecting the same communities but to a greater degree while other populations largely remain unaffected and solely benefit from the increased services. This is supported by all the modelling of the different operational modes which all visually demonstrate increased and concentrated traffic."

Suggestions – Design and Procedures

There were a number of submissions that provided suggestions to the flight path design, including:

- Change flight paths to spread noise
- Use Port Phillip Bay

- Rotating or alternating flight paths
- Use RNP-AR approaches
- Changes to procedures, climb higher before turning:

“it would be fairer to spread this burden over more of melbourne rather than the lower income areas of the west and north where it is currently focussed.”

“the load spread further across more communities who will all ultimately 'benefit' from the increased aviation activities at Melbourne airport?”

“Obviously I'd prefer to see that flight path noise is spread more evenly over inner Melbourne and not concentrated above East Melbourne 3002 which is predominantly residential.”

“varying flight paths to spread the burden of this extra noise”

“The flight path could be further south over the Bay so that noise impact is not directly over residential areas.”

“Port Phillip Bay should be used more extensively, i.e. planes fly further into the bay to gain (for departures) and lose (for arrivals) altitude”

“Rather than taking a path that seems to maximise the number of people flown over, flights to the south should use the wide open space of Port Phillip Bay to climb further before turning at a point much further south where the population density is MUCH lower.”

“change the flight paths (from and to the east using the north-south runway(s) to flight further south over much less populated areas of MEL and then north, so that much fewer people get the regular noise nuisance.”

“RNP AR approaches for rwy 34 which allow for a shorter final leg and can still cater for independent parallel approaches.
…
the allowance for independent visual approaches to a shorter final intercept rwy 34”

“If that means planes need to come in higher, alter glide slopes, mandatory new quieter engines then those provisions must be put in place.”

“increase minimum height plane's can fly.”

“I’d not be in favour of a straight in approach over water to 36L however if aircraft were required to turn final over Brooklyn (more industrial area) that would be better. Likewise, departures to the south would need to make an early right hand turn.”

“RNP AR approaches for runway 34 that track closer in via industrial areas rathe than over built up residential areas.”

“RNP AR approaches need to be introduced to minimize the impact of noise over residential areas”

“Flights taking off to the North should continue North for a longer time before turning left. It makes so much sense but no one listens. They can fly between the various small towns rather than over them.”

Suggestions – Runway Modes

There were some submissions that referenced the flight paths and runway usage:

> *"So I suggest that 100% of take offs remain on the existing N/S runway and that the new runway only be used for flight arrivals. This is one way to restrict the noise from the new runway."*

> *"If most flights arrive from the north on the existing n/s runway then noise is reduced over established residential dwellings. ditto if the new runway is used for departing flights."*

Suggestions – Runway Location

There was a submission referencing a community concept to shift the runway further north to allow a turning departure from Runway 16R that would avoid overflying Keilor:

> *"Why has the following design concept been abandoned?*
> *… raised the suggestion that the preferred 3rd runway nominated by Melbourne Airport be positioned 600 metres North and this would assist in alleviating the sound issues for the residential area at the south of the airport. If the runway was placed in this position aircraft would undertake a right hand turn and this is the situation such as at Cairns airport."*

This was also included within the KRRA submission.

Suggestions – Other

There were other submissions that suggested the airport team experience living under a flight path to understand the impacts:

> *"Perhaps a good exercise would be for the executive team and those employed as part of the development proposal to live permanently for six months or more under the current flight paths at various locations - would they still volunteer to live in those same locations? Would they support future development? Would they 'not really notice' or be affected by the impact of the flight traffic? The likely answer to each of these questions is 'no'."*

> *"If you want more planes and flight paths put them over your own homes at the levels you want for us to live with."*

In addition there was a submission requesting a specific altitude above their house:

> *"I currently live under the flight path in Romsey for southbound traffic coming into to land at the airport. I see that the third runway will potentially increase traffic over my house/town. I'm totally supportive as I the traffic generally flies no lower than 5000 feet above my house."*

East Melbourne Group

The submission from the East Melbourne Group included the following references to the proposed flight paths:

> *"Proposed new flight paths*
> *The following questions have been posed which we require a response to:*
> *• What change in aircraft traffic flyovers (on average no per day/week) can East Melbourne residents expect with the additional runway.*
> *• What change in levels of aircraft noise can East Melbourne residents expect to result*

from the construction of the additional runway
• What flight paths have or will be considered over East Melbourne associated with the new runway"

KRRA

The submission from KRRA includes the following remarks regarding the flight path design:

- Arrangement in 1960s that there would be no flight paths over Keilor
- Proposed shifting of the runway north to reduce impacts of flight paths on Keilor

Example quotes from their submission are shown below:

"3.4 Planners, authorities, developers and residents all used the original runway layout for expansion of the area south of the Airport, based on no flight path would be directly overhead. Residents bought into major housing sub divisions knowing and believing a flight path would not be over the Village.
…
3.7 Of great importance the Village had a "no flights over" status inforced."

"6.6.1 Some time past when the 2018 Master Plan was being floated kRRA wrote to the CEO of Melbourne Airport and requested the alignment of the proposed second N/S runway could be moved 600M north. The reason for this was that the environment overlays would also move 600m to the north. Resulting in most residences coming under the MAEO2 overlay. Which is generally acceptable to most residents. The reply was rejection of such discussion. Disappointing as this was a way to a solution that could have been beneficial to all parties (as it turns out probably not Qantas as that was being kept confidential from residents) who will no doubt complain about these flights in the future, especially night flights departing."

In addition to the submission from KRRA, there were submissions from community members that included the proforma point provided by KRRA relating to the historic assurance regarding no flight paths over Keilor:

"Assurances were given by the Commonwealth Government to the City of Keilor in the early planning stages (circa 1960) that aircraft would not fly over Keilor. How can Melbourne Airport today ignore this assurance"

MACAG

The submission from MACAG includes the following points regarding flight path design:

- Concern detailed airspace design is occurring post-approval
- Commentary on the restrictions of flight paths to the south and requested safety implications
- Reference to a figure within the C2 chapter highlighting the spread of flights in 2019.

Quotes from the submission are referenced below:

"Perhaps even more important to point out is that according to the M3R dMDP these flight paths have been designed by Melbourne Airport. Our advice from Airservices Australia, who are of course responsible for flight path design, is that they will not begin work on them until the new second runway project is approved. This runs the risk that current and

future residents will be misled by the publicly available information as they make decisions about where to live, as has been documented in many parts of Brisbane, some many kilometres from the end of the runway where communities would be justified in expecting to be unaffected."

"We are aware, for example, that there is a radio transmission tower that constrains flight paths from the new second runway such they cannot deviate to the west until they are in line with the tower, and cannot fly within a 5km radius of it as they turn (bearing in mind the vast majority of flights departing Melbourne from the new second runway will ultimately head to the west or north). These flight paths are also constrained to the east by flight paths for the existing north/south runways. They cannot deviate to the east at all, and must turn to the west as soon as they are able. Ideally, parallel runways should be spaced at least 2 km apart and aircraft should angle 7° away from each other as soon as possible after leaving the runway for safety reasons. Melbourne's parallel north/south runways will be 1 km apart. We understand departures from the existing runway cannot deviate to the east as they would encroach on flight paths for Essendon Airport, which means aircraft from the new second runway will have to turn 15° as soon as they can. The safety implications of these constraints on flight paths and the proximity of the two runways to each other should be clearly explained as these flight paths will be directly over established residential communities, including schools and childcare facilities. It would be reassuring to know whether other airports operate with similar constraints and how the planned operations and ultimate capacity at Melbourne Airport compare to them."

"We also draw your attention to Figure C2.5 of the M3R dMDP, which shows a composite of flight radar data from 2019 within a 50km radius of Melbourne Airport. This indicates that aircraft movements, far from being confined to the noise contours presented in the Master Plan and M3R dMDP, are distributed across almost all of the area within that radius over the course of the year."

Keilor Primary School Council

The submission from Keilor Primary School Council (and related proforma submissions) references the following regarding flight path design:

"That the Airport shift the new North / South Runway as far north as possible to reduce noise impacts to Keilor."

"That Operational Controls be applied for all aircraft taking off on runway 16R to fully utilise the runway extension for every take off to maximise vertical clearances to Keilor and Keilor Primary School. Likewise, where safe to do so, aircraft requiring shorter landing lengths should be directed to land further away from the runway limits."

Melbourne Airport CACG

The Melbourne Airport CACG submitted the following questions with reference to the design of flight paths:

"45. Will MA commit to being more proactive in ensuring the community understands the impacts of the new flight paths? This is another area in which doing the minimum required by Airservices does not result in MA being a 'good neighbour'?
46. Is MA actively seeking to have flight path designs which place priority on minimising impacts on residential communities?"

Aviation Industry

Submissions from the Department of Defence, EAPL, Skydive Australia and Global Ballooning Australia reference the flight path design. These submissions are addressed in Issue B5: Interaction With Melbourne Basin Airports and Operators.

Qantas' submission includes the following commentary on flight path design:

> *"As noted in the MDP, construction of M3R will trigger the requirement to reconfigure the Melbourne Basin airspace. A detailed review of this already complex airspace structure will be required with Essendon Fields Airport (ESS), Avalon Airport (AVA), and Moorabbin Airport (MBM), and RAAF Base Point Cook to identify interdependencies and design efficiencies, and safe flightpaths."*
>
> *"The MDP notes that design the development of the airspace architecture for M3R predates the development of the latest Air Services design principles. We are seeking a gap analysis to understand the changes and impacts of complying with the current Air Services design principles."*

Virgin Australia's submission includes the following commentary on flight path design:

> *"We largely support the proposed runway operation modes utilising compass operations rather than terminal operations. However, given that the majority of flights from Melbourne go north rather than south, VA holds concerns around any potential operational restrictions that will require our aircraft to arrive or depart from the south when operating to or from the north, as part of noise-sharing arrangements.*
> *While we appreciate that the preference is for the majority of aircraft noise generated by aircraft to be over the north of the airfield, it is imperative that this is future-proofed to minimise any potential negative noise impacts post-runway opening as the city of Melbourne continues to grow and expand.*
> *As aircraft technologies evolve over time, VA actively works with aircraft manufacturers and equipment suppliers to utilise systems and infrastructure that enhances safety and efficiency, while reducing fuel burn and aircraft wear and tear. It is pleasing to see that the proposed runway operating modes will be based on Performance Based Navigation (PBN) technologies and support increased usage of these moving forward.*
> *…*
> *It is important that any future operational changes as a result of the MDP or M3R MP are minimised and/or future-proofed to ensure we can manage our future planning and related costs appropriately. Airlines are often negatively impacted when these events occur. Effective and robust engagement with local communities is essential to increase awareness and reduce community frustration with increased aircraft noise when the new runway opens."*

The AusALPA submission included commentary on the proposed flight paths and current 'SHEED' approach:

> *"The proposed arrival and departure routes appear to be logical, whilst noting that additional track miles will be required for separation and sequencing.*
> *…*
> *AusALPA believes that the legacy visual approach via SHEED should be either redesigned (waypoint moved to the South noting the possible "noise impact") or discarded to prevent unstable approaches:*
> *One of the major airlines identified that the SHEED approach was a significant contributor to approach instability and consequently they have advised their pilots that they are not to*

accept the approach. This has resulted in a direct improvement of approach stability and therefore an overall improvement in safety."

Property Development Industry - Beulah

A submission from Beulah International includes the following commentary regarding the flight path design:

"The proposed north-south orientation of the third runway will significantly impact the development potential of land within the City of Melbourne.
The impacts will both be direct, through the new proposed flight paths to and from Melbourne airport, and indirect through changes required to Essendon Airport flight procedures to accommodate the new Melbourne Airport flight paths.
…
The Melbourne Airport Third Runway – Community Consultation processes missing a significant amount of independent expert information for public review.
For a proposal with such significant impact on investment into the state of Victoria we would especially welcome more detailed modelling of:
• Detailed flight path modelling in and out of Melbourne Airport,
• Detailed modelling of impacts to PANS-OPS, OLS and RTC levels,
• Detailed modelling of impacts to future height controls on construction in all affected areas,
• Detailed design of changes required to Essendon Fields flight procedures to be modelled."

Boroondara City Council

The submission from Boroondara City Council includes the following commentary on flight path design:

"Currently Boroondara is overflown by arrivals from the likes of Sydney, New Zealand and North America when the wind is from the north (and aircraft are landing from the south).
The use of these flight paths will likely increase when the new runway opens- meaning Boroondara will experience more days with regular overflights than it does now.
Whilst it is expected that the level of noise experienced on those days will likely be similar to what they are now (based on information available) this submission raises concern about the increase in flights over Boroondara and any potential amenity impacts on residents. From time to time, residents raise concern about noise associated with aircraft and therefore any increase in the number of flights over Boroondara is a concern.
Measures should be put in place to prevent any increase in detrimental amenity over Boroondara, particularly in the evening.
Please keep the Council informed on the progress of the proposal and any additional information on potential impacts associated with additional flights over the municipality."

City of Yarra

The submission from City of Yarra made the following references to flight path design:

"its interest in the proposal as it relates to the movement of aircraft over the Yarra municipality and expresses its views that due to the changed flight paths as a result of the configuration of the runways, that it may cause detrimental noise issues to the local Yarra community, and in this regard seeks further engagement and information"

Maribyrnong City Council

The submission from Maribyrnong City Council included the following references to flight path design:

- Suggested design parameters
- Reference to the previous lowering of airspace south of the airport

Quotes from the submission are referenced below:

> *"Design the airport to avoid imposing more noisy flights and new noise impacts in existing suburbs."*
>
> *"However the third runway proposal comes on top of changes completed in 2018 to introduce the Smart Tracking satellite navigation systems for planes landing at Melbourne Airport.*
> *The Aircraft Noise Ombudsman said in a 2021 report that the Airport's introduction of Smart Tracking had concentrated aircraft using Runway 34 into flight paths, having significant noise impacts on inner Melbourne. Air Services Australia's news item on the changes says that flight paths were also lowered as a result."*
>
> *"A requirement for night flights to approach over non-residential areas, such as at Los Angeles International Airport, which requires night arrivals to come in over the Pacific Ocean"*

Wyndham City Council

Wyndham City Council submission included the following references to flight path design:

> *"Hence we seek that where practical, Melbourne Airport will direct flight paths over green wedges and undeveloped regions to mitigate noise impacts and that during the night, aircraft will be directed to fly over the least populated land to the north of the airport, whenever possible, under either proposal."*

D4.4 M3R MDP References

Flight path design is addressed in a specific chapter within M3R MDP Part C Chapter C2: Airspace Architecture and Capacity.

In addition to the MDP material, fact sheets were produced for public engagement on some key airspace topics:

- Proposed Runway Operating Modes (explaining parallel flight path rules and SODPROPS)
- CCO and CDO
- Approach Procedures
- Process for Airspace Finalisation.

The online Flight Path and Noise Tool also provided (and continues to provide) the community with information regarding the location and altitudes of proposed flight paths.

D4.5 APAM Position

To prepare for this M3R MDP, significant airspace concept design development has been undertaken by APAM with input and review by Airservices Australia. The airspace design has been completed to 'concept' stage and will be developed further through the detailed airspace design process in preparation for opening the runway.

In response to the submissions, APAM's position has been split into the following sections:

- M3R Concept Flight Path Design
- Suggested designs and procedures
- Online flight path and noise tool
- Lessons learnt from Brisbane Airport
- Previous flight path changes
- Existing flight paths – community awareness
- Existing flight paths – 'SHEED'
- History of flight paths (1960s and 1990s)
- Aircraft altitude
- On-going engagement and increasing awareness

M3R – Concept Flight Path Design

Development of flight paths and modes of operation was undertaken according to 'Functional Requirements' which were subsequently reviewed against the new Airservices 'Flight Path Design Principles'. The fundamental parameters of the preliminary flight path development stage were:

- Safety – paramount in all procedure development and will not be compromised
- Air Traffic Management (ATM) requirements – procedures will be fit for purpose and based on sound air traffic management requirements to deliver the required capacity in an efficient manner
- Environment – noise, other environmental and social impacts will be minimised to the extent practical to achieve safe and efficient operations.

Where these requirements conflict, resolution follows the above order of priority. Safety will always take the highest priority and delivering sufficient airspace capacity is a fundamental principle underpinning the provision of runway infrastructure. However, for noise abatement at sensitive times (e.g. at night) consideration of aircraft noise impacts may be prioritised over ATM efficiency requirements. APAM notes that Airservices' Flight Path Design Principles and Commitment to Aircraft Noise Management underpin how flight path changes are designed, developed and implemented to deliver a balanced outcome of ensuring safety, operational efficiency, protecting the environment and minimising the effects of aviation noise on the community, wherever practicable.

Though efforts have been made to avoid residential areas through flight path design, total avoidance is not possible for any runway layout. Complexity is added by flight path design safety requirements that apply to independent parallel runway operation, and which are required to meet forecast peak demand at the airport.

APAM notes the Commonwealth Government's recent commitment to an Aviation White Paper and will advocate that the scope includes development of a nationally consistent 'functional requirements for flight path design' that considers the needs of airlines, airports, Airservices, CASA and the community.

As advancements are made in flight path design APAM will continue to work with industry to ensure options to reduce impacts on communities are explored and implemented where possible.

Within the MDP Chapter C2: Airspace Architecture and Capacity there is a section covering avoidance, management and mitigation measures (Section C2.6). The safety of aircraft operations is paramount and, the procedures used are governed by strict international and national standards. Additionally, flight paths and procedures must permit efficient processing of the air traffic. Because

of these requirements, opportunities to mitigate aircraft noise and emissions through airspace design are limited. Where possible, adjustments to flight paths were made during the iterative preliminary design process to improve noise outcomes. Two overarching examples include:

- Introduction of new flight modes (such as segregated mode) which allow flight paths to remain in similar locations to existing procedures
- Reduced fuel burn and emissions through track shortening and use of Continuous Climb Operation (CCO) and Continuous Descent Approaches (CDA).

Opportunities to adjust flight paths depended on the direction of flight paths and the operation. For example, departure flight paths to the north were adjusted to avoid residential areas and utilise Green Wedge areas, however departures to the south of the airport were constrained. As outlined in Section C2.6.2: Departures from Runway 34L/R (refer to Figure 54), the following changes could be made:

- North bound departures from 34L were moved to the east of Sunbury and away from future higher density residential areas
- West bound departures from 34L were moved to be south of Sunbury and closer to the existing departure path
- Continuous climb operations were facilitated from 34L to reduce noise on the most used paths (those going north-east)
- North bound departures from 34R were moved to be west of future higher density residential areas
- The departure paths were also largely suitable for segregated mode operations and therefore fewer new flight paths had to be designed.

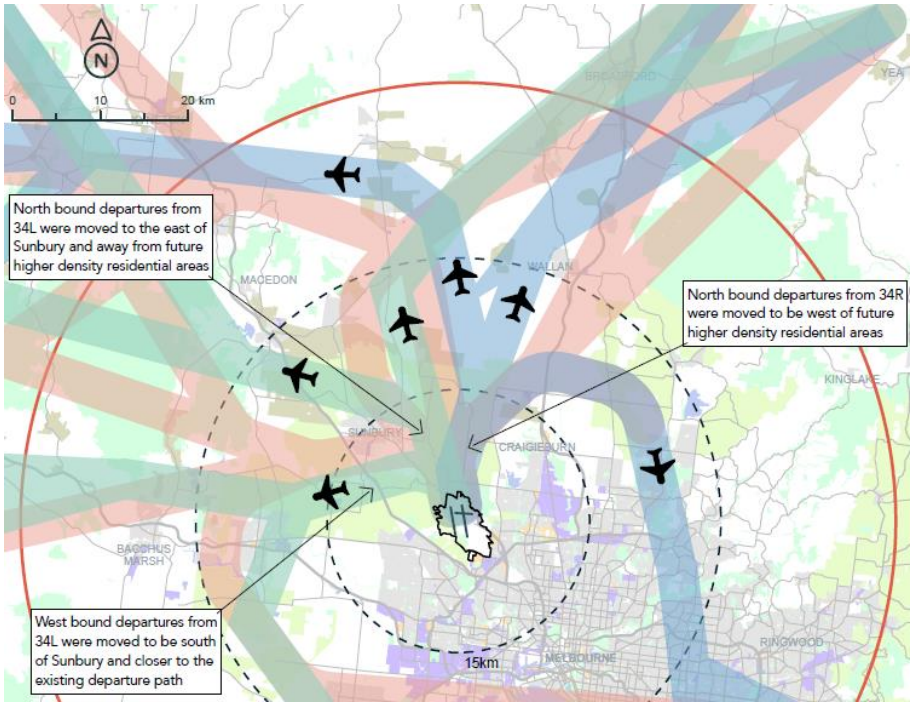


Figure 54: Mixed Mode 34 departure evolution

In contrast, mixed mode Runway 16 departures to the south of the airport are limited by two constraints, the Sydenham Radio Mast and Essendon Fields Airport (as highlighted in Figure 55).

- Departures from Runway 16L will maintain runway track and climb to 4,000 feet before turning east. This is to remain separated from Essendon Fields Runway 17 departures, which turn left and climb to 3,000 feet
- Due to the proximity of the Sydenham radio mast (elevation 735 metres /1029 feet AMSL) departures from Runway 16R must stay on runway track for two nautical miles before they commence a turn to the right. This turn must be 30 degrees away from the departure from Runway16L and keep the aircraft laterally separated from the mast.

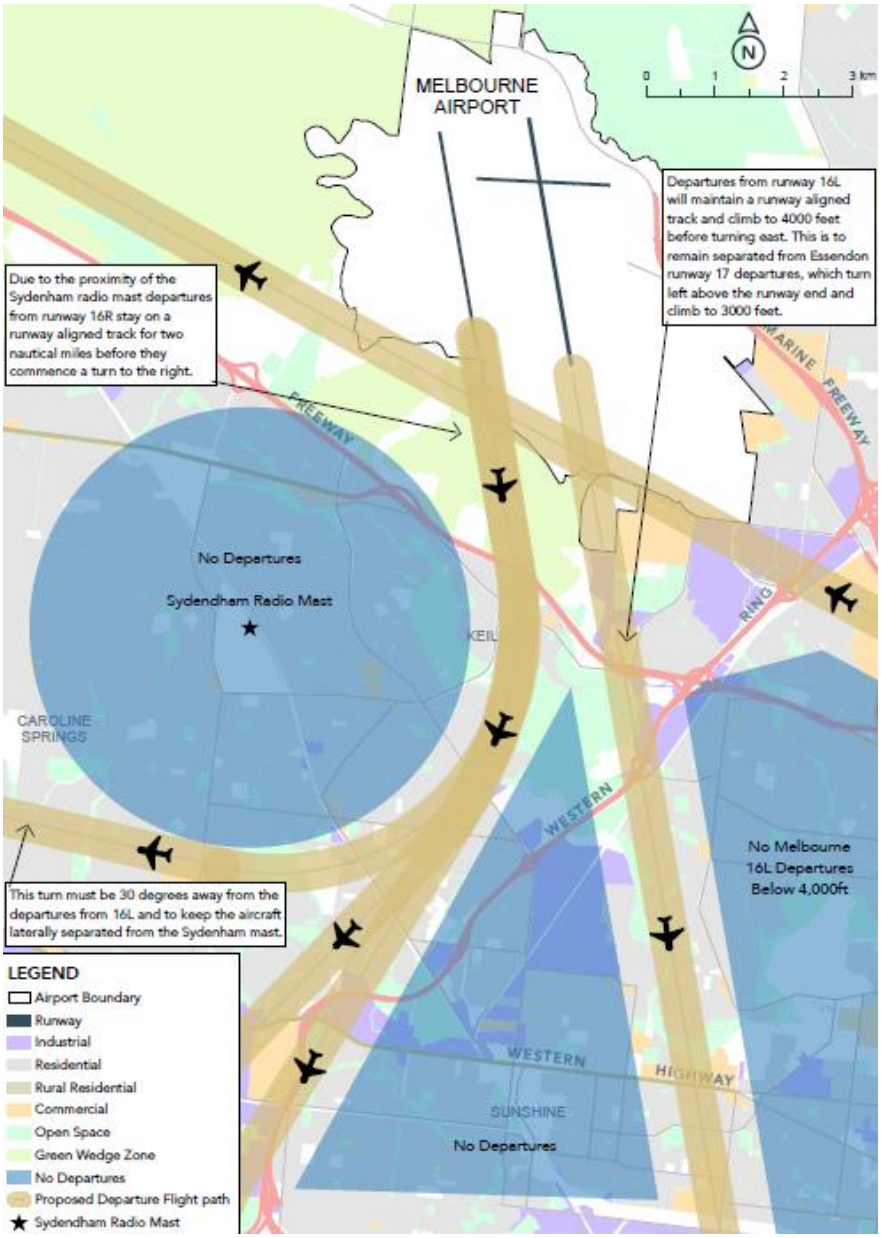


Figure 55: Mixed Mode 16 departure constraints

In relation to the submission made by MACAG regarding safety of operations with these constraints, safety is the number one parameter applied to the flight path development and takes priority over capacity and environment.

An initial high-level safety and capacity assessment has been undertaken consistent with the preliminary design status of the airspace presented in the MDP. Complete safety validation will be part of detailed design.

Airservices have agreed in principle with the feasibility of the proposed airspace changes and draft runway operating plan. Though Airservices has confirmed that its planning requirements have been met, before any flight path changes are implemented it is required to complete a full safety case for each element of the design and obtain approval from CASA to operate in accordance with the proposed concept. This process commenced with the preliminary airspace design but is not expected to be complete until the detailed airspace design is finalised just prior to the opening of M3R.

The utilisation of existing flight paths where possible for segregated modes was demonstrated within MDP Chapter C2: Airspace Architecture and Capacity by overlaying the current flight paths on top of the flight path swoosh diagrams and callouts on the reasons for differences (refer to Figure 56).

M3R concept airspace design seeks to ensure, as far as possible, that it enables Continuous Climb Operations (CCO) and Continuous Descent Operations (CDO) with the required air traffic control separation between departing and arriving aircraft assured whenever they are following the respective departure and approach procedures. APAM prepared a specific fact sheet on CCO and CDO to help inform the community of these operations.

In response to some community submissions referencing Required Navigation Performance – Authorisation Required (RNP-AR), the concept flight path designs for mixed mode operations permit shorter approaches that use specialised international RNP-AR design standards that the modern airline fleet operating in Australia are capable of flying. These approaches are fuel and emissions efficient, offer more flexibility in terms of geometry, and use continuous descent techniques to deliver improved community noise outcomes. APAM prepared a specific fact sheet on Approach Procedures to explain some of the differences between RNP-AR, Instrument Landing System (ILS) and Performance Based Navigation (such as SmartPath in Australia).

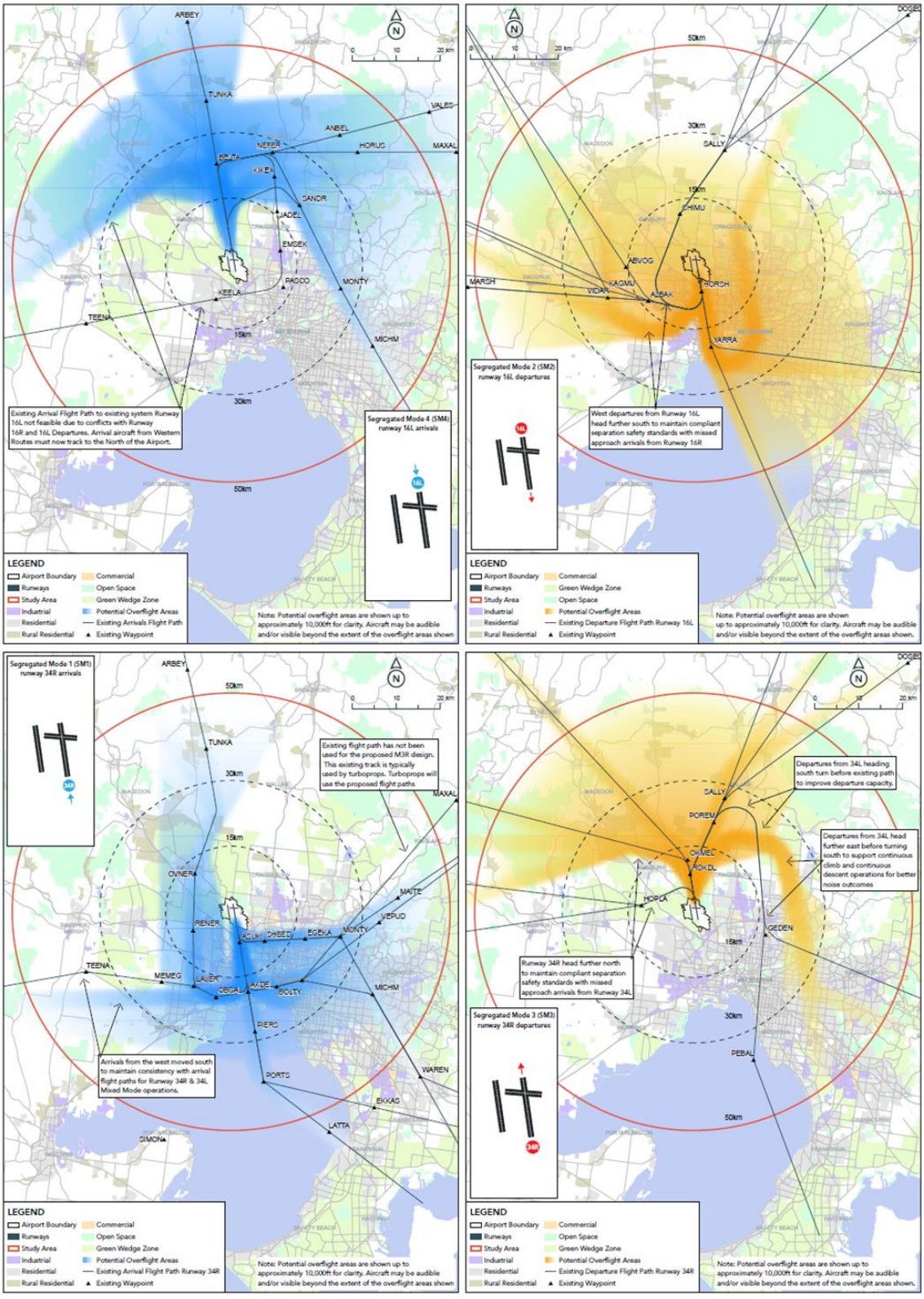


Figure 56: Comparison of existing flight paths with proposed segregated modes

APAM is committed to further refinement of the concept airspace design to achieve efficiencies and improved noise outcomes for the community during the detailed airspace design process. This includes exploration of new runway modes. The detailed airspace design process is discussed further in Issue D5: Detailed Airspace Design and Airspace Change Processes.

Suggested Designs and Procedures

APAM is pleased to see some suggestions from the community around ways to improve the flight path design. These will all be collated and taken through to detailed airspace design where a more detailed review can occur. However, APAM does want to provide the following commentary on some common suggestions.

Regarding the submissions referencing either ‘avoid residential areas’, ‘target farm land’ or ‘utilise green space’, APAM understands the desire for more flight paths over areas with fewer homes and where possible has introduced measures to ensure this can occur (such as preferencing departures to the north and introducing SODPROP flight paths). Due to the location of the new runway, the weather, and the international standards for parallel runways it is not possible to design flight paths to avoid all residential areas all the time.

Spreading of noise and/or alternating operations between runways were common suggestions. These could either be interpreted as spreading traffic across available runways (which is discussed in Issue D3: Draft Runway Operating Plan) or to utilise different flight paths for each runway end and rotate the usage. Of note is that this approach was identified within the Independent Review report by Trax on Brisbane Airport. An option for the management of non-jet aircraft noise linked to the RADAR SIDs was to alternate the standard heading by increments of 5 degrees or 10 degrees to disperse the tracks providing safe separation from other routes can be maintained. Additionally, a recommendation (4.2) within Airservices draft PIR report includes development of ‘options for multiple arrival routes which can be alternated on a planned schedule to provide respite to communities’.

APAM notes the following:

- Whilst this might provide some relief to some communities, others may not support spreading of flight paths if they are not currently under flight paths.
- There are limitations on where the alternate departure flight paths can occur to the south of the airport (noting constraints highlighted in Figure D4.2)
- For mixed mode arrivals, there are limitations on where aircraft need to begin their approach. For example, visual and RNP-AR approaches have been designed to intercept the runway centreline no closer than four nautical miles from the landing threshold. Any residential property within four nautical miles would not benefit from any flight path spreading. Additionally, ILS/GLS approaches have been designed to intercept the runway centreline at approximately 10-15 nautical miles (depending on the runway mode) from the landing threshold.

Requiring aircraft to remain on runway centreline and gain altitude before turning was another common suggestion. APAM notes that for parallel runway operations (mixed mode, segregated mode or SODPROPS), turns are required to maintain appropriate separation standards and limit the ability to achieve this suggestion. APAM anticipate that the departure flight path of concern upon opening M3R will be departures from Runway 16L heading north (refer to Figure 57). Currently all departures heading north turn west and then head north via waypoint SALLY. This flight path is no longer available (due to separation requirements) for mixed mode and segregated mode operations. As a result, flights head south (driven by restrictions shown in Figure 55) to climb to 4,000ft before turning east.

This flight path will now be utilised by all aircraft heading to Sydney as well as all long-haul international aircraft (require longer Runway 16L). The turn at 4,000 feet has been set to provide suitable clearance with departures from Essendon Fields Runway 17. Whilst this flight path could be adjusted to increase the altitude before the turn, 4,000 feet was selected to minimise the track miles for these aircraft and thus reduce the emissions.

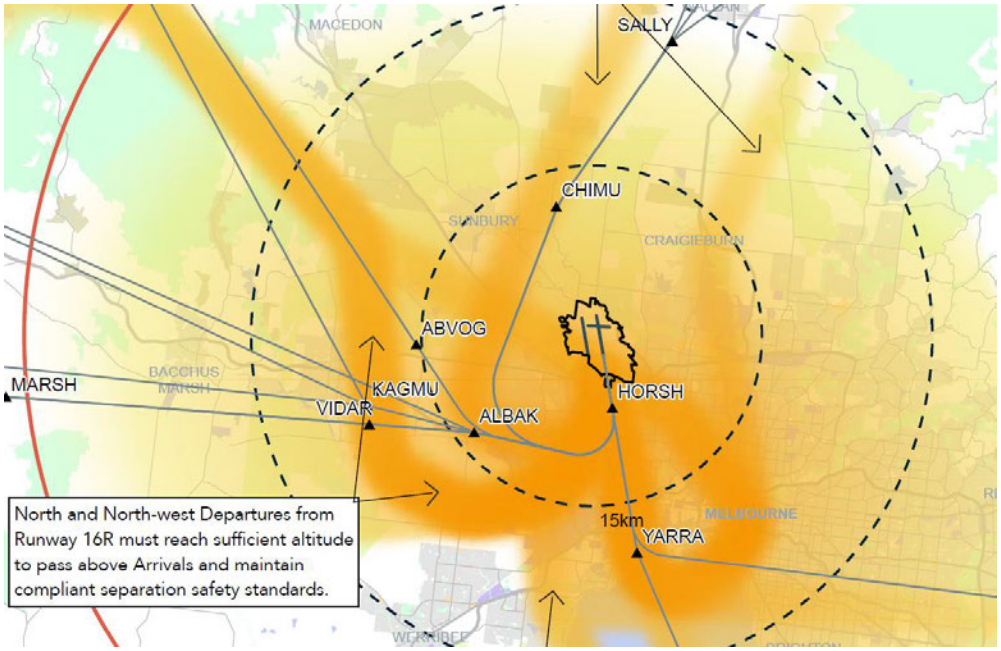


Figure 57: Proposed departure flight paths for mixed mode 16 with existing flight paths and waypoints

Regarding the greater use of Port Phillip Bay, this could be introduced in a number of ways (refer to Figure 58):

- Changing the RNP-AR approaches for Runways 34R and 34L to be further south
- Adjust the existing arrival flight paths currently utilising waypoint AKDEL to be over the bay.

Whilst this may benefit some areas of Melbourne, it would result in concentrating more flights along the extended runway centreline. It is also important to remember that the majority of flights to Melbourne are from the north and the further flight paths have to head south before landing results in increased track miles and as a result, emissions.

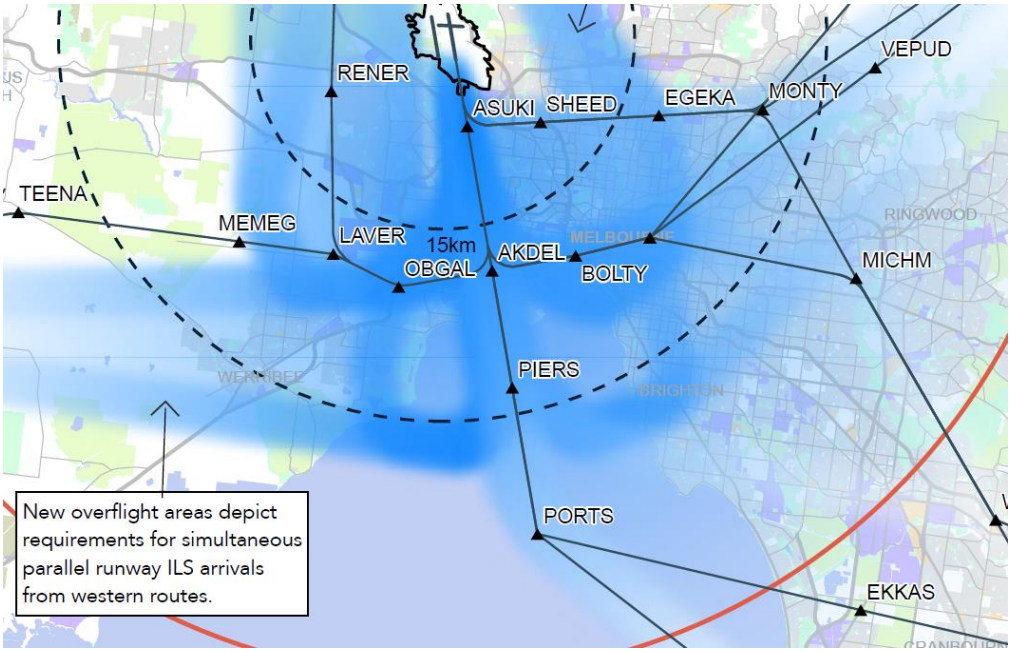


Figure 58: Proposed arrival flight paths for mixed mode 34 with existing flight paths and waypoints

Online Flight Path and Noise Tool

Note the Online Flight Path and Noise Tool is discussed in Issue C4: Online Engagement.

APAM notes that, due to the nature of the airspace design, flight paths within the online noise tool and in the MDP are presented as broad bands, swathes or 'swooshes' based around a centreline track. As the project progresses through detailed airspace design, these 'bands' will become narrower to reflect the design. The online flight path tool will be updated to reflect this once the design is complete.

It is important to note that the tool initially only presented the proposed flight paths online as current flight paths are within existing Airservices websites (such as Webtrak). APAM included a link to the then- Airservices online tool for further information. APAM is looking to incorporate this information within the online tool for ongoing regular reporting.

APAM commits to making improvements to the online flight path and noise tool, and to maintaining its availability online for community use. This will include more information on the current flight paths and operating procedures at Melbourne Airport.

Lessons Learned from Brisbane Airport

As part of the Post Implementation Review (PIR) for Brisbane Airport's new parallel runway, the Brisbane Airport Post Implementation Review Advisory Forum (BAPAF) first quarterly report identified a number of short-term opportunities to improve noise outcomes for the community.

One included 'introducing a Noise Abatement Procedure requiring jet aircraft to remain on the Standard Instrument Departure path until they reach 10-12,000 feet'. APAM would support this noise abatement procedure as part of M3R's detailed airspace design.

Other recommendations included 12-month trials. As a result, Airservices has conducted a number 'Noise Improvement Trials' as part of the Post Implementation Review. These three trials are discussed in Table 42 along with APAM's commentary on application to M3R.

Table 42: APAM commentary on the noise improvement trials at Brisbane Airport

Noise Improvement Trial	APAM Commentary
QantasLink Dash 8 Q400 use of existing RNP-AR flight path over Moreton Bay. *These aircraft have not historically used the RNP- AR flight path to Runway 19L, as the aircraft have not been fitted with the required technology. The RNP-AR approach to this runway has been used only by jet aircraft.*	As part of the M3R design, APAM has included RNP-AR and visual final approaches for mixed mode operations on the same track.
Restrictions on intersection departures from the New Parallel Runway	The intersection departure point for Runway 16R is 450m further south compared to a full-length departure. This is less than the two intersection departure points at Brisbane Airport (1,089m and 638m closer to CBD). As a result, APAM is not proposing to restrict intersection departures on Runway 16L (to support efficient runway crossings). This topic is discussed in detail within Issue D3: Draft Runway Operating Plan.
Extension of Simultaneous Opposite Direction Parallel Runway Operations (SODPROPS) hours	APAM would support the exploration of this during detailed airspace design. APAM notes that aircraft demand between 6am and 8am may exceed the capacity of SODPROPS. Additionally,

	the availability during these hours due to the strict weather conditions would need to be considered.

Table Source: Airservices PIR and APAM, 2022

Regarding submissions requesting lessons are learnt from Brisbane Airport, APAM has provided commentary (refer to Table 43) on the recommendations from the Trax BNE NPR PIR Independent Review report and Airservices Final PIR report.

Table 43: APAM commentary on recommendations from the post implementation review of Brisbane Airport's parallel runway

Independent Review (Trax) Recommendations	Airservices Final Post Implementation Review Recommendations	APAM Commentary
PACKAGE ONE: STRONG, TRANSPARENT AND REPRESENTATIVE GOVERNANCE		
1.1 Establish a Programme Oversight, Management and Assurance function that coordinates the development and assessment of options for change proposals to the NPR flight path design.	Recommendation 1.1 – Oversight, Management and Assurance program: Airservices will support government and other stakeholders in the establishment of oversight, management and coordination functions to support flight path change delivery, as well as development of assessment frameworks and independent assurance mechanisms.	Supported.
1.2 Implement a joined-up Communications Plan for the aviation organisations that are responsible for developing options to communicate effectively with community stakeholders	Recommendation 1.2 – Industry-wide communications planning: Airservices will work with industry stakeholders, government and community to develop effective communications plans supported by all relevant organisations and agencies, to ensure that information provided is consistent, clear and transparent.	Supported. APAM is keen to ensure a common engagement expectation regardless of who is 'leading / owns' the project.
1.3 Define the engagement process that will be followed to gather meaningful inputs from community and aviation stakeholders to help shape the change proposals	Recommendation 1.3 – Meaningful engagement process: Airservices will work with government, community and industry stakeholders to develop effective community engagement plans and tools, to ensure communities are adequately engaged, have the opportunity to input to decision-making and that the metrics used to make decisions are understood and transparently reported against.	As above.
1.4 Produce a long-term Noise Action Plan that clearly lays out how the change proposals and other measures not related to flight path design will contribute to limiting and where possible reducing noise over the short, medium and long-term as traffic levels grow	Recommendation 1.4 – Long-term Noise Action Plan: Airservices proposes the recommendations in this report form the initial version of the Noise Action Plan. This plan will implement noise mitigation measures which are well-planned, tracked, reported against, and supported by community and industry stakeholder involvement.	Supported. As part of the detailed airspace design outcomes APAM would be supportive of a 'Noise Action Plan' outcome for Melbourne Airport.
PACKAGE TWO: MAXIMISE FLIGHTS OVER THE WATER		
2.1 Develop and implement an ATC Operating Plan to extend the use of SODPROPS	Recommendation 2.1 - ATC Operating Plan to extend the use of SODPROPS: Airservices will develop an Air Traffic Control (ATC) Operating Plan, examine options to extend the use of SODPROPS and implement associated design enhancements.	Support investigation into options to extend the use of SODPROPS for Melbourne Airport (noting this will be towards the north).

2.2 Reduce the workload and complexity for Brisbane ATC associated with extending the use SODPROPS	Recommendation 2.2 - Reduce ATC workload and complexity associated with SODPROPS: Airservices will engage with Defence in relation to Amberley airspace, ATC procedures and specific flight paths that constrain SODPROPS operations.	As above
2.3 Modify specific SODPROPS flight paths and ATC procedures, where required, to maximise the potential improvements associated with recommendations 2.1 and 2.2	Recommendation 2.3 - Modify specific SODPROPS flight paths and ATC procedures: Airservices will review options to reduce track miles and emissions associated with SODPROPS operations, update ATC procedures to optimise final approach efficiency and review options to reduce the impact of over water operations on affected communities.	As above
	Recommendation 2.4 – Reduce the impact of overnight operations on communities	Supported. Note M3R MDP adopts SODPROPS and segregated modes only at night. APAM have suggested alternative modes to be explored as part of Detailed Airspace Design.
PACKAGE THREE: REDUCE THE FREQUENCY & CONCENTRATION OF FLIGHTS OVER COMMUNITIES		
3.1 Develop and assess options for change proposals to reduce the frequency and concentration of flights over communities, and where they are feasible, engage with all affected stakeholders on the impacts and trade-offs	Recommendation 3.1 – Reduce the frequency and concentration of flights over communities: Airservices will develop options for departure and arrival paths over the city to allow for noise-sharing and to reduce the occurrence of communities being subject to both arrival and departure operations. Airservices will also develop options to reduce the impact on communities of non-jet tactical operations, flight paths further from the airport, merge points and hold downs. In addition, Airservices will introduce opportunities for greater use of advanced navigation technology where this improves community noise outcomes.	Supported APAM expectation this would occur during the detailed airspace design with the options explored provided to community.
PACKAGE FOUR: OPTIMIZE THE PERFORMANCE OF THE WIDER BRISBANE AIRSPACE SYSTEM		
4.1 Develop and assess options for change proposals to introduce noise sharing through runway alternation using segregated and semi-mixed runway modes with an updated flight path design that deviates from compass operations, and if feasible engage with all affected stakeholders	Recommendation 4.1 - Introduce noise sharing through new operating modes: Airservices will develop options to connect flight paths to all runway ends to provide greater flexibility for noise sharing, and investigate a range of modes, including segregated and semi-mixed modes, to provide periods of respite for communities	Supported APAM have suggested some new runway modes for review as part of the detailed airspace design.

Table Source: Brisbane New Parallel Runway Flight Paths Post Implementation Review Independent Review Final Report Version 1.0 July 2022, Brisbane New Parallel Runway Flight Paths Post Implementation Review (PIR) DRAFT REPORT Version 0.1 21 October 2022, APAM commentary 202

Previous Flight Path Changes

During engagement conducted in 2019 (following the decision to change the orientation of the third runway) several residents to the south of the airport reported concern about the recent Smart Path Runway 34 change, which included lowering of airspace. The Master Plan 2022 and M3R MDP public exhibition included information about this change for Local Government Areas to the south of the airport (particularly Maribyrnong and Hobsons Bay).

A significant number of submissions and conversations with the community during the public exhibition referred to previous flight path changes. To help respond to some of these submissions, APAM has provided a short summary of previous flight path changes at Melbourne Airport that was supplied by Airservices.

The 'Smart Path Runway 34' change included the introduction of Global Navigation Satellite System (GNSS) based precision approach and landing system for Runway 34. The fact sheet prepared by Airservices noted that:

> *"To enable this, aircraft may fly 500ft lower than they currently are between 25km and 15km from the runway touchdown point"*

Airservices also engaged on the 'lowering of airspace south of Melbourne Airport' noting:

> *"In order to introduce Smart Path technology to the approach route south of Melbourne Airport, the controlled airspace at the edge of Port Phillip Bay between Altona South and Station Pier, will require lowing by 500ft"*

Images included in the consultation material are shown in Figure 59.

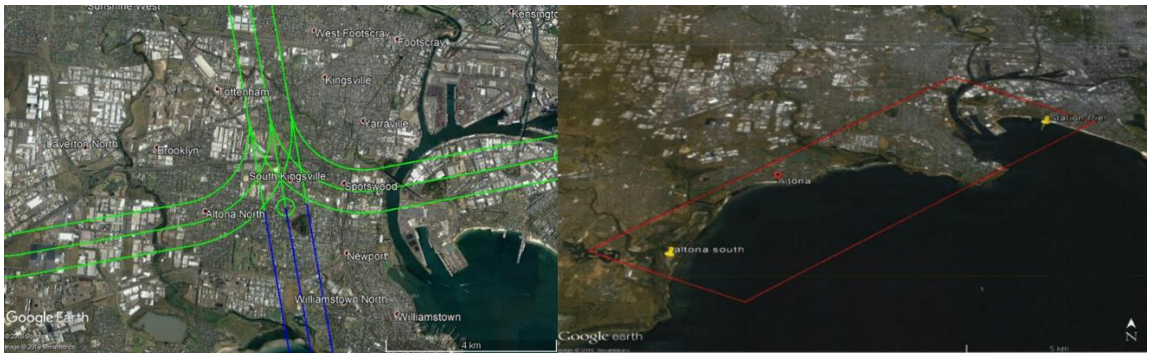


Figure 59: Airservices Smart Path Runway 34 engagement material

Source: Airservices, 2018

Community consultation for the lowering of airspace occurred between May and June 2018 (seven week period). A presentation was made to Melbourne Airport's CACG, information was presented on Hobsons Bay Council's social media and information was published on Airservices website. Airservices received 27 submissions. The following next steps were included in the summary of the community feedback for lowering of airspace:

> *"Airservices has considered the feedback from residents. As there were no recommendations for improvement actions identified in the feedback, the proposal will proceed to implementation. Changes will come into effect on 8 December 2018. Airservices values all feedback received and thanks residents for taking the time to submit their views."*

Community consultation for Smart Path Runway 34 change occurred October to November 2018. Presentation was made to Melbourne Airport's CACG, information was sent to Hobson's Bay Council, a public notice was placed in the Hobson's Bay Star Weekly and information was published on Airservices' website. Airservices received 5 submissions. The summary of community feedback noted the following:

> *"Airservices acknowledges that some residents may experience an increase in noise of up to 1.6 decibels (dB(A)) as a result of aircraft using Smart Path from the south. It is not expected that this level of increase will be noticeable."*

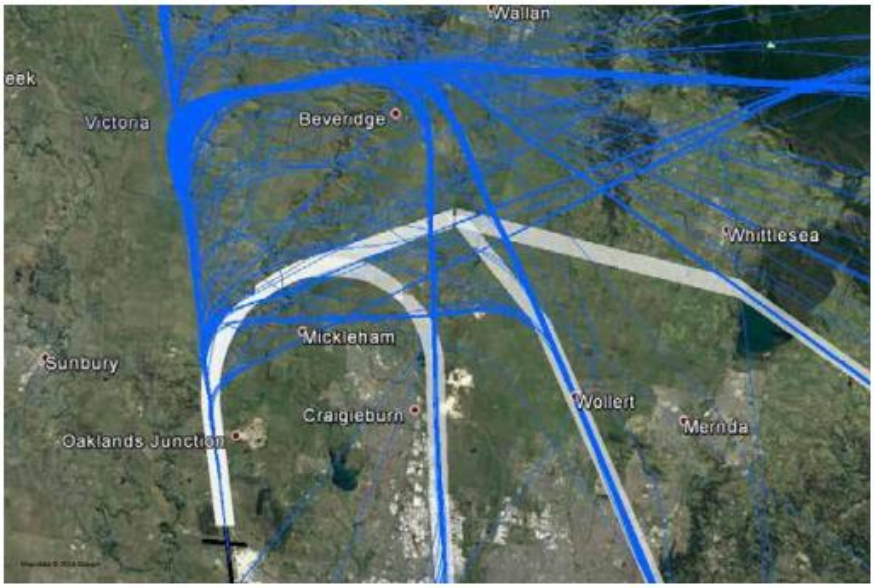
The following next steps were included in the summary of the community feedback for Smart Parth Runway 34:

> *"Airservices has considered the feedback from residents. As there were no recommendations for flight path or airspace improvement actions identified in the feedback, the proposal will proceed to implementation. Changes will come into effect on 8 December 2018. Airservices values all feedback received and thanks residents for taking the time to submit their views."*

APAM acknowledges that the engagement for this change did not meet community expectations, including that the airport should have been more involved in the project. APAM also notes the improvements Airservices has made to their public communication and engagement processes since this change.

To understand the concern raised by community members in Kinglake West, APAM has reviewed other changes available on Airservices website related to Melbourne Airport. Two projects have been identified.

In 2016 Airservices introduced 'Smart Tracking – Melbourne Runway 16'. This did not include any community feedback analysis or summary. The material provided in the fact sheet is shown in Figure 60. It does not appear to be the change referenced by community members in Kinglake West.



Above: New Smart Tracking flight path shown in white. Existing flight tracks (which will not change) shown in blue.

Figure 60: Airservices Smart Tracking – Runway 16/34 engagement material

Source: Airservices, 2016

In 2019 Airservices consulted on changes to 'Runway Mode and Flight Path Changes' at Melbourne Airport to support the introduction of a new mode allowing domestic landings on Runway 09, international arrivals on Runway 16 and departures on Runway 16. Airservices engagement occurred from 15th January to 12th March 2019 (8 weeks) with activities including:

- Three community specific fact sheets
- Public notice in Sunbury leader, Northern leader, Melton and Moorabool Star, Brimbank and North West Star Weekly
- Correspondence about the proposal was shared with community members registered with Noise Complaints and Information Service (NCIS)
- Correspondence about the proposal was shared with local councils and elected representatives
- Communication with Melbourne Airport CACG and Noise Abatement Committee (NAC)
- Hosted 'drop in' consultation sessions with potentially affected communities between 7th and 9th March 2019 (three days).

Airservices received 38 pieces of feedback. Whilst the summary of community feedback notes:

> *'We will consider community feedback along with feedback provided by industry and safety, efficiency and environmental considerations. This will inform the decision on whether or not to proceed with the change. Once a decision has been made it will be published on the Airservices website.*
> *We thank the community for taking the time to submit their feedback and to take part in our community engagement activities.'*

The Airservices website states "The proposal will proceed to implementation on 20 June 2019."

The figure provided by Airservices in the fact sheet is highlighted in Figure 61.

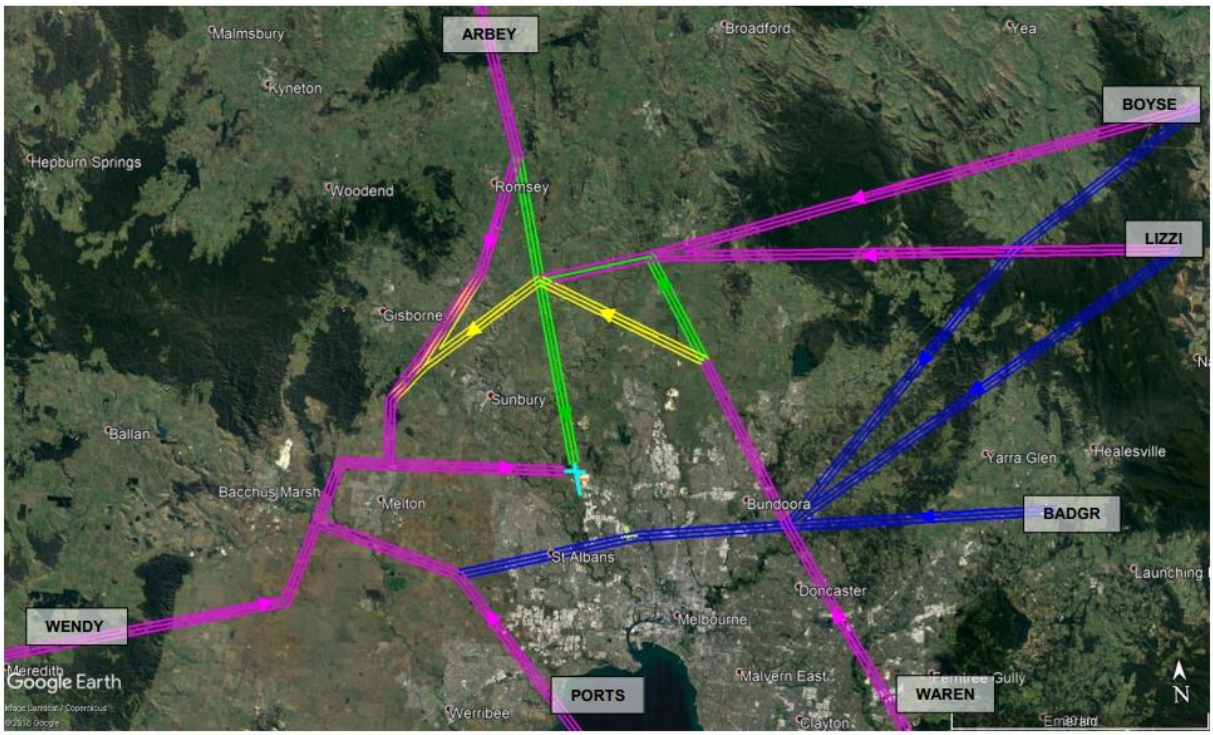


Figure 1: Arrival flight path corridors for Runway 09 (for use when there are south and south-easterly winds)

Key: Current Arrival Paths (Runway 09) Current Arrival Paths (Runway 16)
Proposed Additional Arrival Paths (Runway 09) Removed Arrival Paths (mode dependent)
Melbourne Airport Runways Name of Arrival Path

Figure 61: Airservices Smart Tracking – Runway 16/34 engagement material

Source: Airservices, 2019

It is apparent, in reviewing the flight paths in Figure 61, that the removal of the blue arrival paths for Runway 09 and greater use of the existing pink flight paths from BOYSE and LIZZI could be the change being referred to by community members in Kinglake West.

APAM notes that Kinglake West was not identified as an area within any community engagement activities or material.

While improvement of airspace utilisation is a responsibility in Airservices' remit, APAM is a key stakeholder in flight path changes related to Melbourne Airport. Airservices is making systemic changes to its community engagement strategies, which APAM welcomes and supports. The organisations are committed to working together and with the community to improve trust, credibility and effective engagement.

Airservices Australia has made several improvements to its public communication and engagement processes since the previous flight path changes raised by some submitters, including introduction of its Flight Path Design Principles in 2020 and Community Engagement Framework in 2021. Airservices has confirmed to APAM that future engagement with the Melbourne community will be conducted in keeping with these new standards and contemporary approaches.

APAM is keen to work with Airservices, the community and the broader airport industry to agree on consistent engagement requirements for flight path and runway operating changes.

Existing flight paths – Community awareness

APAM understands community concern about proposed M3R flight paths over personal property and regions. There is also significant interest in the current flight paths. APAM notes that some of the concern with M3R paths actually refers to existing flight paths within the Melbourne Basin.

2019 flight radar data was included within Chapter C2: Airspace Architecture and Capacity to highlight the spread of flight tracks for arrivals and departures into Melbourne Airport. Samples of these data sets are shown in Figure 62. As highlighted within the figures, there are very few areas of Greater Melbourne that did not experience an aircraft over flight during 2019.

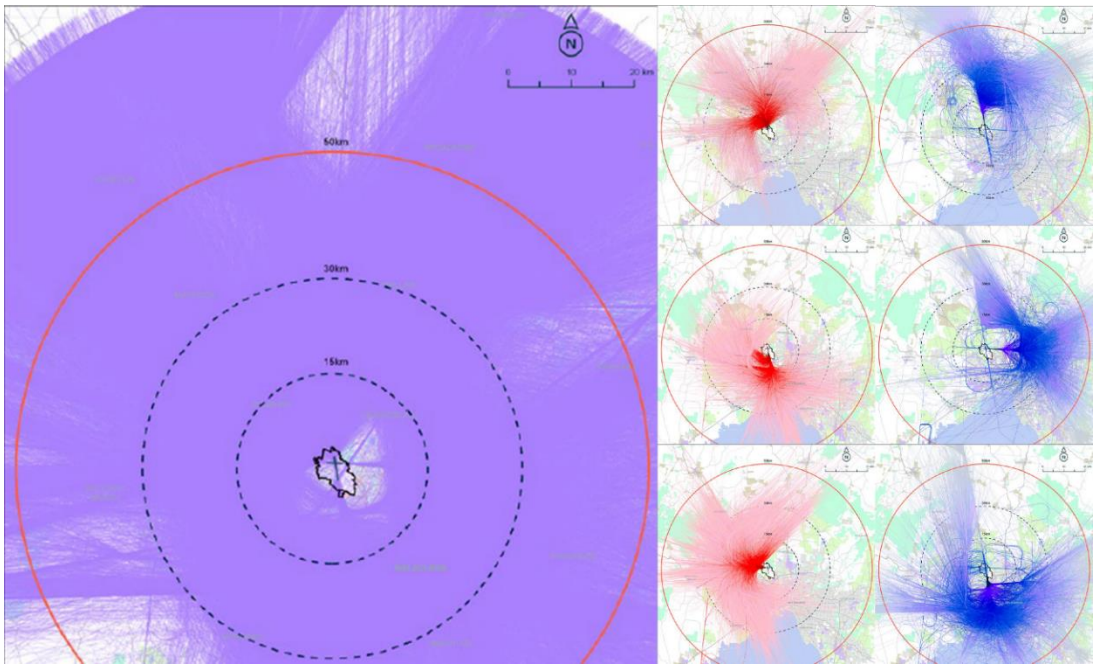


Figure 62: Historical (2019) annual flight radar data taken from the pdMDP

Source: Airservices NFPMS data – M3R MDP Figure C2.5 to C2.13, 2022

The Airservices website does not provide this level of detail. APAM notes that the most recent 'Aircraft Noise Information Report' for the Melbourne Basin, that is publicly available, is from Quarter 1 2016. This report included useful figures highlighting the flight radar data for that period (see Figure 63).

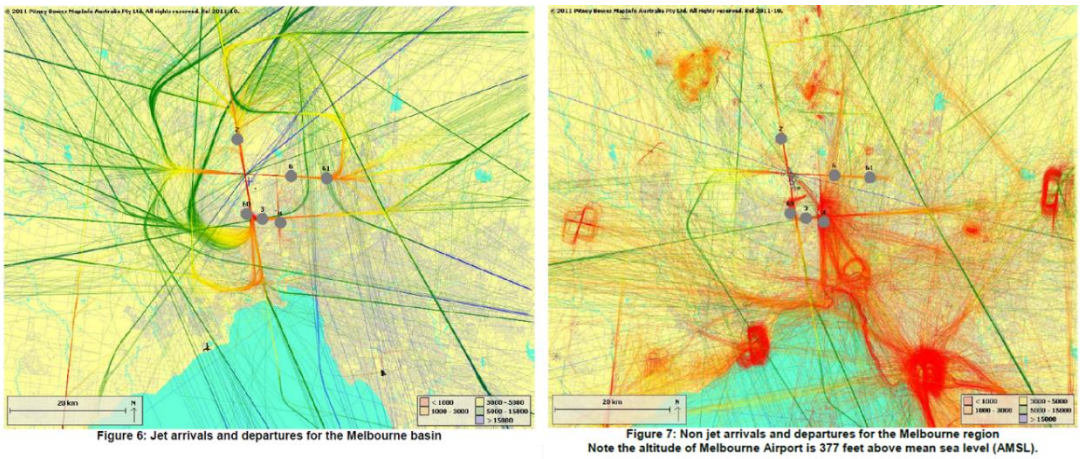


Figure 6: Jet arrivals and departures for the Melbourne basin

Figure 7: Non jet arrivals and departures for the Melbourne region
Note the altitude of Melbourne Airport is 377 feet above mean sea level (AMSL).

Figure 63: Flight radar data taken from an Airservices Aircraft Noise Information Report

Source: Airservices, 2016

Since 2016, Airservices provided this information through a website where swoosh diagrams for arrivals and departures indicated the number of movements over these areas (see Figure 64). This information stopped being available after October - December 2021 reporting.

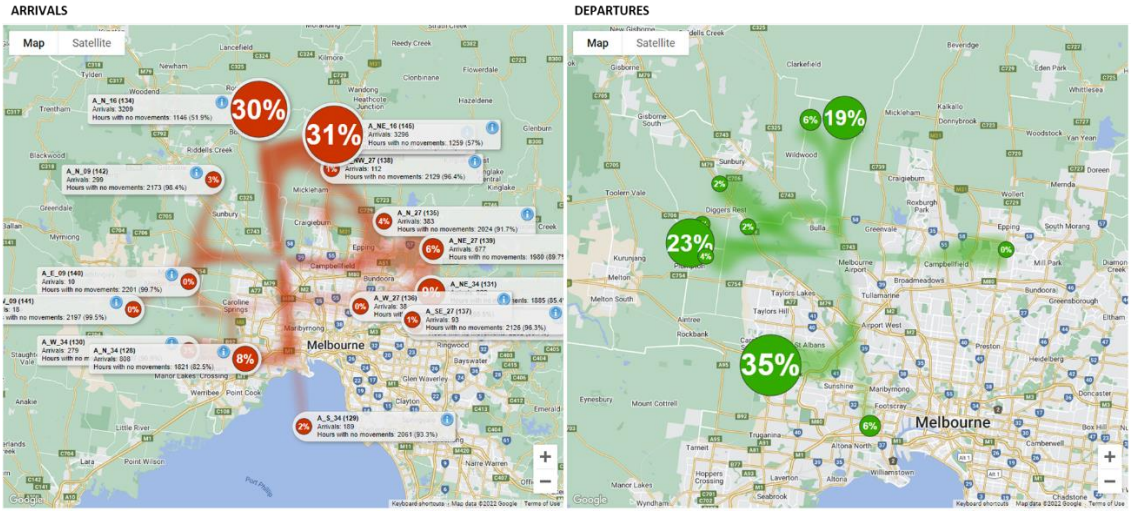


Figure 64: Typical flight path 'swathes' for arrivals and departures on Airservices website

Source: Airservices http://aircraftnoiseinfo.emsbk.com/melbourne/flight-paths, 2021

Whilst Airservices have updated the flight path information for Melbourne Airport on its new 'Aircraft In Your Neighbourhood' website Figure 65 to reflect flown tracks, information regarding the frequency of use is no longer available.

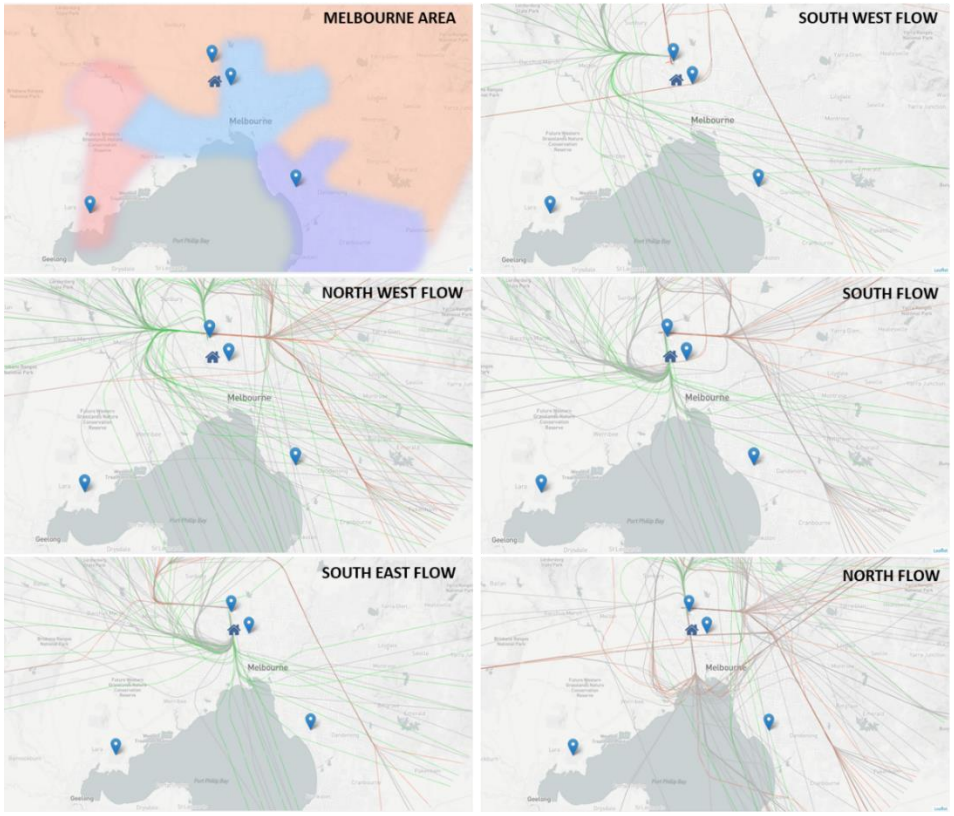


Figure 65: Flight path information for Melbourne Airport on Aircraft In Your Neighbourhood

Source: Airservices website, 2022

APAM is keen to reintroduce reporting of historical flight paths that would include information on:

- Track spread
- Altitude of flights
- Frequency of use.

This information would then be combined with any historic noise contour reporting (refer to Issue D5: Noise Projections).

APAM will work with Airservices to gain regular and efficient access to this NFPMS data to support the preparation of these reports.

APAM would also be keen to explore the inclusion of Essendon Fields traffic with EAPL noting the volume of responses referencing smaller aircraft and helicopters.

APAM would hope that this reporting would help address the erroneous belief by some community members that M3R flight paths are currently being tested or trialled.

Existing Flight Path – SHEED

The current flight path that utilises airspace above Essendon Fields Runway 08/26 is commonly referred to as the 'SHEED' approach (the waypoint above Essendon Fields is called SHEED). Examples of the two standard instrument arrivals (STAR) - WAREN SEVEN VICTOR ARRIVAL (RNAV) and LIZZIE EIGHT VICTOR ARRIVAL (RNAV) are in Figure 66.

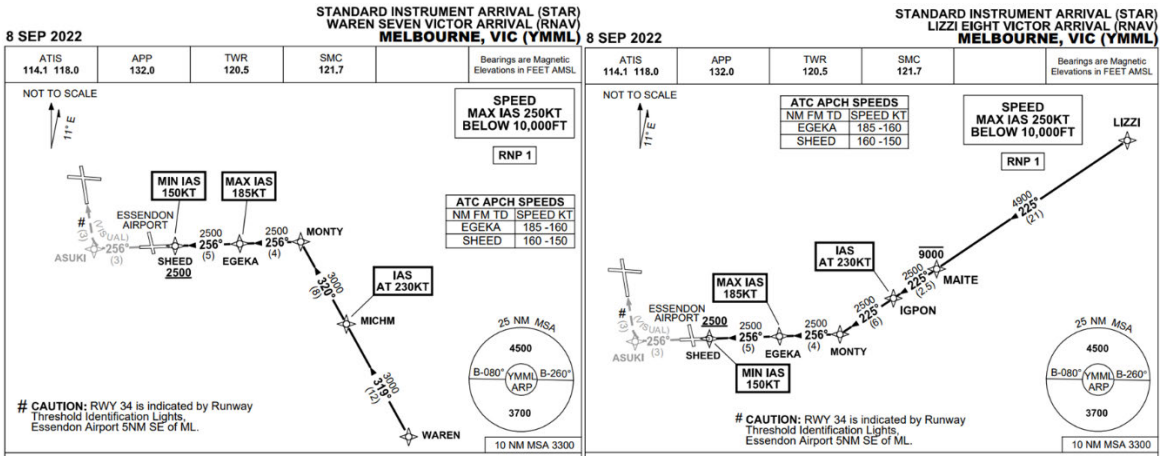


Figure 66: Current STARs for SHEED approaches

Source: Airservices AIP, 2022

These approaches are limited to domestic aircraft only and provide a shorter journey (track miles) for aircraft approaching from the east compared to using waypoint AKDEL (south of the airport).

In developing the concept airspace design for M3R, retention of the SHEED approach for segregated modes (landings on Runway 34R or 34L) was supported by Airservices and airlines. The SHEED approach to the new runway (Runway 34L) was considered a beneficial route. Independent parallel runway approaches do not allow the SHEED approach to occur thus this flight path was utilised in segregated modes only.

APAM reviewed flight path usage for SHEED approaches in 2019 and identified on average this approach was used over 14 times a day (peaking to 22 per day during quarter 2 of 2019). Upon

opening day of M3R, it is estimated that SHEED approaches will be used on average 73 times per day, with a typical range of 32 to 119.

In March 2022, during the public exhibition period, Airservices notified APAM that an airline had advised they would no longer be using the SHEED arrival at Melbourne Airport. APAM provided Airservices with the assumed usage within the MDP and requested historic data on the usage of the SHEED approach by the airline, however no data was provided.

APAM is aware of previous changes to airline preferences over time, with track mile penalties being the usual driver to adopting the approach again. When the airline was queried they did not rule out using the approach in the future.

APAM is not aware of any Airservices engagement with the community regarding changed usage of SHEED, despite complaints from the south of the airport relating to Runway 34 arrivals. Whilst complaints may still be related to the 2019 Smart Path Runway 34 change, there has been an increase in the number of aircraft using the longer approach over communities to the south of the airport because they are no longer using SHEED.

History of Flight Paths (1960s and 1990s)

The history and evolution of airport planning and design is a popular topic throughout the submissions. APAM agrees this is important, and this feedback highlights an opportunity and interest for a detailed and accurate account of the history. As outlined in the supplementary report for the 2022 Master Plan, now is an opportune time to complete a literature review of the historic planning for Melbourne Airport.

APAM notes KRRA's opposition to any creation or expansion of flight paths that pass over Keilor, and the message "original planners gave assurances that aircraft would not fly over Keilor".

APAM has not been able to find reference to this assurance within the 1989 Draft MAS, when alternative runway alignments were being explored. The report does however identify that the wide spaced north-south runways explored (referred to as Options SC1A and SC2A) can be "expected to impose aircraft noise over an area of Keilor not currently affected". It should be noted that the preferred runway strategy within the MAS (SW1A) was updated to reflect the review commissioned by the Municipalities of Broadmeadows, Keilor and Shire of Bulla. This review recommended the alignment of the north-south runway be 1,311 metres to the west of the current runway. This runway layout, as proposed in all subsequent master plans which utilised the layout from the Supplement to the Melbourne Airport Strategy and Draft Environment Impact Statement (Supplement Report 1990), renders avoidance of flight paths over Keilor unavoidable.

Regarding the flight paths assumed within the Supplement Report 1990, this document does not include flight paths but does include ANEC noise contours.

Regarding the suggestions to shift the runway further north to allow departures to turn before Keilor, whilst this may provide some benefit for residents in the south for Runway 16R departures (to be determined), Runway 34L arrivals will remain over Keilor. KRRA's statement that this is 'beneficial to all parties' does not consider the impacts of a northwards shift to residents of Bulla and other areas to the north of the airport. As noted above, the location of the north-south runway was determined as part of the Supplement Report 1990 (adopting the recommendation of the P&D report as described above to shift north and west to improve noise impacts to residential areas to the south of the airport). APAM provided this explanation to KRRA when they queried this point directly prior to the public exhibition of M3R pdMDP.

Aircraft Altitude

APAM appreciates that the overhead altitude of aircraft is a concern for the local community.

Regarding the minimum altitude of aircraft and a reference to Regulation 157 of the Civil Aviation Regulations requiring a minimum altitude of 1,000 feet over towns and populated areas - that Regulation does not apply when an aircraft is in the process of take-off or landing. Where the noise tool presents an altitude result below 1,000 feet that location is below a landing or take-off procedure. APAM will include explanation of this point in the online community portal FAQs section.

As part of MDP Chapter C4: Aircraft Noise and Vibration, APAM included indicative noise altitude distance charts for arrivals and departures. These figures highlight the altitude of aircraft depending on the distance from the runway, as well as the extent of the noise footprint for various aircraft types. Examples of these figures are shown in Figure 67.

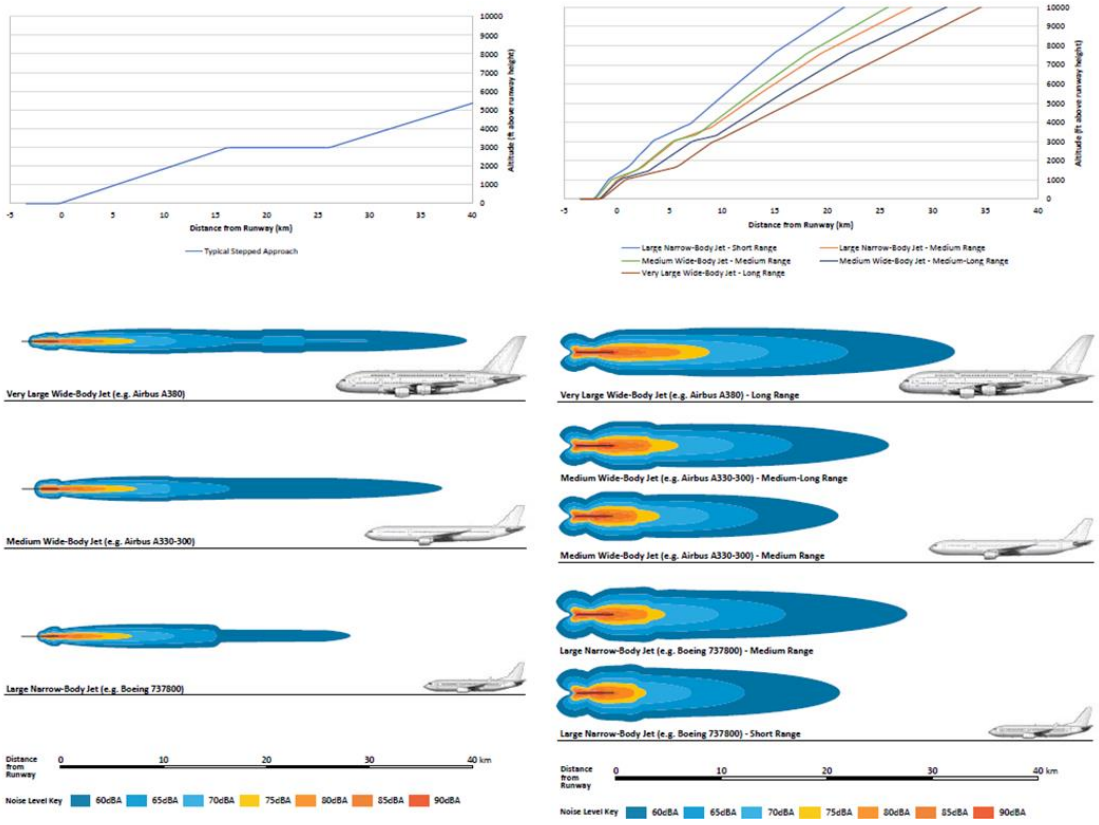


Figure 67: Indicative Noise Altitude Charts

In addition, as part of the flight path and noise tool, the altitude calculator was added to the tool during the middle of February 2022. Figure 68 includes a snapshot of the results for a location along with the more information pop up box.

Figure 68: Melbourne Airports Flight Path and Noise Tool altitude results

APAM notes the new altitude feature within Airservices' Aircraft in Your Neighbourhood website (refer to Figure 69 sample). APAM will work to ensure the community is aware of this feature and will advocate for Airservices to explain the features of the online tool with community members.

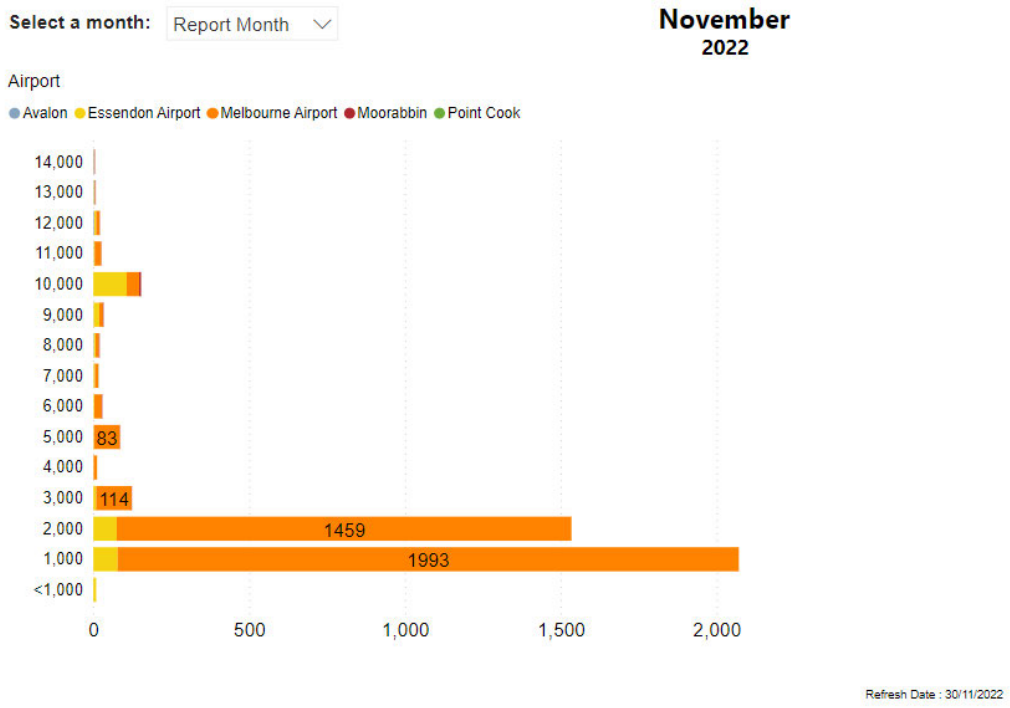


Figure 69: Aircraft altitude information on Aircraft In Your Neighbourhood

Source: Airservices website, 2022

Notes: A location at the intersection of Keilor Park Drive and Calder Freeway was used to generate data

<u>On-Going Engagement and Increasing Awareness</u>

As highlighted throughout this section, APAM is committed to on-going engagement with the community to increase awareness of the current and proposed flight paths.

In addition to community engagement, APAM is planning to further engage with local councils, Melbourne Basin operators and developers within Melbourne and Victoria.

D4.6 Changes to Preliminary Draft M3R MDP

APAM believes that the concept flight paths for M3R are suitable for the MDP and this stage of project development. There are no proposed changes to the MDP.

It would be premature to incorporate any potential noise sharing opportunities without going through the detailed airspace design process with Airservices.

APAM will work in collaboration with Airservices on further engagement of the detailed airspace design with the community.

D4.7 Summary and Conclusion

APAM has produced concept flight paths and runway operating modes to accommodate forecast growth at Melbourne Airport. These have been designed with input from Airservices according to

principles that include reducing aircraft noise impacts upon established communities wherever possible.

APAM notes that the introduction of alternative flight paths to spread the impact might benefit areas further away from the airport, however due to international flight path design requirements, areas in closer proximity to the airport are unlikely to receive any benefit from spreading flight paths. The remaining 'lever' to reduce aircraft noise further is to limit the frequency of aircraft movements, which is discussed in Issue E4: Noise Mitigation.

APAM will continue to work with key stakeholders regarding changes and interactions within the Melbourne Basin airspace. While immediate concerns and requests for information are recognised, the concept airspace design continues to evolve. The detailed airspace design phase will include extensive engagement with these parties.

APAM is committed to ongoing engagement with the community and the aviation industry through the construction phase of the project including the draft runway operating plan required for M3R. It will work in collaboration with Airservices on further engagement of the detailed airspace design with the community.

APAM believes that readily available and easily understood flight path information is critical to community engagement. APAM is committed to providing more regular flight path reporting information for the current flight paths and operating procedures and will work with Airservices to produce this information.

D5 Noise Projections

D5.1 Summary of Issue

This Issue relates to submissions commenting on the noise projections forming part of the M3R MDP. This included references to:

- Concerns regarding current noise impacts
- Concerns regarding noise forecasts
- Concerns regarding specific projections and personal monitoring results
- Comparisons of projections with previous contours, WHO guidelines and EPA guidelines
- Suggestions for ways to reduce / share projected noise.

D5.2 Number and Types of Submissions

1,313 submissions contain reference to the Noise Projections Issue. They were received from:

- Community
- Community organisations:
    - Keilor Residents and Ratepayers Association (KRRA)
    - 'No 3rd Runway'
    - Melbourne Airport Community Action Group (MACAG)
    - Greater Sunshine Community Alliance (GSCA)
    - Friends of the Earth Melbourne (FoEM)
    - Climate Action Moreland
    - South Melbourne Residents
- Non-government organisations and commercial entities:
    - Melbourne Airport Community Aviation Consultation Group (CACG)

  - Qantas Airways Ltd (Qantas)
  - Virgin Australia
  - Essendon Fields Pty Ltd (EAPL)
  - Keilor Primary School Council
  - Town and Country Planning Association Incorporated (TCPA)
  - Keilor Historical Society Inc.
  - Beulah International
- Government:
  - Whole of Victorian Government
  - Hume City Council
  - Brimbank City Council
  - Maribyrnong City Council
  - Hobsons Bay City Council
  - Moreland City Council
  - City of Yarra
  - Yarra Ranges Council
  - Wyndham City Council
  - Moorabool Shire Council
  - Yarra Ranges Council
  - Boroondara City Council
  - Western Health

D5.3 Discussion of Submissions

The noise projections within M3R MDP were the most frequently mentioned topic in submissions. Submissions from the community have been grouped into the following topics:

- Current noise impacts
- Concerns regarding noise
- Concerns about living with noise
- Projected results and online noise tool
- Reference to specific projections and personal monitoring results
- Comparison with previous contours, WHO guidelines and EPA guidelines
- Projections with respect to options
- Suggestions.

These are discussed in detail along with specific submissions from community organisations, non-government organisations, commercial entities and Government agencies.

Current Noise Impacts

A large number of submissions indicated a concern relating to the existing noise from Melbourne Airport, for example:

> *"Pre-covid the noise from air traffic was loud already"*

> *"Do not want third runway as there is already more than enough noise with the number of planes going over."*

“I oppose to this project. The planes are already frequent and very loud as it is”

“Not in favour as I already have to put up with the noise from excessive planes and with the third runway there will be even more noise pollution that I will have to endure.”

“Noise level is too high as is”

“This project will increase the noise pollution which already is at an unreasonable level.”

“There was already a significant amount of air traffic pre-pandemic due to both Tullamarine and Essendon airport flight paths. This plan will make that worse, especially with bigger aircraft coming online.”

“The air pollution and noise pollution in Fawkner is already very bad.”

“Between Essendon Airport and Melbourne Airport, our neighbourhood already bears a disproportionate brunt of air traffic over Melbourne - it is very noisy and disruptive, and keeps us awake at night already, especially with the high number of helicopters that use Essendon Airport.”

“Avondale Heights and other suburbs have been polluted with heightened noise levels for too long.”

“Before 2020, we were already experiencing massive amount of air traffic, even in the wee hours of the morning, waking me up during deep sleep.”

“I have been a resident of Keilor Village for over 25 years. I live in Horseshoe Bend Road which has been in the past, and still is adversely affected by plane noise, even before the third runway comes into play.”

“I currently live at Percy Street, St Albans. I have lived here for 16 years. We have an existing flight path in operation which pertains to flight take-offs above the property. The noise level unreasonably affects my quiet enjoyment of the property.”

There were submissions specifically referencing concern about engine testing:

“Currently there are to many engine runs after Overnight Maintenance, and thrust reverser noise at night.”

“we also suggest that a review of practices should be looked at such as
…
engine testing should also be not carried out at night or sound barriers be placed around the test pad.”

A number of submissions referenced helicopters and light aircraft (general aviation):

“We suffer enough noise harassment by being buzzed by low flying helicopters daily and don't need more noise from your aircraft.”

“We live in Box Hill South & we experience regular low flying helicopter/light plane traffic & passenger jet noise.”

“Noise noise noise!! It's already awful enough with Essendon helicopters and small planes, and the occasional day when larger jets are taking off continuously.”

"As it is, the amenity of our home is ruined by the constant aircraft and helicopter flights to/from Essendon Airport. The stress associated with Essendon Airport noise is compounded significantly on days when incoming flights to Melbourne Airport fly over Essendon Airport to land from the south on the North-South runway."

"We already have so many small planes and helicopters flying over us."

Other commentary on current noise impacts referenced previous changes and impacts:

"We have planes flying low overhead every few minutes due to flight path changes which were implanted without proper community consultation."

"having been affected by the lowering of the flight paths over our house a few years back I am very aware of the negative effects of airport noise."

"I have been living in this house for 49 years and have had no issues until the planes starting flying over my property"

Concerns Regarding Noise

The vast majority of submissions tagged under this Issue expressed concern regarding noise projections and the impacts they will have. Some examples are shown below:

"My home will be affected by noise events with the construction of this runway. I'm concerned this will not only affect the livability of my home but the price of my property in future. How do I go about compensation for this?"

"Noise above acceptable levels for residents"

"My address has significant increase in noise. How will this be compensated?"

"I'm really worried about the extra noise with the increasing number of flights proposed!"

"I disagree with the proposed third runway project as it's of clear evidence that it will cause noise pollution and disrupting our daily life in this suburb."

"I live in quiet area which has very limited noise abatement. I am very concerned that the noise from the revised flight path will adversely impinge on my life."

"Will cause too much traffic and noise pollution."

"I'm greatly concerned about the increase in noise and pollution over a densely populated part of Melbourne. No one should have to live with hundreds of planes overhead every day. The effects on children, health and the environment will be terrible."

"The noise level already is loud, I can't imagine how awful it will be on a more regular basis."

"I believe that the third runway would have a big impact with noise on my property. We purchased our property because of its quiet and rural location but will now be impacted by aircraft noise"

"Concerned about increased aircraft noise over my house."

"We are very concerned and absolutely against the proposal."

"The noise created over Keilor will make our home unliveable. Every time a plane flies overhead we will have to stop conversations. Sleep will be constantly disturbed. Already when outside the current airplanes are loud but this runway will make the planes much closer. Our quality of life will be hugely impacted by this project."

"I am very concerned by the impact of this 3rd runaway on the health of the community due to the frequency of the flights and higher decibels that will result"

"The additional noise over Williamstown that this would create is completely unacceptable."

"My concern is the noise. The flight path of this runway is directly above my community."

"Noice forecast are untenable and limited to real life impact not addressed"

"The noise factor will be absolutely out of control and will be unliveable, abominable and unbearable."

"Please don't add a third runway here. It will make the noise levels unbearable"

Noise at night was frequently mentioned:

"I'm concerned about the noise level, especially at night time."

"It will impact my home after hours - I'm utterly against it - don't have an issue flights during the day but object against between 9pm - 6am"

"Our home has double glazing, soundcheck plaster and it is brick yet the aircraft noise is still loud enough to wake us at night time, interrupt a conversation or periodically stop you from hearing the TV. With no curfew at Melbourne airport you will be subjecting residents in our area to intolerable noise levels all day and night. We do not support the third runway as currently proposed."

"Without a curfew like Sydney the noise pollution is already impacting communities."

"We are woken in the early hours of the morning by Aircraft flying over our property and I assume with the new Runway this will increase"

"It will most likely increase the noise level in the area and especially at night time when our family is trying to get a good night's sleep for work."

"are not in favour of the third runway at Melbourne Airport because of the health implications resulting from noise and broken sleep."

Another concern raised by submissions was about potential impacts of noise on children at home, at school and at pre-schools:

"3 schools will be directly under/very close to the new path (Overnewton, Keilor Primary and St Augustine). 2 pre-schools are under it as well (Keilor and Keilor Gate House). The noise will impact teaching and learning greatly."

"There needs to be other alternatives to this, as I don't believe this is good for our kids health either with the primary school being in the red zone as well."

"I have heard from the news that at certain schools, teachers have to pause every now and again when the plane noise is loud, and this results in a lower standard of education in these areas."

"I find it difficult to agree with a third runway which will impact my community's health which includes students in multiple schools."

"This will impact my family's complete life. The children a school will be hugely impacted as well as our health."

"The flight path for the second N/S runway passes directly over resident housing and three schools, one of which is where my children attend (are these schools going to be relocated to comply with State planning regulations) and according to health data and research will be significantly impacted with regards to their educational learning, health outcomes and long term level of education in comparison to other schools not within a flight path."

"It is now known that this runway will actively impact residents health in basic and horrible ways.... children will perform lower in school, anxiety and sleep disorders will be up. The noise pollution is going to be horrible and a curfew of 11pm to 6am is nonsensical when a child goes to bed between 7-9 depending on their age."

"There are schools with hundreds of students attending them. For example – Keilor Primary School, Overnewton College, St Augustine's Primary School to name just three in the immediate area. They are all in the pathway of the proposed new runway. How are these children and staff guaranteed they will not be affected by noise related medical concerns?"

A number of submissions referenced the impact of the noise projections on property prices:

"The level and frequency of noise pollution this will create will impact on my family's quiet enjoyment of living in Clifton Hill. In addition, this will likely have a negative impact on property prices in the future."

"The planned 3rd runway will significantly impact noise levels and property prices."

"The impact on house prices will be significant as noise impacts significantly impact sale of houses in the area."

"The detrimental consequences this will have on the community, including the drop in house prices and noise pollution."

"In addition to the health effects, they are likely to suffer economically from depreciating house prices."

"I am alarmed at the proposal to bring the new flight path 1.3km closer to us both from the increased noise level and the effect it could be expected to make on the resale value of our house"

There were a number of submissions that made reference to the impact of other noise sources on top of the proposed plan (such as other transport, Essendon Fields, RAAF Base Point Cook and Avalon Airport):

"In Pascoe Vale, the noise pollution from Essendon Fields is already significantly disturbing, it would detriment quality of life with further noise from third runway."

"We already deal with airport noise from both Essendon airport & Tullamarine arrivals & departures. A doubling of Tullamarine airport arrivals & departures following the addition of a third runway is not realistic or fair without a curfew in place."

"Now we're told that Essendon airport is staying plus the flight routes for Tullamarine are going to be altered and significantly increased so that Strathmore will be directly under the major flight paths. This increase in air traffic will also mean an increase in the noise level the local community will be subjected to."

Submissions also referenced concern about impact on wildlife:

"The property and suburb are already subject to noise from Melbourne Airport, Essendon Airport and the railway line.
The addition of the third runway will increase the noise frequency and duration."

"This noise will also affect all of the local wildlife at the woodlands historic Park which is unfair, the park and animals are protected from everything why should they not be protected from plane noise and pollution ?"

"noise pollution could be very detrimental to the flora and fauna within the park. We have black cockatoos, swans, owls and numerous other bird and mammal species that could be impacted by this increase in noise and pollution."

"Jawbone reserve is a protected National Park and the noise will disturb precious animal life."

"I am concerned about the extra noise of additional flights, and the impacts on protected flora and fauna."

"Residents of Melbourne's north already grapple with considerable noise from the Western ring road, Sydney road and Bell street. We are impacted by Essendon airport - if not at home then when we shop or study or go for a walk."

"Richmond is already very noisy due to trains and trams and congested living. Adding further noise pollution is unacceptable."

"I already have a train behind my house, I don't want planes over my house."

"Many owners like us have lived here since 2004 or earlier and subsequently we have had to deal with air traffic from the new development of Avalon. Now we will be subject to a second airports traffic is completely unsatisfactory for noise pollution."

"Not in favour of planes flying in Altona's airspace, Point Cook's planes already affect us with the loud noise giving us headaches."

Some submissions noted that noise projections did not factor traffic on the existing east-west runway:

"It is extremely disheartening to read that the current E-W runway will barely be used once the proposed 3rd runway is built. Currently, many flights depart and arrive from the west of the airport which is an unpopulated area, providing respite to the many residents south of the airport."

"The Noise monitoring tool mentions that Runway 09/27 (East/West) is expected to be used significantly less. This implies that during off peak times, no noise mitigation will be

performed using this runway. This change alone would cause increased noise levels to residents."

A number of submissions tendered that they were never aware of the airport plans:

"Residents bought into this area with no knowledge of what you planned to do"

"Nobody would have any issue if this was planned few years ago so council can make necessary requirement for future house to have certain level of noice insulation, as majority of the houses are only few years old and its a new development."

"We were not aware of this proposal before purchasing our property in 2021, so we feel as though it's extremely unfair to residents who unwittingly purchased a home in a quiet neighbourhood"

"We would not have moved to our home 37 years ago if we knew this was going to occur."

"I live in a community that will be affected by the flight paths from the third runway. We have built in our area and we're not expecting a change in the aircraft noise as significant as this."

Concerns About Living With Noise

A common theme within the commentary of submissions regarding noise projections was 'lifestyle' effects. Commentary included noticeable improvements / changes that occurred during the COVID-19 pandemic downturn in aviation.

A large proportion of submissions referenced their concern about the impact of the noise on their activities and lives in an outdoor setting:

"The main attraction for us moving to Keilor was Keilor Village, in particular picnics in the park at Keilor Village and being able to go on regular walks and picnics in Brimbank Park. My husband and I are grandparents of two little girls and often take them for picnics and play at both the Keilor Village park as well as Brimbank Park. We regularly spend many happy hours at these places. The proposed third runway at Melbourne Airport will have a significant impact on our outdoor enjoyment of these facilities."

"We bought the property based on the atmosphere at Keilor village, lagoon park and Brimbank Park, where we believe would be an ideal place for our children to play and grow. However, it is obvious that the proposed third runway at Melbourne Airport will have an adverse effect at our new home and surrounding area whether it be entertaining friends or going for walks with family to having picnics with our children."

"My friends and I were at a coffee shop in Keilor Village. Simply socialising and chatting. On that day planes were taking off to the South and they had a huge effect on our ability to converse. It basically ruined our get together. And this at a time when the planes were using the runway not directly over Keilor Village. If the expansion plans go ahead the effect on Keilor Village will be much worse."

"We have a beautify back yard which we enjoy relaxing in. Constant aeroplane traffic flying overhead will destroy this environment for us."

> *"Over the past few years, the number of planes taking off and arriving in Tullamarine has increased and this has resulted in a reduction in the quality of life for people living in this and surrounding areas. Many people struggle with having gatherings outside their house as the noise can be deafening at times and persists for a while."*

Another common concern regarding living with the noise was when this was compared to the experience during COVID-19:

> *"The pandemic actually demonstrated how much 'normal' flight traffic already adversely affects daily life: limiting the ability to hold social engagements in the backyard; needing to raise your voice to communicate; interrupted sleep and waking several times in the night due to the noise of overhead flights; needing to increase the volume on audio devices to drown out the sound, expending energy to block out the noise pollution from flights. All these aspects affect the health and impact the quality of life of residents living under or close to flight paths."*

> *"Covid was a welcome relief due to severly limited flights."*

> *"it was peaceful when we were locked withCovid-19 no planes noise"*

> *"covid brought this under control but now that covid is over the noise is back."*

> *"From the first day, we have loved our new home and neighbourhood however since lockdowns have lifted, we have already noticed and been disappointed with the amount of air traffic since the Covid Situation has begun to normalise with Domestic and International air travel returning."*

An additional theme from submissions related to COVID-19 was changed working circumstances, with many people now working from home. The concern was that noise during the day would now impact their ability to work effectively:

> *"I'm currently working from home and still can hear some of the noise from the plan, let alone you are trying to build a third runway that will have constant flight passing this suburb."*

> *"We now spend much more time working from home and therefore the aviation noise is not only effecting our personals lives but also our work."*

> *"I am a light sleeper who works from home and the noise will be unrelenting and unbearable."*

> *"There has also been a shift in work from home pre and post covid and the sound of the planes is noticeable on my work calls it's very frustrating to work from home and not be able to video call without airplane noise in the background."*

> *"As someone who works from home, this can be quite frustrating (as I often have to record for work and it interrupts me)."*

The suitability of residential houses to insulate from aircraft noise was also a concern from submissions and that insulation of a house does not help with outdoor noise:

> *"many of the houses are weatherboard Californian Bungalows and the noise will be unbearable"*

"Our houses we built perhaps in the 1960s or 1970s or earlier. So noise effects on those living in this region will have intrusive and permanent affects for their lifestyle and their being."

"The majority of dwellings in the Keilor area have been built in the 1960s and 1970s, and were not built to protect people from aircraft noise."

"Most of the houses in Kealba were built in the late 70s and early 80s, and as such have no noise protection at all.
…
Installing double-glazed windows will not solve the problem of noise and pollution in our yards and neighbourhoods. We will have to stay locked inside, not work in our gardens or walk our dogs, and not dry our clothes outside. I already have roller shutters on all my windows, but they do not help."

"Furthermore, our home was built in the 80's and sound / noise insulation was never a design factor."

There were a few submissions referencing shift workers and the impact of noise during the day on their sleep pattern:

"I work nights and if this will impact on my sleep during the day it's a definite no."

"As an essential health worker I worked so hard to be able to afford my first home in Kingsville my own quiet space. Not to now be woken from night shift with noise pollution."

"The nature of work for some residents means they are shift workers requiring sleep during both day and night periods."

"Shift-workers and people who are ill are considered at risk for noise-induced sleep disturbance. As a health care worker working shifts this is of great concern to me. How are residents like myself able to get uninterrupted sleep during the day or at night. Yet, despite this, I am expected to present to work well rested with a clear- and quick-thinking mind in order to safely look after patients."

"The residential homes have long been established at the time of the opening of the airport and before the 1990 plan. These houses are not of a building standard which shields against aircraft noise and have been allowed to remain un-protected."

Projection Results and Online Noise Tool

There were a number of submissions that referenced the outputs of the noise tool for their specific location and expressed concern about the results:

"There are also currently no red noise contours (100 to 199 events) to the south. This makes sense as it minimises the negative impacts of high noise levels to the south of the airport which is a built up residential suburban area with hundreds of thousands of residents. However, under your proposed plan, operations with the new third runway will greatly increase the amount of high noise level events to the south of the airport. In fact, according to your modelling, the red noise contour (100 to 199 events) will stretch out further away from the airport to the south than the north."

"The third runway will result in noise contour events going from 10-19 events over my property to 100-199+ events."

"My home address currently has 5-9 noise events but would increase to 20-49 noise events under options 1 & 2."

There were submissions describing difficulty in using the noise tool, MDP information or lack of information:

"My place of residence resides in a, according to your noise scale dB(A) chart, the most noisy of all ranging from 90-120 dB. Throughout the week we hear the roar of airplane engines flying overhead and can literally see a flash of dark shadow come and go across our house. Its quite consistent and frequent and annoyingly so."

"At this stage the air traffic is tolerable with not much of an issue. At this point in time it is estimated that there are approximately 5-9 planes with a dB of over 6o in a 24 hour period. Under this proposal that number jumps to be estimated to above 200 planes. This is an absolute disgrace."

"Board sweeping maps or website tools do not get to the end point of how we would be living after a third runway became operational."

"I am concerned about the noise levels and potential health issues posed by a third runway at Melbourne Airport. The Noise Tool and information provided in literature at the Visitor Centre regarding these issues are lacking or misleading.
1) I would like to have a clearer understanding of where flight paths will be, and a current measure of the noise levels in the Keilor and other impacted areas. This will help give a better idea of what noise levels to expect in the future and where, and if they do/will exceed any acceptable guidelines."

"The data is very confusing - i'm not sure what options 1,2 and 3 are but option 1 seems to have the least impact on me and therefore i would select that if i have to choose."

"1. The interactive map on noise events is hard to understand. The noise events vary greatly between Options 1, 2 and mixed. Which mode of operation is likely to be used? If 'Mixed' is to be used than it appears to generally have little impact on most of the areas around the airport and would be the preferred option, however if Option 1 or 2 is to be used it appears to have a huge affect on a lot of areas which would go from almost no traffic up to 100 noise incidents a day. Can you provide on the interactive tool what the likely modes of operation will be?
2. The interactive map also doesn't seem to account for any use of the East/West runway in any mode of operation. Is this runway now not being used for commercial air flights? It appears everything is being forced down two north/south runways while the 3rd runway is underutilised.
3. For my area in particular (Pascoe Vale) it has a large impact. Going from a max of 20 incidents a day to 100 is quite a shift. It appears these incidences will occur only between the hours of 6am to 11pm which would be up to 6 an hour or 1 every 10 minutes on average. That is a huge jump from 1-2 an hour on average. The interactive tool is also unclear if the amount of incidents will mainly occur outside of business hours or on weekends. If these are likely more or less they might have a huge impact on whether the public is more likely to OK with the plan.
4. For those of us already within the Essendon Airport runway corridor for the east/west runway (like myself) it is unclear if the interactive map takes the flights from that airport into account. If it doesn't there will be possible instances where two planes might fly over

at the same time which will cause extreme noise. The amount of Incidences will almost certainly go up and during peak times which could cause a noise incident every 4-5 minutes which would be unbearable.
5. 4 runway's option on the interactive map appears to cause basically zero noise around the airport. Why not just build 2 now and skip to this utopian scenario?"

"This information not very clear and transparent what you are planning on doing and where the new flight paths will go."

"The noise impact tool is extremely confusing for anyone to use and does not provide me any assurance as to how we will be adversely impacted by this project. Depending on Option 1, Option 2 or Mixed, the impact on my residence is the same, much worse or much better, and there is no information on which Option will be chosen or how that decision will be made."

"We still don't know and don't understand how much an impact this runway will have on us. We need more studies done by independent parties. A website that actually works properly so we can understand the noise impact not to mention the environmental impact."

"The current version of the Noise Tool Does not provide real-time measurements of decibel levels. Only an indication of likely number of flights at 60dB and 70dB levels for the third and fourth runways."

"The detailed Part C of the M3R proposal by APAM covers noise modelling extensively. Unfortunately to the lay person, or to the non-engineer, much of this is impenetrable. It is highly technical, there is a huge amount of jargon and non-lay terms and it is extensive. Appendix C4.A is impenetrable. Some parts are so detailed that you need to be an engineer, or perhaps a flight controller to understand it. I appreciate that this is highly complex, but where are the plain language statements? I suspect stealth by submersion of the reality in this presentation by APAM. It is unrealistic to expect that residents would be able to understand the complexities or the presentation, let alone be able to understand and comment on the different options put forward."

Specific Projections and Own Monitoring

There were a number of submissions that referenced specific decibel readings with related concern about the result:

"My place of residence resides in a, according to your noise scale dB(A) chart, the most noisy of all ranging from 90-120 dB. Throughout the week we hear the roar of airplane engines flying overhead and can literally see a flash of dark shadow come and go across our house. Its quite consistent and frequent and annoyingly so."

"The aviation noise is disruptive to our young family as is and will worsen considerably when the third runway becomes operational.
...
80 decibels of noise is EXTREMELY LOUD! Please consider our petition."

"I am concerned over the continued impact the proposed third runway will have on the local community. I am also concerned about the impact the increased noise and air traffic will have on the community's health, mental health and wellbeing. How is the community going to rest with the constant noise and disruption to daily life. Between 82 and 90 decibels constantly doesn't sound great."

"As a resident I strongly oppose the proposal. It will mean anywhere from 100-200 aircraft flying over my area a day. And with the constant noise of a minimum of 70db, the impact that will have on the ability to enjoy the open spaces of our homes will have a high risk of hearing damage"

"To my absolute disbelief and horror when entering my address I was prompted with the following data:
Number of flights over property: 288
Distance to nearest runway: 6km
Average noise level arrivals: 85db
Average noise level departures: 80db"

There were submissions that also linked personal monitoring to noise projections:

"Spending time outside is unpleasant let alone having a conversation during a block of takeoffs. Recordings on the Explane App have at times reached around 86 dB."

"I am aware that recordings on the Explane App have at times reached around 86 dB."

"I have a dB meter which I regularly use to monitor noise.
The current noise levels are much higher than what is being shown on the airport interactive map. I cannot help but feel that the presented data is not a true reflection of noise levels and that we are being deceived."

"The decibel factor will be somewhere between approx. 85-95 decibels as recorded from the current viewing area already in our town."

Comparisons with Previous Contours, WHO and EPA guidelines

There were some submissions that made reference to the extent of noise forecast in M3R MDP and drew comparison to the 1990 Melbourne Airport Strategy Environmental Impact Statement noise projections:

"Increase the ANEF20-30 noise harm shadow south of Melbourne over seven times the area promised in 1990 plan (double again if you exclude the noise contour caused by original north south runway)"

"The currently proposed runway is not what was promised in 1990. The 1990 proposal saw that another airport would be used in tandem with the Melbourne Airport to reduce noise at the Melbourne Airport, hence the reason my family moved into the area. This is not the case with the proposed MDP."

"The MAS EIS 1990 agreement stated the ultimate 2050 capacity of Melbourne Airport would be 37 Million passengers per annum. This capacity was met pre Covid 2019. Now Melbourne Airport forecast doubling this passenger movement moving forward.
…
How can the suburbs surrounded Melbourne Airport be expected to live with ever increased noise, pollution and traffic congestion while Melbourne Airport expands and continues to operate with no curfew. The pre Covid air traffic we encountered was bad enough."

"Legislate a curfew for Melbourne Airport between 11pm and 6am consistent with the independent review of the FAC four runway plan of 1990, by PD Technologies."

"2022 MA Master Plan does not satisfy the social and environmental guardrails agreed in the 1990 Melbourne Airport (MA) Strategy."

"My understanding is that the 1990 plan involved no further aircraft corridors (and related noise impacts) being developed."

In addition to comparisons with the 1990 contours, there were a number of submissions comparing the noise projections against the 2018 World Health Organisations (WHO) guidelines and/or the EPA noise guidelines:

"Noise level impact to community is not to world standards. Noise impact to community is too significant"

"Communities will be subjected to noise levels well beyond what the WHO recommends and have no legal protection against it."

"The noise scale tool on Melbourne Airports website shows that International wide-body planes taking off at an altitude of 1300ft, should be at 82dB(A). This is way beyond the recommended noise limit of 55dB(A) at night or 60dB(A) during the daytime, stated in the research publications created by enHEALTH in 2018. WHO's recommended noise level is below 70dBA."

"With several flights expected to be over approximately 70dB, I am concerned about the adverse impact this may have on health and safety within my residence and the community. The WHO in 2018, actually reported that airport noise should be less than 45dB, with noise above this producing increased risk of adverse health effects."

"Noise levels proposed with a third runway are unacceptable and are well above WHO guidelines on aircraft-generated noise."

*"The noise assessment measures used by Melbourne Airport do not meet WHO standards. Based on the airport's own noise tool, members of the Sunshine community (and surrounds, including Albion) will endure >200 noise events over 60db(A) every 24 hours *on average* (not peak) should the runway proceed as planned."*

"Not in compliance with the World Health Organisation recommendations."

A submission makes reference to the current EPA noise standards for regional Victoria:

"Aircraft noise emissions are not captured by the EPA standard but Table 2 above shows how business is required to maintain much higher noise abatement standards than the airline industry i.e. 33dBA overnight compared with 60 dBA (and at times up to 70dBA). Recall noise emissions at 30dBA are one sixteenth of noise at 70dBA."

Projections with Respect to 'Options'

There were a number of submissions related to the noise projections that influenced their opinion of proposed operating modes. Submissions referencing the proposed runway operating modes are discussed within Issue D3: Draft Runway Operating Plan.

Suggestions

A number of submissions provided suggestions for reducing the impact of noise.

The most common reference was to relocate the 'noise' to Avalon airport:

"There is a lot of land available away from Melbourne residential areas but stil in easy reach of the city I was hoping that overtime the airport could be decentralized and be moved away from melbourne residential areas like Avalon airport where it is easier to get to easier to park and flights can take up and land over the sea or farm land."

"Will cause too much traffic and noise pollution. Avalon airport is the better option for all concerned."

"I believe there to be an alternative option at Avalon airport that would take planes away from residents and would not impact the community."

"Why aren't existing runways not being utilised (i.e Avalon)? This will save costs and lead to more jobs out of the city. The net quality of people's lives will be negatively affected by any increase in air traffic in the existing site."

"Avalon should be expanding not Tullamarine where it is very dense housing."

"I'm disappointed that options such as expanding services at Avalon airport or looking at other runway options which would limit increases in noise for the community DO NOT appear to have been properly considered"

"We should utilise the infrastructure that we have, such as Avalon airport. We could direct freight there, this will have less noise, pollution and amenity impact on Melbourne – all factors negatively impacting residents and making Melbourne less liveable."

Other suggestions were to build a new airport in (and thus move noise to) the south-east of Melbourne:

"There is already too much noise and extra traffic. We do not need this here in the northern suburbs. Why not build some fancy new airports in the eastern suburbs."

"The impact to the Keilor community is not acceptable and other alternatives must be undertaken. Build a new airport in SouthEast Victoria"

"These alternatives are (i) build another airport properly in the SE that does not negatively impact residential communities,"

"There are also two other alternatives not considered here, including leveraging Avalon which does not have as a significant impact on the number of residents affected and creating an airport in Melbourne's south east."

There were some submissions critiquing the location of the original airport:

"Has it been an enormous mistake to construct Melbourne Airport in its current location and at a time when surrounding population growth was obviously on the increase? It should have been built further out, with appropriate access. Then, there would be no problems."

There were submissions which called for orientation of the third runway east-west as a better outcome for the community:

"why not refer to the original plan to have east west run way which would go across country not residential homes."

"there are many other options that would steer flights away from population areas for Melb that should be considered such as an easy west runway"

"Your alternatives included extending Avalon airport or building an East-West runway over less populated areas. Your choice to proceed with a North-South runway would suggest you care little for the impact it will have on the communities you are supposed to serve."

"I cannot understand this shift away from East West where aircraft mostly fly over the industrial Northern suburbs and farm land to the West."

"You have a better option to go east to west where there is less residents. Or you need to go build an airport somewhere else."

"Melbourne Airport appears to have deviated from its previously held position of a third runway being preferred in the East West direction and has decided to undermine the health of local residents without concern."

"If the 3rd runway were to go ahead, it should be east-west rather than north-south so noise pollution can be distributed evenly."

"Noise, pollution and no curfew will seriously affect the quality of our lives. East-west runway must be a more equitable solution."

Other submissions tendered that development of the four-runway system presents a better noise outcome:

"Judging from the noise and flight path interactive tool it is preferable to go with the 4 runway option since noise would be more spread out, rather than the 3 runway which concentrates noise along the north and south flight corridors."

"5. 4 runway's option on the interactive map appears to cause basically zero noise around the airport. Why not just build 2 now and skip to this utopian scenario?"

"The fourth runway is built now and used as planned till it reaches 55 million passengers per annum (350,000 per annum)
Advantages
• Melbourne airport becomes a low noise harm airport with 4 runways used as promised in 1990 Environmental Impact Statement (EIS 1990)"

"The mixed scenario map for the third runway is the only option that doesn't impact Williamstown, so this is my strongly preferred option. That or the option with four runways, that similarly shows no impact to Williamstown."

"A four runway system that DID NOT negatively impact the surrounding communities."

"Why couldn't you build the 4th runway at the same time of the 3rd? In that way, it seems the noice level is not too bad for us. Too expensive? Then how about get more funding before you ruin our peaceful lives."

There were a number of requests to spread the aircraft noise impacts:

"The proposed plan will increase the burden borne by residents in existing flight paths. Flights pre covid were already incessant, it would be fairer to spread this burden over more of melbourne rather than the lower income areas of the west and north where it is currently focussed."

"Surely if there are more runways then the load should be spread across runways and given the increase in noise levels"

"I have in my past 4 years here been bombarded with Plane noise. This needs to be shared. There needs to be alternatives at various times of the day."

"Having looked at the third runway interactive map, it only seems fair and equitable that the noise is spread evenly with a mix of option 1 & 2 being used."

"Obviously I'd prefer to see that flight path noise is spread more evenly over inner Melbourne and not concentrated above East Melbourne 3002 which is predominantly residential."

"Should the noise impacts of an additional runway be absorbed by the few unlucky communities, or the load spread further across more communities who will all ultimately 'benefit' from the increased aviation activities at Melbourne airport?"

"Can the planners provide more assurances on how the noise will be managed to ensure 1 area doesn't receive all of the noise?"

"I strongly believe the aviation impact should be more broadly distributed and not concentrated to selected areas to achieve economic outcomes."

There were a number of requests to provide some form of mitigation through curfew, insulation, acquisition, etc. These topics are addressed in Issue E3: Compensation and Issue E4: Noise Mitigation. Some example quotes are shown below relating to the noise projections and mitigation:

"I will be between the path of both runways and will be subject to excessive noise and air pollution which will be detrimental to my health and lifestyle. I will also be subject to property devaluation. I should be compensated for this. The options would seem to be: Melbourne Airport can acquire my property: or it can fund the cost of double glazing and an air purification system for my home and on addition compensate me for it's loss of value."

"Please consider to have curfew for Melbourne Airport so that noise will not impact on the community."

"Does the project contain any scope for supporting resident in mitigating the increased noise levels?"

"The addition of a new runway will cause further noise issues that will impact me unfairly.
…
Melbourne Airport should operate under curfew to limit any overnight noise impacts."

Some submissions suggested that the 'decision makers' spend time in their area to appreciate the noise protections:

"The people that put these plans into place try living here for a month then you will know."

"I would demand that each decision maker spend nights in the impacted flight zones to gain an appreciation of the live time noise problems."

"Also do any of the airport directors, ceo etc who are involved with this project live under the purposed runway?"

Keilor Primary School Council

The submission from Keilor Primary School Council and related proforma submissions from the community made references to the impact of the proposed plan on children's sleep and the overlap of operations with school hours:

> *""Majority of operations occur between 5am-11pm" – hours of operation overlap the schools' hours of operations 9am - 3:20pm.*
> *…*
> *Infants and children need 10-13 hours' sleep each night. This is vital for laying down long term memory in deep sleep and integrating new knowledge with pre-existing knowledge in REM sleep. Just disturbing a normal sleep cycle even without waking can disrupt learning.*
>
> *Melbourne Airport's Curfew free status was based on the use of 4 runways over farmland and 2 planned aircraft noise corridors over parks and factories. This new noise corridor over homes and schools was created in 1998 without any community consultation. Melbourne airport's curfew free status should be totally conditional on the airport protecting its neighbours by honouring the fully documented original reason the second North-south runway was moved."*

There is a note that a section of M3R MDP does not comment on the changes to noise contours over time:

> *"Part B – B9.7.2 - Fails to comment on significant changes to noise contours particularly to the South of the Airport in the direction of Keilor. A contour area that has increased sevenfold since 1990 blindsiding the most diligent of "due diligent home and business buyers."*

There is a statement of deficiencies in the noise projections, particularly that there is no discussion or presentation of peak noise:

> *"Part B – B9.3 - Omits to discuss occupational health and safety laws which have been harmonised federally. There is no discussion relating to peak noise levels, hearing loss and human health. Where hearing loss is a credible risk to the public as is the case in Keilor it needs to be directly addressed.*
> *With Reference to Department of Defence Microsoft Word - Factsheet - Measurement of aircraft noise.doc (defence.gov.au) content an average 24 hour LAeq value of 60 dB(A) would approximate an ANEI value of 25 being the "unacceptable" limit for residential housing under AS 2021-2000. Similarly for comparison purposes, a LAeq value of 65 dB(A) would approximate ANEI 30 and LAeq 70 dB(A) would approximate ANEI 35.*
> *"The World Health Organisation (WHO) recommends that, for transportation activities, the noise exposure should be measured in terms of the average 24-hour LAeq and recommends an external 55dB(A) as the value where people start to become annoyed with aircraft noise."*
> *and*
> *"In 2000, the then Australian Department of Transport and Regional Services (DOTARS) suggested the Number Above (NA). This parameter provides an average daily number of aircraft noise events above a certain LAmax dB(A) level. The N70 parameter represents the daily average number of aircraft noise events greater than a LAmax of 70 dB(A), N85 for average aircraft noise events greater than 85 dB(A) etc. DOTARS recommended that the N70 parameter be used as 70 dB(A) is the LAmax level where speech communication can be disrupted by aircraft noise""*
>
> *"Part C – Part C4.7 – No discussion or description provided of peak noise assessed. LAmax is a weighted average only."*

There was reference to the differences between the noise presented in MDP Chapter B9: Ground-Based Noise and Vibration and that within Chapter C4: Aircraft Noise and Vibration:

> *"Part C – Figure C3.15 to Figure C3.20 Seems to suggest N70 events of 200+ events however other descriptions in the MDP suggest 100-200 events. Please clearly publish impacts to Keilor. Data presented in Chapter C seems to be worse than that presented in chapter B."*

There is a specific reference to a peak noise event of 110 dBA:

> *"There is no mitigation strategy for protecting students, staff, or residents from such noise. Further the M3R project was unable to confirm if the volume of events at 110dBA would pass the threshold for hearing loss under occupational health and safety standards. Noise: Safety basics - WorkSafe. The maximum exposure period is between 57seconds for 112dBa, 15min for 100dBA and 2 hours at 91dBA refer ISBNCompliance-code-noise-2019-12.pdf (worksafe.vic.gov.au). Note, calculations in AS2021:2015 validate a peak noise event of110dBA."*

There is an additional reference to the WHO 2018 evaluation metrics and lack of presentation of a 10 ANEF:

> *"Part D – D3.7 Human Health Impacts assessment as "Medium risk" appears understated when considered against the points above and at complete odds with WHO 2018 evaluation of noise harm by 80 leading European academics strongly recommending setting environmental noise levels just below measurable noise harm. We need to see ANEF10 contour maps to see just how extensive these noise harm areas are."*

> *"There is no mention of studies by the World Health Organisation or their recommendations for much lower acceptable safe maximum noise levels (above which noise harm becomes measurable for noise distress, highly disrupted sleep, and cognitive performance delay.) equivalent to ANEF10 nor playground noise recommendations of 55 dBA empty class room 35 dBA."*

Other concerns in the Keilor Primary School Council submission include the chapter summary for C4 not categorising the number of properties impacted in terms of ANEF numbers or MAEO:

> *"Chapter C4 – Aircraft Noise and Vibration - By 2026, when the new runway system opens, between approximately 5,040 and 8,560 dwellings are predicted to be newly affected by aircraft noise (described by N70 day and evening of five or more). Impacted properties have not been categorised in terms of ANEC/ANEF numbers nor correlated to the MAEO's for simplicity."*

<u>No 3rd Tulla Runway</u>

Proforma submissions from community members used information provided by the 'No 3rd Tulla Runway' action group:

> *"Too noisy:*
> *Air transport has an impact on communities that may be more significant than we appreciate. Aircraft noise is not merely irritating. It is damaging to health, wellbeing, learning and cognitive function. In Australia, communities are subjected to levels of aircraft noise well beyond WHO recommendations and have no legal protection against it. There are no limits to the loudness or number of incidents around Melbourne Airport at any time of the day or night — no caps, no curfew — and no compensation is available to residents who are affected by aircraft noise."*

KRRA

The submission from KRRA makes a reference to the noise projections and concerns about Keilor being within the 20 ANEF, and thus requiring insultation / treatment:

> *"5..8.2 The measured and forecast Australian Noise Exposure levels at both locations are above the ANE20 threshold, which indicates sound insulation treatment is likely required for new or renovated dwellings in the general area around the bowling Club monitoring area. Cost of this treatment would add say $100K to a new dwelling, and to an existing dwelling likely a lot more depending on design but the out come might be probable. Residents are asking who is going to pay for this, the airport? the government."*

It also references a concern about the use of the ANEF metric:

> *"8.3.1 Noise distress/annoyance. This level has been shown to increase steadily over the last 20 years. This may be related to more concern about noise harm but more likely related to a rapidly increasing noise levels from road transport and other environmental sources. Despite this Melbourne airport attempts to predict noise annoyance from a 42-year-old survey."*

In addition, there is a number of references to alternative metrics based on the 2018 WHO guideline and a conversion of the ANEF to these metrics.

> *"8.2.4 In 2018 WHO appointed 80 odd leading scientists and academics to review all research to 2015. They calculated maximum safe levels for road transport was(53dbLden), rail was(55dbLden. and for aircraft was db. Lden 45. (Australia's unique ANEF10 is reasonable equivalent to 45db.Lden (simply subtracting 35 from the European metric) These are regarded as safe, evidenced based noise levels because they are the level above which noise harm begins to be measurable."*

The WHO guideline and ANEF conversion was then used to highlight a concern regarding the impacts to residents based on the projections within M3R MDP:

> *"8.5.2 Recommended noise levels in and around schools*
> *● 65 db. Normal teaching voice level.*
> *● 50 bd. Children need a 15-db. noise buffer to allow them to focus on understanding what is being said rather than just focussing hearing what is said.*
> *● 35 db. is the optimal noise level for an empty classroom needed to attain 50db. in a fully occupied classroom.*
> *● 55db. is the WHO recommended maximum playground noise level needed to allow children learn how to interact with their peer group. This is almost as important as what happens in the classroom."*

Regarding the proforma submissions, there are a number of points relating to the noise projections proposed within M3R MDP:

> *"Alignment and positioning of north/south runway means unacceptable aircraft movements over the prestige residential Village of Keilor. Residents will have their lives and welfare seriously degraded, their properties devalued, their whole way of living brought to a halt.*
> *…*
> *It appears that the north/south parallel runway system will be used 24/7. Which means that Keilor Village will have at all times of every day and night aircraft either landing or taking off.*
> *…*

The parallel n/s runway will mean aircraft noise will impact on the three Keilor schools and seriously affect the children's health, cognitive skills, problem solving and learning ability."

MACAG

As part of the MACAG submission, there was a note that M3R MDP should clearly explain the differences in noise impacts compared to the 1990 MAS:

"Importantly, a key feature of the MAS was the plan to use the second north/south runway for overflow of smaller, lighter aircraft, as evidenced by the fact that it was intended to be only 3km in length and not to cross the second east/west runway. The M3R dMDP should clearly explain whether and how this affects aircraft noise impacts from the new second runway so that the community can fully understand how the current plan differs from the protections they understood had been assured them."

"taxiway configurations and airspace design have contributed to the overall capacity of the airport, which has now expanded by 68% above what was agreed to in 1990. The M3R dMDP should clearly explain whether and how these affect aircraft noise and air pollution impacts from the new second runway so that the community can fully understand how the current plan differs from the protections they understood had been assured them."

There was a concern regarding the ground noise projections:

"The fact that ground noise is perceptible at these distances has implications for any period of respite from aircraft noise indicated in Figures C4.79-C4.84. It is also not clear whether this noise is factored into the noise forecasts."

MACAG also reference a concern regarding the extent of noise:

"This may, in turn, pose a threat to future generations as a result of the health and educational impacts of chronic aircraft noise exposure, and the unconstrained 24/7 operation of Melbourne Airport, as both community opposition and the effects of climate change increase."

The submission outlined a concern regarding the information presented via N-contours:

"They outline areas that can expect, for example, an average of twenty or more events per day above 70dB. They do not typically mention that this could in fact be 200-400 events that could be as loud as 85dB, nor is it typically clear from the way they are presented that each increase of 10dB equates to a doubling of perceived loudness, meaning that each overflight could be 2-3 times as loud as expected based on the N contour information. Furthermore, within the N 70 contour there may also be many overflights between 60-70dB that are not counted but are still audible to residents and contribute to their overall noise exposure and resulting distraction, annoyance and sleep disturbance."

There were a number of references to the reliability of the noise projections as well as comparisons with community measured noise (through Explane). These are discussed in detail within Issue D1: Noise Modelling Methodology.

South Melbourne

A submission from residents of South Melbourne Residents includes the following commentary regarding noise projections:

> *"As representatives of the City of Port Phillip, we reject the growth pans and recent jet rerouting and easement forming over the inner zones of the CBD. The recent movements around the Yarra and Albert Park Lake zones are creating broadscale precinct impact, single and multiple craft the noise increases and affects home and work life, now extending through day and night."*

In addition, a concern regarding the increase in aircraft movements and impact to noise was stated:

> *"The escalations are an unacceptable prospect. The concentrated activity on the city, natural spaces, and corridors wears as unilateral ill-considered destruction of local ambient levels that are quiet."*

Other references to frequency and C-weighted noise are discussed in Issue D1: Noise Modelling Methodology.

East Melbourne Group

The submission from East Melbourne Group queries the projection of aircraft noise resulting in only 33 dwellings within the 30 ANEF:

> *"Given the increase in volume of aircraft pollution prior to 2019 and the forecasts for increase in air traffic through 2042 and the inadequacies/failings of NASF and ANEF how do you estimate that only 33 dwellings are predicted to be within the 30 ANEF by 2052? This seems absurd, you need to justify this estimate."*

Additionally, the submission makes reference to the impacts of current noise on their community:

> *"Prior to Covid aircraft noise impacts on our community have been significant. On many days the community has experienced up to 150 RPT aircraft flights per day. Depending on the atmospheric conditions noise levels emanating from those aircraft have been recorded up to 75dba, The average ranges between 45-65dba depending on how close the aircraft is to the measurement point. Also, we have on some days coinciding with the RPT up to 100 VFR consisting of fixed wing and helicopters, with many of the helicopters hovering and doing circuits. Noise emissions have been recorded up to 82dba."*

FoEM

The submission from FoEM makes reference to the concerns raised by 'No 3rd Tulla Runway Coalition' including:

> *"2/ Too much noise attached to the runway and concerns about the Aircraft Noise Modelling Methodology and the impacts of Aircraft Noise and Vibration"*

Climate Action Moreland

The submission makes reference to concerns about additional aircraft noise on wildlife:

> *"Effects of additional aircraft noise and disturbance on listed species of fauna"*

GSCA

The submission from GSCA includes reference to the WHO guidelines and the outputs of the online noise tool:

> *"Noise assessment not meeting WHO standards: Based on Melbourne airport's noise tool, many Greater Sunshine residents are projected to experience, on average (not peak), more than 200 noise events above 60dB(A) over 24 hours should a third runway proceed as currently designed. We note that this surpasses the World Health Organisation's recommendation of maintaining noise levels below 45dB to avoid adverse health impacts."*

The submission also indicates a concern regarding the level of noise on schools and outdoor areas:

> *"Five Sunshine schools currently fall under the flight path where 200+ noise events above 60dB(A) will be experienced over a 24-hour period: Sunshine North Primary School, Sunshine Christian School, St. Bernadette's Primary School, Sunshine College North Campus and Sunshine Harvester Primary School."*

> *"The health benefits of participation in outdoor activities of this nature can be reasonably expected to be significantly diminished when 200+ noise events above 60dB(A) will be experienced over a 24-hour period"*

[redacted]

[redacted]

Western Health

The submission by Western Health includes the following references to noise projections:

> *"Sunshine looks to be significantly impacted by noise cones out to 2026 over 24 hours. The highest building on the Sunshine site, at present, is the Joan Kirner Women and Children's hospital, which houses our maternity services. This building is nine stories high and provides care for newborn's, sick children and women. Looking at the way the map is drawn there may be noise impacts of up to 49 decibels and whilst I am no sound expert I would imagine this will impact the patient amenity in the building. This is of concern due to the nature of care provided for in this building. The remainder of the Sunshine site is also likely to be impacted by noise and this could disturb the therapeutic settings we need to support better patient care. It is not clear how, if noise was an issue, this would be rectified to reduce the impacts on already built health infrastructure – albeit relatively new infrastructure.*
> *It is also clear that in the development of the third runway there are no plans to support a curfew for nighttime operations. With the development of increased traffic, we can see why the airport would not want a curfew; however, it may support some of the mitigation from noise increases."*

> *"Western Health provides a Western Public Health Unit (WPHU) to support the local community in public health measures. The work of the WPHU is developing and we are working with a number of community groups. In reviewing the plan of the third runway, the impact and areas affected, it appears that certain communities within our catchment will be significantly impacted by noise from the development. It looks as though schools, parts of Kellior and others will have significant impact. What is the plan for mitigation or prevention of Nosie for these impacted areas? Negative consequences on sleep, health and learning are linked to noise impacts. World Health Organisation Noise Guidelines for Europe (2018) commented that excessive noise seriously harms human health and interferes with people's daily activities at school, work and home and during leisure time. It can disturb sleep, cause cardiovascular and psychophysiological effects, reduce performance and provoke annoyance responses and changes in social behaviour."*

Hume City Council

The submission from Hume City Council includes the following commentary on aircraft noise projections:

> *"It is vital that Melbourne Airport continue to communicate and engage with communities who will experience aircraft noise in the future, particularly residents (like those on Oaklands Junction and Bulla Township) who will experience more frequent and more significant noise compared to currently as a result of the third runway. This should include greater education and advice to assist in supporting these communities and to promote a shared understanding of the responsibilities both parties have for airport safeguarding.*
>
> *It is also crucial that Melbourne Airport continue to explore and implement new innovative strategies for noise abatement to minimise the impacts of their operations on communities within Hume and beyond. To this end, Council welcomes the potential benefits of new technologies and procedures that are outlined in 15.7.6 of the 2022 Master Plan, such as smart tracking satellite-assisted navigation and continuous descent aircraft approaches to better control and reduce noise exposure.*
>
> *Council will also continue to support Melbourne Airport in strengthening the role of the Melbourne Airport Noise Abatement Committee (NAC).*
>
> *Council continues to believe that to strengthen the role of the NAC their role needs to extend beyond simply identifying an aircraft that may have prompted a noise complaint toward making the users of the new runway more responsible for minimising the amount of noise experienced by residents under the flight path. Airlines in particular, need to recognise that in order for the Airport to grow and to protect the Airport's curfew free status, they need to proactively work with the community to minimise noise impacts."*
>
> *"Council supports the expansion of Melbourne Airport, including the construction of the third runway. Noting this, the project will have health and noise implications for Hume residents, as well as environmental impacts on the Airport site and beyond.*
>
> *Given the scale of the project and the benefits it will provide to the Airport, Council believes that Melbourne Airport must strive for complete transparency in the third runway's impacts. Council also believes that in accepting the impacts that the third runway will have, Melbourne Airport must invest in best practice mitigation measures of their health and amenity impacts, as well as minimising or offsetting its environment impact to the fullest extent."*

Accompanying this commentary, the submission includes the following requests:

> *"Beyond the approval of the 2022 Master Plan and the Third Runway MDP, Melbourne Airport must:*
> *• Communicate, engage and support the communities who will experience new or increasing amounts of aircraft noise.*
> *• Continue to explore and implement new and innovative strategies for noise and*

Brimbank City Council

The submission from Brimbank City Council indicates that the biggest impact on their community is from aircraft noise:

> *"The most significant impact on Brimbank is aircraft noise. The 2022 ANEF 25 contour impacts areas of Keilor, Keilor Park and Keilor North in Brimbank, while the ANEF 20 contour extends as far south as Sunshine North and covers the suburbs of Keilor, Keilor Park and Kealba."*

This comes from the analysis completed as part of their health risk assessment that concludes the noise projections exceed the WHO guidelines:

> *"Dr Denison has identified in her findings that guidelines in the World Health Organisation Environmental Noise Guidelines (2018) (WHO Noise Guidance) is exceeded across the areas within the ANEF 20 and ANEF 25 contours, indicating that there is an increased risk of adverse health effects within the exposed population."*

The submission also makes reference to a number of other topics that are related to aircraft noise but as discussed in detail within other Issues. These include:

- Issue D1: Noise Modelling Methodology
- Issue D2: Future Use of 09/27 (East-West) Runway
- Issue D3: Draft Runway Operating Plan
- Issue D4: Flight Path Design
- Issue E3: Compensation
- Issue E4: Noise Mitigation

The Brimbank submission states there is a lack of mitigations to the noise projections within the MDP and provides some examples:

> *"Council considers that a significant deficiency in the Master Plan and MDP is that no information is provided in the documents detailing how the off-site noise and air quality impacts will be prevented or minimised, in accordance with the Environment Protection Act 2017.*
> *Best practice demand most international airports provide a range of noise mitigation measures to address noise including funded noise insulation schemes, compulsory acquisition, a curfew, and noise abatement procedures."*

As part of Brimbank's Health Risk Assessment, focus group sessions were held where the following comments were made and included within the submission regarding noise projections:

> *"People in Keilor Park, Keilor Village and Kealba all stated that the current situation is intolerable"*
>
> *"Residents are unable to enjoy their homes and feel they need to sell but don't think that anyone would purchase them"*
>
> *"Several residents commented that they are unable to use Brimbank Park for exercise and recreation due to the aircraft noise, which is predicted to get worse with the Airport expansion."*
>
> *"Some of the residents in Kealba and Keilor Village questioned the accuracy of the noise predictions developed by the Airport Corporation as part of their Master Plan. A number said that according to the interactive noise tool their houses are shown as not currently being impacted by the noise from aircraft, however they are unable to sleep due or enjoy their outside areas due to the aircraft noise. Some had conducted noise monitoring at their homes and had recorded noise levels between 70 and 80 dB which is not consistent with the information provided in the noise tool when their addresses were entered into the system. This has raised concerns about the accuracy of future predictions of noise when the current experience at their homes is that they are impacted more severely than the noise tool is predicting."*

The submission makes the following recommendations with regards to noise sharing (and other mitigations):

> *"Melbourne Airport address noise abatement procedures particularly at night-time and review the potential for noise sharing, by reconsidering the four runway configuration in consultation with neighbouring Council's, their communities and State and Federal Government, alternatively the following should be considered.*
> *● A curfew between 11pm and 6am to minimise sleep disturbance that can lead to other adverse health impacts*
> *● Where possible limit the take-offs over the populated area within the Brimbank LGA*
> *● Alternate the direction of take-offs to provide some respite to Brimbank residents from the aircraft noise*
> *● Limit aircraft during these hours to more modern and quieter aircraft*
> *In the interim, extend the existing third runway 27 to the east, to allow an increased use of the east/west runway, which provide a greater opportunity to noise share and deliver some respite to communities to the south and north of the airport."*

The submission includes references to previous noise insultation schemes related to projections at other Australian airports:

> *"Council questions why Brimbank and the communities proximate to Melbourne Airport are being treated differently and why such a noise mitigation scheme, has not been contemplated by Melbourne Airport, particularly as there are examples of past schemes for both Sydney Airport and Adelaide airports"*

<u>Maribyrnong City Council</u>

The submission from Maribyrnong City Council refers to:

> *"Council's analysis of the information in the MADPM and M3R DP is that it will be one of the municipalities to the south of the airport which will experience more aircraft noise after construction of the third runway. Some thousands of sensitive land uses in the municipality, mainly dwellings, will experience more noisy flights every day or will be newly affected by daily noise. That is, these properties will fall within more extensive N-contours than apply now.*
> *The suburb in Maribyrnong that most recently became residential is Braybrook, dating from the early-1950s. Planning for the airport began in the late-1950s. As a collection of residential suburbs which all existed long before Melbourne Airport, Maribyrnong considers that land use planning measures to restrict sensitive uses, such as residential, in areas within the identified N-contours are the least practicable way of mitigating aircraft noise. Instead, Council submits the Melbourne Airport must:*
> *● Design the airport to avoid imposing more noisy flights and new noise impacts in existing suburbs.*
> *● Ensure the new airport designs to mitigate the cumulative noise impacts that have already been visited upon sensitive uses in Maribyrnong through airport operating decisions.*
> *● Further examine alternatives to the third N-S runway, including combination of a selective night time curfew at Melbourne Airport and directing more traffic to Avalon Airport.*
> *● Compensate property owners for increased noise impacts, sufficient to allow installation of window, wall and roof treatments to mitigate the noise should the proposal proceed.*
> *● Implement a clear plan for consulting with affected Maribyrnong residents and allowing them to influence the final outcome of runway operations decisions in a way that is fair and commensurate with the negative externalities placed upon them."*

Moreland City Council

The submission from Moreland City Council makes reference to the community concern regarding noise (and subsequent health) impacts from the project:

> *"The community are concerned about the noise and health impacts of this proposed runway, in addition to the fact that there are no plans for a curfew."*

In addition, the submission suggests that the operating plan focuses on limiting the impacts to areas already affected by noise:

> *"The Draft M3R Major Development Plan shows how the differing operating systems would function. It is noted that the new operating models favour the north-south runways with the most significant noise impacts (ie. noise events above 70 decibels) to the north, south and west of the airport, outside of Moreland's boundaries.*
> *Mitigating adverse community impacts whilst balancing aviation operations is of parament importance to Moreland. Council supports a model that will minimise additional noise impacts to communities by utilising a model that limits impacts to areas already affected by noise impacts."*

Hobsons Bay City Council

The submission from Hobsons Bay City Council includes the following concerns:

> *"While the north-south orientation of the third runway reduces the impact for Hobsons Bay, there is an increase in aircraft noise overall by 2046 that has the potential to affect community well-being right across the municipality, and particularly residents in suburbs to the north of the municipality such as Brooklyn, parts of Altona North and South Kingsville."*

Moorabool Shire Council

The submission from Moorabool Shire Council makes reference to a concern that the forecast noise could impact the council's residential growth precincts:

> *"As discussed below, Council has some concerns regarding the potential for noise associated with Melbourne Airport growth to impact on the Bacchus Marsh residential growth precincts."*

Yarra Ranges Council

The Yarra Ranges Council makes reference to the following regarding the forecast noise projections:

> *"We also note that while there will be no vast change to noise events, environmental impact, or social impacts for our region, based on your analysis, which is key to this endorsement, there may be very small areas of the Yarra Ranges Council that may have additional flight paths overhead. Council does not support increased noise impacts that will increase disturbance levels on the Yarra Ranges Community."*

City of Yarra

The submission from City of Yarra indicates a concern that the plan:

> *"that it may cause detrimental noise issues to the local Yarra community, and in this regard seeks further engagement and information"*

Wyndham City Council

Wyndham City Council's submission makes reference to the extent of noise contours over the City of Wyndham as well as a request flight paths (and therefore aircraft noise) are directed over green wedges and undeveloped regions.

> *"We are aware, however, that re-orientation of the Third Runway will result in changes to existing flight paths, which will subsequently result in changes to the areas affected by aircraft noise. We comprehend from the N contour maps published in the Draft Master Plan that noise impact from aircraft using the new Third Runway will be marginal compared to the rest of metropolitan Melbourne and that aircraft noise is only likely to reach the level of N60 [60 dB(A)], (the level of ordinary conversation) at the northern most edges of the municipality It is also understood that aircraft noise scenarios are similar under both Option 1 and Option 2 for the City of Wyndham"*
>
> *"Hence we seek that where practical, Melbourne Airport will direct flight paths over green wedges and undeveloped regions to mitigate noise impacts and that during the night, aircraft will be directed to fly over the least populated land to the north of the airport, whenever possible, under either proposal."*

Boroondara City Council

The submission from Boroondara City Council makes reference to the noise projections through the following:

> *"The use of these flight paths will likely increase when the new runway opens- meaning Boroondara will experience more days with regular overflights than it does now.*
> *Whilst it is expected that the level of noise experienced on those days will likely be similar to what they are now (based on information available) this submission raises concern about the increase in flights over Boroondara and any potential amenity impacts on residents. From time to time, residents raise concern about noise associated with aircraft and therefore any increase in the number of flights over Boroondara is a concern. Measures should be put in place to prevent any increase in detrimental amenity over Boroondara, particularly in the evening."*

Melbourne Airport CACG

The submission from Melbourne Airport's CACG includes the following references to noise projections:

> *"39. MDP acknowledges moderate sleep disturbance from increased noise. What measures are proposed to reduce or mitigate this?*
>
> *Noise impacts on schools are considered negligible. Yet by 2026 Keilor Primary School will experience overflights 50-100 aircraft at 70dBa+ during the hours of 9-3. This equates to a flight every 3.6 to 7.2 minutes.*
>
> *40. How is MA addressing its social licence obligations when no noise attenuation is considered in this circumstance?"*

EAPL

The submission from EAPL makes reference to the potential changes in noise projections at Essendon Fields Airport as a result of M3R. This has been discussed in Issue B5: Interactions With Other Melbourne Basin Airports and Operators.

TCPA

The submission from TCPA includes reference to the learnings from Brisbane Airport's new parallel runway with the following recommendation:

> *"The TCPA recommends that both the Draft Master Plan 2022 and the Draft M3R MDP 2022 be amended to include discussion and lessons learnt from Brisbane."*

TCPA includes reference to the submission from Victorian Transport Action Group (VTAG) with the recommendation:

> *"The TCPA supports the VTAG recommendation to review NASF Guideline A to include personal impacts identified by the WHO and recommends that Melbourne Airport also advocate for such a review."*

> *"The TCPA supports VTAG's concern that ANEFs produced since 1990 have resulted in significant "Contour Creep" beyond that approved in the MAS into both the 2018 and 2022 ANEFs and recommends that the Draft Master Plan 2022 be amended to include a historical description of the ANEFs associated with each previous master plan"*

Keilor Historical Society Inc.

The submission from the Keilor Historical Society Inc. includes a reference to the current noise impacts:

> *"Today (the 24th March 2022) I'm listening to the departures from the 16 runway and they are constant and how do people live with this constant barrage of low flying noisy aircraft?"*

Beulah International

The submission from Beulah International makes the reference to the following regarding the noise projections:

> *"We are also concerned about the impacts of the third runway, especially the proposed north-south orientation, on the following:*
> *• The current Melbourne Airport Environs Overlay Schedules 1 and 2*
> *• The N-Contours which will significantly expand".*

D5.4 M3R MDP References

Noise projections are discussed in Part C Chapter C4: Aircraft Noise and Vibration of the MDP.

In addition to this chapter, the following information was provided during the public exhibition (and remains publicly available):

- Online Flight Path and Noise Tool
- Fact sheets prepared on:
  - Aircraft Noise
  - Aircraft Noise Sources
  - N-above Contours
  - Noise Abatement Procedures
  - Noise and Flight Path Monitoring System (NFPMS) & Complaints
  - Managing Aircraft Impacts on Communities.

D5.5 APAM Position

APAM acknowledges the community concern and interest in the noise projections associated with M3R. To help inform the community, APAM adopted the descriptors of aircraft noise outlined within the National Airports Safeguarding Framework (NASF) Guideline A:

- Australian Noise Exposure Concept / Forecast (ANEC/F)
- N-above contours
- Flight zone diagrams

The ANEC system has limitations that APAM addressed by adopting N-above contours to highlight the noise projections from M3R. APAM notes that NASF Guideline A recommends the following N-above contour values:

- N70 24 hours = 20 daily events
- N65 24 hours = 50 daily events
- N60 24 hours = 100 daily events
- N60 night (11pm to 6am) = 6 events

APAM have gone beyond NASF Guideline A - N-above contours are presented for five or more events per period (24 hours, day/evening or night). The number of dwellings and sensitive sites within these N-above contours have been estimated and these contours form the basis of the MDP noise projections, including the descriptions of dwellings impacted and newly affected. These thresholds have been adopted because they represent levels above which aircraft noise would be considered a regular feature of the noise environment. N-above values of five or more are considered appropriate for describing aircraft noise in areas currently experiencing aircraft noise, as well as areas which would be newly affected. They also provide sufficient resolution to describe the change in aircraft noise for both existing and newly affected areas.

APAM also notes that the noise contours are based on ‘busy week’ schedules that represent greater activity than an average week and are thus considered to be slightly conservative.

On top of utilising ‘busy week’ schedules, APAM has included typical busy day N-above contours ($NX_{(90)}$). The production of a ‘typical busy day N-above’ diagram was achieved by calculating the 90th percentile of the N-above values across the assessment period. That is, the ‘typical busy day N-above’ describes the N-above value exceeded on 10 per cent of days (or one in 10 days). When combined with information on respite, these metrics communicate a more complete synopsis of aircraft noise. Thresholds presented for N-above contours were developed in consultation with Airservices. This included adopting:

- $N70_{(90)}$ day & eventing (6am to 11pm) = 5 events
- $N70_{(90)}$ 24 hours = 5 events
- $N60_{(90)}$ night (11pm to 6am) = 2 events
- $N60_{(90)}$ 24 hours = 10 events.

Typical busy day N-above contours for the lowest threshold were included on the ‘busy week’ N-above contour diagrams within the MDP.

APAM notes that due to the various operating modes presented within the MDP (Option 1, Option 2 and Mixed Mode), there were a significant number of N-above contours presented within the document and on the noise tool. APAM also notes that only N70 day & evening (6am to 11pm) were presented for Mixed Mode (as this option is only to be activated during high demand day and evening periods) and may have led some submissions to indicating a preference for this option

(due to the smaller extent of contours compared to N60 24 hours) without full understanding of its function.

APAM also prepared ‘difference contours’ within the MDP document to highlight the differences in noise events between the ‘Build’ scenarios (Option 1, Option 2 or Mixed Mode) and the ‘No Build’ scenario.

To further ensure that the noise projections were not understated for M3R, noise modelling did not consider utilisation of the existing east-west runway (09/27).

Submissions raising concerns regarding the accuracy of the projections are discussed in detail within Issue D1: Noise Modelling Methodology.

APAM notes that the opportunities discussed within Issue D2: Future Use of 09/27 (East-West) Runway, Issue D3: Draft Runway Operating Plan and Issue D4 : Flight Path Design provide an opportunity to reduce some of the noise projections. There are however some limitations due to international standards for flight path design, the orientation of the runways and the forecast demand at Melbourne Airport.

Whilst Melbourne Airport does not currently operate a runway slot scheme (similar to Sydney Airport) APAM does note that upon opening of M3R a need to manage demand is anticipated to govern capacity at the terminals (as per current management of slots for Terminal 2). The restrictions of the terminal capacities will constrain aircraft movements during the peak periods until new capacity is provided though terminal developments. APAM notes that despite having a high-capacity parallel runway system at Brisbane Airport (over 100 movements an hour), the capacity declaration for the runways is 75 slots in a rolling 60-minute period (for Northern Summer 2022). The use of a slot scheme to manage growth with respect to terminal capacity will have an effect of managing runway demand.

Due to the lower demand during the night period, it is possible to utilise alternative modes as discussed in other Issues mentioned above to share the noise during the night period. APAM is committed to exploring these alternatives during the detailed airspace design. APAM is not forecasting demand at night to exceed the capacity of a single runway (48 movements per hour) over the 20-year period. This allows these noise sharing modes to be fully utilised at night.

Community Awareness of Current and Future Noise

APAM acknowledges that, aside from the airport's Master Plan publication every five years, there is not enough readily-available information regarding noise available to the community.

APAM is committed to a greater presence within the local community to help explain aircraft noise - in terms of current operations and future plans.

APAM is also committed to providing more regular noise outputs from historical data (such as ANEIs, N-above contours and any other useful descriptors) to the community via the online noise tool.

During and since the public exhibition, APAM has been advertising the online Flight Path and Noise Tool on the real estate website realestate.com.au for areas within the M3R MDP noise contours. This and other awareness strategies are incorporated in ongoing airport engagement plans.

Combined Noise

APAM acknowledges that Melbourne Airport flights contribute to the cumulative noise of Melbourne's urban environment, which also includes other aviation activities (Essendon Fields, general aviation, helicopters etc.), other transport noise (roads etc).

APAM notes the new Australian Government's commitment to an Aviation White Paper and will advocate that the scope includes a discussion on the compound effect of multiple aviation noise sources and ways to present and assess this impact for communities.

Impacts of Noise Projections

APAM acknowledges that the noise projections presented in the MDP draw strong association with health and social impacts. These topics are discussed at length within Issue E1: Health Impacts and E2: Social Impacts.

Specific Noise Projections:

APAM is pleased to see that submissions have used results from the online flight path and noise tool as this shows the tool is being used for its intended purpose. It is evident, however, that there remains opportunity to improve public understanding and engagement with the tool. Some submissions appear to have misinterpreted results (for example, some remark upon noise levels that are not available in the noise tool).

The noise tool generates outputs from N-above contours (i.e. number of events above a certain decibel level) and an estimated average noise level of lowest overflights (by arrivals and departures). The latter metric is calculated from the average of forecast movement events impacting the area, excluding lower noise level events (such as those from more distant flight paths or operations at higher altitude). The value is based on the predicted maximum A-weighted noise level (L_{Amax}). Calls for real time noise outputs may also have confused the tool with Airservices' Webtrak website. APAM will continue to update and improve the online tool to help inform the community of forecast noise projections.

Regarding the specific occupational health and safety concerns expressed about Keilor Public School, the methodology used to calculate 110 dB(A) was not included in the submission. To derive a metric from AS2021:2015, APAM has adopted the following methodology.

The school is approximately 3.9 kilometres south of the Runway 34L arrival threshold and Runway 16R end of runway. As a result, DL (distance from arrival threshold to the location) is 3.9 kilometres and DT (distance from the take-off to location) is 6.9 kilometres (the additional 3 kilometres accounts for the runway length). The school is located 300-400 metres to the east of the runway centreline however, to be conservative in this calculation, it is assumed the school is directly under the flight path, so DS = 0.

Considering the elevation of the runways (Runway 16R is 131 metres and Runway 34L is 100 metres) above the school (approximately 33 metres AHD using information on VICMAP), land height corrections are required. As a result, distances from Table 3.2 in AS2021:2015 are to be added to DL and DT:

- For landings, 1,330 metres is to be added to 3.9 kilometres, resulting in 5,230 metres.
- For departures, the following are added to 6.9 kilometres:
  - International aircraft 750 metres (total 7,650 metres)
  - Domestic jets 590 metres (total 7,490 metres)
  - Domestic propeller aircraft 1,120 metres (total 8,020 metres)

Table 44 highlights the noise levels shown in AS2021 for aircraft typically operating at Melbourne Airport.

Table 44:Comparison of Auckland, Christchurch and Melbourne Airports pre-COVID demand

Aircraft	Arrival Noise Level (DL = 5,000m)	Departure Noise Level (DT = 7,500m)
A319-131	75 dB(A)	73 dB(A)
A320-232	75 dB(A)	71 dB(A)
A321-232	76 dB(A)	75 dB(A)
A330-301	79 dB(A)	82 dB(A)
A340-642	80 dB(A)	79 dB(A)
A380-841	79 dB(A)	83 dB(A)[1]
BAe146-200	76 dB(A)	79 dB(A)
B717-200	73 dB(A)	71 dB(A)
B737-300	78 dB(A)	78 dB(A)
B737-400	78 dB(A)	77 dB(A)
B737-700	79 dB(A)	79 dB(A)
B737-800	78 dB(A)	79 dB(A)
B747-400	84 dB(A)	88 dB(A)[1]
B757-200	80 dB(A)	78 dB(A)
B767-300	83 dB(A)	84 dB(A)
B777-300	80 dB(A)	82 dB(A)
B787-8	77 dB(A)[2]	78 dB(A)[1]
EMB-145	72 dB(A)	68 dB(A)
ERJ-190	76 dB(A)	73 dB(A)
Dash 8-300	66 dB(A)	57 dB(A)[3]
Saab 340	72 dB(A)	64 dB(A)[3]

Table Source: APAM from AS2021:2015, 2022

Table Notes:

Based on departure long haul

Based on arrival long haul

Based on a DT of 8,000m

Based on the above methodology, AS2021:2015 concludes that 110 dB(A) would not be experienced at the school. The maximum noise level identified is a B747-400 long haul departure resulting in 88 dB(A). It is presumed that the 110 dB(A) may have been derived from reading 106 dB(A) for a DT of 3,750 metres, and DS of 0 for a B747-400 long haul departure. Whilst this DT value approximately references the distance from Runway 34L to the school, it does not include the runway length for a departure heading south.

Regardless, 88 dB(A) is still a high noise level. All Keilor Primary School buildings are within the ANEF 25 contour in the Master Plan 2022 (nb. the 2018 ANEF 25 contour covered half of the school buildings). APAM appreciates and understands the concerns of the school, community, and State Government about this level of exposure. Submissions referencing health and social concerns, including effects on children, are discussed in Theme E: Community Impacts.

The methodology described by AS2021:2015 is referenced in the relevant submission and is thus used in the above response, to understand and explain how the submitter may have arrived at a noise level of 110 dBA. APAM notes that this methodology is approximate only, and that the aircraft noise predictions methodology utilised in the MDP is considered to be far more reliable. As

such, in general, the noise level projections in the MDP should be relied upon rather than the AS2021:2015 predicted noise levels.

APAM cautions against reliance on ExPlane data for noise assessment. Community desire to measure noise in their area is understandable, however ExPlane is not an accurate tool - its own website states that:

> *"Although the data gathered with ExPlane app will not be perfect, we aim to collect so much data what it will force stakeholders to take it into account".*

It is not clear how the ExPlane app generates a decibel reading or links this to an aircraft. APAM team members have trialled the app and received varying results. Accuracy is critical, so APAM preferences installation of noise monitoring stations around the airport, with commitment to sharing accurate data with the community. APAM has recently installed three short-term noise monitoring stations and will continue to advocate to Airservices for more permanent noise monitoring stations around Melbourne Airport.

Previous Noise Contours

Though the desire of community action groups to reference the MAS Supplement Report 1990 contours is understood, reference has only been made to one ANEC. The three-runway contours developed in 1990, which cover a larger contour extent are not discussed. The Supplement Report 1990 did not present a 'composite ANEF' which would have included all the potential runway stages. This 'composite ANEF' has been included in all Master Plans since 1998.

Comparing the Master Plan 2022 and Supplement Report 1990 contours does not acknowledge or reflect on the changes in noise contours over the last 20+ years with each subsequent Master Plan. Modelling software, aircraft types (1990s ANECs were based on five aircraft types, the current contours include 22) and operating standards/requirements have changed significantly over the last 30 years. As discussed in Issue A3: Melbourne Airport Strategies and Plans (inc. MAS 1990 & Master Plans), the Federal Government confirmed with APAM that the MAS is no longer a valid document given the legislative framework articulated by the Airports Act 1996. The changes in each endorsed ANEF are detailed within the relevant Master Plan. Due to the interest in historic contours, APAM is currently investigating inclusion of historic ANEFs in the online noise tool.

In terms of the extent of the 1990 noise contours, a comparison of the dwelling counts, compared with the 2022 Master Plan counts, is highlighted in Table 45. It is important to note that a composite ANEF was not prepared for the 1990 Supplement Report which would combine the extents of the various ANEC contours.

Table 45: Estimated Dwellings within 2022 ANEF and the 1990 Supplement Report

	1990 Supplement Report		2022 Master Plan
	North-south ANEC	4 RWY ANEC	4 RWY ANEF
Total Aircraft Movements	250,000	320,000	524,920
Dwelling Counts			
Within 20 ANEC	7,499	2,817	8,255
Within 30 ANEC	81	38	33

Table Notes

North-south ANEC V324 values from Table 4.4 within 1990 Supplement Report

Option SC3 ANEC V292 values from Table 4.2 within 1990 Supplement Report

WHO and EPA

Comparisons of the noise projections with the WHO Aircraft Noise guidelines features heavily in feedback from all types of submitters. This is discussed in detail within Issue D1: Noise Modelling Methodology.

APAM notes the new Commonwealth Government's commitment to an Aviation White Paper and will advocate that the scope include discussion of items raised in submissions regarding aircraft noise descriptors and adoption of L_{den}.

APAM notes that there was also some confusion regarding what the WHO guideline value represented. For example, the 55db or 45db does not relate to a single event but relates to the L_{den} and L_{night} metrics. Single event maximum noise levels contributing to an L_{den} of 55 dBA (i.e. equivalent noise level over 24 hours, with penalties for evening and night) would themselves greatly exceed L_{Amax} 55 dBA. As a result, some community members appear to have misunderstood the distinction between the noise metrics and inappropriately compared predicted L_{Amax} against L_{den} or L_{night}.

APAM notes that the submission containing a reference to EPA standards for businesses in regional Victoria are likely to be referring to limitations for industrial or commercial sources in low ambient noise environments. It is important to note that these noise level restrictions typically limit activities that might benefit only the emitter. In the case of transportation noise, there is an inherent benefit to the wider community, and so acceptable noise levels acknowledge a compromise between the costs and benefits of that noise source. Thus, all forms of transportation, including road and rail, are subjected to much higher noise levels than those quoted by the submission. Noise limits of 33 dBA, or similar, would prohibit almost all forms of transportation.

Further, the submission notes aircraft noise levels of 60 dBA and 70 dBA. Like other submissions referencing the WHO objectives, this fails to recognise the distinction between a single event maximum noise level and a time-averaged noise level (i.e. L_{Aeq} over a whole period).

Proposed Suggestions:

Whilst APAM can understand community preference for moving noise to another area (such as Avalon Airport or another to the city's south-east), the M3R MDP addresses demand for Melbourne Airport.

Issue B2: Options and Alternatives discusses alternatives to M3R in detail. It includes note that moving noise to another area still impacts the community – effects could be expected to duplicate, disperse and compound. Whilst land around alternative airports is less populated today (as Melbourne Airport was in the 1960s compared to today), increased activity at an alternative airport would likely attract more encroaching development due to the economic stimulation airports bring.

Regarding the submissions related to the noise projections being better for the east-west runway being the third runway, this may be the case for residents to the south of the airport, however there would be areas to the east of the airport of similar impact scale (such as Gladstone Park, Broadmeadows, Westmeadows, Meadow Heights, Coolaroo and Dallas). Whilst submissions are correct that departures would head west over green wedge land, all arrivals would come from the east (similar to M3R with arrivals from the south, departures to the north). Further, as outlined within MDP Part A Chapter A3: Options and Alternatives, if the east-west runway was built first, the north-south runway would need to be constructed within the next decade - advancing noise impacts for a much larger overall community for limited temporary benefit.

The proposed solution of bringing forward the build of the fourth runway would similarly bring forward impacts to a very large population.

Noise Sharing:

APAM recognises the concerns of the community about M3R noise projections, and the need to balance the economic importance of M3R with the impact in the vicinity of the airport. If previous Australian mitigation schemes (such as the noise insultation programs at Sydney Airport and Adelaide Airport) were adopted they would apply to 33 dwellings within the ANEF 30 and none within the 40 ANEF. This is in stark contrast to Sydney Airport (4,083 residential dwellings insulated and 147 residential dwellings voluntarily acquired) and Adelaide Airport (648 residential dwellings insulated).

It is important to understand the unique location and planning history of the Tullamarine site. Sydney and Adelaide aerodromes are located much closer to residential populations than Melbourne. The Tullamarine site was deliberately selected in the 1950s with an objective of minimising community noise exposure. The site's surrounds were largely rural, with only few dwellings south of the airport (north of the Calder Freeway) and the township of Bulla to the north-west. Suburbs south of the Calder Freeway are more than 3.6 kilometres from the new runway, which is similar to the distance between the existing north-south runway and Keilor Park.

Avoidance, management and mitigation measures as discussed within Section C4.5 of the MDP and are referenced earlier in this Issue at the start of Section D5.5: APAM Position.

APAM is committed to exploring noise sharing opportunities during the detailed airspace design process and will work with Airservices to engage with the community during this process.

We note that M3R provides a greater opportunity for noise sharing opportunities than the current cross runway system, in particular at night.

Further Consultation

Whilst airports have very little direct involvement in managing operational aircraft noise (it is the role of Airservices through air traffic management) APAM is committed to collaboratively working with Airservices and operators to enhance the management of aircraft noise. This includes a commitment from APAM to:

- Introduce short-term noise monitoring stations around the airport
- Regular flight path and noise reporting covering extent of flight paths (including unusual operations), adherence to Noise Abatement Procedures, noise descriptors (contours) for reporting periods
- Regular reporting of aircraft types and runway usage at Melbourne Airport
- Explore ability to add historic Master Plan noise contours within online flight path and noise tool.

Melbourne Airport is fortunate to have the Melbourne Airport Environs Overlay and the recently updated Victorian Planning Provisions Amendment VC218 that includes elements of the NASF Guidelines. APAM will continue to be a strong advocator for off airport safeguarding measures and will work collaboratively with local councils and the Victorian State Government to enhance safeguarding of Melbourne Airport from new noise sensitive developments.

APAM notes the new Commonwealth Government's commitment to an Aviation White Paper. The Aviation White Paper from 2007 included a chapter (Chapter 14) on minimising the impact of aircraft noise. APAM will advocate that the findings from the M3R Supplementary Report (such as the discussion of appropriate noise descriptors) be included in the White Paper and that any recommendations are applied nationally for consistency.

APAM is committed to exploring noise sharing opportunities during the detailed airspace design process and will work with Airservices to engage with the community during this process.

D5.6 Changes to Preliminary Draft M3R MDP

APAM proposes no changes to the noise projections presented in the Preliminary Draft M3R MDP, however there will be further work completed as part of the detailed airspace design process regarding noise sharing opportunities discussed in this Issue and other Issues within the Supplementary Report.

D5.7 Summary and Conclusion

APAM note that the noise projections are an outcome of the following:

- Noise modelling methodology
- Propose runway operating plan
- Flight path design
- Forecast demand at Melbourne Airport

The MDP has adopted best practice across all of these parameters (as discussed in other Issue responses). APAM will leverage the Commonwealth Government's commitment to an Aviation White Paper to discuss and explore alternatives to the assumptions and methodology within this MDP to support optimal community outcomes.

APAM recognises the concerns from the community about the noise projections of M3R, and the need to balance the economic importance of M3R with impact in the vicinity of the airport. If adopting previous Australian mitigation schemes such as the noise insultation programs at Sydney and Adelaide Airport, the noise projections for M3R result in approximately 33 dwellings within the ANEF 30 and none within the 40 ANEF. This is in stark contrast to Sydney Airport (4,083 residential dwellings insulated and 147 residential dwellings voluntarily acquired) and Adelaide Airport (648 residential dwellings insulated).

It is important to understand the unique location and planning history of the Tullamarine site. Sydney and Adelaide aerodromes are all located much closer to residential populations than Melbourne. The Tullamarine site was deliberately selected in the 1950s with an objective of minimising aircraft noise impacts. The site's surrounds were largely rural, with only few dwellings south of the airport (north of the Calder Freeway) and the township of Bulla to the north-west. Suburbs south of the Calder Freeway are more than 3.6 kilometres from the new runway, which is similar to the distance between the existing north-south runway and Keilor Park.

Urban planning and development since the airport's opening has regrettably resulted in residences and sensitive facilities within significant noise impact zones. APAM continues to work with State and local governments to influence planning policies that minimise incompatible property use around the airport. The airport's objective is to retain its ability to operate and grow without undue community conflict.

D6 Flight Safety Hazards

D6.1 Summary of Issue

This Issue relates to submissions commenting on flight safety hazards associated with M3R. This includes references to:

- Concerns regarding the safety of operations
- Concerns regarding interaction with Essendon Fields and other general aviation / helicopter operations as well as references to recent incidents at Essendon Fields
- Concern over the risks to wildlife / risk from wildlife strikes, objects falling from aircraft and fuel dumping.

D6.2 Number and Types of Submissions

168 submissions contain reference to the Flight Safety Hazards Issue. They were received from:

- Community
- Community organisations:
  - Melbourne Airport Community Action Group (MACAG)
- Non-government organisations and commercial entities:
  - Keilor Primary School Council
  - Melbourne Airport Community Aviation Consultation Group (CACG)
- Government:
  - Brimbank City Council.

D6.3 Discussion of Submissions

Submissions from community members included the following topics:

- Concern for safety due to aviation operations, including increased risks due to M3R
- Concerns about interaction with Essendon Fields, previous incidents at Essendon Fields and the risks of aircraft collisions
- Concern over fuel dumping and equipment falling from aircraft
- Concerns about the location of flight paths over hazardous areas (such as fuel depots)
- Concern over the risk to wildlife
- Reducing hazards by moving operations to alternative locations.

These are summarised under the headings below along with significant submissions from community organisations, non-government organisations, commercial entities and Government.

<u>Safety of Aviation Operations</u>

Submissions referenced concern regarding the safety of aviation operations broadly, at that M3R increases chances of an incident. There are some specific concerns about risk of incidents over residential areas. Some examples statements made are shown below:

> *"If an aeroplane were to be faulty and fall out of the sky it could potentially crash in the midst of a residential area. This should be avoided at all costs."*

> *"Safety concerns with planes taking off and landing Directly over our Homes"*

"Extra air traffic over a residential area is unacceptable. Planes taking off and landing over our homes is dangerous at the best of times and very very concerning."

"Safety is a further concern, increased flights over the same areas exposes communities to increased risk."

"I contest this runway as it will amplify the amount of air traffic noise in the air and also increasing the risk of an airplane crashing into our home."

"The risk of crashes in our neighbourhood will be higher so who would want to live in the area if we want to sell?"

"Because we live in close proximity to the airport there is always, heaven forbid, the chance of an aircraft accident in the back of our minds – more planes flying over more populated areas would obviously increase the risk two or three fold!"

"I have always felt threatened whenever I experienced low flying aircraft above me. This has been further exacerbated by the live images of the 9/11 tragedy. The threat posed by the constant flow of aircraft flying so low above my home, as per the proposal for a new NS runway, will no doubt significantly affect my well-being.
…
With the high number of overflights per year (100,000 plus, and that's just when the runway opens in 2026), I will feel that the probability is higher for something to go wrong. I truly believe I am not alone in my community in experiencing these feelings with low flying aircraft. It is our right to feel safe in our homes and in the surrounding outdoors."

One submission referenced a media article from early 2022 regarding Qantas pilots and the post COVID-19 recovery:

"Referring back to safety... there's been a recent admission by Qantas. Qantas confirmed that their pilots are making errors after long periods without flying. This is a compliance issue not only affecting Qantas, but all airlines. What happens if we were to have further lockdowns? I understand that Australia has strict Aviation Compliancy, but is this issue being taken seriously by Australian Aviation? What about International Aviation and foreign Airline companies?"

<u>Essendon Fields, General Aviation, Helicopters, and Previous Incidents</u>

Some submissions raised need to consider the safety of operations interfacing with Essendon Fields' operations, and previous safety incidents:

"We are also concerned about a possible increase in likelihood of midair collisions particularly as smaller aircraft currently pass overhead regularly on route to and from the smaller Essendon Airport."

"I have lived in Essendon for forty-five years and have witnessed the expansion of flights from both Tullamarine and Essendon airports. The impact of increasing noise interference, fuel dumping and pilot error in choosing the wrong airport (this is not a rare occurrence pre Covid 19 at least twice a year an aircraft meant for Tullamarine prepared to land at Essendon, fortunately to date they have all been averted.) have been disturbing. I fear a third runway will further escalate these issues."

"Whatever considerations are made about the third runway, the fact that Essendon Fields Airport is so close to Melbourne Airport must be taken into consideration! There have been some confusions over the years which could have been catastrophic had pilots not

somehow managed to skilfully change the course of their planes at the last minute. As having two airports so close together has already caused near misses - I think this very much needs to be factored in.“

“the changes will result in our home being under flight paths for both Essendon and Melbourne Airports – how is this safe or fair to expect anyone to be able to live harmoniously with a constant high level of noise overhead”

Other submissions referenced concerns regarding general aviation aircraft and helicopters as hazards:

“We live in Box Hill South & we experience regular low flying helicopter/light plane traffic & passenger jet noise. Last night a loud jet flew over at 11.31 pm. In one instance recently, it was so loud we thought a jet was about to crash land & rushed outside. Thankfully it didn't.”

“I am also concerned about the increased safety risks associated with greater air traffic over our neighborhood. I have witnessed many times where large planes come into close proximity to smaller aircraft such as helicopters and light planes.”

“Adding another runway will make the skies more dangerous accidents and plane crashes could happen there has been a few close calls almost colliding with planes as I know a person who is a traffic controller for the airport”

“The very real possibility of a plane catastrophe crash landing into houses with so many thousands of take offs and landings - it's a mathematical certainly - a catastrophe will happen sooner or later regardless of the safety statistics”

“I have lived in Keilor for over 35 years and have noticed many strange and dangerous incidents and things regarding pilot error, planes taking the wrong approach when landing such as the huge 787 Air India Dreamliner on 14th January 2014 when a pilot was trying mistakenly to land on a much smaller Essendon Airport instead of the international Melbourne Airport and only by the grace of God the pilot was notified by air traffic controllers at the last minute not to land to accelerate forward and upward in an emergency take off again and abort landing at Essendon Airport.”

Fuel Dumping and Objects Falling From Aircraft

A large number of submissions expressed a concern about fuel dumping:

“With an additional runway, there could be potential risk to the surrounding communities, in regards to jet fuel dumpling in the case of an emergency, and increase risk of runway incursions and accidents.”

“Also worry about the fuel dumping etc on our homes. What about those that have drinking water tanks all the fumes and fuel going into the water supply.”

“I am strongly opposed to the third runway project being built as a resident of Keilor Village I believe the runway will impact our physical and mental health and financial impact with the noise pollution and fuel droppage directly over my house.”

“The smell of poisonous and carcinogenic aviation fuel being dumped over tens of thousands of family homes of all the suburbs abovementioned and beyond especially with strong prevailing winds. The average sized 747 Jet plane expels a staggering 20,000 litres plus of toxic and cancer-causing fuel every single take- off which eventually is blown

and settles over most and many of the suburbs mentioned above. Tons of unburnt cancer-causing toxic fuel settles every single day on top and inside of tens of thousands of houses, on top of thousands of cars and their door handles etc, schools, shops, shopping centres, factories, back yard vegetable gardens, the washing on thousands on people's clothes lines, parks and gardens where children play daily - in fact every possible nook and cranny where tons of toxic and cancerous fuel will invade."

"Fuel dumping by aircraft releases unburned aircraft fuel into the air."

"And at the time also handed in my concerns , I believe already being where we are the pollution and chemicals falling from the plans has affected my health and other members of my family"

"As a Keilor resident and ratepayer, we will have to pause discussion as aircraft pass overhead, resort to being inside especially if there is a potential fuel prop (emergency landing) and potentially consider relocating to a quieter and less polluted area."

Other submissions referenced a concern regarding objects falling from aircraft:

"The increased aircraft traffic would give rise to a corresponding increased risk to residents from aircraft mishaps, including things like falling objects and jettisoned fuel."

"Watching how close the planes are to your roof is an experience in itself and not pleasant as you realise any equipment on the plane that drops off could either kill you or seriously damage your home."

Location of Flight Paths over Hazardous Areas

There were submissions indicating a concern that flight paths have been designed over hazardous areas such as fuel depots, electricity pylons and substations. Example submissions are shown below:

"I've always wondered about planes flying over the large grouping of Oil Tankers in Spotswood and Yarraville. The very large tanks belonging to Caltex, Mobil and Shell contain Petrol, Diesel and Jet Fuel. They are building more of these tanks too! I wonder how safe this Flight Navigational Path is - not only for the passengers on board the planes, but also those on the ground within this area and surrounding residential areas. To have more planes flying on this flight path only increases the likelihood of a catastrophic accident."

"It will also increase the risk of accidents around the fuel depots in this areas and the risk of fuel leakage that could impact our parkland and wildlife. We are adjacent to Newport Lakes Reserve, fuel leakage and noise pollution could be very detrimental to the flora and fauna within the park. We have black cockatoos, swans, owls and numerous other bird and mammal species that could be impacted by this increase in noise and pollution."

"Our region also contains two large fuel depots, and I am concerned of the increased risk of an air accident that may involve one of these depots. I see no documentation considering this safety risk."

"There is the East Keilor Substation; (the one I studied at Uni.) the planes fly over this Substation. If ice or other parts from a plane should hit this Substation and it is made non functional. 80% of Victorians power supply will be out. How many people are going to die in nursing homes, there are about 20, within 5Km of my home. The fuel that I can

smell, if it flows over the substation and the RIGHT conditions ignites. Hope you have good insurance. THe public is going to be very very angry.“

Concern Over Risk to Wildlife (Wildlife Strikes)

A number of submissions referenced impacts to local wildlife from flight path hazards. Some submission quotes are shown below:

“Bird strikes are guaranteed with the proposed flight path travelling directly through the park which will give the airport permission to kill these birds under the guise of human safety precautions.”

“In line with International Safety Regulations many of the birds in Brimbank Park will be culled and this will continue as other birds move into the area.
This has been outlined and it sickens and repulses me to the core!
Our precious wildlife and native animals face enough threats and perils to their existence as it is without you unnecessary adding to it!
…
Birds being hit by planes will be highly likely which will put the safety of 5800 Keilor residents also at risk with planes flying at less than 300 metres over their houses!”

“Risk of endangered species being hurt or killed by extra road and flight traffic”

“The Grey Box Grassy Woodlands, Raptors and Wedgetail Eagles all risk striking aircraft in flight paths over their habitat, ending their lives and damaging aircraft.”

Solutions to Reducing Hazards

Some submissions included solutions to reducing the flight safety hazards, largely suggesting moving the activity to another location (such as Avalon). Some quotes from submissions are shown below:

“I am concerned about increase to noise and safety for residents who will be in the flight path of the third runway at Melbourne Airport. I believe there to be an alternative option at Avalon airport that would take planes away from residents and would not impact the community.”

“It should also be mentioned that the runway at Avalon is much closer to the sea (open, unpopulated space) by a factor of about 75% so in the vent of an emergency, aircraft will be able to get away from populated areas much quicker than they will at MA. Given that proportionately more accidents happen during take off and landing, I would expect this, a SAFTEY issue, would be a major consideration.”

“A new airport in a safer location will provide more jobs and far less carnage to birds and will also adversely impact humans less too.”

MACAG

The submission from MACAG included the following references to flight safety hazards:

“We are aware, for example, that there is a radio transmission tower that constrains flight paths from the new second runway such they cannot deviate to the west until they are in line with the tower, and cannot fly within a 5km radius of it as they turn (bearing in mind the vast majority of flights departing Melbourne from the new second runway will ultimately head to the west or north). These flight paths are also constrained to the east

by flight paths for the existing north/south runways. They cannot deviate to the east at all, and must turn to the west as soon as they are able. Ideally, parallel runways should be spaced at least 2 km apart and aircraft should angle 7° away from each other as soon as possible after leaving the runway for safety reasons. Melbourne's parallel north/south runways will be 1 km apart. We understand departures from the existing runway cannot deviate to the east as they would encroach on flight paths for Essendon Airport, which means aircraft from the new second runway will have to turn 15° as soon as they can. The safety implications of these constraints on flight paths and the proximity of the two runways to each other should be clearly explained as these flight paths will be directly over established residential communities, including schools and childcare facilities. It would be reassuring to know whether other airports operate with similar constraints and how the planned operations and ultimate capacity at Melbourne Airport compare to them."

Keilor Primary School Council (including proforma submissions)

The submission from Keilor Primary School Council (and related community proforma submissions) includes the reference to public safety area analysis in MDP Chapter C5:

"Part C – Table C5.2 – Public Safety Areas in the 1:100,000 is incompatible for use with recreation activities such as sport and entertainment, education, and community centres.
Part C – Table C5.9 – Notes land impacted by PSA contours amounts to 36.93Ha – what is the strategy for managing these impacts?
Part C – Figure C5.15 – Demonstrates that Keilor Sports Club is directly impacted by the 1:100,000 contour and the Keilor Precinct has "Major incompatibility" – Figure C5.16 has not been updated to reflect the no build scenario.
Part C – Table C5.10 Omits public health risk resulting from peak noise events causing hearing loss."

The submissions also reference absence of emergency planning for neighbouring schools:

"Does not address changes in land use, human health, impacts to existing residential and civic infrastructure such as recreational areas and schools. Part E4 does not include any community consultation group or emergency planning. Heathrow Airport, for example, has coordinated emergency management plans with neighbouring schools.
Part 4.6 does not deal with preferencing of runways or strategies for utilising parts of the runway with a view to minimise noise impacts. For example, aircraft that do not need the full length of the runway can be instructed to utilise parts of that runway to minimise impacts to Keilor. Short field take off procedures could be required for all smaller aircraft to maximise vertical distance over Keilor.

…
Schools surrounding Heathrow Airport are part of an active emergency management committee with the airport. There is evidence of ongoing collaboration, and monitoring mitigation of adverse impacts with the community."

Melbourne Airport CACG

The submission from Melbourne Airport CACG included references to public safety areas:

"54. The MDP shows that in 2026 the outer area of the southern Public Safety Area (PSA) is extending into some residential areas. What specific actions did MA take to notify affected properties that this is the case?"

Brimbank City Council

The submission from Brimbank City Council includes the following references to Public Safety Areas:

> *"2.6 Public Safety Areas*
> *● Accurately identify all properties within the Public Safety area (PSA) within the Master Plan and the MDP, and made publically available.*
> *● Undertake appropriate consultation with all owners of properties within the Public Safety Area (PSA), including face-to-face meetings and allow an adequate opportunity for their review and comment.*
> *● Introduce a scheme where properties within the PSA can be voluntarily offered by owners, at current market value, for purchase by Melbourne Airport/ Commonwealth, or alternatively compensation is paid for the loss of property value.*
> *● Provide an appropriate opportunity for all owners with the PSA and the public to review and comment of the PSA purchase / compensation scheme, prior to its implementation."*
>
> *"5.6 Public Safety Areas*
> *The Master Plan has updated the location of the Public Safety Areas (PSA) to reflect the new location of the proposed third runway in the north/south orientation.*
> *PSA's are designated areas of land at the end of airport runways where planning restrictions may apply.*
> *…*
> *The incompatible uses within nominated PSA's for both the inner and outer PSA include dwelling houses, multiple dwellings, tourist parks, hostels, residential care facilities and retirement villages.*
> *The outer PSA for the proposed third runway would extend south of the runway into 1.2 kilometres of the existing residential area of Keilor Village, at a width of 20 – 40 metres. This means that up to 60 existing dwellings and the Keilor Community Hub are now directly impacted by the outer PSA.*
> *The implementation of NASF guidelines, as recommended in the recently released Report by the Melbourne Airport Environs Area Safeguarding Standing Advisory Committee (MAESSAC), would see the PSA's identified as an Overlay in Victorian Planning Schemes. If the MAESSAC recommendation is adopted that would mean that any vendor statement given to buyer regarding the sale of land (commonly referred to a Section 32 under the Sale of Land Act) must disclose the Planning Overlay identifying the property being sold being within the PSA.*
> *It is evident that the nomination of any site within a PSA, where dwellings are identified"*

D6.4 M3R MDP References

MDP Part Chapter C5: Airspace Hazards and Risks is dedicated to flight safety hazards,.

D6.5 APAM Position

Aviation Safety

Although Australia has an excellent aviation safety record, there are inherent and unavoidable risks in the industry. Australia has not experienced a high-capacity (i.e. aircraft with more than 38 seats) Regular Public Transport (RPT) fatal accident since 1968 and has never had a major accident involving a RPT jet aircraft. There has never been a serious accident involving RPT at Melbourne Airport.

Melbourne Airport's safe operation is highly regulated. The aerodrome is certified under section 139.050 of the CAS Regulations and is therefore bound to satisfy CASA that appropriate operating

procedures, equipment and adequately trained and experienced personnel are in place so that suitable provision for the safety of aircraft and personnel is maintained.

RPT aircraft using Melbourne Airport are subject to extensive regulatory controls to ensure they are safely maintained and operated. Pilots and crew are subject to high standards of licensing and regulatory control.

Small-scale safety risks are managed through systemic industry practices – this includes the public exposure to the hazard of falling aircraft components (which may be lost during take-off or landing). Airline safety management includes a strong focus on preventing objects accidentally detaching from aircraft in flight. Though rare occurrences, when objects are discovered to have fallen off aircraft, these occurrences are reported to the Australian Transport Safety Bureau (ATSB) which maintains a database and may investigate.

Wildlife Strikes and Objects Falling from Aircraft

APAM acknowledges the community's concern regarding wildlife strikes. As indicated in MDP Chapter C5 Section 5.5.1 Wildlife Hazards, when compared to other major Australian airports, the risk presented by wildlife hazards at Melbourne Airport is low. APAM is committed to regular reporting of these statistics to the community (refer to Further Engagement heading below).

Similarly, regarding objects falling from aircraft, as indicated in Chapter C5 Section C5.6.10 Objects Falling From Aircraft, it is estimated that one object falls every 3.4 million aircraft movements Australia wide. APAM is committed to regular reporting of these statistics to the community (refer to Further Engagement heading below).

APAM does note that there is some community confusion regarding the implementation of NASF Guideline C (Wildlife Buffers) in particular regarding the meaning of 'mitigate' which has been assumed to infer culling. APAM has recently provided this feedback to DITRDCA on the review of Guideline C and will continue to advocate for appropriate community consultation of any changes to NASF Guidelines.

Fuel Dumping

Fuel jettison from aircraft in flight is an extremely rare practice, only undertaken in emergencies when an aircraft's weight must be reduced quickly to minimise its landing weight.

In Australia, fuel dumping from aircraft in flight will not occur unless permission is given by Air Traffic Control or according to a direction issued by the Civil Aviation Safety Authority (CASA); or in an emergency (where fuel may be released over areas where it does not create a hazard).

The Airservices Australia Aeronautical Information Package (01 December 2022) states that:

> *"10.14.4* ***Fuel Dumping in Flight***
> *10.14.4.1 Release of fuel from an aircraft is not permitted except in an emergency or non-normal situation*
> *10.14.4.2 When fuel dumping is required, the pilot in command should request authority from ATC before commencing a fuel dump and must:*
> *a. notify ATC immediately after an emergency fuel dump;*
> *b. take reasonable precautions to ensure the safety of persons or property in the air and on the ground; and*
> *c. where possible, conduct a controlled dump in clear air above 6,000FT and in an area nominated by ATC*
> *10.14.4.3 The pilot should advise ATC if radion silence is required during the fuel dumping operation"*

Liquid fuel dumped by a fast-moving jet aircraft at the minimum height of 6,000 feet AGL would shatter into small droplets on contact with the atmosphere. The resulting droplets would disperse and evaporate before reaching the ground. Upon reaching ground level, the concentrations of vapours and any remaining droplets would be very small and undetectable and thus of negligible air quality impact at ground level.

APAM notes the ICAO State of the Science Report, which examined aviation emission environmental impacts, stated that only emissions up to approximately 3,000 feet above ground level directly contribute to the surface concentrations near the airport; emissions above are dispersed more widely (Umweltbundesamt, 1992). This is why the modelling software (AEDT) only models emissions less than 2,000 feet. There is no evidence that aircraft emissions results in contamination of tank water. The bulk of particulate matter, NOx and other pollution are generated at ground level.

APAM notes the community concern around this topic and will endeavour to work with Airservices to provide a greater level of reporting if/when fuel dumping events occur at or near Melbourne Airport.

Flight Path Design Safety

In relation to the submission made by MACAG regarding safety of operations, safety is the number one parameter applied to the flight path development and takes priority over capacity and environment. This is discussed further within Issue D4: Flight Path Design.

In addition, airspace around airports is protected under the Airports (Protection of Airspace) Regulations 1996 which provides protection for aircraft from obstacles. APAM will continue to work with local councils to ensure that the airspace around Melbourne Airport is protected from obstacles. APAM is planning to update gazetted airspace for the four-runway system (which was last gazetted in 2011). The community, local councils, developers and crane operators will be engaged on the importance of protecting prescribed airspace. This process will provide an opportunity to share a simple ‘referral surface’ covering the heights at which developments should be referred to the airport by developers and/or councils. Other airports around Melbourne will be consulted to seek interest in inclusion in this surface.

Public Safety Areas

APAM acknowledges that the letters sent to dwellings within (or close to) the PSA contours may have raised undue alarm for recipients. The letter included FAQs based on the information available from the NASF (Guideline I) website and APAM offered further information for affected residents upon request.

It appears that the engagement was not sufficiently clear regarding the purpose of PSAs from a land use planning perspective (for future developments), and that the guideline will not be applied retrospectively. APAM is proposing to provide further information to the community regarding PSAs (including calculation methodology and intended use - see example commentary below) to address this shortcoming.

The 2022 Master Plan is the second Melbourne Airport Master Plan that has presented PSAs. This topic is not yet addressed consistently across other Australian airports – several federally-leased airports have not included PSA figures in their post-2018 Master Plans.

The airport has adopted the methodology proposed in NASF Guideline I, which follows the methodology developed by UK NATS - this applies accident frequencies based on historic data (1970 to 1998). An outcome of this method is a higher crash rate than would result if based on the modern fleet operating and forecast at Melbourne Airport. In developing the contours, APAM

considered presenting other PSAs based on a crash rate more reflective of the trends presented in Boeing's annual summary of airplane accidents (Boeing Statistical Summary of Commercial Jet Airplane Accidents, Worldwide Operations 1959-2020). Additional consideration was given to whether worldwide statistics are appropriate for Australian airports. These alternate methodologies were ultimately discarded to not risk creating confusion as to which PSA should be considered.

Brimbank City Council's submission does not recognise that the Guideline is not applied retrospectively and that the purpose is to support land use planning for future developments. It does also not recognise that PSAs were included within the 2018 Master Plan.

APAM notes that the PSAs included in the MDP reflect both proposed operating models (option 1 and option 2). Option 1 concentrates arrivals onto Runway 34L whereas option 2 alternates (providing respite), this influences the extent of the public safety area (driven by frequency of aircraft movements). Based on the further work to be completed as part of detailed airspace design informing the operating mode and commentary above regarding PSA methodology, APAM believes further work is required to inform the extent of M3R's PSAs.

APAM notes the Commonwealth Government's commitment to an Aviation White Paper and will advocate for that scope to include discussion of available PSA calculation methodologies, with an objective of nominating an optimal framework for application in Australia.

Emergency Planning (school examples)

APAM notes the concerns raised by Keilor Primary School Council regarding need for a co-ordinated emergency management plan similar to that at Heathrow Airport. APAM notes there are a number of primary schools to the east of Heathrow airport within 2,000 metres of the landing threshold (such as Cranford Primary School, Beavers Community Primary School and Marjory Kinnon School). APAM commits to making enquiries to Heathrow Airport to understand what emergency management plans are in place and to discuss these with Keilor Primary School.

APAM notes that Keilor Primary School is approximately 3,900 metres from the proposed new runway however is more closely aligned to the extended centreline compared to the schools near Heathrow Airport.

Further Engagement

APAM believes better reporting, consultation and engagement on aviation safety could be achieved via:

- Regular publication of performance data for wildlife strikes, fallen objects, etc.
- Industry expert (airline, regulator, air traffic controller) participation in engagement to provide specific information and answer specific community questions
- Partnering with Essendon Fields and Airservices to collectively inform the community of safety measures in place to manage the airspace between the two airports
- Regular reporting on safety metric performance to CACG.

D6.6 Changes to Preliminary Draft M3R MDP

Based on the commentary in APAM Position, no changes to the MDP are proposed.

D6.7 Summary and Conclusion

APAM believes regular reporting, consultation and engagement regarding aviation safety will help enhance the community's understanding of safety hazards and risks associated with the airport's operations.

D7 Aircraft-Induced Vibration

D7.1 Summary of Issue

This Issue relates to submissions referencing aircraft-induced vibrations and references:

- Current vibrations experienced due to aircraft operations
- Concerns about increased vibration impacts due to M3R
- Concerns with the lack of solutions to impacts from aircraft-induced vibrations.

D7.2 Number and Types of Submissions

169 submissions contain reference to the Aircraft-Induced Vibration Issue. They were received from:

- Community
- Community organisations:
  - Keilor Ratepayers and Residents Association (KRRA)
- Non-government organisations and commercial entities:
  - Keilor Primary School Council

D7.3 Discussion of Submissions

The community submissions referencing aircraft-induced vibration fell into three main categories:

- Comments regarding current vibration
- Concerns about the potential increase in aircraft induced vibration
- Concern with lack of solutions to damage.

These issues are discussed below along with the submissions from community organisations and Government.

Current vibration

A number of submissions referenced current aircraft-induced vibrations in their home:

> *"Ever since the planes were allowed to fly in at a lower height, we are disturbed by the noice. We wake up in the night with our windows shaking."*
>
> *"We currently experience excessive noise and house vibrations from occasional small light aircraft that fly above our home"*
>
> *"We already suffer from some planes who appear to fly too low with the vibration and noise"*
>
> *"Emergency aircraft such as the police, air ambulance, flying doctors and TV station aircraft fly low and shaking the windows."*
>
> *"The noise and vibration is horrendous."*
>
> *"Planes that currently fly over my house are very loud in the house, wake up my children in the middle of the night and cause my house to shake. This already has a considerable impact on our lives."*
>
> *"Not only that but the vibration that occurs can be house shaking at times."*

“light chandellers shakes like nobody’s business and also came down on d floor”

“We already know , as experienced , aircrafts passing by at a low altitude make houses shaking , hence causing structure damage in a long run.”

“noise study truly has considered what we already contend with and some of it has nothing to do with landing and take off , we live in a brick home with double glazed windows , yet under the right conditions and certain planes utilising the Airport our house can be effected by harmonic vibration , shaking and windows can rattle”

“The planes that fly over now are very upsetting, flying so low that they course vibrating and shaking”

“My house is under flight paths at Oak Park with incessant loud noises from planes taking off and landing at both Essendon & Tullamarine Airports day and night. Sometimes they fly so low that the whole house shakes!”

“I live in East keilor , directly over the flight path, Sometimes planes are so low ,I can feel the house shake, and that wakes me up, from my sleep.”

“Many houses especially those in Kealba were not built to withstand the aircraft that have flying over our houses, especially since Melbourne Airport for the past few years started their trial flight paths. My house, vibrates, shakes and the windows rattle.“

“planes flying overhead during the night, sometimes so close that the windows and house vibrate, are currently waking me up”

“I live in Keilor and just last night had an airplane fly over us. The level of noise and low altitude, was quite frightening due to the vibration which shook every glass window in our home.”

“Vibration of my windows when larger planes start their engines late at nigh and take off on the current runways.”

“When we moved into Arundel in 2011 the house was in perfect condition without any cracks in the walls etc. Since the extension and widening of the current North South runway a number of things have happened.
…
The noise and vibration created by increased aircraft movements have caused substantial damage to our Historic Home. We have noted many cracks appearing in our walls to the extent that three years ago, we noted that the south wall of the building developed hairline cracks in the walls. These were upstairs and downstairs particularly in our bathroom.
…
Soil tests were done, however little moisture was present. The engineer stated that the cracks were possibly caused by vibration and recommended the south wall of the building should be under pinned to stop any further damage.
…
This exervise cost us $30,000.00 and we still have the same problem. We now notice hairline cracks appearing in other rooms which have always been solid plaster”

“It is hard enough to listen to the noise and my house rattling with the current”

“By flying over our house you create vibration that rocks the houses and cracks the bricks. It also happens when the big planes land on the present runnaway our houses shake and rattle and we are 7km away from the airport now.”

"The vibration and noise of low flying jets vibrate my windows and affect the quality of my life, especially when I am in the garden."

"From observations we have also seen aircraft for years but noise or vibration was never an issue as the aircraft followed the M80 ring road out then turned, now for some reason they cut the corners "probably to save fuel as they now turn directly over the hospital almost above my residence and start their climb leaving me in the wake and the noise continues for approximately 10 seconds"

"There are a number of time were the house has shook due to planes flying low. We have alreay replaced 2 windows that have cracked."

"Houses in Kealba were not built to withstand the aircraft that have flying on these 'new trial flight paths' for the past two years. My house in Kealba now has cracks in it, which it didn't have before this new flight path and Melbourne Airport will not speak on the matter about it. My house shakes with some of the aircraft, my windows rattle and vibrate and most annoying it affects my health. The rumbling of the aircraft affects my ears and mental well-being and Melbourne Airports advice was to move."

Increases in Aircraft-Induced Vibration

In addition to current impacts, a number of submissions expressed concern about increase to aircraft-induced vibration impacts:

"Any aircraft flying of Jackson's Hill will appear extremely low and the noise, vibrations, as well as, pollution will dramatically affect the ambience of this area."

"Very concerned about noise pollution and vibration. Planes that currently fly over my house are very loud in the house, wake up my children in the middle of the night and cause my house to shake. This already has a considerable impact on our lives. It will be much worse with another runway and increased traffic."

"i have grave concerns that the additional runway will greatly exceed noise levels to unbearable levels, which will have adverse impacts on health and community . Not only that but the vibration that occurs can be house shaking at times."

"Furthermore, planes flying overhead during the night, sometimes so close that the windows and house vibrate, are currently waking me up and this is also of course anticipated to become more frequent and more intolerable with a third runway."

Solutions to Damage

A number of submissions expressed a concern that no solution / remediation has been proposed for vibration impacts. In addition, some submissions suggested suitable solutions:

"Noise and vibration to residences, no compensation on offer, no offer on sound proofing or triple glazing offered to reduce noise impact."

"What happens when plane vibration causes damage to homes? There already is slight vibration when larger aircraft take off from the existing runway. Planes now being 1.3km closer will increase this issue. How will this be processed and proven? Will Melbourne Airport do inspections of each home prior to the runway being built?"

"When a low heavy flying International Plane laden with fuel and luggage flys over our property it shakes our light fittings and our windows rattle. We like many others will be seeking compensation for any damage to our properties."

"The solution should be to provide compensation to upgrade houses built before these changes to withstand the noise, we are being unfairly exposed to and not have flights throughout the night and early morning."

"We currently have 2 family properties that were built long before the existence of Melbourne Airport, yet neither Melbourne Airport or the Government have any plans to financially assist with any damage that may occur as a result of repeated aircraft noise vibration or noise insulation."

Keilor Primary School Council

As part of the submission from the Keilor Primary School Council, and related proforma submitted by community members, there are vibration concerns expressed regarding the impact of southerly departures from Runway 16R on the school building:

"Part C – Figure C2.54 Demonstrates flight path of aircraft taking off on runway 16R. This is the movement which will cause greatest noise and vibration impacts to Keilor. It is obvious that Keilor Primary School and Keilor are directly impacted by this movement. Note C4.5.3.2 states that the right turn will only commence over the Calder Freeway – The school is hard up against the Calder Freeway. Many houses and schools (including Keilor Primary School) were built before 1985 and are likely to have asbestos which when subjected to repeated vibration will shed asbestos fibres."

KRRA

The submission from KRRA included a reference to the impacts of A380 night departures to the south pre-COVID:

"On a still night these long haul flights would actually vibrate windows and fittings of houses."

There was a submission that noted vibrations have not been taken into account within the flight path and noise tool:

"I would also add there are vibrations which have not been taken into account."

D7.4 M3R MDP References

Noise-induced vibration is discussed in Part C Chapter C4: Aircraft Noise and Vibration, Section C4.7 Noise-induced vibration.

A reference is made in MDP Part B Chapter B9: Ground-based Noise and Vibration, Section B9.7 Operational Noise.

Engine ground running is discussed in MDP Part B Chapter B9: Ground-based Noise and Vibration, Section B9.7.3 Engine ground running (EGR).

D7.5 APAM Position

Aircraft-induced vibration is covered within the MDP as a matter closely related to aircraft noise.

Chapter B9: Ground-Based Noise and Vibration includes the following commentary for on-ground operational sources (nb. Site 2 is the Taxiway Bravo Run-up Bay):

> *"Unlike construction activities, there are no airport-operational sources that will generate significant levels of vibration."*
>
> *"High-power EGRs can generate high levels of low frequency sound, which can leave to vibration within buildings. At site 2, sound levels in the region of 55-65 dB(A) would be experienced at the closest residential locations. At these decibel levels, high levels of low frequency sound are not sufficient to cause any adverse vibration. Accordingly, the impact of vibration from operational sources in negligible".*

Within Chapter C4: Aircraft Noise and Vibration, Section C4.7, the MDP includes the results from a 90 A-weighted decibels noise-level contour for the loudest regular arrival and departure events at Melbourne Airport. This analysis is consistent with Brisbane Airport's New Parallel Runway EIS/MDP, the Western Sydney Airport EIS and Perth Airport's New Runway Project MDP. APAM notes that research into noise-induced vibration is almost exclusively international and does not necessarily align with community submissions.

APAM will leverage the Commonwealth Government's commitment to an Aviation White Paper to review appropriate metrics and provide a national approach that can inform the community where buildings may be subject to aircraft-induced vibration, and explain appropriate mitigation strategies.

MDP Chapter C4 outlines that five dwellings to the south of the new runway (on McNabs Rd) and 37 dwellings to the north are within the predicted 90 dBA single event L_{Amax} contour. Figure 70 shows the extent of these contours. It is worth noting that the contours do not extend beyond the Calder Freeway, suggesting that aircraft induced vibrations would not occur in Keilor or Keilor Primary School. However, there are community members outside of this contour who believe they are impacted by aircraft-induced vibration. APAM will make this clear in its submission to the Aviation White Paper.

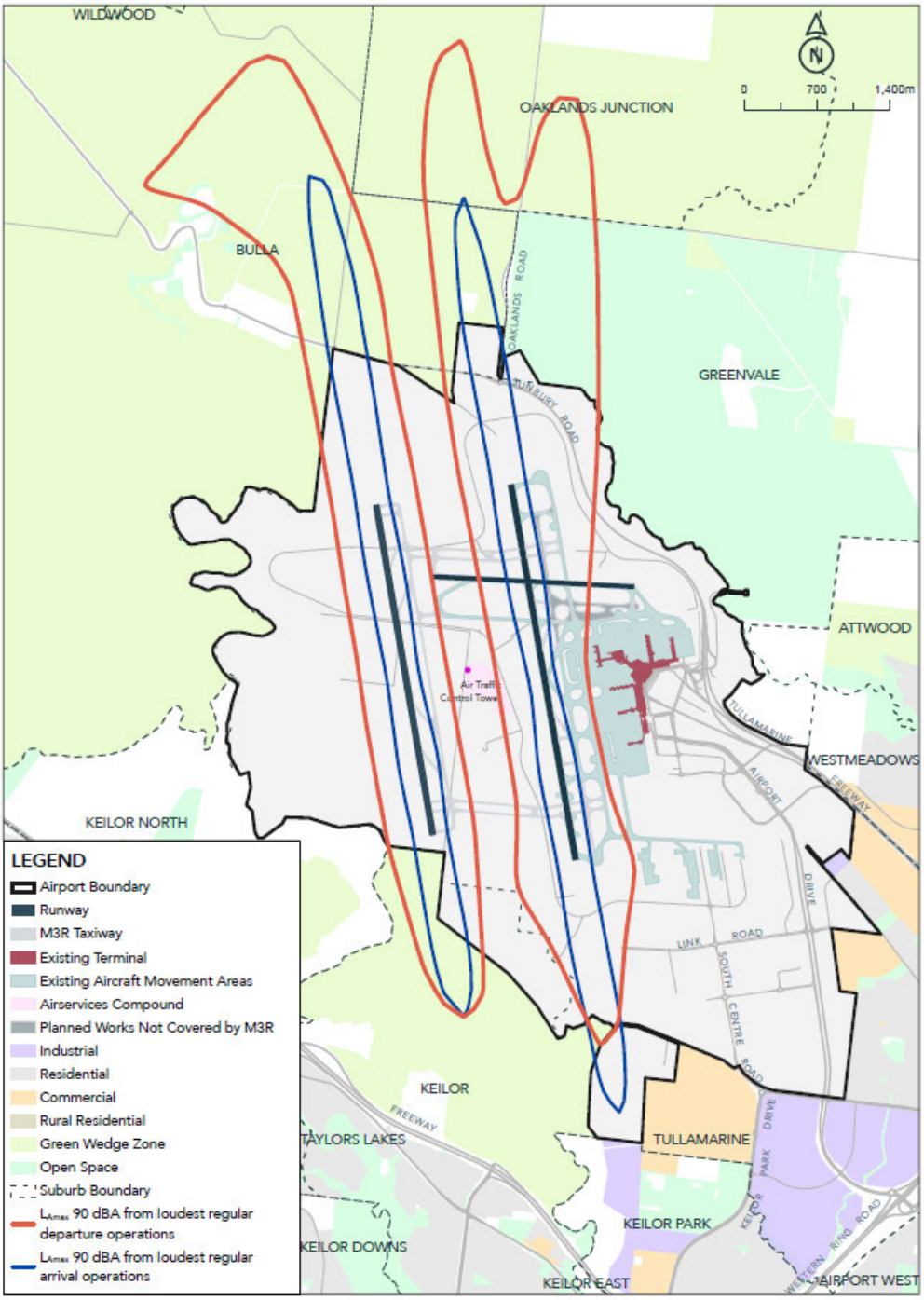


Figure 70: A-weighted decibels contours the loudest forecast arrival and departure events LAmax

These specific noise contours (L_{Amax} for a specific aircraft type) where not included within the online noise tool to avoid any confusion with other contours and data presented.

D7.6 Changes to Preliminary Draft M3R MDP

APAM proposes no changes are proposed to the noise projections within the Preliminary Draft M3R MDP, however we will be leveraging the Aviation White Paper to advocate for a national approach to aircraft-induced vibration and the effects thereof.

D7.7 Summary and Conclusion

APAM understands community concern of impacts from aircraft-induced vibration from operations at Melbourne Airport. APAM has adopted a metric utilised by Brisbane, Western Sydney and Perth Airports and concluded the impacts are limited to approximately 42 dwellings for the new runway.

APAM will leverage the Commonwealth Government's commitment to an Aviation White Paper to advocate for a national approach to a suitable metric that can be used to inform the community where buildings may be subject to aircraft-induced vibration as well as any mitigation / compensation measures.

APAM believes the M3R MDP has:

- Adopted the best practice methodology for modelling of aircraft noise.
- Included a suitable range of operating modes to mitigate aircraft noise, in particular at night. However, it is acknowledged that more could be explored as part of detailed airspace design to support greater noise sharing (where feasible).
- Adopted the best practice functional requirements for the concept flight path design (safety, air traffic management and environment). However, it is acknowledged that there are opportunities further from the airport to spread flight paths (and subsequent impacts). APAM undertakes to explore these as part of the detailed airspace design process.
- Included the best practice noise descriptors (based on the NASF Guideline A). Community desire for additional metrics and a review of the ANEF system is acknowledged, and APAM will advocate for this to be explore as part of the Commonwealth Government's Aviation White Paper.

APAM have proposed the following changes to M3R MDP:

- Included a new Chapter regarding future use of Runway 09/27 to reflect community interest in the shortening that is within M3R scope.

APAM have committed to the following:

- A factor in generating community trust in noise modelling methodology is reliable data. APAM has recently purchased three temporary, movable noise monitors for deployment in Keilor, Bulla and Sunshine. These monitors commenced calibration and data capture in February 2023. Ongoing results sharing will be explored with the Melbourne Airport CACG.
- Providing regular reporting on runway usage and adherence to Noise Abatement Procedures along with the resulting noise contours from actual operations.
- Exploring alternative operating modes including use of Runway 09/27 as part of the detailed airspace design process.
- Exploring alternative operating modes (such as single runway modes during low demand) as part of the detailed airspace design process.
- Further engagement with the community to help determine community preference for operating options where they are available. This will take into consideration the outcomes of the detailed design process that will consider alternative operating modes.
- Ongoing engagement with the community and the aviation industry through the construction phase of the project including the draft runway operating plan required for M3R. APAM will work in collaboration with Airservices on further consultation of the detailed airspace design with the community.
- Continual improvements to the online flight path and noise tool and maintaining it available online for community use. This will include more information on current flight paths and operating procedures.

- Further refinement of the concept airspace design to achieve efficiencies and improved noise outcomes for the community during the detailed airspace design process.
- On-going engagement with the community to increase awareness of the current and proposed flight paths.
- Provision of more regular flight path reporting information for the current flight paths and operating procedures.
- Exploring noise sharing opportunities during the detailed airspace design process - including engagement with the community to inform outcomes.
- Regular flight path and noise reporting covering extent of flight paths (including unusual operations), adherence to Noise Abatement Procedures, noise descriptors (contours) for reporting periods
- Regular reporting of aircraft types and runway usage at Melbourne Airport.
- Exploring ways to provide better reporting, consultation and engagement on aviation safety to the community
- Further discussions with Keilor Primary School regarding co-ordinated emergency management planning (based on consulting with Heathrow Airport).

APAM notes the Commonwealth Government's commitment to an Aviation White Paper and will advocate that the scope includes:

- Independent review of aircraft noise forecast and modelling methodologies.
- Discussion on the compound effect of multiple aviation noise sources and ways to assess and present this impact for communities.
- Development of a nationally consistent 'functional requirements for flight path design' framework that considers the needs of airlines, airports, Airservices, CASA and the community.
- Discussion of items raised in submissions regarding aircraft noise descriptors and adoption of Lden.
- Discussion of available PSA calculation methodologies, with an objective of nominating an optimal framework for application in Australia.
- Provide a national approach to a suitable metric that can be used to inform the community where buildings may be subject to aircraft-induced vibration as well as any mitigation / compensation measures.

5.5 Theme E: Community Impacts

5.5.1 Overview of Theme

This theme covers issues raised in submissions relating to the potential impacts of M3R on the surrounding community, both positive and negative, and how those impacts may be managed or mitigated. It addresses issues relating to a wide range of impacts including health, social, economic, employment and road network impacts. It also addresses compensation and noise mitigation.

Community impacts are perhaps the most significant issues raised in the submissions. The vast majority of the submissions contain some reference to these potential impacts, particularly noise impacts. They were raised largely by community members, but also some local government and non-government organisations included these issues in their submissions.

Part D of the MDP addresses community impacts, particularly economic impacts (Chapter D2), health impacts (Chapter D3) and social impacts (Chapter D4). Most of the issues raised in submissions were already addressed in these chapters in the Preliminary Draft MDP. However, the submissions have raised some matters which require further comment or consideration, which is the purpose of the issue discussions set out below.

The ‘Community Impacts’ Theme was raised in 1,514 submissions.

The following Issues are considered within the ‘Community Impacts’ Theme:

E1: Health Impacts

Issue E1 deals with submissions that raise various health concerns at different levels of detail. Comments at the generalised end of the spectrum refer to increased aircraft noise and/or increased air pollution being detrimental to health. Many of the submissions are more specific and go on to identify their author’s concerns in more detail. The most common concern is sleep disturbance followed by mental health concerns in their various forms, and the related issue of cognitive and learning impairment, especially in children.

E2: Social Impacts

Issue E2 relates to concerns expressed in submissions that quality of life, wellbeing and lifestyle will diminish for those living in areas that will receive new or increased noise and disruption (especially disruption to sleep). It also deals with submissions that refer to the uneven distribution of the detrimental effects of M3R, impacting disproportionally on areas of greater socioeconomic disadvantage. At a broader social impact level this issue also discusses concerns about the impact on public facilities, particularly the impact on schools, childcare centres and on children’s learning.

E3: Compensation

This Issue deals with several financial remedy topics raised by a wide range of participants in the public exhibition process, who submitted suggestions, requests or requirements for financial consideration by APAM. The issue addresses submissions raised by many community submitters who expressed a desire to be remediated for impacts on quality of life, residential amenity and property value performance. Though some submissions used general terms, many expressly requested acquisition, noise attenuation or similar schemes for noise-effected properties. Some community organisations and local governments cited an expectation that APAM be financially responsible for health and social effects of increased aviation activity.

E4: Noise Mitigation

Issue E4 relates to submissions which include recommendations for avoiding or reducing aircraft noise impacts – through both direct and indirect means. For example, the suggested mitigations, which are discussed in this Issue, include not building M3R, that the third runway should be oriented east/west, that a curfew should be introduced and airspace design measures.

E5: Economic Activity

This Issue covers submissions that raise issues relating to the economic impact of M3R. It discusses submissions supportive of the economic benefit of the new runway to Victoria/Melbourne and the local area, and those critical of the economic justification of the project, the economic assessment methodology or expected influence on property values. The Issue addresses concerns that the economic assessment methodology did not capture all costs, that benefits were overstated and the comparative assessment should have considered options other than further development of Melbourne Airport.

E6: Employment

This Issue addresses submissions that relate to the expected contribution of the project to employment at Melbourne Airport during construction and operation phases and the employment benefits to the greater Victorian economy that are facilitated by growing aviation activity. The Issue covers three sub-issues: employment benefits, employment justification and employment assessment.

E7: Public Space Amenity and Ecology (Off-Airport)

Issue E7 addresses feedback relating to public space amenity and ecology impacts outside the bounds of the airport. It includes comments relating to plane spotting and airport photography, flora and fauna effects beyond the airport site and impacts on parks and recreational spaces.

E8: Off-Airport Road Network Performance and Plans

Issue E8 primarily deals with concerns raised around traffic and congestion on the existing road network and proposals for alternatives to continued airport expansion. Most of the submissions concerned with traffic generation focus on the operational impacts that might be associated with M3R, but a subset of these emphasise the temporary demands that construction activity is expected to place on surrounding local roads. This Issue also addresses submissions that highlight public transport as a necessary priority to enhance overall access to Melbourne Airport, and the need to balance increasing transport demand with environmental and social outcomes.

5.5.2 APAM Response to Issues

This section of the Supplementary Report addresses the Issues grouped into the ‘Community Impacts’ Theme. This section:

- Summarises each Issue in the context of Melbourne Airport and the M3R project
- Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment
- Explains if/how the M3R MDP addressed the issue in its Preliminary Draft version
- Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM’s response/position where balances between impacts and benefits must be sought

- Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.

E1 Health Impacts

E1.1 Summary of Issue

Submissions categorised to this Issue present a range of perspectives about health concerns and benefits, at different levels of detail. Comments at the generalised end of the spectrum refer to increased aircraft noise and/or increased air pollution being detrimental to overall human health, 'wellbeing' and 'quality of life'. However many submissions are more specific with extensive detail of their author's position and rationale. The topics of these submissions include:

- Sleep disturbance
- Mental health and performance
- Cognitive impairment
- Myocardial infarction
- Hearing impairment
- Air and water quality
- Transparency and suitability of health studies.

The most common concerns are the effects of severe and/or sustained sleep disturbance, followed by mental health issues (in various forms) and childhood cognitive development and learning impairment.

Some submissions sought to discredit and/or rebut the representations of noise in the M3R MDP, and thus the assessments of health risks and impacts. Unfortunately this approach was not often robust and resulted in erroneous conclusions. Issue D1: Noise Modelling Methodology explores and explains these disconnects in detail. However, APAM responds to these concerns as presented in principle, regardless of underlying technical issues.

E1.2 Number and Types of Submissions

A total of 687 submissions referred to the detrimental health impacts of M3R. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- State and local governments
    - Victorian State Government
    - Brimbank City Council
    - Hobsons Bay City Council
    - Hume City Council
    - Maribyrnong City Council
    - Moreland City Council.

E1.3 Discussion of Submissions

There is extensive overlap between submission content regarding anticipated noise and health concerns and, by extension, social impact. Therefore, this Issue should be read in conjunction with Issue E2: Social Impact and the broader responses to noise subjects in Issues D1: Noise Modelling Methodology, D5: Noise Projections and E4: Noise Mitigation.

A notable share of responses that detail health concerns acknowledge that there is need for expanding Melbourne's aviation capacity. Some accept further that this is necessary at Melbourne Airport and that economic imperatives and benefits are real and important. Objections to M3R as the means of achieving growth objectives thus often propose alternative solutions, including aligning the new runway east/west, imposing a curfew and/or creating additional capacity at another airport (most popularly Avalon). These recommendations are addressed in Issue E4: Noise Mitigation.

The M3R MDP has clearly identified and quantified all reasonably anticipated beneficial and detrimental impacts for the project. Community research (see section 3.4.3) shows that private individuals and organisations that oppose the proposal are much more likely to formally lodge that opinion via a submission than parties who stand to benefit. This occurs because advantaged parties are generally either not motivated to undertake the effort of preparing a submission, or do not thoroughly engage with the content and thus are inadequately aware of the benefits likely to accrue to them in the future.

The health issue importantly brings focus to the fact that it is not appropriate to simply balance benefits against disbenefits — despite the very substantial net beneficial outcome for Melbourne and Victoria. The health concerns expressed in the submissions must be addressed on their merits, as follows.

Sleep disturbance

By far the most prevalent health-related subject tendered in submissions was the effect of noise upon quality sleep. Most submissions give only broad remarks, for example [location not provided]:

> *"I would request reducing flights flying between 10pm and 7am to reduce noise disturbance and the adverse effect on sleep quality of residents."*

Some submissions, however, include specificity about impacts associated with night-time noise — exemplified by this extract from the Maribyrnong City Council submission:

> *"According to a recent article published in the National Library of Medicine, long-term consequences of sleep disruption in otherwise healthy individuals include hypertension, dyslipidemia, cardiovascular disease, weight-related issues, metabolic syndrome, type 2 diabetes mellitus, and colorectal cancer."*

Particular reference to sleep issues for infants and children is also raised. The Keilor Primary School community proforma submission comments:

> *"Infants and children need 10-13 hours' sleep each night. This is vital for laying down long term memory in deep sleep and integrating new knowledge with pre-existing knowledge in REM sleep. Just disturbing a normal sleep cycle even without waking can disrupt learning."*

Many submissions consider sleep disturbance an absolute barrier to M3R, demonstrated by this comment that appears in several submissions from Bulla:

> *"At a local community engagement meeting by Airport staff, residents were told there will be at least 200 flyovers over Bulla where residents won't be able to sleep. … This is totally unacceptable."*

In some cases, however, the concern is presented with a remediation-focused context, such as this query from Coolaroo:

> *"I would like to know how Melbourne airport will help to minimise the noise? It would be good to get compensation to install better window glass to help reduce the noise."*

and from Keilor:

> *"I believe there should be some constraints around this third runway when it opens:*
>
> - *When only one runway is needed for aircraft to land or take-off the existing north-south or east/west runways should be used, not the new runway. Melbourne has been built around these flight paths and have been living with this for over 50 years.*
> - *A night curfew on the new runway, not the existing 2 runways."*

Though most concerns were raised by residents close to the airport, some came from areas projected to experience negligible impact, such as this resident from Templestowe:

> *"I am writing as a community member in Melbourne. ... I can also appreciate the concerns of local residents that the expansion and a new runway will exacerbate noise concerns…constant noise will understandably have an impact on their daily lives and stress."*

<u>Mental Health and Performance</u>

Annoyance/irritation and the impacts thereof, are a primary issue for a large share of M3R submitters who link it to mental health consequences including stress, anxiety, depression, and exacerbation of Alzheimer's disease.

Mental health effects are usually described in general and representative terms, such as these examples from Keilor:

> *"Already residents put up with much noise from frequent aircraft, and increasing this to virtually non stop noise is a guaranteed way to induce stress, anxiety and depression amongst a community, who's mental health has already suffered with a worldwide pandemic. Already the community of Keilor manages the constant excessive noise which impacts sleep, enjoyment of backyards and general wellbeing. This burden will put added stress on all residents."*

and from Essendon North:

> *"As a resident between the Essendon and Melbourne airport, working from home permanently, this increased traffic and noise will cause significant mental health concerns for myself and my family."*

A small number of submissions reported psychological effects being induced now by the mere prospect of the project.

> Coburg North: *"We have small children who are light sleepers and we are already impacted by the noise pollution from the airport. Thinking about this increasing is very anxiety provoking for us."*

> [Location not provided]: *"Significant and disruptive, stressful rattling noises over our heads throughout the day and especially at night. This gives me anxiety even typing this."*

Cognitive Impairment

People's ability to learn, develop and function healthily within the context of M3R was raised in a substantial share of submissions.

Linkage was drawn between noise and compromised mental function by the 'No 3rd Tulla Runway' action group, which distributed proforma messaging:

> *"Aircraft noise is not merely irritating. It is damaging to health, wellbeing, learning and cognitive function."*

A resident of Keilor Downs further remarked upon psychological and mental effects:

> *"Frequent exposure to high noise levels has well documented negative impacts on people's health and wellbeing. These include the inability to focus, cognitive difficulties, fatigue, lack of sleep, stress as well as being detrimental to people's psychological and physical health overall."*

An email campaign in the local government area of Maribyrnong lobbied that:

> *"Aircraft noise has serious health and educational effects: It disrupts sleep, affects learning and cognitive function, it caused cognitive impairment of comprehension, problem solving and memory, higher impairment in children with language or retention disorders or learning in a second language and high levels of stress.*
>
> *It impairs reading ability and learning outcomes, auditory discrimination and speech perception and leads to poor attention levels."*

Brimbank City Council suggests that:

> *"There are several ways in which aircraft noise could influence children's cognition:*
>
> - *lost teaching time — as a teacher may have to stop teaching whilst noise events occur*
> - *teacher and pupil frustration*
> - *annoyance and stress responses*
> - *reduced morale*
> - *impaired attention*
> - *children might tune out the aircraft noise and over-generalise this response to other sounds in their environment missing out on information; and*
> - *sleep disturbance from home exposure which might cause performance effects the next day."*

A substantial share of submissions concerning cognitive function came from the community of Keilor Primary School as a standardised letter. The letter's primary focus is the potential for noise to adversely impact normal childhood learning and development, with additional particular concern about students with autism:

> *"[M3R MDP Section] D3.2.3.4 Outlines that school children (particularly the noise impact on reading comprehension) are more sensitive to noise. This should include more specifically autistic children who are extremely sensitive to sound. Keilor Primary School*

has a proportion of students who are autistic and who will be extremely impacted by the increase in noise levels and the frequency of noise events."

A resident of Keilor makes related commentary about adult effects:

"Decline in cognitive function in people over 45 years of age (currently 35% of Brimbank's aging population)

Recent research now shows this group has poorer cognitive function under flight paths. (As we get older, sleep patterns tend to become progressively more disrupted so optimally laying down short term memories again becomes more crucial.)

This may cause some people to be unable to live independently despite having only mild dementia.

Even more worrying is the possible impact on many people over 45 years of age who are often at the peaks of their careers."

Similarly to the mention above of dementia, language repeated in several submissions referred to 'studies' (without citation) that link noise to Alzheimer's disease. An example from Sunshine:

"There are multiple studies and media reports highlighting the disturbance of noise pollution to mental and cognitive health, including interrupted sleep patterns and its devastating impact (e.g. links with Alzheimer's among other health issues)".

Myocardial Infarction

The M3R MDP collectively addresses heart-health matters into an assessment of 'myocardial infarction' risks. As community submissions use a range of terminology that aligns with 'myocardial infarction' overall they are presented here as such.

Brimbank City Council and several community groups researched the World Health Organisation (WHO) 'Environmental Noise Guidelines for the European Region' and promulgated it as a basis for rejecting the health and social impact assessments in the M3R MDP. This information spread resulted in a large share of submissions referencing the WHO guidelines, including specifically in relation to myocardial infarction. An example is drawn from the Keilor Residents and Ratepayers Association (KRRA) proforma, which was lodged by a significant contingent of Keilor residents:

"In Australia, communities are subjected to levels of aircraft noise well beyond WHO recommendations and have no legal protection against it."

The Brimbank City Council submission explicitly links WHO criteria to cardiovascular disease in the M3R context:

"This [failure to meet WHO noise guidelines] would indicate that there would be increases in cardiovascular disease within that population."

Note: The validity of the WHO Guidelines as an assessment tool for M3R is discussed in detail in Issue D1: Noise Modelling Methodology, which should be considered for further detail relating to all health impacts of noise.

A submission from Keilor speculates upon cumulative cardiovascular impacts for the residents of Keilor Village — compounding existing effects of the Calder Freeway:

"Hypertension, increased CVS associated disease and Keilor Village

This link is suspected but is not strong enough to be included in setting Aviation maximum safe noise levels

However, there is a solid link to Road Traffic Noise (RTN) causing increasing morbidly and mortality…If Melbourne airport adds noise…the impact will be additive…This is an older area with an already increased hypertension incidence. The mortality and morbidity costs to at risk individuals and society could well be enormous."

Hearing Loss

Although less common than other health concerns, hearing loss attributable to sustained aircraft noise exposure received several mentions. These submissions assert that the effect of aircraft noise in a residential setting can damage hearing. Examples of these submissions include:

Keilor Downs: *"Where hearing loss is a credible risk to the public as is the case in Keilor it needs to be directly addressed."*

Keilor Primary School proforma: "*There is no discussion on peak noise or the risk of hearing loss arising from aircraft movements."*

[Location not provided]: "I live under the flight paths of both Essendon and Tullamarine and I think people in my situation should be compensated by the airports by being shouted double or triple glazed windows and regular hearing tests along with hearing aides!"

Air and Water Quality

While many submissions refer to 'pollution' as an environmental issue there are also frequent mentions of health concerns consequent from degraded air and/or water quality. These majority of these submissions discuss respiratory issues (particularly asthma) and downstream effects of contaminant runoff (particularly PFAS), however a perception that aircraft release fuel overhead ('fuel dumping') is also prevalent.

Air quality concerns are well exemplified by the following community submissions:

- Kealba: *"There will be increased air and noise pollution, with the flights taking off from Tullamarine's proposed third runway, initially flying directly over our residence releasing large quantities of fuel in the process of ascending from the ground. This will impact my asthma problems considerably and I am concerned about not just my long term deterioration of my health, but the impact this will have on my family as well."*

  West Footscray: *"Our child suffers from horrible bouts of asthma and we believe this is due to the terrible air pollution in the area. Our suburb suffers pollution from factories, trucks and airplanes on a daily basis."*

  West Footscray: *"It will be directly injurious to the health, welfare and quality of life for myself and others in and close to the flight path due to the high level of fuel emissions and to a lesser extent, noise pollution. How will emissions falling over my home be managed to mitigate health impacts and how are losses to properties to be compensated if this plan goes ahead. I understand the development needs of the state but this proposal detrimentally impacts the health and welfare of many, many people."*

A small portion of submissions express concern about aircraft fuel in the air — at times including assertion that unused fuel is deliberately released overhead Melbourne:

Yarraville: *"Assigning flight paths over industrial areas (also related to a consideration for fuel shedding, we all know despite R&Rs this happens wherever it is most convenient)"*

City of Port Philip: *"Other than noise from low flying large aircraft is the additional dumping of aviation burnt fuel on an area that already experiences high vehicle emission loads."*

Keilor East: *"These planes use fuel, you can smell the fuel in the air, sometimes. What does that do to my health? I am going to be compensated for medical issues."*

Downstream effects of contamination from the airport site, particularly PFAS, is discussed in some submissions. This example from Keilor Downs queries the airport's plans for known sources:

"Part B – B3. 7 MPD reveals extensive PFAS contamination and the ground water system, which could contaminate the Maribyrnong Catchment. Table B3.8 reveals approx. 8 million Tonnes of PFAS contaminated soil could be reused – risk of PFAS migration is high. Loss of containment would impact the surrounds and Keilor as well as risk the agricultural operators to the north of Keilor. Greater levels of PFAS are presented to the south of the airport in Figure B3.9 Given the majority of PFAS is in the top soil and Part B4.7 confirms large volumes of overland flow into Arundel Creek refer to Table B4.19. Risk of PFAS migration is high. What is the impact to the community who are growing, or consuming produce grown and irrigated with water from the Maribyrnong River?"

Potential effects upon local agriculture related to pollution were further remarked upon by a few residents:

Keilor: *"This third runway WILL SIGNIFICANTLY impact our health, lifestyle, locally grown produce & our childrens learning with the increase in noise and pollution."*

Bulla: *"We grow fruit and veggies in the garden, now I have stopped eating them"*

The Keilor Primary School proforma community submission introduces an important health hazard potentially related to aircraft-induced vibration:

"Many houses and schools (including Keilor Primary School) were built before 1985 and are likely to have asbestos which when subjected to repeated vibration will shed asbestos fibres."

<u>Transparency and Suitability of Health studies</u>

A proforma submission circulated within the Keilor Primary School community remarked upon the MDP's consideration of equity in the distribution of benefits and disbenefits, with particular reference to localised impact in their area:

"Emphasis is placed on the community-wide health outcome perspective, the benefits afforded through employment (thus mortality-avoidance) outweigh the less-serious negative health outcomes of sleep disturbance, annoyance, and communication interference. However, impact to persons who may lose or be forced to move from their homes, or loss of business, is disregarded in the assessment. There is no assessment on lost productivity caused by students unable to achieve their maximum learning outcomes due to unmitigated noisy learning environments."

Some submissions assert that Melbourne Airport has not released all available health data and assessment. Examples include:

Hume City Council: *"Council believes that the assessment that was conducted by Quigley and Watts LTD via AECOM should be made publicly available to enact full transparency with impacted communities and to provide greater comfort of the health impacts of the health impacts associated with the third runway.*

…

It is also understood that the scale of the health impact identified is based on to the number of people who will be affected, rather than the severity of the impacts on an individual. This is something that may be of potential concern for the community and the suitability of this should approach should be clearly outlined and explained."

West Footscray: *"…there has been no study completed or released to the public to review the affects that the increased noise levels (a form of pollution) will have on the residents living under the increased flights paths health, wellbeing, rest and the potential learning difficulties that children and adults may be subject to."*

E1.4 M3R MDP References

The health impacts of M3R are addressed in detail in Chapter D3: Health Impact of the MDP. The noise impacts of M3R are addressed in detail in Chapter C4: Aircraft Noise and Vibration, social impacts in Chapter D4: Social Impact and financial impacts in Chapter D2: Economic Impact Assessment.

E1.5 APAM Position

In responding to the health issues raised in submissions, there is substantial overlap with material addressed in Issue E2: Social Impacts, and Issue E3: Compensation, as well as in the responses to noise issues. Each of these sections also relates very closely to Issue E4: Noise Mitigation. It is therefore important to read these sections in conjunction with each other.

The topics raised in this Issue are grouped under headings that reflect the nature of the health concern. However in this section responses are grouped under headings that reflect underlying causes as it is these matters that require address.

This section has therefore been divided into two main subjects: Noise and Pollution.

Noise

The MDP is explicit in acknowledging that the opening of M3R will cause an abrupt redistribution of aircraft noise over Melbourne, but there will not be an immediate increase in air traffic overall. This circumstance occurs because of changes to flight paths in readiness for aircraft traffic growth which will occur over time.

There will be apparent detriment for people newly or increasingly subject to noise. More people will witness increasing aircraft noise than decrease, however some communities are expected to receive less overflight with M3R. In any event, the benefit to those who receive less noise will not in any way diminish the health impacts on those for whom noise increases.

Many of the submissions considered by this Issue either did not refer to the health assessment in MDP Chapter D3: Health Impact or did not trust its conclusions. APAM acknowledges that the MDP is a long and complex document with a great deal of technical information and analysis. Though this level of exposition is appropriate for the scope and scale of this project, it may not be easily accessible for much of the community. APAM thus undertook a varied and extensive program of community consultation activities and forums, supported by webpage resources, to ensure all interested parties had appropriate opportunity to engage with the project and have questions answered.

It is important that APAM continues to work with the community to improve information sharing, create clearer interpretations of that information for the community, and increase trust in that

information. This is vital to ensure that attention is focussed on the credible health concerns and not on those that have been validly assessed as negligible. The risk of increased rates of myocardial infarction are in the latter category, and the same is true for cognition issues in all but one school and two childcare facilities. APAM will ensure that the community has access to clear information that explains those conclusions and the source data on which they are based.

Hearing loss was not assessed as a credible health risk from M3R. The noise generated by aircraft everywhere except in the 'airside' parts of an airport (that the public cannot access) falls well short of the levels that can damage hearing. This point was not thoroughly explained in the Preliminary Draft MDP but has been included in the Draft MDP.

The MDP openly acknowledges that increased noise over some parts of Melbourne will be at levels that will cause annoyance, and that can cause sleep disturbance. Detailed plans for airport expansion, with accompanying noise forecasts, have been included in published information for over 50 years. Noise forecasts based on the current (and future) planned runway configuration have been published in Master Plans since 1998.

APAM consistently pledges to work with all affected communities to explore strategies for minimising impacts of additional aircraft noise. This includes broad public consultation on available and optimal air traffic arrangements that govern the new runway configuration, as well as more targeted consultation with affected communities. It will also include ongoing engagement to explore possibilities for improving air traffic management to deliver a better noise outcome. Such possibilities may arise from experience with the operation of the airport and/or from evolving technology and regulation. A specific example is APAM's recent procurement and installation of three temporary, portable noise monitors in:

- Keilor — Bonfield St
- Bulla — Green St
- Sunshine — Joan Kirner Women's and Children's Hospital

These deployments have been strategically selected to gather baseline data for zones of potential significant noise impact. Ongoing plans for their (re-)location will be consulted and their outputs will be shared to Airservices' Webtrak service from March 2023 (subject to calibration and agreement with Airservices). Transparency and engagement of the data these monitors generate will be key to understanding community effects of M3R and developing effective plans for mitigating impacts.

APAM will also explore other options to moderate the noise impacts of M3R. This will include working with Airservices, CASA and airlines to ensure aircraft operations are conducted with a view to minimising noise. Continuous descent arrivals provide a quieter noise profile for arriving aircraft. Working with airlines to have them utilise quieter aircraft where possible can also deliver an improvement in aircraft noise outcomes.

An important element of APAM's engagement strategy will be to make information readily accessible about measures that homeowners can undertake to reduce noise intrusion into their homes, and to manage noise intrusion in outdoor areas.

APAM notes the new Australian Government's commitment to an Aviation White Paper and will encourage inclusion of practical community guidance for addressing residential effects of aircraft noise. Consideration of this issue should acknowledge the fact that ANEF contours or N-contours only define objective noise levels, not subjective responses to noise. It should also recognise that most homeowners/residents who are in areas of significant aircraft noise will have had some opportunity to consider its effects in their decision to move in — even if sellers, agents and/or relevant government agencies did not actively disclose impacts or forecasts/plans.

A small proportion of those in areas that face significant noise from M3R operations will not have been able to identify this consequence at the time they purchased or moved to a property in such an area. This may be because they purchased/moved prior to publication of the long-term plan for Melbourne Airport, or because the changes in noise forecasts and detailed planning since then will have had a disproportionately significant impact on their property. Similar issues will exist for those affected by aircraft noise around any major airport, even where there has not been a major development such as the opening of a new runway.

Sleep disturbance and annoyance attributable to aircraft noise will be the most prominent and widespread community issues accompanying the opening of M3R. These impacts are also key drivers of other mental health issues such as stress, anxiety and depression. The noise itself is, of course, the principal cause of annoyance, but other factors can also influence the level of annoyance, including unexpected changes, concern that better options for noise management are not being pursued vigorously, a sense of unfairness that the noise is not being equitably 'shared', a sense of not being considered in decisions, failure to get acknowledgement of or help in dealing with the issue, and a lack of trust in information being provided. These are issues that APAM can and will address.

APAM is committed to robust community and stakeholder engagement based on global best practice engagement, including Core Values, Planning and Implementation methodologies and the Spectrum of Public Participation according to the International Association for Public Participation (IAP2). APAM aims to:

- Identify and pursue best practice in aircraft noise management
- Share transparent, clear, concise and accessible information
- Provide clear and comprehensible information on noise management options
- Build trust with the community
- Create opportunities for community collaborations, partnerships and investment
- Explain decisions relating to aircraft noise
- Research and share information on best practice in aircraft noise management
- Work with stakeholders (such as airlines, Airservices and government) to deliver the above objectives.

The community of Keilor Primary School mobilised to raise significant concerns about impacts of M3R on the school and its pupils. Similar impacts were also raised on behalf of other community facilities and childcare centres. The MDP clearly acknowledges that significant impact is expected for Keilor Primary and certain nearby sensitive receptors. APAM has initiated and pledged to continue cooperation with these facilities, particularly Keilor Primary School (and the Victorian Department of Education), to explore practicable measures for addressing aircraft noise impacts. These are likely to include soundproofing for indoor spaces, and spaces dedicated to noise sensitive children (such as those with autism). APAM will also assist in researching options for creating some outdoor spaces that provide noise amelioration (noting that other airports, such as London Heathrow, have previously managed this issue).

The health issues raised in the report attached to the Brimbank City Council submission address some valid issues, such as annoyance and sleep disturbance, which are considered above and in the MDP. Unfortunately much of the analysis Brimbank has commissioned is not supported by available evidence. The analysis relies very heavily on standards outlined in WHO Environmental Noise Guidelines for the European Region. This has been accessed by converting the ANEF metric used in Australia into the L_{den} noise metric used in the WHO report, on the basis of an invalid methodology.

As set out in detail in Theme D: Airspace and Aircraft Impacts, the WHO conversion often cited is predicated upon a flawed method of calculation. A key difference between the L_{den} and the ANEF is the timing and weighting for evening and night traffic. Without a very detailed analysis of the balance of day, evening, and night traffic there will be no consistent level of conversion. It should also be noted that the conversion used differs very substantially from claimed conversion values in other studies. The majority of the health assessment is based on the use of the hazard quotient which is calculated by the predicted noise level divided by the health-based guideline. By using a converted L_{den} metric this analysis becomes invalid as the conversion is flawed as noted in Theme D. Additionally, the health-based guideline metric quoted is not supported by the International Civil Aviation Organisation (ICAO) or within the National Airports Safeguarding Framework (NASF) Guideline A criteria.

The WHO framework was not applied to M3R by APAM as it is not incorporated in Australian aircraft noise regulation, including the Airports Act or NASF guidelines. APAM does, however, recommend that it be considered within the full context of available aircraft noise wisdom, in the forthcoming federal Aviation White Paper.

ICAO released an environmental report in 2019 which included several topics related to aircraft noise (in Chapter Two). Within the section covering 'Aircraft Noise Annoyance', on page 91 a specific reference is made to the WHO recommendations:

> *"The World Health Organization (WHO) has recently published new environmental noise guidelines for Europe that state that the annoyance has increased, and it therefore recommends a limit of L_{den} 45 dB for aircraft noise in order to prevent adverse health effects. WHO's newly identified noise exposure levels are an order of magnitude lower than those identified by WHO in 2000.*
>
> *However, this recommendation has been based on a selection of non-representative and non-standardized surveys with results that cannot be applied to a general airport population. The recommendation is therefore unwarranted and unsupported by the reported evidence."*

The 2018 WHO Guidelines provides single L_{den} and L_{night} values across all environments and are source specific (i.e. rail or aircraft). This guideline reflects the definition of "noise exposure levels above which the GDG is confident that there is an increased risk of adverse health effects". This definition and single value can cause some confusion with the community, for example references in submissions to impact to schools with noise above 45 dB L_{den}, did not consider the full 2018 WHO Guideline that notes a relevant risk increase was found at 55 dB L_{den} for reading skills and oral comprehension in children.

The WHO guidance is not supported by ICAO, however the ICAO 'Aviation Noise Impacts White Paper' notes:

> *"Generally, health studies to date have used L_{den}, L_{day} and L_{night} metrics, most likely as these were available and had been extensively validated in annoyance studies. There is a need to examine other noise metrics that may be more relevant to health endpoints – some of the more recent studies are starting to include other metrics, including intermittency ratio, maximum noise level and to examine specific time periods, especially for night-time exposures. These new metrics should be additional, but not replace the standard equivalent metrics (L_{Aeq}, L_{den}) to allow for comparability of results, at least at present while the evidence base is being compiled."*

APAM notes the new Australian Government's commitment to an Aviation White Paper and will advocate that the scope includes discussion of items raised in submissions regarding aircraft noise descriptors and adoption of L_{den}.

APAM also notes that the WHO Guideline covers other modes of transport such as road traffic noise (53dB L_{den} and 45dB L_{night}), railway noise (54 dB L_{den} and 44 dB L_{night}), wind turbine noise (45 dB L_{den}) and leisure noise (70 dB L_{Aeq},24h). APAM contends that, should the aviation industry become subject to this guidance, other industries should also be subject.

Supplementary evidence in the report attached to the Brimbank City Council submission relies on data detailing poorer health outcomes in Brimbank than in Victoria more generally. The report suggests (without evidence) that this performance is attributable to the airport, however also highlights Brimbank's below-average Socio-Economic Indexes for Areas (SEIFA) rating and that lower socioeconomic ratings are associated with poorer health outcomes. While the report does consider some overseas studies assessing health outcomes near major airports, it does not address the key point that those studies primarily rely on data from airports which place significantly higher noise loads over surrounding populations than will occur from M3R.

The submission from Brimbank City Council raises important and valid health concerns around annoyance and sleep disturbance, but the detailed analysis of levels of disturbance needs to be reassessed without the distortions from invalid conversion of L_{den} metrics to ANEF numbers. The report's reliance on overseas studies without considering relative noise levels raises further concerns. In relation to other health issues, such as cognitive development in children, those reservations are even more significant and in relation to myocardial infarction, they are fundamental flaws.

Pollution

The M3R MDP examines issues around pollution of soil, groundwater and air in considerable detail. It is clear from submissions that many of those raising concerns about the impact of the M3R project on pollution affecting human health, have either not been able to find, understand or accept the analysis in the MDP.

The deliberate and careful management of PFAS contamination is explained in detail in the MDP and is subject to regular consideration by the airport's Community Airport Consultation Group (CACG). APAM is working with Airservices to ensure that PFAS contamination does not present risk to human health — particularly during the construction phases of airfield projects, including M3R. APAM is amassing considerable expertise and capability for monitoring and treating PFAS. Responsible PFAS management is an ongoing primary concern for APAM with the safety of the public, airport staff and construction workers being paramount.

The M3R MDP also provides detailed analysis of air quality issues associated with the construction of M3R and its operations. The analysis shows clearly that air pollution attributable to M3R (and to aviation operations of Melbourne Airport generally) does not pose a credible health risk to the public. APAM will work to improve the communication of information around air pollution issues and to enhance transparency of and trust in the analysis. APAM will engage with relevant state and local government agencies to ensure appropriate monitoring of air quality and promulgation of resulting data.

Other than the issue of hearing loss due to aircraft noise, the issues raised as health concerns have been considered in detail in the MDP. It is therefore a priority for APAM to improve the sharing of key information from the MDP in readily accessible forms, to build trust in that information and to engage on the aircraft noise issues that are an unavoidable consequence of

M3R. APAM is committed to continued and better communication on these issues. Issue E4: Noise Mitigation includes more detail on this proposed enhanced communication.

E1.6 Changes to Preliminary Draft M3R MDP

The draft MDP will be amended to add information to address the concern about possible hearing loss from aircraft overflight.

No other changes related to this Issue have been made.

E1.7 Summary and Conclusion

APAM acknowledges community concern about the potential health impacts associated with increased aviation activity at Melbourne Airport. The M3R project openly recognises that certain impacts — particularly annoyance and sleep disturbance — will occur in some communities as a result of new and changed flight routes. However it is evident that other health concerns have emerged with little or no credible foundation, and that it is thus incumbent upon Melbourne Airport to educate, inform and support the community throughout the M3R project and into the runway's operation.

APAM has already demonstrated its commitment to understanding and sharing community noise information through installation of three temporary, portable noise monitors in areas that are projected to be most affected by M3R. Transparency and engagement of the data these monitors generate will be key to understanding real impacts, facilitating meaningful mitigation strategies to address them and informing the community about findings. Melbourne Airport will explore suitable means for sharing the outputs of these monitors with the CACG community engagement forum.

Inadequately informed use of health impact assessments (particularly the WHO Environmental Noise Guidelines for the European Region) has influenced a very large share of submissions. It is likely that inaccurate representation of the WHO guidance has resulted in undue concern in communities in which it was widely circulated – including by groups in Keilor, and Brimbank City Council. This issue further reinforces the need for APAM to engage with community to spread accurate information, but also supports the case for the upcoming Aviation White Paper to evaluate currently-applied metrics and representations of noise and its impacts in communities surrounding Australian airports.

APAM, as a commercial enterprise and community service provider, creates beneficial and detrimental externalities. Just as APAM does not gain directly from external benefits (such as employment and business growth) it is not appropriate that APAM should exclusively bear costs of external detriments. This is particularly the case where those externalities have been publicly identified and indeed quantified for many years so that they could be (and have been) built into planning regimes and individual decisions about property.

E2 Social Impacts

E2.1 Summary of Issue

A range of community and lifestyle subjects are collectively referred to as 'social' impacts in the M3R MDP. The diversity of these topics was reflected by submissions through terms like 'quality of life', wellbeing, lifestyle and 'way of life', and through remarks about community interaction and cohesion.

Some submissions elevated these concepts to community- and society-wide effects across large regions of Melbourne. In select examples, the airport was apportioned responsibility for large-scale social inequity and socioeconomic disadvantage that is unfairly and disproportionately focused on Melbourne's west.

Impacts on public and sensitive-use facilities also featured prominently in submissions categorised for social effects. Although there was some mention of parks and recreational facilities, principal concerns related to schools and childcare centres.

General concerns about the societal implications of climate change commonly featured in community group proforma submissions.

Submissions containing reference to social issues have been grouped as follows, to enable appropriate address in this Issue:

- Noise
- Financial and economic
- Health
- Socioeconomic context and influence
- The airport's role in social connection.

E2.2 Number and Types of Submissions

There are 534 submissions that refer to the social impacts of M3R. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government:
    - Victorian State Government
    - Brimbank City Council
    - Hume City Council
    - Maribyrnong City Council
    - City of Yarra.

E2.3 Discussion of Submissions

Social benefit and disbenefit projections are intrinsically linked to the outputs of primary impact assessments (such as noise, air quality, economics and employment) which are specifically detailed elsewhere in this report and should be read in conjunction with this Issue:

- Theme D: Airspace and Aircraft Impacts
- Theme E: Community Impacts
- Theme F: Environmental Impacts.

A significant share of submissions considering social effects recognise that Melbourne's population is expanding and diversifying culturally, and that aviation connections are important. This is particularly prevalent in commentary about travel restrictions of the COVID-19 era. Similarly, though some submissions challenge the economic benefits forecast by the M3R project, most accept that economic growth facilitated by aviation is significant and valuable. Very few submitters argue that airport growth is not warranted — they just want it served elsewhere and/or with less personal impact. Examples of this perspective:

> Keilor Downs: *"I am well versed in Aviation and I understand Melbourne's requirement to increase its flight capacity in order to sustain its future however, I don't believe that this is the correct solution because it will do considerably more harm than good to a very large portion of Melbourne's community long-term. Another solution that doesn't result in such harmful effects to the community's health and wellbeing should be sought."*
>
> Keilor: *"I understand it is needed and has been proposed for a long time.*
>
> *I am concerned about the increase of noise in Keilor this third runway will cause for it's residents, which I am one."*
>
> Sunshine: *"I appreciate and understand Melbourne is a growing city with growing needs, including need for greater aviation capacity.*
>
> *But that should not come at the expense of hundreds of thousands of city residents who will find themselves beneath a flight path."*

Many submissions propose alternatives to M3R which range from curbing growth by not building any additional runways to expanding another airport or diverting domestic traffic to a high-speed rail network. These options have been considered in the M3R MDP and are further addressed in Issue B2: Options and Alternatives, and Issue E4: Noise Mitigation.

The M3R MDP clearly describes social benefits and detriments that are reasonably expected to result from the development of M3R. These are often projected to occur in the same communities (for example, a large portion of airport-based employees reside within the six local government areas neighbouring the airport and thus receive both high economic benefit and noise impacts). Some organisations, particularly local government councils, have recognised and commented upon the dichotomy of overlaid social detriments and benefits.

<u>Noise</u>

New, changed and increased noise exposure, and the social effects thereof, is a central theme of the majority of social impact submissions. Concerns about harm to lifestyle values are raised by residents across wide reaches of Melbourne, but are particularly prominent in submissions from the Brimbank local government area:

Keilor: *"There will be so much additional noise in Keilor with excessive planes flying and roaring over the suburb. How sad that this will be a real life example of the classic Australian comedy movie, The Castle."*

Maribyrnong: *"I used to enjoy being in my backyard and the noise is just so stressful for me to be out there anymore ! I can hear the plane while watching tv with all the doors closed !! This is no way to live !!!"*

Bulla: *"Residents have the right to enjoy activities in their own back yards. The impact of aircraft noise when children playing outside or parents entertaining friends has huge social, economic and health disadvantages. It would be impossible for anyone to enjoy their own private out door area to which they have paid a lot of money to enjoy."*

St Kilda West: *"I beleive that this project will greatly affect Melbourne's tourism area in St kilda, St kilda west, middle park and Albert park. these areas are full of beach side cafes and restaurants and nothing kills the vibe of a conversation and good times like a plane flying over the top of you."*

Keilor: *"Spending time outside is unpleasant let alone having a conversation during a block of takeoffs…When these levels of noise are experienced in blocks of takeoffs multiple times during a pleasant sunny day it is a nightmare and extremely stressful. We are concerned we will be forced to live indoors."*

Keilor: *"When plane after plane takes off at short intervals it is impossible to sit outside and converse and this adversely affects the amenity of the area. When indoors, doors and windows have to be kept closed and televisions and audio equipment turned up loud just to be able to hear the content…As a community, we are concerned that an outdoor lifestyle will become non existent. The amenity of our home, our community and our village is very important to us; we do not want to live elsewhere."*

Keilor: *"The way I see it is that the initial effect will be on the restaurants, coffee shops and other social gathering places in the affected areas.*

Why would anyone choose to go to a Pub where your conversations are going to be effected every 6 minutes by an airliner taking off.

You would simply choose to go and socialise elsewhere. The same can be said for the many other social activities in this area.

Why would you bother to play football or basketball or tennis or other sports at a venue where you can't talk to your team mates.

And how would schools be affected? To me it seems that they would become unworkable. And why would you visit a park in this area where instead of relaxation you get noise drowning out nature."

Several submissions from residents of Bulla use the following text in commenting on the noise expected from M3R:

"The noise factor will be absolutely out of control and will be unliveable, abominable and unbearable. Twenty-four hours day and night with no relief. The decibel factor will be somewhere between approx. 85-95 decibels as recorded from the current viewing area already in our town. How does your plan protect residents from aircraft noise as required by AS2021?"

Alongside these concerns are comments in a proforma submission shared within the community of Keilor Primary School. The submission proforma raises prospects of significant social impact on students and the school's broader surrounds:

> *"M3R Project objectives omits any clear social responsibility towards communities within their flight paths*
>
> *…*
>
> *Part D – D2.3.2 Refers to Kaldor-Hicks's rule, where projects are worth undertaking when welfare in the beneficiaries is greater than the loss in welfare by those affected. I certainly do not agree that this project meets this rule if student learning is compromised to any degree. This part also states, "In other words, a particular build case would be warranted if the beneficiaries could, if required, compensate those adversely affected and still be better off." We have been given no indication of a compensation strategy for Keilor Primary School or the community which will mitigate any impacts."*

[redacted]

The M3R MDP explains that, though M3R will change flight paths and thus noise corridors, the overall increase in traffic will occur over time. Hume City Council observed that community exposure to noise impacts will correlate with growth:

> *"Council acknowledges that the construction and use of the third runway will not result in an immediate significant increase of aircraft movements, noise and emissions on these areas. It will be a gradual but sustained increase in the intensity of operations over the next 20 years that will see more people and communities exposed to greater intensity and frequency of aircraft noise."*

<u>Financial and Economic</u>

Submissions that correlate social and financial impacts overwhelmingly assume that residential property values will suffer in noise-effected areas, and that serious personal (sometimes intergenerational) consequences will occur. Examples include:

> Keilor: *"As a resident of Keilor, a widow with young children my home that both my late husband and I have nurtured for the future of our kids, this is a complete disregard for my*

kids and I and our future. It also impacts other families and schools in terms of the value of our homes etc…"

Sunshine: *"I do not agree with the Airport having any say on how my city is developed - again with soaring house prices, people are locked into the homes, many can't leave - any intergenerational wealth that the community might have gained will be stripped from them. It's unconscionable to me that the bottom line of big business is more important than the 1000's of families who will be impacted."*

Kingsville: *"You will also trap people in poverty and poor health as the value of homes affected will plummet, trapping people in negative equity and leaving them unable to move elsewhere as their homes will become unsellable."*

These submissions do not address the data included in the MDP, that shows the impact of aircraft noise and overflight evidently do not have a long-term effect on house prices. Nevertheless, there are very real social impacts from both any short-term effect on prices, and from residents being concerned about the impact on house prices.

A share of submissions express consternation about the balance of economic benefits and disbenefits considered by the M3R MDP:

Maribyrnong: *"Melbourne Airport's extensive documentation relies on downplaying the negative impacts of noise, pollution and house price decline while overstating the economic benefits for Melbourne."*

Keilor: *"Of course we will be affected by these social impacts as listed and who evaluates the damage to the culture, community; its cohesion, stability, character, services and facilities.*

This is one of the saddest components of your report. Because you are equating a new tarmac with busy aircraft activity and measuring it against all of our lives and our families lives."

Keilor: *"I fear the new runway design will essentially destroy Keilor as we know it and have a huge impact on our lives financially and socially.*

I keep thinking of the schools and how they will be affected. How disastrous it will be for the outdoor activities in our suburb.

And I think of the financial consequences for the businesses and residents of Keilor."

Health

Impacts of aircraft noise and overflight on health are addressed in Issue E1: Health Impact, however a number of submissions consider further social impacts of health effects in the community. The Brimbank City Council submission draws association between health and societal outcomes:

"As a result of the construction of the third runway, some dwellings and buildings accommodating sensitive uses will experience an increase in noise exposure (while others may decrease). As identified previously, the operations of the airport including those proposed under the Master Plan and MDP provide considerable benefits to the Victorian economy. Nevertheless, Council submits that it is inherently unfair that the Brimbank community must endure the significant disbenefits and recognised health risks from the excessive and prolonged exposure to adverse aircraft noise because of living

and working in buildings accommodating sensitive uses close to airports or under flight paths."

The Brimbank City Council submission further cites concern that the World Health Organisation (WHO) Environmental Noise Guidance 2018 was not utilised in developing the M3R health impact assessment. While this matter is primarily addressed in Issue E1: Health Impacts, applicability of the WHO guidance also extends to broader issues of social impact that would result from any general decline in health attributable to the airport:

"Council submits great weight should be placed on the WHO targets. This is for reason the WHO literature comprises the most recent and authoritative opinion considering aircraft noise and its impacts on health, wellbeing and quality of life. This is well documented in the NHRA prepared by Tonkin + Taylor on Council's behalf.

Council does not advocate for a particular noise target, although it submits the WHO target should be the starting position. Rather Council advocates for an outcome ensuring aircraft noise does not adversely impact sensitive receiver's health, wellbeing and quality of life. These considerations are paramount.

In achieving these paramount outcomes, Council submits further work informed by expert evidence must be undertaken to determine the criteria used in setting such targets with a view to ensuing aircraft noise does not adversely impact sensitive receiver's health, wellbeing and quality of life. To-date no such analysis has been commissioned by either the Department or Melbourne Airport."

Climate change as a societal concern, with specific reference to aviation's contribution, was raised in a submission circulated by the 'No 3rd Tulla Runway' action group:

"Way too warming: The proposed Third Runway will contribute to increasing global heating emissions, right when we're in a climate emergency and must rapidly reduce emissions across society."

and by some individual community members:

Coburg North: *"…we're in a climate crisis that puts our own human species at risk. So why keep increasing that risk to our own species and further damaging our climate?...The aviation sector is the world's fastest growing greenhouse gas emitter and one of the most polluting sectors, yet hundreds of airports are being built or extended for the privileged few to travel by plane. And so the pattern continues, of the privileged few causing the vast majority of damage to our climate and planet, and the poor being the most vulnerable to the impacts of climate damage."*

<u>Socioeconomic Context and Influence</u>

A perception that the aircraft noise from M3R could and should be distributed more equitably is evident in some submissions from Melbourne's western region. The theme of inequity and unfairness is also reflected in submissions that refer to the distribution of noise over suburbs of socio-economic disadvantage. Some examples:

Altona: *"The western suburbs is constantly disadvantaged by major projects as it is perceived to be lower income and therefore less likely to object to this type of project."*

Sunshine: *"I'm concerned that the communities most affected are some of the most culturally diverse in Australia. These are largely working class, multicultural neighbourhoods…Is this plan being imposed on some of Australia's most socio-economic*

disadvantaged areas because these communities don't have the power of wealthier suburbs to make noise (pun intended)? This is unfair and will accentuate the social fissures in this city between the haves and have nots."

Braybrook: *"The west is a dumping ground for the city, and no consideration has been made to equalise the impact across the city, especially towards the east.*

We've put up with the existing noise for years as we chose to move to the area knowing it would be there. Asking us to deal with even more is abhorrent and classist."

Strathmore: *"You will push the cost onto the community (West Melbourne will bear the brunt of negatives) who doesn't stand to significantly benefit from your rosy upside*

Tourists aren't going to Broadmeadows.. they're going to the city/East/South"

A small share of submissions remark upon the airport's expansion as a threat to Melbourne's appeal as a cosmopolitan society and destination:

Preston and Coburg North: *"Melbourne prides itself on being one of the most liveable cities in the world. A 3rd runway will mean 5 times as many planes flying overhead causing a huge increase in noise, pollution and amenity."*

Coburg North: *"Melbourne prides itself as one of the most diverse cities on the planet. The benefit of peaceful coexistence of a large number of people from diverse backgrounds cannot be valued high enough, and any disturbance of this fragile process should not be underestimated. The northern suburbs account for a lot of this diversity, they stand for successful integration, and persistent efforts to cultivate a healthy social balance. This cannot be taken for granted. Social cohesion is a matter of national safety and population health. Melbourne's high position on the international liveability index would suffer."*

Sunshine (the Greater Sunshine Community Alliance): *"Economic threat to Sunshine transformation: The third runway directly conflicts with the vision of transforming Greater Sunshine into a regional hub for Melbourne's west. Sunshine has been earmarked for substantial economic development due to its identification as a National Employment and Innovation Cluster and a major transport hub serving regional lines and the to-be-built airport rail link. We are greatly concerned that the preeminence of a flight path will impose strict limitations on planning and development - including for commercial and residential towers in Sunshine CBD and educational and commercial facilities. We fear it will also deter the private investment needed to match state government and council ambitions for Sunshine to meet its full economic potential."*

[Location not provided]: *"You are well aware of the catastrophic health impacts of stress from constant unbearable noise and sleep disruption, not to mention health impacts from aircraft fumes. You will also trap people in poverty and poor health as the value of homes affected will plummet, trapping people in negative equity and leaving them unable to move elsewhere as their homes will become unsellable."*

<u>The Airport's Role in Social Connection</u>

Melbourne Airport's role as a facilitator of travel, trade and industry is widely acknowledged in submissions. It is evident that social connections, both domestically and internationally, are particularly treasured following the isolation of COVID-19 lockdowns and travel restrictions:

West Footscray: *"Aircraft noise contributes to the vibrancy of our cities and communities. It's confirms that there is economic activity and social connections happening. The silence during covid (I live under the flight path) was isolating. We find the aircraft noise a affirming reminder that we live in a cosmopolitian and globally connected city."*

Whittlesea: *"Coming out of Covid and having the infrastructure to accomodate travel is a win win for the whole community."*

Sunshine: *"I live under the flight path, and will experience, according to your diagrams an increased amount of traffic overhead.*

However, I understand how both the Melbourne and Victorian communities will benefit from additional capacity at Melbourne Airport, and I conclude that the greater community benefits outweigh any inconvenience that I may personally encounter.

I also appreciate that not all my fellow residents opinions will align with my own. I also understand that those that oppose Melbourne Airport's development may be quite vocal in their opposition; subsequently I feel its my duty to speak up, and express my support.

Like over 25% of the population, I was born overseas. I came to Australia by plane. I use the airport to re-connect with my family and friends that are spread across Australia and the globe. I appreciate the benefits that living near an airport give me on a personal level."

Submissions that object to the project usually do so on the basis of personal impact. There are, however, significant community-wide perspectives that show consideration of the project's greater social context. Notable examples come from the neighbouring local government areas that experience both significant social benefit and disbenefit attributable to the airport:

Brimbank City Council*: "Melbourne Airport is one of the most significant gateways to Victoria and provides considerable social and economic benefits to the Victorian and surrounding communities, supporting economic development in Melbourne and Victoria.*

Council acknowledges that the expansion of the Airport is likely to deliver some economic benefit to Brimbank, however when scrutinised, the Master Plan and MDP, fail to adequately demonstrate that the expansion of Melbourne Airport will not result in significantly greater disbenefits to our community through increased health, amenity environmental, economic and traffic impacts."

Hume City Council: *"Council's submission acknowledges the importance of Melbourne Airport to the State and the Hume community and supports the Airport's growth, including the establishment of a third runway. But Council believes that this development can and must occur in a manner which minimises potential adverse effects on the community.*
…
Hume City Council recognises the significant contribution of Melbourne Airport towards tourism and freight industries and employment to the State of Victoria and Hume residents and businesses."

Ormond: *"I am pleased to see the airport expanding as Melbourne recovers from COVID and seeks to increase its resilience and international appeal into the future. The third runway will be an important asset and has been on the cards for some years, including appearing in several editions of Melways. As such it should not come as a surprise to*

anyone and those that have chosen to live or purchase property in the vicinity have had ample opportunity to understand the airport's plans and make appropriate choices."

E2.4 M3R MDP References

The social impacts expected to be associated with M3R are identified and addressed in detail in Chapter D4: Social Impact of the MDP, this chapter also interacts closely with:

- Chapter C4: Aircraft Noise and Vibration
- Chapter D3: Health Impact
- Chapter D2: Economic Impact Assessment.

Material addressed in this Issue also substantially overlaps with other Issues in this supplementary report, which should be considered in conjunction:

- Issue E1: Health Impacts
- Issue E3: Compensation
- Issue E4: Noise Mitigation.

E2.5 APAM Position

This section responds to concerns raised in the submissions under the same headings used in section E2.3.

Noise

As with many activities in our urban environment, the increased noise from development and growth can have a significant detrimental social impact. While this consequence is equally true in other fields (such as road construction, expansion of industrial facilities and the development of entertainment venues) new aviation activity can have a much more immediate and widespread impact. It is therefore important to respond to this effect in a manner that is appropriate for community expectation and to the scope and scale of aircraft noise change and increase.

Though some submissions do not display solid understanding of the likely noise impacts of M3R, this does not diminish the validity of residents' concerns. That some areas are likely to experience reduced aircraft noise with M3R also does not diminish the detriment for those who will experience increased noise.

It is worthy of note that there are very real and significantly detrimental social and economic impacts that would result from not increasing aviation capacity in line with Melbourne and Victoria's growth. There is clear need to seek an acceptable balance of benefit and disbenefit for the ongoing operation of the airport in the contexts of its local, city and state contexts.

The M3R MDP commits to extensive community engagement to strive towards the best possible noise outcomes for necessary aviation capacity. This engagement will include extensive consultation with individuals, community groups, local councils, industry stakeholders and government on the best options for use of the three-runway system. Ongoing strategies shall maintain engagement with the community, stakeholders and Airservices to continually review opportunities to improve community noise outcomes.

This engagement cannot remove all the detrimental effects of aircraft noise from M3R, but it will ensure that noise is managed in the most equitable fashion practicable. It will also serve to address personally aggravating factors like (un)fairness, futility, misinformation and knowledge gaps through information and awareness.

Importantly, APAM is committed to a rigorous and ongoing program of communication with the community to explain changes to the extent and pattern of noise that will occur in the future, to provide advice on actions that individuals can take to lessen the impacts of those changes, and to support research into improved management of aircraft noise. These programs of engagement, investigation, research, and information sharing are referred to in Chapter D4: Social Impact of the MDP in general terms. More detail on these programs will be developed in conjunction with the community as the M3R project progresses and will include:

- An information centre at Melbourne Airport providing detail on the project, its progress and its impacts
- A program of ongoing and regular engagement via community events, schools, tertiary institutions, industry and the jobs sector
- Ongoing development of the online information centre
- Extensive communication through a range of channels including printed materials and all media (including social and multicultural media) to promote and enhance community awareness of the airport's activities and plans
- Expanded community investment and partnerships programs.

Financial and Economic

Concerns about loss of property value and calls for compensation are addressed in Issue E3: Compensation. Nevertheless, there is a broader potential social impact arising from these concerns. For the average homeowner, their principal residence is their most valuable asset by a large margin. Accordingly, concern about a drop in its value, and therefore a concern about the future (including that of children who may ultimately inherit this asset), can cause significant social distress. It can also risk provoking hurried and ill-informed decisions about selling a home.

It is not APAM's role to provide financial advice or guidance to those living near the airport or those likely to be affected by increased aircraft noise. On the other hand, it is important the airport shares with the community the research reported in Issue E3: Compensation, and in the MDP about the likely impact of aircraft noise on property values. APAM commits to including ongoing easy access to clear, concise and independent information on this issue within its M3R engagement strategy.

Economic imperatives for, and expected benefits to result from, the project are widely recognised by the community, government and private sector. For some communities, these overlap with significant detrimental impacts that are also attributable to the airport, and thus careful strategies are necessary to appropriately and credibly balance overall social outcomes.

Health

The full breadth of M3R health engagement to date is contained in Issue E1: Health Impacts. This Issue considers the related issue of social and community-wide effects of the project, including and importantly health.

It is particularly noted in the M3R health impact assessment that economic activity and associated employment opportunities are a key determinant of health, and that the project will generate beneficial local employment opportunities through construction and operation.

MDP Chapter D4: Social Impact provides the project's full assessment of potential detrimental health impacts associated with increased air traffic, and the conclusion that these are generally negligible over the full community context of Melbourne. The complete assessment factors the substantial beneficial health effects of increased employment opportunities and economic development against more localised impact factors.

The risks of increased myocardial infarction, air quality deterioration, and slower cognitive development in reading comprehension are forecast to be negligible overall (though there are localised instances of higher risk, such as Keilor Primary School). In other areas there are more significant impacts and there are also measures that individuals can take, and responses that APAM will lead, that can ameliorate annoyance, sleep disturbance, and interference with communication (both in schools and in homes).

The content of many submissions suggests that understanding of the health impact assessment is limited and/or that there is significant distrust in its conclusions. Importantly, these submissions highlight very real social concerns about detrimental health effects - regardless of whether or not they are reasonably forecast to occur.

As noted above, APAM will give priority to ensuring improved information sharing on these important issues. This information sharing will involve physical installations, printed materials, and online resources, and direct community engagement that will present clear, concise and comprehensible information.

Socioeconomic Context and Influence

The analysis in Chapter D4 has shown that while the impact of the noise from M3R will disproportionately affect Melbourne suburbs with lower socioeconomic ratings, this is an indirect consequence of the location of those suburbs with respect to a range of influencing factors (such as transport, natural attractions, established community centres, etc.), rather than a matter of intention or deliberation. This is a feature of almost all major airports in Australia and should be considered in the development of the Aviation White Paper.

APAM greatly values its role in the community and is committed to demonstrating this through its Environment, Social and Governance (ESG) Strategy. The ESG strategy sets a series of priorities and targets that aim to deliver positive impact to the airport's community, stakeholders, environment and economy. This includes measures to ensure that the natural and physical environment is conserved, appropriate stewardship is implemented, sustainable and social procurement targets are set and all employees across the airport and precinct work in a safe and inclusive environment. These focus on:

- Carbon emissions (net zero Scope 1 and 2 emissions by end of 2025 and ongoing engagement on Scope 3)
- Waste (diverting majority of waste from landfill by 2024)
- Water quality and PFAS (minimising APAM's impact on local waterways and effective management of PFAS)
- Diversity and inclusion (adoption of key diversity principles)
- First Nations (acknowledgement and celebration of First Nations)
- Sustainable procurement (including local employment targets in infrastructure projects).

APAM also provides support to the following local community programs, actively increasing direct engagement with these and other local community initiatives and partnerships:

- Melbourne Airport Community Fund (Australian Communities Foundation): Neighbourhood House grants
- Western Chances financial and advisory support
- Cross cultural volunteer program financial support for Organ Pipes National Park and the Eastern Barred Bandicoot at Woodlands Historic Park

- Banksia Gardens Community Centre financial support: Study Group-Homework Club (5-18 years), 'Smart kids aiming high' (VCE) and Melbourne Airport School scholarships (16 for grade 6 students)
- Laptops for students: Melbourne Airport donated 37 factory-reset, staff laptops to Broadmeadows' Banksia Gardens Community Services in June 2020, loaded with a Microsoft license and an active internet connection. Further programs to donate refurbished laptops and iPads are being developed with other non-for-profit organisations such as Enable Australia and Keeley's Cause.
- The Melbourne Airport and Hume JobLink websites to promote local employment.

The Airport's Role in Social Connection

The Australian aviation industry's recovery from the downturn induced by COVID-19 is well underway. As at January 2023 Melbourne Airport is operating at 80% of pre-pandemic passenger volumes, with signs of further acceleration as the Chinese market returns.

The airport's robust recovery has been led by strong performance in the 'Visiting Friends and Relatives' market segment. Melbourne is a diverse and cosmopolitan city, with a worldwide network of active social connections that value travel to maintain relationships.

Credit Eddie Jim, The Age.

E2.6 Changes to Preliminary Draft M3R MDP

The M3R MDP has been updated to include reference to its Environment, Social and Governance (ESG) Strategy in the Draft version.

No other change to the MDP has been made in response to the Social Impact Issue.

E2.7 Summary and Conclusion

It is appropriate for a project of the scope and nature of M3R to assess merit based on overall social impact. Nevertheless, the substantial net social benefit overall should not detract from the need to consider all reasonable options to improve the noise outcome for those to whom M3R will deliver a detrimental change.

Although most submissions came from residents living relatively close to the airport with potentially higher levels of noise, some came from further afield, both with concerns about noise at lower levels and with broader social concerns, such as the impact on climate change.

Submissions to the M3R consultation reflect a general understanding that Melbourne's need for aviation growth is justified, however this is often juxtaposed with concern that new/increased impacts are personally unacceptable. Aircraft noise (particularly the health and social effects thereof) is the primary basis of concern and thus many submissions seek to avoid, relocate or otherwise mitigate noise. Regardless of how/where aircraft traffic disbenefits are serviced, they must be balanced with the significant societal benefits afforded by aviation. Melbourne Airport contends that this balance is best achieved by the M3R project.

E3 Compensation

E3.1 Summary of Issue

The title "compensation" has been adopted for this Issue to group several financial remedy topics. A wide range of participants in the public exhibition submitted suggestions, requests or requirements for financial consideration by APAM.

Community submitters often expressed desire to be remediated for impacts on quality of life, residential amenity and property value performance. Though some submissions used general terms, many expressly requested acquisition, noise attenuation or similar schemes for noise-effected properties.

Select community organisations and local governments cited an expectation that APAM be financially responsible for health and social effects of increased aviation activity.

E3.2 Number and Types of Submissions

497 submissions contain reference to the issue of compensation. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government:
  - Victorian Government
  - Brimbank City Council
  - Hume City Council
  - Hobsons Bay City Council
  - Maribyrnong City Council.

E3.3 Discussion of Submissions

This issue has been segmented to enable consideration for 'compensation' (and similar) for the variety of contexts submitters raised:

- Noise attenuation for residential properties (e.g. glazing and insulation schemes)
- Voluntary property acquisition (including for properties now subject to overlay/s)
- Recompense for impact on personal investment (residential property) value loss
- Financial remedy for loss of amenity (i.e. use of outdoor space for leisure)

Noise attenuation

Some submissions seeking remedy for noise effects came from residents with existing impacts. Objections to current and further impact include the following examples from Braybrook:

> *"The noise from existing services is already unacceptable for those living under the flight path- if a third runway goes ahead, we will require significant compensation in order to reduce noise in our homes – double glazing, acoustic insulation etc."*

and Sunshine:

> *"The flight path travels over a heritage area in Albion and Sunshine. These houses are over 100 years old and most do not have the insulation and features to reduce noise impacts. When a low flying international plane laden with fuel and luggage flys over our property it shakes our light fittings and our windows rattle. We like many other will be seeking compensation for any damage to our properties."*

Compensation-related submissions also came from residents concerned about new exposure to aircraft noise impacts. A notable portion of these sought funding from Melbourne Airport and/or government to facilitate noise treatment measures as a social condition for the project.

A Bulla resident submitted:

> *"If this third runway does proceed, we request compensation to eliminate the increased noise pollution. Melbourne Airport should be liable for payment and installation of double-glazed windows and doors to our property."*

An Albion resident submitted:

> *"While we oppose the building of the third runway – should the project proceed, urgent efforts need to be directed towards covering the costs for residents directly under the flight path. This would include compensation for residents to receive appropriate insulation and double-glazing."*

And another submitter from Bulla stated:

> *"The Commonwealth should accept responsibility and pay for the insulation of noise insulation, double glazing etc as required under AS2021."*

A Keilor resident submitted:

> *"There should be programs in place to adequately compensate affected residents to the extent that they can insulate their homes to meet the WHO noise guidelines. If amelioration measures and noise abatement measures cannot satisfy WHO noise guidelines, then a curfew between 11pm and 6am should be introduced."*

This Glenroy resident said:

> *"I would have to consider making major noise reduction improvements or consider selling and moving. Compensation??"*

A resident from Gladstone Park put forward a specific proposal for structuring a compensation scheme:

> *"Melbourne Airport to advise the Minister the existence of houses and buildings sited in noise areas above 30 ANEF which will allow the Minister to declare Melbourne Airport and Leviable areas under the Aircraft Noise Levy Act 1995. This will start the process to identify areas and rates of compensation to install noise attenuation to attain a reduction in aircraft noise compliant to ASA2021 and possibly buy back. The cost should be shared by the Commonwealth, State Government, Airport Operator and Airlines."*

Some submitters drew correlation with previous property acquisition/amelioration programs. A resident from Avondale Heights posited:

> *"Like in Sydney a curfew must be introduced to protect our sleep and we should receive compensation to allow us to insulate our homes from the noise."*

Another from Albert Park wrote:

> *"What financial support will be given for residents for sound proofing their homes as has happened in inner western Sydney? As a Victorian taxpayer I strongly believe that any financial compensation and soundproofing for impacted residents must be paid for by the organisation that is leading this change: Melbourne Airport."*

Several local government organisations made submissions on behalf of their communities that addressed strategies for treating residences and other noise-sensitive land uses.

Hume City Council submitted the following comments:

> *"Melbourne Airport should explore the potential options to assist in retrofitting existing dwellings, child and aged care facilities, libraries and schools with noise insulation such as window glazing and roof insulation.*
>
> *Council also requests that Melbourne Airport support Council and residents in advocating to the Federal Government to recognise the need for greater policy and financial support for these noise insulation mitigation improvements to dwellings and other sensitive facilities that are impacted by high levels of aircraft noise from the third runway."*

Brimbank Council submitted:

> *"It is considered that compensation should be provided either by means of a noise amelioration program (NAP) or other forms of compensation to owners of dwellings and buildings accommodating sensitive land uses (ie. Schools, places of worship, childcare centres and hospitals) adversely affected by aircraft noise associated with Melbourne Airport."*
>
> *"Council contends that the well-established 'agent of change principle', encapsulating the position an agent introducing a new land use is responsible for managing the impacts flowing from that land use (including adverse aircraft noise), should be invoked. Consistent with the agent of change principle, there is a clear obligation on Melbourne Airport to ameliorate the adverse noise impacts resulting from the proposed third runway."*

The council further provided a series of recommendations:

> *"An adequate compensation scheme including a NAP under the existing legislative framework is prepared.*

The form of compensation must be effective and informed by an evidence-based approach.

An adequate opportunity is provided to the owners of dwellings and buildings accommodating sensitive uses for the review of the compensation scheme and comment.

An adequate opportunity is provided to the general public to review the compensation scheme and comment."

It further proposed:

"A purchase scheme is implemented where properties within the PSA (Public Safety Area) can be voluntarily offered by owners, at current market value for purchase by Melbourne Airport/the Commonwealth"

Hobsons Bay Council also canvassed the issue of compensation, writing:

"This could include for example ensuring buildings in areas most impacted have appropriate insulation to reduce noise impacts, or an option for compensation (such as offering to buy severely impacted properties) to those landowners who are most impacted by the proposed airport expansion."

The Melbourne Airport Community Aviation Consultation Group posed a number of questions, including:

"How is Melbourne Airport addressing its social licence obligations when no noise attenuation is considered in this circumstance?

How will Melbourne Airport take its share of responsibility for compensating community members for losses and expenses as a result of future development?"

<u>Voluntary Property Acquisition</u>

Some submitters expressed a desire for property acquisition options - including this from one Keilor resident:

"Speaking for myself, I would definitely leave the area destroyed by Melbourne Airport and be demanding compensation from Melbourne Airport in the form of full market value of my property, prior to any detrimental effects caused by the actions of Melbourne Airport."

One Keilor resident wrote:

"What compensation is going to be available to homeowners for loss or devaluation of property? My home (vibration on steel frame windows, no insulation and a flat roof) was built before Melbourne Airport existed. Will insulation, triple glazed windows and other noise attenuation be available?"

This resident of Wildwood said:

"We purchased our property because of its quiet and rural location but will now be impacted by aircraft noise. Do we receive any compensation or property acquisition?"

A submitter from Bulla remarked with a community remedy:

> *"It may be better to acquire the surrounding land now to remove further community objections if the township of Bulla is a hurdle. This would allow the people to move on and give the airport control to do what they want to do unopposed."*

Residential Property Value Loss

Many participants in community engagement activities expressed concern about potential for aircraft noise to adversely affect residential property values.

One resident of Keilor, challenged the validity of the study of house prices undertaken for the MDP, and offered alternative assessments:

> *"Other international studies, such as Tsao (2022) and Kaur, Cardak and Macallister (2016), using far more rigorous analysis methods, do find that there is a relationship between declining house prices and aircraft noise."*

One Keilor resident wrote:

> *"It is inconceivable that in the short term (5-10 years) suburbs under new, or busier flight paths would not become less desirable and those suburbs that will experience reduced flights and noise would not become more desirable. It is inarguable that this proposed development will have profound and adverse affects on local communities such as Keilor. It follows that house prices will be affected in the short-term. Therefore, if this development is approved, then significant financial compensation to local residences is inherently fair and is required."*

A Diggers Rest resident wrote:

> *"I am worried about the value of our house. I love to travel. I think a third runway is needed, I am just hopeful it can happen with less impact on residential communities."*

This submitter from Romsey wrote:

> *"We bought this property because it was not under a flight path, you should not be allowed to change it an impact our amenity. We are concerned about the noise and property devaluation."*

A resident in Attwood submitted:

> *"I did not purchase a million dollar property to now be under a flight path, I'm strongly against the introduction of this new flight path. This will seriously devalue my property."*

Another resident in Coburg wrote:

> *"The planned flight path is directly over the developing Pentridge living/retail/work area which will be a significant community area. The planned third runway will significantly impact noise levels and property prices."*

A West Footscray resident wrote:

> *"We wake up in the night with our windows shaking. The idea of a third runway is terrifying. We're a working class family and with house prices as high as they are won't be able to afford to move, we'll be trapped in our home unable to sleep."*

And this submission from Seaholme stated:

> *"This will not only ruin harmony in our area and devalue our house prices."*

One Kealba resident feels that relocating away from impact may be impossible:

> *"Relocating is not an option, as it will cost $100k in real-estate agent fees and stamp duty fees. I am on a pension, so I will be forced to buy for less than the value of my present home, which will confine my purchase to the western suburbs, which are all affected by aircraft noise. I cannot escape the problem by relocating."*

Remedy for Loss of Amenity

A Bulla resident wrote:

> *"It will destroy the town and house prices as who would want to live on the end of a runway? At least there should* be compensation for double glazing for the residents."

Another resident from Altona North wrote:

> *"Melbourne Airport need to accept the negative impacts on amenity this project crates, and in turn accept the top line fiscal consequences that goes with compensating the affected communities. I'm in complete favour of this project- my objection is Melbourne Airport already know in great detail what actually needs to be done within these communities."*

Another resident from Essendon North wrote:

> *"This project should make provision for compensating residents whose lives will be significantly affected by its implementation. Double/triple glazed windows and doors and additional roof insulation would be an appropriate start."*

A resident from Strathmore wrote:

> *"Double glazing windows are very expensive and not affordable to a lot of residents and even though it may result in noise reduction indoors it does not rectify the noise issues outside."*

Keilor Primary School

A pro-forma submission prepared by the Keilor Primary School Council states:

> *"We have been given no indication of a compensation strategy for Keilor Primary School or the community which will mitigate any impacts. There is no evidence that the true cost of mitigation has even been assessed, refer to Table D2.1. There are at least 400 private residences around Keilor Primary School and the Keilor Sports Club which would require noise mitigation at a minimum. In Keilor alone there would be over $150M in mitigation works. Extrapolated across each side of the airport there is $500M not accounted for."*

It continued with a request:

> *"That Compulsory Acquisition of properties now located in ANEF 25 or greater take place- noting that the Airport has already been procuring land in Arundel amounting to $46M suggesting there is already an intention to minimise development in the direction of Keilor."*

[redacted]

Essendon Fields Airport

Essendon Fields Airport noted that changes to its operations may be required as a result of the opening of Melbourne Airport's new runway. It submitted:

> *"EAPL seeks commitments that the facility upgrades at EFA that are consequent on the reorientation of MA's third runway will be funded by MA, including but not limited to runway extensions, installation of runway end safety areas, the installation or upgrade of communications, navigation and surveillance infrastructure, or earlier-than-scheduled surface improvements."*

E3.4 M3R MDP References

Section D2.7.1.13 of the MDP includes summary of an assessment of historic and potential property value impact by Chris Eves and Andrea Blake of Queensland University of Technology (QUT) in 2016. The study of 320,000 sales across 62 Melbourne suburbs concluded that the location of residential properties under a Melbourne flight path had no significant long-term impact on annual movements in house prices.

Section D2.7.1.13 also includes a follow-up study by Professor Chris Eves (now of RMIT University) in 2020, which analysed property sales data from 1990-2019 in 72 Melbourne suburbs. It focused on the long-term investment performance of suburbs located within designated noise contours or subject to significant levels of aircraft noise complaints. It concluded that suburbs with exposure to aircraft noise had the same sales trends as comparable suburbs with low or no aircraft noise complaints.

The MDP property value study explores beneficial values that evidently offset the expected detrimental effect of aircraft noise upon property values. Among these are transport connectivity and reliability, access to services, proximity to work and economic centres, views and property sizes/density.

The MDP does not explicitly discuss other matters of compensation, such as amelioration or acquisition.

E3.5 APAM Position

Noise attenuation programs

Submissions indicate there is broad community desire for a noise attenuation scheme to treat residential and sensitive site exposure to the effects of aircraft noise. Though there is little clarity around what eligibility criteria or parameters might look like (beyond broad comparison to Sydney), a significant share of community and local government submissions attribute responsibility to both APAM and the Commonwealth (Brimbank Council specifically referenced previous Australian noise attenuation schemes for Sydney and Adelaide Airports).

APAM notes this is a federally regulated matter and remains open to ongoing dialogue. It is worthy of note however, that if the same criteria were to be applied in Melbourne as were used in Sydney,

an estimated 33 properties would be eligible for assistance (all within Hume local government area). This reflects the significant difference in land use and population surrounding the two sites. Issues D5 and E4 discuss this in more detail.

APAM's position is that any scheme for compensation should be nationally consistent. New runways in Brisbane and Western Sydney, for example, have not been subject to compensation schemes. The forthcoming Aviation White Paper may be a suitable avenue for addressing a national framework for treatment of noise impacts in communities.

Incompatible residential development

Council submissions fail to acknowledge the role their planning decisions have played in allowing residential encroachment into known future noise impact zones – which have been declared, promulgated and largely consistent since 1990.

APAM notes that some developments around the airport have sought to reduce costs of noise insulation for dwellings through excluding aircraft types from AS2021:2015 calculations. It's also not always clear whether new buildings subject to noise insultation requirements have been built in compliance with AS2021:2015 as local councils do not share or publish this information. Some community members expressed concern during the public exhibition period that their new houses are not compliant.

APAM notes that Brimbank City Council's submission reflects a shift in expectations as to how aircraft noise is managed, compared to Council's joint submission with Hume City Council to the Melbourne Airport Environs Safeguarding Standing Advisory Committee (MAESSAC). As part of their submission to the Melbourne Airport Environs Safeguarding Issues and Options paper, Brimbank City Council advocated for the revisit and removal of the density limit controls within the MAEO2, stating:

> *"45. Council is both disappointed and frustrated the Committee has not seized the important opportunity to revisit the setting of density controls in the MAEO2.*
>
> *46. The limitation of one dwelling per 300 sqm is strategically not justified and lacking in any evidentiary basis. It remains the case that no evidence has been or is adduced before the Committee or compelling argument advanced supporting the density control.*
>
> *47. The strategic justification for the present density setting for residential use appears to adopt a 'no risk' approach. It appears the underlying solution to the risk of unreasonable noise impacts to sensitive uses is to control the density so less people are theoretically impacted."*

This would have resulted in an increase in the number of residents within the MAEO2 (the ANEF 20 contour). APAM acknowledges that this shift may be a result of the Health Impact Assessment included in the Brimbank submission.

It should also be acknowledged that most homeowners/residents who are in areas of significant aircraft noise will have had opportunity to consider aircraft noise prior to the decision to move into those areas. Nevertheless, many may have missed that opportunity and often information about aircraft noise issues may not have been actively presented to individuals by sellers and/or relevant government agencies.

APAM notes that planning restrictions for Public Safety Areas are not retrospective.

Property values

APAM notes significant community concern regarding potential impacts upon property values attributable to noise. Research conducted for this project concludes that other factors also influence house prices and home purchase decisions – to the extent that any detrimental effects attributable to aviation are negated. The studies prepared for this MDP and Western Sydney Airport's Environmental Impact Statement found no appreciable difference in growth rate between median house prices in suburbs subject to noise and those in similar areas not exposed to aircraft noise.

[redacted]

Essendon Fields Airport

Melbourne Airport values the co-operative relationship it has with Essendon Fields Airport and notes the different and important roles the two facilities play in Victoria's economy.

APAM maintains that infrastructure upgrades at Essendon Fields, if/when necessary, are a matter for that airport's operator. Given the parallel north-south runway has featured in Melbourne Airport Master Plans since 1990, Essendon Fields has had and continues to have ample opportunity to adapt its facility. APAM undertakes to continue working with Essendon's management to coordinate operational interactions with Melbourne Airport as both evolve.

E3.6 Changes to Preliminary Draft M3R MDP

No changes have been made for the Draft M3R MDP in relation to this issue.

E3.7 Summary and Conclusion

The M3R project will bring significant benefits to Melbourne and Victoria. However, APAM acknowledges the need to balance those 'macro' level benefits with 'micro' level impacts on local communities.

While compensation schemes have not been a feature of recent runway projects at federal airports, this is an issue the Commonwealth Government may wish to consider as part of its Aviation White Paper.

E4 Noise Mitigation

E4.1 Summary of Issue

Submissions regarding aircraft noise often included recommendations for avoiding or reducing impact – through direct and indirect means. These mitigation propositions have been grouped as follows:

- The third runway should be oriented east/west
- Necessary capacity should be created elsewhere
- A curfew should be introduced
- Airspace design measures should be used that reduce or relocate overflight noise for residential communities
- Compensation measures should be provided to ameliorate impacts.

E4.2 Number and Types of Submissions

506 submissions contain reference to the 'Noise Mitigation' Issue, received from:

- Community
- Community organisations
- Non-government organisations and commercial entities:
  - Keilor Primary School Council
  - Keilor Residents & Ratepayers Association
  - Melbourne Airport Community Action Group
  - Qantas
  - Victorian Tourism Industry Council
  - Virgin Australia
  - Western Health
- Government:
  - Victorian State Government
  - Brimbank City Council
  - Hobsons Bay City Council
  - Hume City Council
  - Maribyrnong City Council
  - Moreland City Council

E4.3 Discussion of Submissions

Though a range of propositions were offered for mitigating detrimental effects of M3R, two themes dominated the submissions - curfew and compensation (in various forms). These submissions were sometimes based on misunderstandings – the most common being that most major airports operate under curfew, and that compensation schemes for noise impact (equivalent to those applied in Adelaide and Sydney) would benefit that submitter's circumstances if applied in Melbourne. Regardless of any misunderstanding in submission basis, all plausible proposals have been considered on their merits.

Many of the topics discussed herein are also addressed in technical detail in other Issues of this Supplementary Report, which should also be considered for full context:

- Issue B1: Project justification and timing
- Issue B2: Options and alternatives
- Issue B3: General objection to M3R
- Issue D3: Draft runway operating plan
- Issue D4: Flight path design
- Issue D5: Noise projections
- Issue E1: Health impacts
- Issue E2: Social impacts
- Issue E3: Compensation.

The third runway should be orientated east/west

A direct measure often proposed for avoiding increased noise conditions to the south and north of the airport is to change the orientation of Melbourne Airport's third runway to east/west. Accompanying rationale often cites lower population density at greater distance from the airport to the airport's east and west - and thus less overall community impact. A submission from Kingsville summarises:

> *"The proposed south to north impacts suburban Melbourne homes much more so than a West to East new runway would. I propose change to west to east direction."*

Similarly, from West Footscray:

> *"If the runway goes ahead, the changes needed are … make it an East West direction runway, not north south. A marginal reduction in flights due to wind modelling is outweighed by improved mental health for thousands."*

A selection of these submissions demonstrate further awareness of the airport's long-term plan for four runways and/or the previous Runway Development Plan (RDP) proposal. This submission from Keilor draws upon elements of RDP and current operations to advocate for reorienting the third runway proposal:

> *"Had the east-west runway been chosen to be developed first (as it originally was before the change in 2018), the noise impact would have been significantly less on the community. This is because there are mush fewer houses and developed areas to the west where the majority of the noise would have been heard. It is mainly open grass areas (Organ Pipes National Park). I still believe this runway should have been developed first. Planes very, very rarely (almost never) take off east. Homes in these areas would not have been affected by this new runway."*

Further analysis of this subject is provided in Issue B2: Options and Alternatives.

Necessary capacity should be created elsewhere

The fundamental objective of the M3R project is construction of aviation capacity to enable Melbourne's projected aviation demand. A substantial share of submissions acknowledge that increased aviation capacity may be necessary for Melbourne but tender that growth should not be facilitated at Melbourne Airport and thus M3R should not proceed.

Distinct subsets of these submissions are evident - increase utilisation of other existing airports and/or develop a new airport. Each functions to mitigate community noise impacts specific to Melbourne Airport by relocating aviation growth.

The most common alternative growth means proposed, by a large margin, is to expand utilisation of Avalon Airport. A selection of related submissions demonstrates community support for this concept:

> Kealba: *"Melbourne Airport are completely ignoring alternative options that would be better for the community – like a curfew and alternative airport options…If Melbourne Airport is reaching capacity, rather than building a new runway, alternative airports are available (Avalon)."*
>
> Keilor: *"There is already an underutilised airport in Avalon which I am sure could benefit from additional infrastructure rather than placing further strain on Melbourne Airport."*
>
> Kealba: *"Avalon Airport is Melbournes 3rd runway and should be further developed."*
>
> Maidstone: *"Altneratively, expand Avalon. There's plent of untapped space out there with little residental area. I'm sure Mr Fox would be interested."*
>
> Keilor: *"As Tullamarine has obviously out grown itself, the obvious location for an International Airport is AVALON airport Lara. Very open flat land with NO residential impact, very close to Geelong which desperately needs employment for its population, as they have experienced great loss of many factory closures over the past recent years. The existing eight lane Freeway direct access to Melbourne and Geelong, an existing railway which has already been upgraded direct to Melbourne, the availability of water taxi's not only direct to Melbourne but, Port Melbourne, Williamstown, Frankston, Mornington, Sorrento and Portsea, eliminating only one avenue of transport , as with the Tullamarine Freeway, which is unable to cope with traffic as it is today."*

A selection of submissions posit that Melbourne's aviation growth could/should be accommodated by development of additional airport/s. A range of justifications are cited, examples include:

> Bulla: *"Melbourne Airport has reached its capacity; therefore another airport should go East to benefit the other side of Melbourne where there are fewer residents to effect...The planning for a future airport located East of Melbourne has been in the State planning since 1971, in preparation for when the population of Melbourne reaches five million people."*
>
> Keilor: *"Other locations: Avalon Airport, Essendon Airport and Moorabbin Airport can also be addressed by the Minister to accommodate additional aircraft movement. Avalon Airport in particular is well poised to accommodate residents geographically. Other countries adopt multiple airport use for reasons of safety, public infrastructure and residential demographic impact."*
>
> South Kingsville: *"I believe serious consideration should be given to the construction of another airport preferably in the outer eastern or north eastern suburbs. This would reduce the flight traffic arriving and departing Melbourne airport and a night-time curfew could be imposed to alleviate the impact on the densely populated surrounding suburbs…It would also potentially decrease the travel times to Melbourne airport for people currently residing in the eastern suburb, as they would be commuting to the eastern/north eastern suburban airport…Given the rapid expansion of the metropolitan area especially in the outer western region, more suburbs and more people will be impacted by the proposed expansion of the airport…The Federal government needs to acquire suitable land on the outer north eastern or eastern fringe of the metropolitan area allowing for a vast buffer zone around it where no development other than that associated with the airport's operation and further expansion cannot occur."*

> Kensington: *"Melbourne Airport already at maximum impact on surrounding suburbs with respect to 1) noise and 2) freight transport to and from, no curfew magnifies future dis-amenity, instead, money should be spent on third international airport in SE Melbourne near Tynong, thus respecting Melbourne's present 'centre' at Oakleigh, better servicing the SE suburbs, and also Gippsland, and, also respecting the citizens of the west who are already experiencing serious detriment due to the present operations of Melbourne Airport"*
>
> [Location not provided]: *"Go and build a new airport in the bush somewhere only the cows are annoyed by it. Melbourne Airport is in for a massive fight, same as Sydney airport had. There will be a curfew. This will cost more money than just building it somewhere else."*

Suggestions for a different approach to expansion of Melbourne Airport capacity also included a more strategic consideration of all aviation facilities serving the Melbourne region, as one resident from Williamstown states:

> *"A modern new long term Melbourne Aviation Policy and Plan is now needed given the planned expansions of MA and Avalon Airports and development of a new Airport in the South East"*

Further analysis of this subject is provided in Issue B2: Options and Alternatives and Issue B5: Interaction with Other Melbourne Basin Airports and Operators.

<u>A curfew should be introduced</u>

Calls for flight curfew feature prominently in community submissions objecting to M3R noise impacts. Though a substantial share of these use general terms, some contributors make distinct recommendations that seek to meaningfully mitigate night noise impacts for the community.

A portion of submissions seek curfew for the existing operation to address current impacts, with associated expectation that impacts will increase in correlation with the growth enabled by M3R:

> [Location not provided]: *"Even without the plan for a third runway there should be strong consideration given to introduction of a curfew from 10.30pm to 6.00am or something similar to Sydney to deal with these health effects that will be felt by many."*
>
> Darraweit Guim: *"My expectation is that a flight curfew is imposed like Sydney and Heathrow no flights between 10.30pm and 7.00am better to apply this measure now so that airlines can get used to scheduling there aircraft movements before the dramatic increase in flight volumes"*
>
> [Location not provided]: *"The 3rd runway must not proceed until a curfew is introduced…Aircraft noise is already a massive issue and will only be exacerbated by further landings and take offs putting additional health and wellbeing impacts on communities."*
>
> Riddells Creek: *"I thought there was curfews on flights but now I see you have flights between 11pm and 6am. I guess none of the owners will be living with the noise!"*
>
> West Footscray: *"Without a curfew like Sydney the noise pollution is already impacting communities. There are huge planes coming into the airport throughout the night, it's not conducive to a growing area."*

Curfew, often presented as a condition of consent to M3R, is the mitigation most often cited for noise impacts. Sydney (Kingsford Smith) Airport's curfew is frequently cited as an example of effective community impact management:

> [Location not provided]: *"In regard to the new runway proposed for Melbourne Airport. Whilst I realise the necessity for future demand for overseas & domestic air travel that may require a third runway. I would not support the plan unless there was a plan for a curfew included."*
>
> West Footscray: *"I would request that a curfew be implemented over these areas, similar to Sydney (Kingsford Smith) to ensure residents have minimal disruption between 11pm and 6am."*
>
> Keilor: *"A night curfew on the new runway, not the existing 2 runways"*
>
> Keilor East: *"As Melbourne airport is a commercial enterprise it should not be allowed to to disrupt the peace by being allowed to operate during times where residents would be sleeping or otherwise resting. Most major roads in Melbourne have curfews in place as do all councils regarding noise restrictions even Essendon Airport has a curfew in place. If this proposal is going to proceed a curfew must be in place to restrict planes flying overhead as Sydney has, and the argument we would get more tourism due to Sydney airport having curfews is based on greed and no regard for the many hundreds of residents that would be affected. Thus at the very least curfew must be enforced."*
>
> Kealba: *"If the proposal goes ahead, there will have to be a night curfew as the impact of the noise and frequent flights will affect peoples' sleep and sleep patterns, with consequential health effects…If a night curfew is not agreed before construction it will almost certainly be forced upon Melbourne Airport after the opening by legal action based on significant health concerns relating to disrupted sleep."*
>
> Coburg North: *"If the runway goes ahead, I expect the community will campaign for a flight curfew as exists in Sydney, which will further reduce the capacity of the airport."*
>
> Kingsville: *"Ultimately the Victorian government needs to impose a curfew onto Melbourne airport. This will bring Melbourne into line with other international airports. No other state chooses profits over quiet curfew time."*

Several city councils neighbouring the airport submitted recommendation for multi-faceted noise impact mitigation strategies. Curfew appeared specifically in submissions from Maribyrnong City Council [recommendations]:

> *"A mechanism for instating a night time curfew (either full or partial) on the use of the added north-south runway in the event that other noise mitigation measures do not address the deleterious health impacts of the noise exposure.*
>
> *…*
>
> *Council calls for further investigation of curfew and flight-quota options to protect existing residential areas from aircraft noise. Options include:*
>
> - *A night curfew on all arrivals and departures*
> - *A night curfew on arrivals and departures except for low-noise freight and business jets, such as at Sydney Airport*

- *A requirement for night flights to approach over non-residential areas, such as at Los Angeles International Airport, which requires night arrivals to come in over the Pacific Ocean*
- *A limited annual quota on the number of night time flights or on the number of movements at the start or end of the curfew, such as at London's Heathrow Airport*
- *A daytime quota, such as Sydney's limit of 80 flights per hour."*

and Brimbank City Council:

"Implement noise mitigation measures based on national and international best practice including:

- *A noise insulation program in the areas within the ANEF 20 and ANEF 25 contours for residential premises, schools, childcare and early learning centres, aged care facilities and public buildings such as libraries and community centres.*
- *A curfew between 11pm and 6am to minimise sleep disturbance that can lead to other adverse health impacts*
- *Imposing noise abatement procedures that limits take-offs over the populated area within the Brimbank LGA; alternates the direction of take-offs to provide some respite to Brimbank residents from the aircraft noise; and or, limits aircraft during 11pm to 6pm to more modern and quieter aircraft*
- *In the interim, extend the existing runway 27 to the east, to allow an increased use of the east/west runway, which provide a greater opportunity to noise share and deliver some respite to communities to the south and north of the airport."*

and Hume City Council:

"Council supports the airport's growth and development, including its ongoing curfew free operation. Council also supports the establishment of a third runway at the Airport, but believes that this development can and must occur in a manner which minimises potential adverse effects on the community."

Melbourne Airport currently operates without curfew and has maintained intent to remain without operational restriction (curfew or movement cap) throughout its planning history. Support for Melbourne Airport's continued curfew-free status, particularly with regard to associated economic advantages and benefits, was reaffirmed during M3R consultation by several key stakeholders:

[redacted]

Victoria Tourism Industry Council*: "From the beginning, Melbourne Airport's visionary position as a curfew-free entry point into Australia has been a major point of difference for the state and has seen the airport play a critical role as an overflow entry point for the*

nation. This 24/7 curfew-free status of our airport is something that cannot ever be reconsidered as it has proven to be a primary contributor to our growth and importance in the aviation profile of Australia on the global stage."

Virgin Australia: *"While we are cognisant of the need to carefully manage and reduce the effects of aircraft noise on local communities, the imposition of inefficient operational restrictions, curfews or Noise Abatement Procedures (NAPs) will have the effect of both constraining already strained capacity and increasing our fuel usage and subsequent CO2 emissions."*

Historic Curfew References

The KRRA submission includes a 1969 quote "*the curfew restricting night flying should remain in force until the committee presented its final report*" which is attributed to the interim report House of Representatives Select Committee on Airport Noise. APAM has not been able to source the reference from the news clipping. APAM notes that Melbourne Airport has never operated with a curfew.

One submission referenced a P&D Technology recommendation for curfew as part of their review of the 1990 APAM Strategy / Draft Environmental Impact Assessment. APAM has reviewed this report (version dated 11th December 1989) but is unable to find the referenced recommendation.

Further material related to curfew in the context of M3R is provided in Issue D3: Draft Runway Operating Plan and Issue D5: Noise Projections.

Airspace Design Measures Should Be Used That Reduce Or Relocate Overflight Noise For Residential Communities

Commentary about airspace design and utilisation was varied and appeared in a range of contexts. A share of these remark upon existing flight paths and procedures in the context of increasing impact due to M3R - an example from Newport:

The current air traffic management plan to not operate flights over the north-south corridor where houses are located at night is obviously not working, and I have little confidence that in future that the volume of traffic and noise will not increase well beyond what your own mapping shows. If the infrastructure is built, what is to stop you maximising it's use regardless of the impacts on the community?"

An array of suggestions was offered for improving flight path design to reduce community impact. Some of these strategies demonstrated reasonable understanding of the complexities involved in airspace architecture and flight path design:

Maidstone: *"I understand that the airport needs to grow, and it's probably as much an economic decision as it is about access to our state, but you need to consider the people who already live here. If that means planes need to come in higher, alter glide slopes, mandatory new quieter engines then those provisions must be put in place."*

Yarraville: *"The community need some assurances that procedures will be put in place to mitigate the extra frequency of aircraft noise over our homes. This should include:*

- *Noise abatement 1 departures off runway 16. (The current noise abatement 2 is not enough)*
- *RNP AR approaches for runway 34 that track closer in via industrial areas rathe than over built up residential areas.*
- *Commitment that heavy & super heavy aircraft from the north & west are to utilise 34L for arrivals even though the will be requesting 34R as it will be closer to the terminal."*

Some suggestions link to mitigations already presented in the MDP, such as accessing options for respite:

> Seddon/Yarraville: *"A curfew or staggering of traffic needs to be considered to give residents some relief from the constant noise."*

Theme D: Airspace and Aircraft Impacts (particularly Issue D3: Draft Runway Operating Plan and D4: Flight Path Design) contains extensive consideration of airspace architecture. These issues include explanation of the complexities embedded in the preliminary design presented in the MDP, and the process of future detailed airspace design that will refine this aspect of impact mitigation.

Compensation Measures Should Be Provided To Ameliorate Impacts

Compensation, in various forms, is a common inclusion in M3R submissions as indirect treatment for noise impact. Though financial remedies are addressed in detail in Issue E3: Compensation, their application as a mitigation is contextualised by this excerpt from the Brimbank City Council submission:

> *"These mitigation measures can be separated into active and passive noise abatement measures, where active measures relate to internal changes of flight paths, flight times, and aircraft models, and passive measures are more community-focused measures."*

E4.4 M3R MDP References

M3R MDP Chapter A3: Options and Alternatives examines the feasibility of securing necessary aviation capacity through expanded use of other airports (Essendon Fields, Moorabbin and Avalon) in section A3.2.3.

Part D of the M3R MDP comprehensively addresses community issues in chapters explaining the anticipated economic, health and social impacts of the project. Each of these chapters describes related avoidance, management and mitigation measures where impact has been reasonably identified:

- Chapter D2: Economic Impact Assessment, section D2.8 Avoidance, Management and Mitigation Measures
- Chapter D3: Health Impacts, section D3.7 Mitigation and Enhancement of Potential Health Effects
- Chapter D4: Social Impacts, section D4.7 Avoidance, Management and Mitigation Measures.

Noise mitigation measures for impacted communities span a broad range. Notable examples include maximising local benefits of job creation, influencing appropriate land use in forecast impact zones, and supporting ongoing community engagement and education. The airport seeks to minimise detrimental effects of M3R within the context of balancing the community benefits and impacts of aviation growth.

E4.5 APAM Position

There were several submissions, including from Brimbank City Council, that referenced need for M3R to adopt best practice noise mitigation. These submissions refer directly to measures such as compensation, noise amelioration and curfews.

Compensation featured in a range of contexts which are collectively addressed in Issue E3: Compensation, including as mitigation for unavoidable community impacts (particularly noise). Issue E3 thus should thus be read in conjunction with this Issue.

The concept airspace design presented in the Preliminary Draft M3R MDP was produced in alignment with the International Civil Aviation Organisation (ICAO) Balanced Approach to Aircraft Noise Management framework. The four pillars of this framework are:

Principle 1: Reduction of noise at source

Principle 2: Land-use planning and management

Principle 3: Noise abatement operational procedures

Principle 4: Operating restrictions

Principle 1 in Australia is largely facilitated by the *'Air Navigation (Aircraft Noise) Regulations 2018'* which require most aircraft operating in Australian airspace to comply with noise standards and recommended practices. Aircraft without a noise certificate, and those that have been noise certificated at Annex 16 Chapter 2 noise standards, are not permitted to operate in Australia. APAM notes the following was discussed in the 2009 Aviation White Paper:

> *"The Government strongly believes the time has come for industry to move away from the use of aircraft which fail to meet Chapter 4 noise standards."*

APAM will advocate for the Aviation White Paper to discuss a review/update of requirements under the '*Air Navigation (Aircraft Noise) Regulations 2018*'.

The Melbourne Airport Environs Overlay (MAEO) supports Principle 2. APAM notes that land use planning protections for Melbourne Airport have existed in local planning schemes since 1992 (the then Airport Environs Overlay), updated in 2007 (as the MAEO) and again in 2018. APAM will continue to work with the State Government to ensure that the MAEO is updated to reflect the latest ANEF contours based on the approved Master Plan. APAM is a strong advocate for improvements to the MAEO protections and supports the outcomes of the recent Melbourne Airport Environs Safeguarding Standing Advisory Committee (MAESSAC) process. APAM will continue to work with all levels of government to enhance the MAEO and ensure it is being implemented appropriately.

Noise abatement procedures and noise sharing opportunities, in line with Principle 3, are discussed in detail within Theme D: Airspace and Aircraft Impacts.

APAM's position regarding curfew, a measure aligned with Principle 4, is discussed in detail below. Any other operational restriction (such as movement restrictions) would constrict aviation capacity and thus undermine the project's primary objective of serving travel and freight demand. APAM anticipates need upon opening M3R to manage demand at the airport due to capacity limitations at the terminals (as per current slot management for Terminal 2). Restricted terminal capacity will constrain aircraft movements during peak periods until new capacity is provided through terminal developments.

APAM believes there is yet opportunity to improve within Principles 1-3.

<u>Orientation Of Melbourne Airport's Third Runway</u>

APAM is committed to fulfilling its obligation to provide aviation capacity at Melbourne Airport to meet the needs of the Melbourne, Victorian and Australian community and economy. This obligation originates from the operating lease, which is explained in detail in Issue A2: Airport Lease to Australia Pacific Airports Melbourne.

Several other sections of this report explain the context within which M3R, in particular the proposition for a parallel north-south runway, was decided:

- Issue A1: Master Plan 2022
- Issue A3: Melbourne Airport Strategies and Plans
- Issue B1: Project Justification and Timing
- Issue B2: Options and Alternatives

Extensive technical analysis and research has determined that the optimal orientation of Melbourne Airport's third runway is north-south. This does not preclude future development of a fourth runway oriented east-west, but does maximise the airport's utility through the forecast period presented in Master Plan 2022.

Melbourne's Capacity Demands – Melbourne Airport Vs Other/s

Other potential measures for delivering necessary aviation capacity, including expansion of other airports (most notably Avalon) are considered in Issue B2: Options and Alternatives.

M3R is by far the most efficient and economically sound solution for meeting the growing aviation needs of Melbourne and Victoria. A new airport or the enhancement of a secondary airport to meet the requirements of a primary airport with large volume international and domestic passenger and freight handling capacity involves a great deal more in time, planning and cost than the addition of a new runway to an existing major airport. The extra requirements go well beyond the creation of passenger and luggage facilities of international standard, including customs and immigration facilities. Major upgrade of an airport requires the creation of entirely new transport and access infrastructure.

Melbourne Airport's infrastructure plans, including development of third and fourth runways when appropriate to facilitate growth, have been detailed extensively through Master Plans since 1990. Further details are provided in Issue A3: Melbourne Airport Strategies and Plans.

Curfew

Curfew would only be considered for Melbourne Airport in accordance with Principle 4 of the ICAO Balanced Approach to Aircraft Noise Management, and only when solutions aligned with other Principles have not been adequate.

A curfew upon Melbourne Airport would constrict aviation capacity and thus undermine the primary objective of serving travel demand. Contrary to a popular perception, relatively few major airports around the world operate with curfew. In Australia, only four airports (Sydney, Adelaide, Gold Coast and Essendon Fields) have curfews.

The unique location and planning history of the Tullamarine site is important to the ongoing 24-hour operation of Melbourne Airport. The airport was deliberately located in the 1950s with an objective of minimising aircraft noise impacts to community - the site's surrounds were largely rural, with only few dwellings south of the airport (north of the Calder Freeway) and the township of Bulla to the north-west. Sydney, Adelaide and Gold Coast aerodromes are all located much closer to residential populations than Melbourne (see Figure 71 following).

APAM does not agree that curfew for the Tullamarine site is warranted by its proximity to residential properties. As demonstrated in Issue D5: Noise Projections, if the metrics for noise treatment programs applied in previous Australian schemes are applied to this site, the scale of community impact in Melbourne is substantially smaller.

With specific reference to M3R, suburbs south of the Calder Freeway are more than 3.6 kilometres from the proposed runway - a similar distance to that between the existing north-south runway and Keilor Park.

APAM's curfew-free status is an important economic competitive advantage - particularly in terms of international tourism, business connection and freight. 24-hour operations enable time-critical freight to arrive fresh at destination. This benefits Victorian exporters of fresh food, allowing their produce to be exported in a timely manner.

Australian airports are remote from the major North American and European aviation hubs with which they must connect and as such, are not able to dictate timetables to overseas airports. Australian airports must therefore accommodate the timing of arrivals that suit the departure times for the major European and North American hubs. Of the four airports in Australia that receive the bulk of the long-haul overseas flights (Perth, Brisbane, Sydney and Melbourne), only Sydney is curfewed. Any further curfews would drastically inhibit international aviation and cause significant economic harm to Australia, especially to the state in which the curfew is imposed.

Plan Melbourne 2017–2050 is Melbourne's overarching metropolitan development strategy for guiding growth in the city and suburbs. Plan Melbourne recognises the need to protect APAM's curfew-free status and support its expansion (Direction 3.4). APAM's unrestricted operating hours are also identified with the Victoria Planning Provisions, clause 18.02-7R: 'Protect the curfew free status of APAM and ensure any new use or development does not prejudice its operation or optimum usage".

A recent review of the effectiveness of the Melbourne Airport Environs Area further highlighted the importance of curfew-free operations. The MAESSAC was appointed in March 2020 by the Victorian Government Minister for Planning. The MAESSAC Terms of Reference state: "APAM's curfew-free status provides an economic advantage to Victoria which must be protected."

Qantas' support for retaining an operation unconstrained by curfew is appreciated by APAM. The airline's commitment to balancing operational needs with community outcomes is aligned with the airport's objectives. Hume City Council's support for growth at the airport, including ongoing curfew-free operations, is appreciated by APAM.

A curfew solely on M3R would be damaging to the ability of Melbourne Airport to deliver the aviation capacity required into the future. It would also severely restrict options to use M3R as a means of improving noise outcomes overall (for instance through the provision of predictable respite). Nevertheless, the option of restrictions on the use of M3R as part of Noise Abatement Procedures is within the range of measures that APAM will consider as a way to address aircraft noise concerns. This would only be considered in the context of thorough community engagement and consultation. It must balance the benefits for some parts of the community with equitable outcomes for other communities affected by noise from the existing north-south runway, to share the noise and provide respite to those heavily impacted. It should also ensure arrangements are sufficiently flexible to maximise the use of 'SODPROPS' (both arrivals and departures for the same direction, in this case north) as a primary noise abatement strategy.

Airspace Design Measures

Airspace design and air traffic management are complex pursuits, which have been carefully governed through design to date in accordance with the range of regulations, standards and industry best practices available. These frameworks assign absolute primacy to safety with various further limitations (eg. aircraft performance) that collectively constrain opportunities for mitigating noise impact through flight path and procedure design.

There are, however, opportunities to improve airspace design – including for the M3R project. Since 2013, Airservices Australia has had an active program of identifying adjustments to flight paths and air traffic management to improve the noise outcomes for those affected by air traffic around Australia's major airports. Although changes are often only minor, they have been shown as capable of having a significant impact in reducing aircraft noise annoyance in the community.

APAM is committed to an active program of working with the community, Airservices Australia and other stakeholders (such as airlines) to achieve the most effective, and equitable air traffic management regime possible for Melbourne Airport. As technology advances, both in aircraft design and in air traffic management itself, there will be more options for improved airspace design and noise abatement procedures. APAM is committed to exploring new opportunities for better outcomes as they become available.

APAM is committed to specific refinement of the M3R proposition through a process of detailed airspace design (should M3R be approved). Further detail of this process is included in Issue D4: Flight Path Design.

E4.6 Changes to Preliminary Draft M3R MDP

APAM has made no amendments to the M3R MDP to address this issue.

E4.7 Summary and Conclusion

Noise, and mitigation of the impacts thereof, was prominent in submissions to the M3R public consultation. Contributors often remarked on both direct and indirect measures for mitigating community effects, which have been grouped for response in this Issue.

Many of these topics directly correlate with other technical sections of this report, and thus these Issues should also be read in conjunction:

- Issue B1: Project justification and timing
- Issue B2: Options and alternatives
- Issue B3: General objection to M3R
- Issue D3: Draft runway operating plan
- Issue D4: Flight path design
- Issue D5: Noise projections
- Issue E1: Health impacts
- Issue E2: Social impacts
- Issue E3: Compensation.

APAM acknowledges significant community concern about noise and undertakes faithfully to apply the ICAO Balanced Approach to Aircraft Noise Management to govern continued development of M3R airspace and flight paths/procedures. The detailed airspace design phase will appropriately prioritise community outcomes and will be crucially supported by ongoing community and stakeholder engagement.

APAM also pledges to support comprehensive consideration of strategies for addressing community noise impacts in the forthcoming Federal Government Aviation White Paper.

Figure 71: Proximity of other airports to residential areas compared to Melbourne Airport

E5 Economic Activity

E5.1 Summary of Issue

Public exhibition submitters were divided between those supportive of the economic benefit of the new runway to Victoria/Melbourne and their local area or business, and those critical of the economic justification of the project, the economic assessment methodology or expected influence on property values.

Those critical of the economic assessment methodology felt not all costs were captured, benefits were overstated, or the comparative assessment should have considered options other than further development of Melbourne Airport.

E5.2 Number and Types of Submissions

304 submissions contain reference to economic activity. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government:
  - Victorian State Government and Western Health
  - Brimbank City Council
  - Hume City Council
  - Hobsons Bay City Council
  - Maribyrnong City Council
  - Yarra Ranges Council.

E5.3 Discussion of Submissions

This theme can be broken down into four sub-issues, being economic benefits, economic justification, economic assessment and property values.

Economic Benefits

The economic benefit of the project was actively supported or noted positively in the context of other issues by a number of submitters from the community, government and commercial entities.

Private community submissions included:

From Craigieburn:

"The benefit for local business and the community in bringing more jobs more tourists and access to better delivery times through the increased cargo opportunity."

West Melbourne:

"I think this will be beneficial to Melbourne to reduce airport delays due to 2 current runways overlapping and also boost the economy."

Melbourne:

"The proposed third runway is a vital piece of infrastructure in not only developing the local economy but support the wider Victorian and Australian economy as we move past COVID and look towards the rest of the decade. While my chief concerns remains with the ecological and environmental impacts of the project, much of the details provided by Melbourne Airport addresses most of those concerns. In all I support the proposal and the governance of Melbourne Airport."

Benalla:

"It is about time that the third runaway be provided at the Melbourne Airport. One of the busiest airport in the country and it will put Victoria on the world market especially after the impacts of COVID19- that we are open to trade and tourism. I support this project as it provides opportunities to reginal Victoria as well from cargo (fresh produce export) to tourism. Cannot wait for this project to be completed."

[redacted]

Western Health added to state agency responses:

> *"Western Health fully understands the implication of the development and what this will bring to the economy of Victoria, as the airport is a major contributor to the state's economic prosperity. The economic development argument for the expansion of facilities and a third runway looks very clear on the projections discussed."*

A range of local governments were actively engaged by Melbourne Airport during the public exhibition period. These included councils near to the airport and thus in high impact areas, but who also traditionally hold the highest proportion of economic and employment activity directly related to the airport.

Commentary regarding economic activity was tendered by the following local governments:

> Brimbank City Council:
>
> "*…according to the latest 2016 ABS 1,369 Brimbank residents work in the Melbourne Airport Precinct, including 380 Brimbank residents directly employed at Melbourne Airport by the APAM."*
>
> *"The passenger and freight capacity of the Master Plan, combined with the potential benefits of the Melbourne Airport link will generate a significant incremental increase on the economic activity in Brimbank."*
>
> The council also tendered a series of supportive recommendations:
>
> *"Committing to procurement policies and practices that prioritise local services within neighbouring municipalities affected by the airport noise and planning restrictions."*
>
> *"Strengthening links with the Sunshine National Employment and Innovation Cluster and the Sunshine Health, Wellbeing and Education Precinct."*
>
> Yarra Ranges Council:
>
> *"Yarra Ranges Council supports the Melbourne Airport's Preliminary Draft Major Development Plan (pdMDP) and Preliminary Draft Master Plan (pdMP) 2022. Tourism is integral piece of Yarra Ranges economy, directly providing 1,877 jobs and $160 million in gross revenue annually. Indirectly, Tourism contributes to the economy across all industry sectors including agriculture, manufacturing, retail trade, accommodation and food services, and arts and recreation services. An increase in international tourism will boost these economies and help provide visitation during off peak times. Additional freight capabilities will also boost our economy."*
>
> Hobsons Bay City Council:
>
> "*Council understands the need for Melbourne Airport to expand to accommodate Melbourne's expected population growth and to support economic development."*

Melbourne Airport is a key contributor to the tourism economy – several industry organisations and participants took opportunity to comment to this effect:

> Victoria Tourism Industry Council:
>
> *"The recovery of Victoria's vital visitor economy is highly reliant on the performance, vision and growth of Melbourne Airport and realising the aspiration of the third runway as part of this vision will ensure the revitalisation and recovery of our important sector."*

Western Melbourne Tourism Inc*:*

"The future economic growth of Melbourne's west is inextricably linked to the expansion and growth of Melbourne Airport. Hence this project has our strong support. Melbourne Airport has traditionally been a key asset and competitive strength for the city. An expansion of capacity is vital for Melbourne if it is to sustain its competitiveness as a city in a global marketplace, but also in the face of other airport capacity expansions occurring nationally including the new curfew-free Western Sydney Airport to be opening soon."

Hertz Australia wrote*:*

"The investment in the 3rd Runway will deliver the capacity to service and maintain further air traffic movements. This will result in a larger customer base for Airport based businesses such as Hertz which will help us grow our business."

Melbourne Airport importantly functions as a key connectivity point for national and international economic networks, as raised by trade experts:

Lend Lease Australia:

"Development of a third runway will contribute to Melbourne's competitiveness and economic development by linking to several of Australia's key industries (including the supply of specialist construction materials)."

Minter Ellison*:*

"We believe that expansion at Melbourne Airport is crucial to making sure that Australia maintains the benefits of an outward-looking trading nation. A third runway at Melbourne Airport will strengthen our economy and provide the essential goods and services that all Australians rely upon."

A particularly key role of the airport is export hub for southern Australia's premium agricultural industry. Submissions supporting 24-hour operation of the expanded airport were received from key representative groups:

AUSVEG:

"AUSVEG supports Melbourne Airport's Third Runway Plan. The new runway will provide capacity for Victoria's future passenger and cargo needs and will help facilitate more direct market routes for exporting Victorian growers. The airport's curfew free operation has always been the strong selling point for Victorian fresh vegetable growers, which is particularly important for local growers so they can harvest and pack during the day and have their product on planes the same night."

Melbourne Market Authority:

"The demand for premium Australian horticultural exports continues to grow strongly, thanks to the growing affluence and increasing numbers of middle-class consumers in Asia and the Middle East. By constructing a third runway at Melbourne Airport, Victoria can be well-positioned to take advantage of this opportunity for the benefit of the state agricultural industry, and the wider Australian economy."

<u>Economic Justification</u>

Approximately 150 submitters questioned or disagreed with the runway project's justification on economic grounds as a trade-off to community and climate change impacts.

One St Albans resident wrote:

> *"Making money and growing the economy is vitally important to the overall wellbeing of a country but we need to be cognizant of the inconvenience and inadvertent socio-economic detriment that will be imposed on these communities. Please always remember to put people and communities first when making a decision as significant as this because a country without people is just a large plot of land."*

One Bulla resident stated:

> *"It is absolutely criminal that Melbourne Airport will sacrifice a whole community without any empathy for the resident's mental health for their own profits."*

One Hillside resident wrote:

> *"Melbourne airport wants to build a very high noise impact airport. It wants to double the size of an already financially robust curfew free airport to create one as busy as London's Heathrow airport."*

One Sunshine resident wrote:

> *"The planes are constant, which, as is well documented, is damaging to human wellbeing and can even affect the cognitive development of children. Something that should be protected far and away over any commercial concerns."*

One Taylors Lakes resident stated:

> *"…refers to Kaldor-Hicks's rule, where projects are worth undertaking when welfare in the beneficiaries is greater than the loss in welfare by those affected. I certainly do not agree that this project meets this rule if student learning is compromised to any degree. This part also states, "In other words, a particular build case would be warranted if the beneficiaries could, if required, compensate those adversely affected and still be better off."*

<u>Economic Assessment</u>

The economic assessment was critiqued by some submitters in general terms.

One Keilor resident stated:

> *"And who's to say the economic benefits as you put it will ever happen? I'm sure your Master Plan projections didn't take into account the war in Europe and China's presence in our region. It all could change in a heartbeat."*

Another Keilor resident wrote:

> *"Melbourne Airport, argues that the economic value and benefit will out way the affect on community health by bringing billions of dollars to Victoria. However, there is zero data to back this statement up. Where is the data and why won't it be shared? This statement of $8 billion dollars appears made up."*

Submissions were made concerning the scope of the cost and benefit assessment.

A pro-forma submission prepared by the Keilor Residents and Ratepayers Association stated:

> *"Dodgy economics: Multiple costs are unaddressed by the Third Runway MDP. It overstates the benefits."*

A pro-forma submission prepared by the Keilor Primary School Council and submitted by dozens of residents stated:

> *"Part D – D2.9 Refers to the cost benefit analysis of M3R which of $9.24 dollars for Victoria for every dollar invested. The discussion throughout part D exclusively focuses on benefits and not any of the adverse impacts or cost of mitigations.*
>
> It continued with a request:
>
> *"Those full details relating to the Cost Benefit Analysis, how the M3R project assessed the cost impact caused to students at Keilor Primary School by noise and air pollution. As well as accounting for all costs associated with remediating broader community impacts be fully accounted for, such as relocation of facilities, compulsory acquisition, ongoing monitoring of impacts, upgrades to the road network and mitigation of impacts to all impacted civic buildings, schools, and pre-schools."*

Brimbank City Council wrote:

> *"It is also evident that other aspects of the Master Plan are likely to counteract the economic gains to the Brimbank economy, because of potential conflicts and externalities, for example, the Airport's operational impacts, e.g., Off site amenity issues such as noise and the PSA, which can impact property values."*
>
> The council recommended to address:
>
> *"Detail how the Master Plan and MDP will mitigate any negative economic impacts from the airports existing and future operations e.g. amenity impacts that can reduce property values and restrictions on development."*

Maribyrnong City Council recommended:

> *"A social cost benefit analysis should be conducted that includes pricing the negative social and health impacts of noise (i.e. morbidity factors associated with sleep disturbance). It should include the cost of ameliorating the noise impacts for all sensitive uses within the noise contours identifying in the masterplan as impacting on those uses."*
>
> Council also stated:
>
> *"The cost benefit analysis does not appear to consider any economic dis-benefits of depressing urban growth in aircraft noise affected areas, either through planning restrictions or through lowered residential rentals as a result of persistent aircraft noise, or both. Areas where residential growth is depressed, either artificially through planning limitations or through market forces, lose services and retail to other neighbouring areas where there is more growth. This can trigger a cycle of local economic decline and increased costs and reduced revenues for local government in affected areas."*

Melbourne Airport Community Action Group (MACAG) submitted:

> *"The costs of the health and educational impacts must also be factored in. To our knowledge, these have never been calculated in the Australian setting, however in the UK*

it is estimated the total health costs from aircraft noise could be as high as £258mil per year. It would also be necessary to add to that the costs of educational delay not only in terms of school fees and taxpayer funding for schools but also in terms of tutoring and loss of income and opportunity for those whose study is affected by aircraft noise. Furthermore, the effects of aircraft noise on learning and cognitive function have only been studied in children – there is mounting evidence they would also manifest in adults – particularly over the age of 45 - at work or study. This is yet another cost to the economy that does not appear to have been considered."

Essendon Fields Airport raised specific concerns on the economic impact on its operations:

"As with all airports, a component of EFA's aviation income comes from the fees and charges that are derived from aircraft movements. While we recognise the overall economic benefits of the third runway as outlined in the M3R MDP, we have real concerns in relation to the likely economic loss to the aviation revenue stream at EFA, and to the viability of general aviation businesses that operate at Essendon."

"…physical upgrades or changes to Essendon Fields infrastructure to facilitate a third north-south runway at Melbourne Airport are not addressed in the pdMP or M3R MDP, and increased usage of a single runway and upgrades to meet regulatory compliance have the potential to significantly affect the frequency and timing of maintenance investment on EFA's 17/35 runway in particular."

Commitment was requested from APAM:

"Accordingly, EAPL seeks commitments that the facility upgrades at EFA that are consequent on the reorientation of MA's third runway will be funded by MA, including but not limited to runway extensions, installation of runway end safety areas, the installation or upgrade of communications, navigation and surveillance infrastructure, or earlier-than-scheduled surface improvements."

Submitters also proposed alternatives to the third runway with economic justifications.

One St Albans resident wrote:

"Fundamentally, I believe in the expected or projected benefits from having an additional runway and appreciate the time and effort that has gone into quantifying this for Melbourne. I just do not think that other options have been given the same opportunity or level of thought such as developing Avalon or building another international airport. I am certain that the benefits to the state and community will still be realised via these other options."

One Keilor resident wrote:

"High-speed and/or overnight rail between Melbourne, Canberra and Sydney would reduce airport traffic enough to make a third runway unnecessary. It would also be cleaner, cheaper in the long run, and scale to higher capacity more easily."

Maribyrnong City Council recommended:

"Alternatives to air travel are adequately examined, including a high speed rail link along Australia's eastern and southern coasts.

Options to increase capacity at Avalon Airport are considered alongside any development expansion at Melbourne Airport."

Property Prices

The impact of proposed flight paths and aircraft noise on property values was a key concern for hundreds of submitters.

One Keilor resident wrote:

> *"It is inconceivable that in the short term (5-10 years) suburbs under new, or busier flight paths would not become less desirable and those suburbs that will experience reduced flights and noise would not become more desirable. It is inarguable that this proposed development will have profound and adverse affects on local communities such as Keilor. It follows that house prices will be affected in the short-term. Therefore, if this development is approved, then significant financial compensation to local residences is inherently fair and is required."*

Another Keilor resident submitted:

> *"Speaking for myself, I would definitely leave the area destroyed by Melbourne Airport and be demanding compensation from Melbourne Airport in the form of full market value of my property, prior to any detrimental effects caused by the actions of Melbourne Airport."*

And another Keilor resident questioned the study of house prices undertaken for the Preliminary Draft M3R Major Development Plan, writing:

> *"Other international studies, such as Tsao (2022) and Kaur, Cardak and Macallister (2016), using far more rigorous analysis methods, do find that there is a relationship between declining house prices and aircraft noise."*

A Diggers Rest resident wrote:

> *"I am worried about the value of our house. I love to travel. I think a third runway is needed, I am just hopeful it can happen with less impact on residential communities."*

This submitter from Romsey wrote:

> *"We bought this property because it was not under a flight path, you should not be allowed to change it an impact our amenity. We ae concerned about the noise and property devaluation."*

A resident in Attwood submitted:

> *"I did not purchase a million dollar property to now be under a flight path, I'm strongly against the introduction of this new flight path. This will seriously devalue my property."*

Another resident in Coburg wrote:

> *"The planned flight path is directly over the developing Pentridge living/retail/work area which will be a significant community area. The planned third runway will significantly impact noise levels and property prices."*

A West Footscray resident wrote:

> *"We wake up in the night with our windows shaking. The idea of a third runway is terrifying. We're a working class family and with house prices as high as they are won't be able to afford to move, we'll be trapped in our home unable to sleep."*

And this submission from Seaholme stated:

> *"This will not only ruin harmony in our area and devalue our house prices."*

Further consideration of property prices is included in Issue *E3: Compensation*.

E5.4 M3R MDP References

Economic Benefits

Section D2.7.2 and Table D2.5 of the MDP present the findings of the economic impact assessment of the project. They highlight the significant economic contribution the project will provide to Victoria. These benefits underpinning this economic contribution are summarised in Section D2.9 and stem from greater reliability for air travellers, induced travel demand and reduced fares, reduced costs of delay, greater tourism, exports and productivity gains driven through agglomeration and enhanced connectivity.

Section D2.8 of the MDP, Avoidance, Management and Mitigation, states Melbourne Airport can also engage in partnerships that play a role in helping to market tourism opportunities for visitors that will extend visitation and increase expenditure opportunities in Victoria. This will help accentuate the benefit of increased capacity at the airport to attract business and tourist visitors.

The economic assessment draws on information contained in *Chapter A2: Need for the Project* of the MDP that forecasts the restraint on aviation, and hence economic activity, if the project were not to proceed.

Economic Justification

Section D2.3.2 of the MDP defines the Cost Benefit Analysis (CBA) method and explains 'net community benefit' - whereby an initiative is considered acceptable if the overall gain in welfare by beneficiaries could, theoretically, offset the impacts of those adversely affected.

The community and climate impacts associated with the project are documented in *Chapter D3: Health Impact*, *Chapter D4: Social Impact* and *Chapter B11: Greenhouse Gas Emissions*.

Economic Assessment

Section D2.7.1.3 of the MDP recognises external costs (noise, nuisance and health impacts) and that these were excluded from the CBA and assessed in other MDP chapters. This is reflected in Table D2.1.

External impacts associated with the project are subsequently documented in *Chapter D3: Health Impact*, *Chapter D4: Social Impact* and *Chapter B11: Greenhouse Gas Emissions*. Chapters D3 and D4 consider the local impacts within the 15-kilometre radius from Melbourne Airport.

Section A3.2.3 of the MDP assesses potential for expansion at Essendon Fields, Moorabbin and Avalon airports to meet forecast demand. It determines that Essendon Fields Airport and Moorabbin Airport are not suitable due to infrastructure constraints. Avalon Airport is assessed as not suitable due to its distance from Melbourne and passenger and airline preferences. The MDP also recalls the longstanding declared plans for the dual-parallel runway system at Melbourne Airport.

Property Prices

Section D2.7.1.13 of the MDP includes summary of an assessment of historic and potential property value impact by Chris Eves and Andrea Blake of Queensland University of Technology

(QUT) in 2016. The study of 320,000 sales across 62 Melbourne suburbs concluded that residential property proximity to a Melbourne flight path had no significant long-term impact on value.

Section D2.7.1.13 also includes a follow-up study by Professor Chris Eves (now of RMIT University) in 2020, which analysed property sales data from 1990-2019 in 72 Melbourne suburbs. It focused on the long-term investment performance of suburbs located within designated noise contours or subject to significant levels of aircraft noise complaints. It concluded that suburbs with exposure to aircraft noise had the same sales trends as comparable suburbs with low or no aircraft noise complaints, and that other factors such as views, access to services, distances to work and transport reliability also influence house prices.

E5.5 APAM Position

Economic Benefit

APAM welcomes recognition of the important economic contribution the project will provide locally, for the State, and Australia more broadly.

[redacted]

In relation to the Brimbank City Council recommendations, APAM published its Environment Social and Governance (ESG) strategy just prior to release of the M3R MDP for public exhibition. Sustainable procurement and an intention to leveraging APAMs procurement capability for greater community benefit, is identified as one of six priorities. It specifically notes APAM will stimulate local employment opportunities and deliver tangible outcomes to our local community by incorporating procurement targets into infrastructure projects such as the third runway and Melbourne Airport Rail Link. To achieve this, the ESG strategy commits APAM to ensuring that by end of 2022:

- all capital projects over $20M have local employment targets
- all service provider contracts with 20 or more employees have local employment targets.

Economic Justification

APAM, in the M3R MDP explicitly recognises and is cognisant of the potential social, health and climate impacts the project may have and these were documented in the relevant chapters.

It is noted that, as per the health impact assessment, economic activity and the associated employment opportunities are a key determinant of health and the project will generate local employment opportunities both during its construction and operation. The economic benefit from the project is recognised by the community, government and the private sector, as demonstrated by the 82 supportive submissions from these stakeholders.

To further enhance our engagement on community and climate issues, APAMs ESG strategy sets a series of ESG priorities and targets that aim to deliver a positive impact on our community and stakeholders, ensure that the natural and physical environment is conserved, and appropriate stewardship implemented as well as ensuring all employees across the airport and precinct, work in a safe and inclusive environment. These focus on:

- Carbon emissions (net zero scope 1 and 2 emissions by end of 2025 and engaging on scope 3)
- Waste (diverting the majority of waste from landfill by 2024)
- Water quality and PFAS (minimising APAM's impact on local waterways and effective management of PFAS)
- Diversity and inclusion (adoption of key diversity principles)
- First nations (acknowledgement and celebration of First Nations)
- Sustainable procurement (including local employment targets in infrastructure projects).

APAM also provides support to the following local community support programs, with a view to actively increasing our support for these and other local community initiatives:

- Melbourne Airport Community Fund (Australian Communities Foundation).
- Neighbourhood House grants.
- Western Chances financial support.
- Cross cultural volunteer program financial support at Organ Pipes National Park and Eastern Barred Bandicoot at Woodlands Historic Park.
- Banksia Gardens and Melbourne Airport School scholarships — four students from three schools receive a scholarship each.
- Laptops for students. Melbourne Airport donated 37 laptops to Broadmeadows' Banksia Gardens Community Services in June 2020. The laptops, which were previously Melbourne Airport staff laptops, were factory reset and loaded with a Microsoft license and provided with an active internet connection, before being handed over to Banksia Gardens. Offer another round of laptops.
- Financial support for the Hume JobLink website and Banksia Gardens Community Centre.

Economic Assessment

It is important to note that the *Airports Act 1996* does not require airports in a MDP to provide a CBA in relation to economic impacts, but to specify the likely effect of developments on the local and regional economy. This analysis indicated a significant positive contribution to the local and regional economy through the project. The CBA was explicit in its exclusion of monetising social, health and other impacts, as these were assessed and addressed through issue specific metrics in the relevant M3R MDP chapters.

APAM will not be including any information on the economic benefits of developing high speed rail as this is beyond the remit of the airport-lease APAM holds with the Commonwealth Government, as defined in the *Airports Act 1996.* APAM believe that the development of Avalon Airport as an alternative option to the project is not feasible on the basis that it does not serve the demand for aviation services in the Melbourne basin.

Essendon Fields

Melbourne Airport values the co-operative relationship it has with Essendon Fields Airport and notes the different and important roles the two facilities play in Victoria's economy. The two airports operate within the Melbourne Basin, with air traffic control provided by Airservices Australia.

Given the parallel north-south runway has featured in Melbourne Airport Master Plans since 1990, Essendon Fields has had and continues to have ample opportunity to adapt its facility to suit its operation. As detailed in Issue B5: Interaction With Other Melbourne Airports, APAM will maintain effective liaison with Essendon through the detailed design processes of M3R, and any/all changes to operations or interdependence that are necessitated by the final project configuration.

Property Prices

APAM notes community concern regarding potential impacts on property prices. Research conducted for this project suggests numerous other factors (such as views, access to services, distances to work and transport reliability) also influence house prices and home purchase decisions.

The economic stimulation forecasts produced for M3R evaluate the effects of growth enabled by M3R infrastructure capacity, and then compare them against economic activity constrained by the airport's current capability. The airport's important role as an economic facilitator for a wide range of domestic and international industries is explored.

The *Airports Act 1996* requires specification of the likely effect of developments on local and regional economies. The M3R CBA analysis indicated a significant positive contribution through the project, but is explicit in its exclusion of monetising social, health and other impacts as these are addressed through issue specific metrics in the relevant M3R MDP chapters.

Should M3R not proceed, or be approved with curtailed capacity, Melbourne Airport growth will become constrained. Economic analysis demonstrates that this will lead to:

- Higher costs (and associated ticket/freight price increases)
- Reduced airline reliability and an associated increase in passenger costs from delays
- Reduced airline competition and less passenger choice
- Constrained tourism expenditure
- Reduced agglomeration driven productivity gains
- Potential constraints on net freight exports
- By 2046, a reduction in Gross State Product of approximately $4.6 billion, including $649 million to the local area
- By 2046, a reduction in employment of approximately 37,000 additional jobs, including 7,833 in the local area.

As Melbourne city continues to grow, with a population highly motivated to travel and consume airfreighted goods, the capacity of Melbourne Airport to accommodate more flights must also grow.

[redacted]

In relation to the Brimbank City Council recommendations, APAM published its Environment Social and Governance (ESG) strategy just prior to release of the Preliminary Draft M3R MDP for public exhibition. Sustainable procurement and commitment to leverage APAMs procurement capability for greater community benefit, are identified as priorities. The ESG strategy specifically notes APAM will stimulate local employment opportunities and deliver tangible outcomes to its local

community by incorporating procurement targets into infrastructure projects such as the third runway. To achieve this, the ESG strategy commits APAM to ensure all new contracts will meet the following from 2023:

- All capital projects over $20M have local employment targets
- All service provider contracts with 20 or more employees have local employment targets.

Though APAM cannot comment on the economic characteristics of competitive/alternative strategies for growth (such as high-speed rail or development of alternate airports), they are considered and subsequently dismissed in practical feasibility terms in Issue B2: Options and Alternatives.

Melbourne Airport values the co-operative relationship it has with Essendon Fields Airport and notes the complementary roles each serve in Victoria's economy.

APAM notes community concern regarding potential impacts on property prices. Research conducted for this project suggests numerous other factors (such as views, access to services, distances to work and transport reliability) also influence house prices and home purchase decisions. This matter is explored in further detail in Issue E3: Compensation.

E5.6 Changes to Preliminary Draft M3R MDP

[redacted]

> While M3R and aviation is not addressed in the Strategy, the project aligns with the objectives of preparing for population change, enabling workforce participation, lifting productivity and driving Victoria's changing, globally integrated economy."

No other changes are proposed as Chapter D2:

- Recognises that Chapter D3: Health Impact, Chapter D4: Social Impact and Chapter B11: Greenhouse Gas Emissions detail impacts associated with the project, including for local communities
- Is clear on the scope of the economic impact assessment CBA in terms of the exclusion of social, health and climate change impacts
- Has considered in Chapter A3: Options *and Alternatives* the potential expansion of other airports for Melbourne.

E5.7 Summary and Conclusion

Submissions on economic activity, as described in *Chapter D2: Economics* of the MDP, were divided between those supportive of the economic benefit of the new runway and those critical of the economic justification, assessment methodology or the impact on property values of the project. Those critical of the economic assessment methodology felt not all costs were captured, benefits were overstated, or the comparative assessment should have considered non Melbourne Airport options.

APAM welcomes the support and recognition by a large cross-section of community, government and private sector contributors of the economic contribution the project will make locally and to the Victorian economy.

APAM is conscious of the potential for negative impacts associated with the project and has evaluated these in dedicated chapters within the MDP. In addition to the mitigations discussed within these chapters, the APAM ESG strategy, through sustainability objectives that include economic measures, seeks to prioritise benefits to surrounding communities. Further, the APAM ESG strategy seeks to address other issues of community concern, including climate change.

The exclusion of social, health and climate change considerations from the economic assessment is clearly stated in Chapter D2 and the assessment is in line with the *Airports Act 1996* requirement to specify the likely effect of developments on the local and regional economy. With regard to development of other airports as an alternate to Melbourne Airport, Chapter A3 sets out the rationale for why these are not deemed appropriate.

In the context of the above, the proposed change to the M3R DMP in response to the submissions is the inclusion of additional information on how APAM will work with partners to generate demand for the capacity generated by the project and implement the sustainable procurement priority of its ESG strategy.

E6 Employment

E6.1 Summary of Issue

The M3R MDP discusses the expected contribution of the project to employment at Melbourne Airport during construction and operation phases. It also models expected diffuse employment benefits to the greater Victorian economy that are facilitated by growing aviation activity.

Melbourne Airport is Victoria's second largest employment precinct and in 2019 approximately 19,000 staff were employed within the airport precinct. Of these, at least two thirds resided in the seven municipalities within 15 kilometres, with one in twenty employed at Melbourne Airport. These

percentages vary with municipality and in the City of Hume, Melbourne Airport provides direct employment for one in six employees.

In addition to direct on airport employment, the economic activity stimulated by the operation of Melbourne Airport has significant flow on impacts to other industries in the local area and Victoria through leisure and business travel and freight movement. This leads to significant flow-on employment generation to other industries including accommodation and food services, retail trade and transport, postal and warehousing.

E6.2 Number and Types of Submissions

311 submissions contain reference to employment related to the airport and/or M3R. They were received from:

- Community and community organisations
- Non-government organisations and commercial entities
- Government
    - Victorian State Government
    - Brimbank City Council
    - Maribyrnong City Council
    - Yarra Ranges Council.

Submitters were divided between those supportive of the employment benefit of the new runway, and those who disagreed with the employment justification for the project, health impact assessment and employment benefits methodology or findings. Submitters also proposed options for additional runway capacity other than Melbourne Airport, with employment benefit justification.

E6.3 Discussion of Submissions

This theme can be broken into three sub-issues: employment benefits, employment justification and employment assessment.

Employment Benefit

The employment benefit of the project was actively supported or noted in the context of other issues by various submitters from the community, government and commercial entities.

In this context, the Victorian Government and Brimbank City Council requested further information on the employment programs Melbourne Airport will undertake to maximise local opportunities.

[redacted]

Brimbank City Council wrote:

> "*…according to the latest 2016 ABS 1,369 Brimbank residents work in the Melbourne Airport Precinct, including 380 Brimbank residents directly employed at Melbourne Airport by the APAM.*
>
> *These 1369 Brimbank residing airport workers are estimated to be making a significant contribution to the overall Brimbank economy each year, including $93.40m in direct output, and an additional $52.02m direct value add, which supports a further 720 local jobs."*

Council went on to provide a series of recommendations to maximise employment in Brimbank from the runway project. Examples include:

> *"Detail explicitly how Melbourne Airport will partner with Council to develop local employment, service delivery and procurement policies and practices with a positive prejudice toward business services in neighbouring municipalities*
>
> *…*
>
> *Detail explicitly how Melbourne Airport will partner with Council to introduce employment programs and/or work collaboratively with Council's 'Local Jobs for Local People Program' to deliver actual jobs to local people, increasing employment opportunities through apprenticeships, training, employment pathways, etc. for our community at Melbourne Airport and in related industries and operations.*
>
> *…*
>
> *The employment program introduced must have a clear measure regarding the number of people employed at Melbourne Airport and in related industries and operations and the LGA where they reside, with this information shared bi-annually with Council and neighbouring LGA's"*

The Business Council of Australia wrote:

> *"Transport infrastructure such as airports are enablers of commerce and make tourism and trade possible. Melbourne Airport both directly and indirectly supports tens of thousands of jobs, in aviation and supporting industries, and in the broader tourism and freight sectors. The Airport's future expansion will further bolster its role in supporting jobs in Victoria."*

The Victorian Tourism Industry Council commented on the employment impact of the COVID-19 pandemic and the need for the runway:

> *"The Covid-19 pandemic has decimated Victoria's visitor economy, which contributed $32.5 billion to the state's economy and employed some 260,000 people by the end of 2019, delivering 6.5% of our Gross State Product. [The] latest statistics from the State Tourism Satellite Accounts (STSA) show that the tourism and events industry has lost 53% of its workforce supply, falling to just 120,000 as at end 2021, from its peak in 2018-19 of nearly 260,000.*
>
> *Conversely, this double-digit decline in tourism jobs was in stark contrast to the overall employment growth in the Victorian economy during the same period, albeit it only being a marginal increase of 0.3%. The recovery of Victoria's vital visitor economy is highly reliant on the performance, vision and growth of Melbourne Airport and realising the*

aspiration of the third runway as part of this vision will ensure the revitalisation and recovery of our important sector."

Commercial beneficiaries, were supportive of employment creation stimulated by aviation activity.

ACCOR (accommodation):

"To maintain a strong growing hotel industry that positively contributes to job creation for Melbourne and the Victorian regions, Accor supports the third runway project at Melbourne Airport and encourages the completion of this project as soon as possible."

Fulton Hogan (construction):

"We see the Third Runway as an opportunity to continue to support jobs growth for local community, contractors, suppliers and the Victorian construction and civil engineering sectors."

Services provider at Melbourne Airport, were representative of businesses directly related to the precinct's activity and noted the local employment benefits:

Daifuku (transportation services) stated:

"With increasing passenger counts expected in Melbourne, this third runway project will inevitably be a trigger to provide further growth for Daifuku Oceania, to allow us to engage more local employees, and allow Daifuku to continue to test new technologies which is critical for the growth of both organisations, and Daifuku globally."

Programmed Facility Management (facilities management) submitted:

"The Third Runway will expand the work that Programmed delivers into Melbourne Airport which will result in the following outcomes:

- *Increased employment opportunities with us and our vendor partners for the skilled resources necessary to deliver increased maintenance and minor capital works as the Airport expands*
- *Deeper investment in local supply chains through working with existing vendor partners and sourcing new small business providers through Social Traders, Kinaway Chamber of Commerce, Supply Nation, ICN Victoria and business networks in the Hume, Brimbank, Moreland, Melton, Whittlesea and Moonee Valley municipalities, to achieve ongoing economic and social improvement in these communities*
- *More apprenticeships and upskilling and retraining of people to effectively undertake new functions and roles and use new technologies.*

A substantial share of private citizen submissions were supportive the project for employment reasons:

"This is a good project and provides employment opportunities."

"I think this is a great opportunity for the community and will not only create opportunities but further enhance additional jobs.

> *"This is a great plan and I wholeheartedly support it. It will provide jobs for people. We have to move forward and I am tired of selfish people complaining about everything. Yes, I live locally and will hear the planes. I like them :)"*

Employment Justification

Several submitters questioned the conclusions of the health impact assessment that are drawn from increased employment projections.

One Westmeadows resident wrote:

> *"Employment Beneficial effect of additional jobs created or supported by new runway, based on improved health outcomes for the employed - with subsequent benefits to children and communities. All these seem like positive results on what results the runway not built yet. The communities effected by this plan get no benefits what so ever."*

The Melbourne Airport Community Action Group (MACAG) submitted:

> *"The MDP takes jobs growth into account in measuring health impacts on local communities. The argument appears to be that employment creates health benefits for the employed person and their household and these benefits offset the health detriments suffered by those directly exposed to aircraft noise, particulates and other pollutants. Leaving aside the inequity of using benefits that flow to one group to offset detriments flowing to another, we also question whether these economic benefits are as significant as they are claimed to be.*
>
> *Western Sydney Airport was promoted as offering a 'jobs bonanza' to the local communities, but the 'Jobs for the West' report found that job forecasts were vastly exaggerated and may be only 18% of the forecast number.*
>
> *A similar study of the claimed economic benefits of Heathrow Airport expansion found it may actually be a net cost to the British economy."*

Employment Assessment

A small share of submitters questioned the findings of the employment assessment for areas surrounding Melbourne Airport, based on existing experience and distribution of beneficial impacts.

One resident wrote:

> *"The suburbs immediately around MA have not benefitted proportionately from the employment the Airport was supposed to bring.*
>
> *There is no reason to believe, other than the assurances of MA itself, that the contribution to the financial wellbeing of the area and population most affected by M3R will be any different."*

One Keilor resident stated:

> *"Re job growth it is important to remember that more people work at Sydney airport even with a curfew than Melbourne Airport."*

Another Keilor resident stated:

> *"Adjoining Brimbank and Hume LGAs both have high unemployment rates which is counter to Melbourne Airport's claims they provide employment."*

Maribyrnong City Council wrote:

> *"Employment and Historical Context for Maribyrnong - Part D of the M3R development proposal, on the social impacts, concludes that the employment benefits to health and other social benefits of the expansion of the Airport through the third runway will outweigh the health and related impacts of increased aircraft noise. While this may be true for the whole of Victoria, Maribyrnong is a location where this is not demonstrated to be the case.*
>
> *Employment at The Airport - The number of Maribyrnong residents in 2016 working in the Hume LGA was 1,226 out of 41,648 residents employed, or 2.9%. A smaller number again work at the Airport within the Hume LGA. There were 318 Maribyrnong residents employed in Hume in the Transport, Postal and Warehousing Industry. As that industry makes up around 60% of the Airport workforce, approximately up to 500 people may be living in Maribyrnong and working at the airport. (Sources are ID consulting links from Maribyrnong and Hume council websites and BITRE, Employment Generation at Australian Airports, 2011, BITRE Information Sheet 46). On the other hand, many thousands of residents experience aircraft noise at N-above contours now and in future."*

Correlation between noise and employment (and absence of consideration in the employment assessment of same) was raised by numerous submitters through a pro-forma submission prepared by the Keilor Primary School Council:

> *"Part D – D3.6.3 Does not consider the possibility of loss of jobs, business or employment arising from excessive noise. The Keilor Village traders are unlikely to be able to trade and exist under the peak noise scenarios particularly as their primary trade occurs during ordinary business hours."*

A resident also queried the ability to source the construction resources identified in the assessment:

> *"There is no detail as to how the multitude of additional human resources required for the build of the 3rd runway and, more generally the long-term Master Plan will be sourced.*
>
> *The consequence of the build of the 3rd runway will be that construction and other resources will be shifted from other socially and strategically important projects for Victoria, including much urgently needed road infrastructure around Melbourne, the Airport rail link itself and other rail projects, leaving these out to dry."*

Submitters also proposed alternatives to the third runway with employment justifications.

A proforma submission from a number of Bulla residents wrote:

> *"The Airport is one of the State's largest employment sites and is a major contributor to local and social economic well-being but where has this been of benefit to Bulla residents. This economic growth could be far better spread to outlying residential areas where there can be proper planning and development to sustain an International Airport in a different location to distribute the traffic flow and access and pollution and not be congested in one small area. With the expansion of Melbourne it would be a far better option to have another airport in a different location to spread the employment opportunities."*

One Keilor resident wrote:

> *"Avalon Airport with its placement, the proposed Outer Metropolitan Ring Road (OMR) connecting Geelong port with the Northern suburbs and also alleviating congestion from the Docklands ports. The same amount or even more jobs and money into the economy*

will be created without the destructive and polluting effects on waterways or the further overcrowding of the already overcrowded Melbourne Airport."

E6.4 M3R MDP References

Employment Benefit

Section D2.8 of the MDP describes a strategy to expand employment benefits related to the airport - that Melbourne Airport engage in tourism promotion opportunities that extend visitation and thus expenditure in Victoria. This would help accentuate the overall economic benefit of increased capacity at the airport to attract business and tourist visitors and thus contribute to jobs creation.

Employment Justification

Section D2.3.1 of the MDP defines the economic impact analysis' Computable General Equilibrium (CGE) modelling method. This approach enables assessment of employment generation in the No Build and Build scenarios. The additional employment associated with the project's implementation is summarised in Section D2.7.1.10, Table D2.6 and Table D2.11.

Section D3.2.55 of the MDP defines qualitative and quantitative methods for incorporating health effects of employment into the health impact assessment.

Employment Assessment

Section D2.6.1 of the MDP defines the existing demographic conditions of the local area, which includes Keilor, Moreland – North, Sunbury, Tullamarine – Broadmeadows and Brimbank. D2.6.2 defines economic activity in this region by gross value added by industry in 2019. D2.7.1.10 defines the increase in employment, with Table D2.6 documenting the total jobs increase in the local region and the suburbs most affected.

Section D2.3.1 of the MDP, in defining economic impact analysis through CGE, notes the method's ability to identify labour and other resource availability in local regions, and hence whether price and wage increases are necessary to meet the needs of a project.

E6.5 APAM Position

Employment Benefit

36 submissions from government, the private sector and residents supported the employment generation M3R is forecast to create. APAM welcomes recognition of the important contribution the project will provide to direct and indirect employment locally and for Victoria.

Melbourne Airport is an important employment hub – directly hosting approximately 19,000 staff in 2019. Of these, at least two thirds resided in the 7 municipalities within 15 kilometres, with one in twenty employed at Melbourne Airport. These percentages vary with municipality and in the City of Hume, Melbourne Airport provides direct employment for one in six employees. As such, Melbourne Airport is an anchor employer in the local region (encompassing Keilor, Merri-bek (North), Tullamarine - Broadmeadows, Sunbury and Brimbank). It is expected to be a significant contributor to employment growth as the airport's capacity is expanded. The Victorian Government noted its support for the on airport job creation, while Brimbank City Council's submission indicated in 2016, 1,369 residents were directly employed in the airport precinct.

Existing service providers, such as Daifuku and Programmed Facility Management noted the opportunity M3R provides to continue and increase support for local employment. Indirect employment beneficiaries such as ACCOR and Fulton Hogan stated their support for the third

runway due to the positive contribution to employment generation, while the Victorian Tourism Industry Council highlighted the loss of employment in the tourism sector during the COVID-19 pandemic and the critical role of the third runway in supporting this recovery.

Numerous residents also stated their support for the third runway based on the employment opportunities it will create.

APAM has an ongoing program of partnering careers events with jobs and education sectors in neighbouring local government jurisdictions. Their success encourages plans to host further events and workshops in the future. These events are an opportunity for APAM to partner with affiliate service providers at the airport, such as ISS (security) and Ikon (facilities management), to provide job seekers with local employment opportunities and career information. An event occurred in the City of Brimbank in May 2022 with ~200 in attendance and a similar event was held in the City of Hume in August 2022.

Further jobs fairs are being developed in 2023 within other local government areas with Councils, including a proposed Melbourne Airport Jobs Week. APAM hosted a delegation of education and jobs providers that has led to new partnerships on careers and jobs opportunities that will be developed further in 2023, including with secondary schools, tertiary and Tafe institutions, job agencies, and state and federal goverment jobs agencies. This is supported by the Melbourne Airport Joblink online platform that draws in jobs vacancies from the airport and surrounding airport precinct to promote local employment

Until recently, APAM had a Memorandum of Understanding (MoU) with Brimbank City Council to partner to provide and/or facilitate environment, employment, and educational opportunities. APAM received correspondence from Brimbank City Council advising of their choice to not continue with this MoU, and the partnership opportunities that could have been facilitated, in May 2022. APAM nevertheless continues to pursue employment, social and economic growth benefits from Melbourne Airport for Brimbank.

Brimbank City Council and the Victorian Government asked questions and made specific recommendations regarding local employment - to which APAM refers to its recently published Environment Social and Governance (ESG) strategy. Sustainable procurement and effort to leverage APAMs procurement capability for greater community benefit, are identified as priorities. The strategy specifically notes that APAM will stimulate local employment opportunities and deliver tangible outcomes to community by incorporating procurement targets into infrastructure projects – including the third runway. To achieve this, development in the local education and job sector will occur as specified above, guided by the ESG Strategy that commits APAM to ensuring all new contracts will meet the following from 2023:

- All capital projects over $20M have local employment targets
- All service provider contracts with 20 or more employees have local employment targets.

Employment Justification

The employment assessment was undertaken by specialist consultants, using relevant data sets and the forecast No Build and Build information, to inform projection of on airport, local and Victorian employment generation during construction and operation of the project.

During construction an estimated 650 additional jobs will be created. Within 5 years of opening it is projected M3R will contribute an additional 471 on airport jobs, 1,185 jobs in the local region and 3,904 jobs in Victoria. By 2046, this is projected to increase to 3,222 on airport jobs, 7,833 jobs in the local region and 36,832 jobs in Victoria.

Without the construction of a third runway employment is expected to grow more slowly than the rest of Victoria. Should M3R not be built, constrained activity would likely cap the precinct's employment levels to circa 27,616. Building M3R raises that figure to 30,837.

Over coming decades population growth in the local region is forecast to exceed the Australian average, with 750,000 residents projected by 2046. Indirect employment benefits related to aviation activity are diverse and wide-ranging. Within the local region surrounding Melbourne Airport, M3R will create numerous jobs across a range of industries. Examples of the forecast additional jobs created in the local region by industry and the municipality most affected are included below:

- Accommodation and food services
    - 5 years from opening: 813 jobs created
    - 20 years from opening: 1,262 jobs created
    - Suburb most affected: Tullamarine - Broadmeadows
- Transport, postal and warehousing
    - 5 years from opening: 957 jobs created
    - 20 years from opening: 2,254 jobs created
    - Suburb most affected: Tullamarine - Broadmeadows
- Manufacturing
    - 5 years from opening: 957 jobs created
    - 20 years from opening: 2,254 jobs created
    - Suburb most affected: Brimbank

It is important to note that employment enabled by the airport is drawn from a wide range of social sectors. Alongside engagement with local government authorities and employment support services, the airport is working towards partnerships to promote jobs of the future. Opportunities to establish pathways towards employment through careers partnerships exist with higher-education institutions, trade schools and tertiary providers, but also draw importantly from workforces without prior formal skills.

Opportunities to expand targeted recruitment for communities who experience increased levels of unemployment could be well supported through the construction and operation of the new runway. Targeted recruitment of female workforces, culturally and linguistically diverse workers, migrant workforces, part-time shift work and flexible working arrangements are all opportunities well facilitated through infrastructure of the airports size and varied service delivery. As the airport continues to grow, especially through the runway and its facilitation of more flights, so too does the business's ability to support a variety of workforces.

It is widely recognised that employment is a key determinant of health – not only for the direct employee, but for the network that benefits from regular income (ie family, community). Positive employment opportunities are effective improvers of socio-economic outcomes in communities. Melbourne Airport, and its growth over time, is a substantial example of economic contribution to the local economy through employment – M3R furthers this role.

Health benefits attributable to employment importantly do not directly offset health impacts that are associated with increased aviation activity – particularly noise. Correlation between these aspects of the M3R project is discussed in Issue E1 Health Impacts. This Issue also responds to submissions regarding the methodological approach to health impact assessment.

Employment Assessment

The employment assessment within the M3R MDP projects an enormous positive employment contribution to the local area and Victoria. Projections for construction-facilitated jobs have conservatively forecast 650 positions on site, without detail of related supply and support employment. Projections for the employment related to the ongoing operation of M3R (above/beyond existing infrastructure) are:

- 3,200 jobs at Melbourne Airport
- 37,000 jobs throughout the greater Victorian economy

As a comparison, while the business case for the $10.9 billion Melbourne Metro (Victorian Government, 2016) projected that 3,900 jobs would be created during the peak construction year in Victoria, (reflecting its significantly higher capital value compared with M3R) its operation is forecast to generate an additional 740 jobs from 2031 to 2056.

Similarly, the business case for the $10.9 billion North East Link Project (Victorian Government, 2018) projected that while 10,900 jobs in total will be created during construction, its operation will create an additional 3,800 jobs across Victoria.

E6.6 Changes to Preliminary Draft M3R MDP

[redacted]

No other changes are proposed as Chapter D2 was prepared by a specialist consultant using the best available data sets and methodology, and addresses the *Airports Act 1996* requirement to assess on-airport employment generation.

E6.7 Summary and Conclusion

Submissions discussing airport-enabled employment were divided between those supportive of the benefit of the new runway, those who disagreed with employment as a justification for the project (including its relation to the health impact assessment), and those who challenged the assessment methodology and/or findings. Submitters also proposed alternative-airport options for additional runway capacity, with associated employment benefit justification.

APAM welcomes the general acknowledgement of the majority of community, government and private sectors of Melbourne Airport's economic role as a major employer, and facilitator of indirect employment. The further contribution M3R will make locally and throughout Victoria is recognised.

APAM is conscious that positive economic benefits do not directly correlate with negative social and health impacts that are associated with the project and has explored this in dedicated chapters within the MDP (D3 Health Impacts and D4 Social Impacts). A key objective of the M3R MDP is to evaluate and demonstrate relationships between population- and economy-scale benefits and local-scale impacts. This balance includes evaluation of the contribution to health that is afforded by effective employment against disbenefits associated with increased flight activity.

The APAM ESG strategy, through prioritisation of sustainable procurement, seeks to prioritise the benefits of APAM investments such as M3R, to surrounding communities. Prioritising local employment for greater community benefit is a key element of this strategy. APAM also seeks to work proactively with neighbouring local governments and the education and jobs sectors to maximise local employment opportunities.

The employment assessment undertaken in Chapter D2 aligns with the *Airports Act 1996* in its evaluation of the contribution of the project to on-airport employment.

In terms of the development of other airports as an alternate to Melbourne Airport, Chapter A3 Options and Alternatives rationalises why these are not appropriate.

In this context changes have been made to the M3R MDP to include additional information about how APAM will work with partners to generate demand for the capacity generated by the project, and implement the sustainable procurement priorities of its ESG strategy.

E7 Public Space Amenity and Ecology (Off-Airport)

E7.1 Summary of Issue

Community feedback to the public exhibition of M3R included a range of remarks about amenity factors related to the airport site but beyond its bounds. These comments have been grouped as:

- Plane spotting and airport photography
- Flora and fauna effects beyond airport
- Parks and recreational spaces

These subjects often accompany sentiments that are addressed elsewhere in this Supplementary Report. Specifically the following related Issues should be considered with Issue E7 for related and fulsome context:

A6: Environmental Management Framework (inc. AES & sustainability)

A7: National Airports Safeguarding Framework (NASF) Guidelines

A8: Off-Airport Planning Controls

E1: Health Impacts

E2: Social Impacts

F3: Ecology (On-Airport)

E7.2 Number and Types of Submissions

113 submissions contain reference to the ‘Public Space Amenity and Ecology (Off-Airport)’ Issue. They were received from: [delete from list below as appropriate]

- Community
- Community organisations
- Non-government organisations and commercial entities

E7.3 Discussion of Submissions

Plane spotting and airport photography

A significant contingent of public submissions discuss venues for public plane spotting and photography. Some of these submissions recommend upgrades to the existing informal viewing area on Sunbury Rd. Examples from Bulla:

> *"I'm a avid plane spotter and enjoy the air traffic while living in the Bulla township. I would also like to see a more user friendly viewing area in close proximity to the airport. The current site at the end of the North runway is in urgent need of upgrade, especially with the parking surface and also more area for parking that is much more user friendly. Information boards, perhaps even a digital display board indicating departing/arrival flights might also be an advantage for families who don't digital access to electronic portals such as the flight radar app etc. Also, a display area depicting the history of Melbourne Airport with illustrations and photos would be a great attraction as well."*

…and from Hillside:

> *"Request the project scope be expanded to include sealing and upgrading the existing airport runway viewing areas for Aviation enthusiasts by providing a fully sealed and line marked car park and community amenities such as seating areas and public toilet/rest rooms and bin enclosures which can be automated to remotely notify cleaning crews when full. Consideration to adding new aviation viewing areas north and south of the proposed 3rd runway also with sealed and line marked parking, seating areas and a public toilet/restroom and bins."*

M3R infrastructure plans necessarily close the current popular (but informal) aircraft viewing and photography area on Operations Rd. Users of this location express desire for an improved replacement to be included in the M3R development scope.

> Essendon*: "I am writing as part of a growing plane-spotting community in Melbourne to enquire about plans on designated spotting areas around the airport. Currently, the viewing area on Operations Rd opposite TWY Juliet is very suited for taking photographs or simply watching aircraft movements in the afternoon. I personally go to this location quite often to take photographs of aircraft on RWY16/34.*
>
> *…*
>
> *[Recommending a future location between the runways] Having a 360 degrees view of taxiways and aircraft will be very unique and interesting, and will definitely be a fantastic spot for those who love aviation. I have seen the viewing area on the northside of the RWY full of families and enthusiasts, and a location where you can see two runways instead of one would be even better. Maybe even a cafe would be great for the public and airport workers:)"*
>
> Newport*: "The third runway project should include a replacement for the operations road aircraft viewing area (to the west of the existing runway) which looks like it will be inaccessible to the general public after the new security checkpoint is added. Melbourne is home to the only major facility in Australia that manufactures parts of the airplanes we see at the airport (Boeing Aerostructures Australia in Port Melbourne). Aviation manufacturing has been important to the city's heritage since the 1940s, and viewing those products in action at the airport is an enjoyable pass-time, as well as a way to appreciate that heritage."*

Flora and fauna effects beyond airport

A small selection of submissions express concern about potential impacts to precious wildlife and nature reserve assets. Natural behaviour changes (due to noise) and birdstrike (collision between birds and aircraft) are the core topics of these submissions, as exemplified by:

> [Location not provided]: *"This area also contains important wildlife reservoirs, including Newport Lakes, Cruickshank Park and the Williamstown Wetlands, all of which are important habitats for a wide range of wildlife species, including the swift parrot, swans, gulls, ibis and spoonbills. Whilst your project documents outline how you will manage environmental impact on the airport property, there is no consideration of environmental impact under proposed flight paths, and this is an important omission in the assessment of this project."*
>
> Williamstown: *"There is no impact statement regarding the rare Migratory birds that visit the wetlands.*
>
> *Williamstown is an historic, quiet, picturesque area that is frequented by tourists. The beach, wetlands, botanic gardens, marine park will be hugely impacted by the Noise and Sight of low flying, circling airplanes."*

A selection of these comments claim that Melbourne Airport will cull birds to manage birdstrike incident risks:

> Keilor East: *"In line with International Safety Regulations many of the birds in Brimbank Park will be culled and this will continue as other birds move into the area.*
>
> *…*
>
> *Birds being hit by planes will be highly likely which will put the safety of 5800 Keilor residents also at risk with planes flying at less than 300 metres over their houses!"*
>
> Keilor: *"This new north south runway will have planes flying 24/7 through the middle of the peaceful scenically calming Brimbank Park, home to many species of birds who will have to be killed to prevent bird strikes to planes."*

Parks and recreational spaces

Brimbank Park (south) and Woodlands Historic Park (north) are specifically cited in several submissions as recreational facilities that stand to be significantly impacted, with related social implications, by M3R. A submission from Kealba encompasses the range of concerns:

> *"We are very concerned about the impact that the proposed north-south runway will have on Brimbank Park and to a lesser degree on Woodlands Hill Historic Park.*
>
> *…*
>
> - *The projected noise levels at Brimbank Park will effectively render the park unusable by people seeking to recreate there.*
>
> *…*
>
> - *We were unable to find information on the impact of the proposed north south runway of the wild life associated with Brimbank Park. In particular, we are concerned for the many bird species that reside either permanently or occasionally in the park. These include eagles, falcons and hawks, as well as sulphur crested and yellow tailed black cockatoos among other species. The boobook owls and tawny frogmouths that occupy the park will also need to be considered in relation to night flights and the need for a night curfew.*

- *There are also small populations of kangaroo and swamp wallaby and occasional echidnas. Having such a diversity of wildlife close to the Melbourne CBD should be treasured and not put a risk by a private company operating an airport seeking to maximise its profits.*
- *Brimbank Park is the largest park servicing this part of Melbourne - a part of the city that is under resourced in term of such facilities.*

  …
- *In the western part of Melbourne there is a general lack of greenspace, trees and canopy cover, which correlates with poorer general public health, shorter life spans and higher incidences of type 2 diabetes, higher blood pressure and poorer cardiac health. This is widely known and contributes to high Victorian health costs.*

  …
- *The proposed north-south runway and flight frequencies will inevitably reduce people's use of the park, which is very popular with people and so further negatively affect the health and wellbeing of people in this region.*

  …

Many of the above comments can also be applied to Woodlands Hill Historic Park, so I will not repeat them here"

E7.4 M3R MDP References

Most of the subjects categorised within this Theme are addressed in the M3R MDP. The exception is 'plane spotting' – the M3R MDP does not explicitly discuss development or relocation of public viewing/photography locations.

The off-airport ecological and social amenity implications of projected flight paths and noise are detailed primarily in the following MDP chapters:

B5: Ecology

B12: Landscape and Visual

C5: Airspace Hazards and Risks

D3: Health Impact

D4: Social Impact

E7.5 APAM Position

Plane Spotting and Airport Photography

Melbourne Airport acknowledges community appreciation of opportunities to observe and photograph airport activity. Existing informal locations on Sunbury Road and Operations Road are enormously popular with a range of visitors.

There is clearly a particularly dedicated community of aircraft enthusiasts for whom a suitable vantage point for photography is important. These users correctly note that the M3R proposition removes the current Operations Road location and that a replacement has not been provided.

Though not included in the M3R MDP, Melbourne Airport is considering suitable locations for future vantage spots. Early considerations include observation platforms for the construction phase, educational facilities and clear lines of sight for the future manoevuring area and approach/departure flight paths. Upgrades to the Sunbury Rd location are also being evaluated.

Flora and Fauna Effects Beyond Airport

The M3R project has commissioned analysis of off-airport effects for sensitive and important species and maintained close consultation with State and Federal environmental agencies. Melbourne Airport recognises, however, that there are chances of impact that cannot be reasonably anticipated. Chapter B5: Ecology of the M3R MDP contains updated information about these risks.

The airport is responsible for proactively managing birdstrike incident risks and achieves this through a range of measures that accord with the National Airports Safeguarding Framework (NASF) Guideline C. Bird culling off-airport is not part of the current or future wildlife hazard management plans. Issue A7: National Airports Safeguarding Framework (NASF) Guidelines and M3R MDP Chapter C5: Airspace Hazards and Risks discuss the airport's strategies for managing bird hazards in detail.

Parks and Recreational Spaces

The ongoing amenity of public spaces, particularly Brimbank Park and Woodlands Historic Park, has been raised in a small portion of community submissions. Exercise and interaction are central themes of this feedback, within overarching health and social contexts.

Though these submissions apportion community value to parks and recreational spaces, APAM notes that submitters have placed far lower regard to them than residential properties, and only to spaces very close to the airport.

Melbourne Airport asserts that the ongoing amenity of recreational spaces fits within the greater contexts of Issue D1: Health Impacts and D2: Social Impacts and that these should be consulted for the airport's fulsome position.

E7.6 Changes to Preliminary Draft M3R MDP

Some additional content has been incorporated into Draft M3R MDP Chapter B5: Ecology regarding quantifiable impacts of the project upon off-airport ecological communities. See Section B5.5.2.6.

No other changes relating to this Issue are considered necessary within the M3R MDP.

As discussed in Section E7.5, Melbourne Airport is considering changes and upgrades to current and future public observation areas but has not specifically linked this to M3R.

E7.7 Summary and Conclusion

APAM appreciates the popularity of the airport for aviation enthusiasts but also recognises concerns about this project's potential impacts upon ecology and social amenity outside the airport.

The airport uses industry-leading resources to develop ecological studies and plans that strictly adhere to the various applicable regulatory systems. Unknown impact risks are acknowledged and subject to environmental management frameworks that apply harm avoidance and minimisation as core principles.

Potential health and social implications of the project, including amenity of public spaces, are central to this Supplementary Report. These elements are incorporated in Issues D1: Health Impacts and D2: Social Impacts which should also be considered for thorough context.

E8 Off-Airport Road Network Performance and Plans

E8.1 Summary of Issue

A surface transport assessment was undertaken to understand current conditions, as well as the impacts that increased transport activity will have on road performance both within and outside Melbourne Airport's boundary. This includes a consideration of the impacts expected during the construction and operation of Melbourne Airport's Third Runway (M3R) and is outlined in Chapter B8 of the Major Development Plan (MDP).

The surface transport assessment incorporates forecast passenger and employee numbers, as well as future year transport conditions. It was undertaken to determine transport network impacts and identify the improvements required to accommodate the demand associated with M3R. Strategic modelling was completed under both Build (i.e. with a new runway) and No Build (i.e. no new runway) scenarios to understand specific implications for internal and external roads, public transport, and networks for walking and cycling.

The assessment found that the overall difference between the Build and No Build scenarios is generally moderate, with reduced road network performance of between five and 20 per cent based on an analysis of the volume to capacity ratio of external roads. It shows increasing congestion over the years, although this varies depending on location and mode. Without planning for mitigation, impacts on the roads surrounding Melbourne Airport could be greater.

To alleviate the impacts of M3R on surface transport conditions and minimise potential operational challenges, APAM has identified a range of mitigation strategies. This includes a need to support ongoing planning and development of the proposed Melbourne Airport Rail which is to be undertaken separately from this MDP, and its potential to reduce congestion on the road network.

Overview of submissions

The submissions that contain reference to the 'Off-Airport Road Network Performance and Plans' Issue vary in nature, but mostly include concerns raised around traffic and congestion on the existing road network and proposals for alternatives to continue airport expansion. Most of the submissions concerned with traffic generation focus on the operational impacts that might be associated with M3R, but a subset of these emphasise the temporary demands that construction activity is expected to place on surrounding local roads.

Many submissions also highlight public transport as a necessary priority to enhance overall access to Melbourne Airport and balance increasing transport demand with environmental and social outcomes. These tend to focus specifically on the Melbourne Airport Rail project, often suggesting that M3R should not go ahead until a direct train connection is established between Melbourne Airport and the city.

Within these, a number of submissions related to both traffic impacts and public transport request greater detail or justification of the assessment methodology applied. Others include specific comments on the integration of on-site roads within the off-airport network, the potential for improved cycling connections and the need to maintain adequate car parking.

Overall, the submissions under the 'Off-Airport Road Network Performance and Plans' Issue have been reviewed and grouped into the following sub-issues:

- Off-airport road network
- On-airport road network
- Construction traffic

- Public transport
- Cycling access
- Car parking

A description of each sub-issue is provided below, along with an outline of APAM's response to the concerns raised in relevant submissions. The final section details any proposed changes to the Preliminary Draft MDP (pdMDP) based on this review. It is noted that some submissions relate to more than one sub-issue and have been separately considered in relation to each, as relevant.

E8.2 Number and Types of Submissions

258 submissions contain reference to the 'Off-Airport Road Network Performance and Plans' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Maribyrnong City Council, Hume City Council, Brimbank City Council, City of Yarra, Moreland City Council, the Victorian State Government, and Western Health).

E8.3 Discussion of Submissions

E8.3.1 Off-Airport Road Network

Access to Melbourne Airport from the external road network is a strong focus of submissions, which generally express concern over the increase in traffic that they associate with the new runway development. These submissions reference a number of related topics, including the mitigation of impacts, the assessment methodology applied and the role that major road projects play.

[redacted]

Over a third of the submissions that focus on implications for the off-airport road network also suggest that to protect the area surrounding Melbourne Airport from any additional transport demand or congestion alternative locations for airport expansion should be considered. This includes various options, such as expanding Avalon Airport instead or establishing a new airport in Melbourne's south-east.

While most of these submissions are concerned with reducing road traffic in and around Melbourne Airport, others highlight additional benefits that a new airport could offer. For example, one submitter suggests that a new airport absorb some of the demand in the Victorian market.

> *"A new international airfield in Melbourne's south-east, floated by the Victorian government early this decade, should be considered with greater urgency as there should be a better alternative to ease flight congestion."*

Another submitter proposes an alternative airport as a way of reducing travel times for residents in the city's southeast:

> *"As a larger city we would benefit from an additional commercial airport in the South East of Melbourne as current travel to Melbourne Airport is excessive for those who reside in the South East corridor.*

Traffic impacts and mitigation strategies

Around three quarters of the submissions that referenced the off-airport road network (especially those from the community) expressed concerns over the additional traffic that they expect M3R to generate once it is operational. Submitters suggested that forecast increases in passengers and employees travelling to and from Melbourne Airport, as well as the movement of freight trucks, will worsen congestion on surrounding freeways, arterials and local roads, which are understood to be approaching or at capacity already.

Some of these submissions call out specific roads that are subject to congestion within and outside the airport boundary. One submitter notes that:

> *"Over the past few years, with an increasing population, we have also observed much heavier road traffic and "bottlenecks" locally and beyond: Green Gully Rd, Milleara rd, the Tullamarine freeway and the Ring Rd in particular. A third Airport runway, with the associated increase in people movement and freight volume would surely put roads and freeways under enormous pressure!"*

Other notable examples reference Arundel Road, Annandale Road, Keilor Park Drive, Sharps Road, Tullamarine Freeway, Sunbury Road/Bulla Road, Somerton Road, Calder Freeway, Old Calder Highway, Metropolitan Ring Road. Sydney Road, as well as local roads in Keilor Park and Airport West near the Westfield Shopping Centre, were also mentioned.

These submissions generally attribute expected increases in traffic on external roads to the new runway development, with several stressing that current infrastructure is not able to support the proposed airport expansion. In this regard, some submitters recommend that road enhancements should be prioritised before (or at least alongside) ongoing planning for M3R. One of them states:

> "*I don't want 3th runway to build before government help to protect our health and houses to manage noise reduction and traffic problems."*

Submitters raising concerns around traffic also frequently emphasise the environmental impacts associated with car travel, which they also attribute (at least partially) with M3R.

Finally, among the submissions that reference impacts to the off-airport road network, a small amount include comments on the importance of mitigation strategies. Some of these request greater detail on the mitigation measures factored into the traffic impact assessment that was undertaken and documented in the pdMDP. Others request information around what projects are planned by APAM and government stakeholders to alleviate congestion around Melbourne Airport. While expressing support for M3R, one submitter suggests that APAM should work with surrounding councils to identify local road upgrades that may be required:

> *"I feel this is a great thing to happen at Melbourne Airport. I'm concerned about the extra traffic on my local roads heading to the airport. […] Are you consulting with local council about upgrading local roads the lead to the airport."*

This submitter specifically referenced Somerton Road and their concerns were echoed by another submitter who suggested APAM should fund local road improvements, especially for the area south of Melbourne Airport.

Assessment methodology

Other submissions include questions around the modelling approach used to assess the operational traffic impacts associated with M3R. This includes a submission from Brimbank City Council, requesting that the Outer Metropolitan Ring be (at least partially) factored into the transport assessment. Since the project is being delivered in stages, they recommend incorporating some level of connectivity in the transport modelling for the 2031 scenario.

Among the submissions that reference methodology, a few request clarifications on whether the traffic modelling that was undertaken, incorporated relevant population forecasts, especially considering the substantial growth in north-west Melbourne. A couple of others suggest that an assessment of the need for the third runway and any associated traffic impacts should be undertaken independently by a public planning body, instead of APAM itself. As one submitter explains,

> *"Independent traffic modelling for the Melbourne road network [should] be undertaken to ensure the road network can cater for the movement of conservative figure of 29 million international passengers and 47 million domestic passengers by 2042. The modelling is to include the growth projected in Melbourne's population over this time, particularly in the north and western suburbs."*

Finally, one submitter indicates that the severity criteria used to describe the traffic impacts associated with the proposal (e.g. 'negligible', 'minor', etc.) do not adequately reflect the reality or experience of traffic congestion.

Major projects involving external roads

[redacted]

A couple of submissions that reference external major projects emphasise the potential value of a western access point to Melbourne Airport from the Calder Freeway. This includes a submission from Brimbank City Council, which requests that APAM undertake preliminary planning with other key stakeholders to safeguard this opportunity. Another submitter raises concern over the existing congestion on Sunbury Road and proposes a bypass to redirect traffic away from the Bulla township and Bulla Bridge. They argue that these cannot cope with any added demand. [redacted]

One submitter suggests that the CityLink Tulla Widening project is already diverting traffic from elsewhere in Melbourne towards Melbourne Airport and expects this to increase with the impacts of M3R.

E8.3.2 On-Airport Road Network

Two submissions ([redacted] one submitted by a community member) referred to the on-airport road network. These broadly highlight the impact that on-site performance could have on external roads in light of the proposed runway development.

[redacted]

[redacted] to the on-airport road network, suggests that the proposed runway development (and the associated passenger, employee, and freight movements) would generate additional traffic on roads within the airport's boundary.

E8.3.3 Construction Traffic

The impacts of construction vehicle traffic and associated staff movements is a key concern raised in a number of submissions. These focus on local and arterial roads, expressing concerns around a lack of capacity to accommodate additional heavy vehicles associated with M3R construction activity. Some of these submissions highlight specific roads as unsuitable for truck access, while others raise the issue of traffic generation associated with construction workers commuting to the airport site.

Access routes

Overall, almost half of the submissions related to construction traffic express a general concern for increased traffic on local roads because of construction activities. Among these, one submission requested that access routes be identified, and mitigation strategies detailed, given the impact of traffic conditions on local businesses. This submitter asks:

> *"What roads will be utilised during the building phase of the third runway? What considerations have been taken to identify the increase in traffic conditions on local businesses that use the roads?"*

Another notable submission came from Brimbank City Council, which requested that APAM amend the MDP to express a commitment to work with surrounding local governments in managing impacts on local roads.

Traffic impacts

Approximately half of the submissions called out specific roads that are either already congested and/or may be unable to accommodate additional heavy vehicle traffic that would be associated with M3R construction.

Most of these mention the proposed northern access routes, focusing on Sunbury Road and connecting routes. Hume City Council requested further detail around traffic assessment assumptions, arguing that the impacts of construction traffic associated with wider projects in this area should be factored in, along with potential safety implications for Bulla Bridge. They recommend updating the MDP to indicate that construction traffic will avoid the use of Bulla Bridge altogether. They also recommend an updated intersection assessment where Sunbury Road meets Wildwood Road and Oaklands Road, using the revised traffic volume forecasts that were included in the pdMDP.

Among the submissions that raise concerns around the proposed southern access routes, Brimbank City Council highlights that McNabbs Road and Arundel Road, especially the bridge over the Maribyrnong River, are not suitable for heavy-loaded vehicle movements and require APAM to avoid using these during construction. Others emphasise existing congestion levels on the local roads to the south of the airport, especially Annandale Road, as well as:

> *"Keilor Park Drive, Arundel Rd, Sharps Rd [which] are already overwhelmed with traffic to & from the Airport precinct given the scale of the ever expanding non-Airport operations related Industrial Park commercial activity to the south of the airport."*

Construction staff movements

Finally, three submissions identified the impacts of traffic generated by construction workers travelling to and from the site. This needs to be considered separately from the movement of construction vehicles themselves. One submission expresses concern that construction workforce trips will create additional traffic on the local road network. Hume City Council recommends including more detail around this in the MDP. However, relating to construction workforce traffic impacts, SkyBus highlights an opportunity to expand existing airport staff shuttle services to accommodate construction workers and other support staff associated with M3R.

E8.3.4 Public Transport

Public transport is a common topic raised in submissions, with a key focus on Melbourne Airport Rail (MAR). About a third of the submissions related to public transport discuss the timing of M3R relative to this project. Of these, around half express support for both projects, which are seen as complementary, long-awaited investments that will boost Melbourne's economic and social outcomes.

The other half (including a submission from the City of Yarra) express caution around the development of a new runway, suggesting that this should be contingent on the confirmation of a train connection. Many of these explicitly state that a convenient and timely rail service must be established prior (as opposed to after, as current project timelines suggest) to the consideration of any further airport expansion. As one submitter claims:

> *"The development of a third runway should be contingent on the development of a viable, efficient and affordable rail link to the airport."*

[redacted]

[redacted]

The submission suggests that this should be replaced by a more high-level account of the planning and approval process that the project will undergo, and a reiteration of its expected opening year.

Other comments do not mention specific timeframes but emphasise that additional public infrastructure (including rail, road and bus priority projects) is needed to accommodate the increase of transport demand that submitters expect M3R to generate. This includes some suggestions to connect Melbourne Airport to the city via Westfield Shopping Centre and Avalon Airport, while others emphasise the urgency of an airport train connection regardless of the new runway development.

A number of these (including one from Brimbank City Council) highlight the importance of rail infrastructure as a way of encouraging a mode shift among airport users and reducing the environmental impacts and road congestion associated with car travel. They mostly refer to a train link, with one submitter proposing a light rail connection. For example, one submitter explains that:

> *"A third runway will mean traffic congestion to the airport is worse than ever, unless the planned rail link is in operation at the same time."*

These submitters suggest that, to effectively discourage car travel, the rail connection should be frequent, fast and direct, low cost and conveniently connected to all airport terminals. That said, while acknowledging the need for MAR, one submitter noted that the cost associated with this infrastructure represents a substantial economic burden on the community.

[redacted]

From a methodological perspective, Brimbank City Council requests the inclusion of MAR in the transport modelling undertaken for 2031 to reflect the future network more accurately.

E8.3.5 Cycling Access

Two submissions raised the issue of cycling access, one focusing on the assessment of proposed routes and the other requesting that current routes be maintained throughout the construction of M3R. Brimbank City Council specifically requested a:

"more detailed assessment on the delivery of improved cycling connections […] (including along Arundel Road), with a focus on reducing car and bus transport to and from the airport."

The other submission was from a community member, who requested that cyclists be able to enjoy continued, safe access to the public roads surrounding Melbourne Airport. This submitter also mentioned Arundel Road but highlighted a number of others as well – namely, Operations Road, McNabs Road, Annandale Road, Oaklands Road and Sunbury Road.

E8.3.6 Car parking

A few submissions referenced car parking, with some raising concerns over capacity and others taking issue with the current pricing. Considering the volume of car parks available on site, a couple submissions suggested that airport parking has reached capacity. One of these submitters emphasised how the growing passenger and employee forecasts associated with the new runway development would create additional demand for parking that could spill over onto local streets in surrounding suburbs. In terms of cost, one submitter highlighted recent increases in the parking rates applied on-site, while another suggested that existing airport car parks are already overpriced.

E8.4 M3R MDP References

E8.4.1 Off-Airport Road Network

In relation to the submissions suggesting the development of alternative airports, a range of options was considered in Chapter A3 of the MDP. This included the development of a new airport, which is understood to be a long-term possibility (beyond 2050). In combination with the limited infrastructure and growth potential of existing airports, M3R was identified as the most viable option to respond to forecast demand for air travel in Melbourne.

To support the approval process, an assessment has been undertaken to understand the impact of increased transport activity on both the internal and external road networks, incorporating the construction and operational phases of M3R. Section B8 of the MDP outlines the methodology applied in this assessment, discusses the findings, and identifies a range of mitigation measures.

Traffic impacts and mitigation strategies

The impacts of increased transport activity on the road network surrounding Melbourne Airport were first assessed as changes in the volume of traffic between the opening year of M3R (2026), five years after it's opening (2031) and 20 years after it's opening (2046). Traffic flows in the AM and PM peak were measured across 13 traffic reporting sites, as shown in Figure B8.5 of the MDP, under both Build and No Build scenarios.

The findings of the assessment of traffic flow on external roads are presented in Section B8.6.2.2. They reveal some increases in traffic under the Build scenario, which are relatively small in the early years (around 1 per cent for most roads, except Airport Drive). Differences become greater for some roads as passenger numbers grow (up to around 10 per cent increase in road traffic), while Tullamarine Freeway, Sharps Road and Keilor Park Drive show clearer increases in daily traffic (around 15 to 20 per cent). Airport Drive shows the most significant increase (around 80 per cent) in the 2046 scenario.

Forecast traffic flows in each assessment year were then compared to road capacity thresholds at each reporting site to understand external network performance and reflect relative levels of congestion. These performance levels were measured as a Volume to Capacity Ratio (VCR) and

grouped into four categories of road conditions: free flow, stable flow, approaching unstable to unstable flow, and forced flow.

The findings from the assessment of external road performance are detailed in Section B8.6.2.3, including a note that additional capacity is expected on Sunbury Road and Airport Drive over the assessment period. The 2026 analysis shows that there is generally no difference in performance between Build and No Build scenarios, which corresponds with the very minor changes in traffic flow volumes for this year. In the 2031 analysis, no major differences in flow conditions were observed between Build and No Build scenarios (Airport Drive experiences a slight increase but remains free flow or stable). The 2046 analysis shows that the Build scenario would result in some deterioration in performance levels compared to the No Build scenario (an increase of +0.1 to +0.2 in volume to capacity ratio), mostly on the roads closest to Melbourne Airport and especially those near Airport Drive. This includes Tullamarine Freeway, which already experiences unstable flows in the No Build scenario, as well as Sharps Road and Melrose Drive, which would both remain at stable levels. It also includes Keilor Park Drive, though impacts to flows were noted only in the AM southbound and PM northbound directions. Airport drive is also estimated to experience more significant impacts under the Build Scenario but would remain at stable levels (likely to due to the corridor's enhanced capacity).

Overall, the performance assessment suggests that, without mitigation, the impact on external roads will be 'negligible' in 2026, 'minor' adverse in 2031, and up to 'high' adverse in 2046. The MDP notes that the implications of these findings are that M3R would lead to some increases in travel time and delay on roads closest to the airport. The impacts to users on the arterial roads noted above would be generally low, given that the conditions tend to stay in the same performance levels (with just slightly worse conditions). For the Tullamarine Freeway in particular, impacts are likely overstated given the corridor's operation is managed by VicRoads Managed Motorways technology to minimise unstable flow conditions. The assessment also doesn't account for the possible delivery of MAR within the period assessed, the use of ITS, or mitigation measures proposed by APAM.

A range of avoidance, management, and mitigation measures related to M3R that will be targeted towards minimising the effects on external road network performance are outlined in Section B8.7 of the MDP. This includes operational mitigation measures proposed in B8.7.2.3, such as working with the Department of Transport and Planning (DTP) (formerly known as the Department of Transport) to establish a coordinated network of ITS for internal roads that will be integrated with broader traffic management centres, as well as coordinating the delivery of internal road network infrastructure projects that integrate with external enhancements. Key internal projects are detailed in Section B8.2.4.3, with a central short-term priority being the Elevated Roads Project.

These mitigation measures are complemented by ongoing management practices, detailed in Section B8.7.3. These involve regular liaison with DTP and other relevant authorities regarding ground transport arrangements and proposed improvements. Section B8.7.4 highlights monitoring tools that compare actual growth with forecasted estimates and allow for adjustments in airport planning to be made as required. In this way, changing trends can be identified and addressed efficiently and effectively throughout the construction and operation of M3R.

Assessment methodology

The assessment methodology for the MDP is described in Section B8.2.2, including the operational impact assessment, which covers the traffic flow and performance-based assessments of 13 traffic reporting sites within and outside the airport boundary. This was based on strategic modelling outputs from the Victorian Integrated Transport Model (VITM). VITM is a comprehensive multi-modal analytical tool that forecasts Average Annual Weekday Travel (AAWT) for metropolitan

Melbourne and its surrounding areas. Key assumptions of future passenger, employee data and future transport networks informed this modelling.

Section B8.2.4.3 outlines the future year transport network, including internal road works and external major projects, such as the Outer Metropolitan Ring. The timing of this project is noted as being subject to further planning and funding, but it is included in the 2046 VITM reference case. Table B8.4 (see below) summarises the major transport assumptions that were factored into the modelling, indicating that Outer Metropolitan Ring was only included in the 2046 assessment.

To reflect the significance of the findings, Section B8.4 explains how project-specific criteria for severity have been developed for the surface transport assessment related to M3R. Table B8.5 in the MDP (see below) outlines the framework of severity criteria that was applied in this assessment, describing the meaning of each term in detail. For example, a 'negligible' impact describes a reduced performance of less than 1 per cent when compared to the No Build scenario, implying that transport users are unlikely to perceive any impact to the accessibility and amenity of transport infrastructure as a result of the Build scenario.

Year	Runway scenario	Internal projects		External projects			
		Elevated Roads Stages 1 & 2	Other ramp connections to freeway	CTW	OMR	MAL / Bulla Bypass	MAR
2026	Build	✓	×	✓	×	×	×
	No Build	✓	×	✓	×	×	×
2031	Build	✓	✓	✓	×	✓	×
	No Build	✓	✓	✓	×	✓	×
2046	Build	✓	✓	✓	✓	✓	×
	No Build	✓	✓	✓	✓	✓	×

✓ *Project included in this assessment*
× *Project excluded from this assessment*

Table B8.4 Summary of major transport assumptions

Major projects involving external roads

As noted above, Section B8.2.4.3 includes details around future external road network conditions, including a range of proposed major road upgrades. It details how the Bulla Bypass will enable traffic to avoid the Bulla township, which currently experiences congestion on the Sunbury Road corridor, limiting its operational capacity. The MDP notes that while some airport users would benefit from this upgrade, in combination with the additional capacity associated with the Melbourne Airport Link project, the main beneficiaries would be residents of Sunbury and the northern growth corridors.

A number of other projects are also referenced in this section, including the West Gate Tunnel Project, North East Link, Outer Metropolitan Ring and CityLink Tulla Widening project. Each project is described briefly, with relevant implications for accessibility to Melbourne Airport highlighted. Where relevant, key details around the anticipated timeline of these projects are also noted to support their inclusion or exclusion from the transport assessment undertaken.

E8.4.2 On-Airport Road Network

Section B8.2.2 of the MDP details the methodology applied to assess current surface transport conditions, as well as the construction-related and operational impacts of M3R. This includes an

explanation of a microsimulation model of the airport's landside road network, which was developed for internal planning. Based on 2018 traffic conditions (calibrated and validated to DTP standards), it was used for internal road performance in this assessment.

As outlined in Section B8.6.2.4, modelling suggests M3R is not expected to result in negative impacts to the internal road network that would then impact the external road network. Despite the Build scenario resulting in slightly slower average speeds compared to the No Build scenario at M3R opening year (<1km/h) and five years after (<2km/h), queue lengths are estimated to remain within on-site road capacity limits for both Build and No Build scenarios, from opening through to 2046. With traffic volumes increasing by around 30 per cent during this time, the comparatively low reduction in average speed is considered a good reflection of the additional road capacity in the internal road network. The impacts of increased traffic are understood to be mitigated by network improvements associated with the Elevated Roads Project, as well as the proposed widening of Airport Drive in the 2030s, plus other internal road capacity enhancements, as noted in Section B8.2.4.3.

Overall, the MDP, concludes that a 'negligible' impact on the operating conditions of internal roads is expected in 2026, becoming a 'minor' adverse impact in 2031, and 'moderate' adverse impact in 2046. The MDP provides a summary of measures to mitigate the impacts of M3R in Section B8.7.2.3, which includes the potential to utilise ITS to improve the performance of the existing network. This would involve ongoing work with DPT. Section B8.7.2.1 specifically emphasises the importance of coordinated ITS within the airport internal network to assist in managing operational impacts of M3R on external roads. APAM proposes to work with DTP to establish this infrastructure as part of the Elevated Roads Project, and to have it connected to DTP traffic management centres.

The major transport assumptions included in the assessment of network impacts and future requirements associated with the development of M3R are summarised in Table B8.4 (see above). This includes 'other ramp connections to freeway'. These road enhancements are detailed in Section B8.2.4.3, where they are described as "two new north-facing ramp connections with the Tullamarine Freeway (i.e. a northbound on-ramp and an off-ramp for southbound freeway traffic)."

E8.4.3 Construction Traffic

This pdDMP has been prepared to support the assessment and approval process necessary to develop the new runway. The document focuses on defining the scale of impacts to road network performance and key issues for further consideration. Specifically, Chapter B8 includes an assessment of baseline traffic conditions on internal and external roads, and of related impacts associated with the construction and operation of M3R. If the document is approved, further investigation and review of options will be carried out through the Construction Traffic Management Plan (CTMP) process.

The CTMP will be prepared in advance of the construction works, to provide greater clarity on the form and scale of the construction traffic. The document will confirm access arrangements, timeframes, truck route haulage plans, and involve traffic analysis of the access points to the main roads adjacent to the airport site and any other relevant intersections. It will also include management and mitigation measures to minimise the impact of any truck movements to and from the construction site that occur during peak periods.

Access routes

Two proposed access routes for construction activity are identified in Section B8.6.1.2:

- From the north: utilising an access road connecting off Sunbury Road. Options are being considered for access to and from Sunbury Road, and the final arrangement will be subject

to agreement with DPT (likely connections on Sunbury Road at existing roundabouts at either Oaklands Road or Wildwood Road).

- From the south: via either Operations Road or McNabs Road. This would involve travel through the local/collector road network (managed by APAM and Hume City Council respectively) to the arterial network at Sharps Road, Keilor Park Drive and/or the Calder Freeway.

These will be confirmed as part of the CTMP, which will involve more detailed site investigation to identify the need for and extent of any road enhancement works required. As stated in Section B8.6.1.3, this could involve appropriate modifications to intersection configurations along Sunbury Road — at Wildwood Road or Oaklands Road — subject to the approval of DTP. It may also involve widening, pavement strengthening and/or bridge strengthening (and potentially rehabilitation works post-construction) to facilitate southern access to the construction zone, via either Operations Road/South Centre Road or McNabs Road/Arundel Road/Annandale Road (with documentation submitted to Hume City Council, as required).

Traffic impacts

An assessment of the road network impacts is presented in Section B8.6.1.3, with a focus on construction truck traffic generation. This is expected to consist mostly of trucks travelling to/from the site for materials delivery, with associated impacts moderated by a four-year construction timeline and a 12-hour period each day. The assessment of construction traffic impacts was based the operational capacity of proposed routes and a relative comparison of existing traffic flows in peak periods with forecast performance during construction. Overall, it is expected that M3R construction activity would have ‘negligible’ to ‘minor’ adverse impacts on the roads surrounding the construction site.

A preliminary feasibility review for access via Sunbury Road (at the intersection with either Wildwood Road or Oaklands Road) was undertaken for the pdMDP. This shows that the increase in hourly traffic from construction activity is not expected to significantly impact the peak-period operations, since the expected increase is consistent with typical day-to-day fluctuations in traffic flows on the corridor.

For the proposed southern routes, the MDP explains how the addition of construction traffic to local/collector roads, including McNabs Road, Arundel Road, and Annadale Road, could represent notable increases in their daily proportions but overall volumes of traffic remain relatively low. For this reason, no significant impacts to these roads’ operation are expected.

Further investigation and planning for access arrangements, vehicle volumes and their distribution between northern and southern routes, will be detailed in the CTMP. As indicated in Section B8.7.3, the CTMP will require engagement with DTP to confirm the location and format of the construction access arrangements on Sunbury Road. Discussions will also be required with DTP, Hume City Council and Brimbank City Council in relation to southern access route options through the road network. The summary provided in Table B8.19 broadly notes that collaboration with government stakeholders will be pursued to help achieve optimal outcomes for the external road network, while minimising the impacts of truck traffic associated with M3R construction.

Construction staff movements

Section B8.6.1.2 outlines the size of the expected construction workforce and the proposed location of the worksite carpark on Perimeter Road (Figure A5.3) near the northwest of the airport boundary. The workforce will mainly arrive via Sunbury Road, with an estimated 600 workers on the site at peak construction periods, which represents up to 600 arrivals and 600 departures from the construction site each day. Construction workers are expected to mostly travel outside of peak

commuter periods when traffic demands are lower and there is limited-to-no congestion on the surrounding road network (although some overlap may occur between construction shift changeover times and conventional commuter periods).

While different travel behaviours are associated with various airport user groups, employees tend to travel primarily by car. As detailed in Section B8.6.1.2, the construction staff associated with M3R are expected to mostly arrive to site each in their own private vehicle. This section of the MDP notes that the CTMP will finalise access arrangements for construction workers, identify specific shift times and confirm that capacity is available to accommodate the forecasted volume of workforce traffic during M3R construction.

E8.4.4 Public Transport

The MDP includes an assessment of the impacts of M3R on the public transport network. The assessment considered assumptions on the future year public transport network and assessed both demand changes and expected impacts to network performance under Build and No Build scenarios.

Section B8.2.4.3 outlines the MAR project, indicating that it was not included in any modelling for both Build and No Build (i.e. with vs. without M3R) scenarios given the uncertainty surrounding its expected timeline and unconfirmed funding at the time of preparation of the assessment. A summary of the assumptions related to the inclusion and exclusion of relevant road and rail projects in the analysis for 2026 (M3R opening year), 2031, and 2046 is provided in Table B8.4. Section B8.2.4.3 also notes the target completion date for MAR as 2029, while Section B8.2.2 indicates that the anticipated opening date for M3R is 2026. Other references to the timing and funding of MAR are also included in Section D4.6.3.7 and Table E6.4.

Public transport demand for the Build and No Build scenarios was modelled using the VITM and demonstrated that public transport demand would be higher under the Build scenario, particularly in 2046 (refer to section B8.6.2.5). The impact of M3R on public transport operating conditions is expected to be moderate in 2046 without mitigations measures. The MDP notes that the VITM model has some limitations in how it calculates public transport trips at the airport. Therefore, the number of public transport trips and the public transport mode share may be higher than what is produced by the model.

Section B8.5.4.2 and Table B8.9 show a breakdown of 2016-2017 estimates of mode share split for travel to the airport, which are considered to be representative of existing (as in 2019) conditions. This shows that around a quarter of passengers arrive at the airport by bus, coach or other shuttle service (including off-airport parking). That said, as outlined in Section B8.7.2.2, MAR is expected to help reduce reliance on the road network, including private car travel, which would reduce congestion levels (and mitigate associated carbon emissions).

A tentative alignment and station location for MAR is shown in Figure A3.9, along with the future ‘potential rail’ to the Western Sub-Precinct.

Section D2.4.2 outlines the policy context around M3R, as it relates to Infrastructure Victoria.

E8.4.5 Cycling Access

The existing conditions of the active travel network that offers access to Melbourne Airport are outlined in Section B8.5.3, while the current bicycle network is shown in Figure B8.8. This map builds on the DTP Strategic Cycling Corridors to identify significant gaps and network enhancement opportunities both within and outside the airport’s boundary.

New routes are proposed for Oaklands Road and Sunbury Road, which would connect the Moonee Ponds Creek Trail to the north of the airport with existing on-site routes along Airport Drive and Melrose Drive. No additional cycling infrastructure is proposed for Operations Road, McNabs Road, Arundel Road, or Annandale Road. As detailed in in Section B8.6.1.2, these are all identified as possible southern access routes for construction activity associated with M3R (to be confirmed as part of the CTMP).

Further, no reference is made to the background assessment of cycling connections that has informed the proposed network enhancements shown in Figure B8.8 of the MDP.

E8.4.6 Car parking

While no section of the MDP is dedicated to car parking matters specifically, one of the main objectives of the Elevated Roads Project is to enhance both the safety, function and accessibility of airport parking areas. This project is outlined in Section B8.2.4.3 of the MDP, which highlights the internal and external projects that are expected to shape Melbourne Airport's future transport network. The Elevated Roads Project is a key priority for the airport's internal road network, and proposes a continuous, grade-separated road link from the Tullamarine Freeway to Terminal 4 and the Terminal 1/2/3 multi-storey car park. It will also involve increased capacity and accessibility of drop-off and pick-up zones.

E8.5 APAM Position

E8.5.1 Off-Airport Road Network

Traffic impacts and mitigation strategies

Traffic modelling indicates that the difference between the Build and No Build scenarios is generally 'moderate', indicating a reduced road network performance of between 5 and 20 per cent based on an analysis of the volume to capacity ratio of external roads. This assessment included many of the key corridors raised as concerns in submissions, with notable exceptions being Arundel Road and Annandale Road. These roads were not included in the 13 traffic reporting sites that informed the strategic transport assessment. However, no significant operational impacts are expected for M3R since these roads will only be used during the construction phase of the project. Further, as detailed in the response to submissions related to construction traffic, construction access from the south of the airport will largely be supported via Operations Road instead, unless under special circumstances.

While flow conditions are expected to worsen over time, this varies across the network and does not account for some key mitigation measures, including the role of ITS. Given the uncertainty around the timeline and funding for MAR at the time the assessment was undertaken, the impact that this could have on transport demand and accessibility to Melbourne Airport was not factored into the assessment either. It is expected that a rail link to Melbourne Airport will enhance the capacity for access to the airport and possibly alleviate any operational challenges associated with M3R.

APAM is committed to further developing the on-site network to streamline traffic and suit forecasted passenger volumes, as needed, and is supportive of the delivery of external projects to further enhance overall accessibility. Relevant projects have been outlined in the MDP and factored into the transport assessment as appropriate. Additional detail regarding network planning and proposed improvements is more relevant to, and has been documented in, the Melbourne Airport Master Plan 2022. While APAM will seek to minimise impacts to roads surrounding Melbourne Airport, the delivery of external local road upgrades is not within the scope of its responsibility.

Assessment methodology

Since there is limited information around the staging of the Outer Metropolitan Ring, and it is only included in the 2046 VITM reference case, this same assumption was applied to the transport assessment in the MDP. APAM holds that it's partial inclusion in the 2031 scenario would not realistically or significantly change the conclusion that M3R is generally expected to have a 'moderate' impact on the performance of external roads.

Similarly, while APAM is not responsible for planning around and accommodating the implications of population growth, demographic forecasts are featured in the VITM. As such, population growth features as a background assumption in the strategic transport modelling that was undertaken by APAM to adequately reflect the anticipated impact of M3R.

To assist in interpreting findings, the definition and use of appropriate severity criteria is common practice in transport modelling. This allows for the description of their significance and facilitates the comparison of results.

Major projects involving external roads

Relevant implications of major road projects involving the external network are detailed in the MDP and incorporated into the strategic transport modelling that was undertaken for M3R. This includes details on the West Gate Tunnel Project and the North East Link, which will both enhance the accessibility to and from Melbourne's north. The development and delivery of external network interventions are the responsibility of the Victorian Government. APAM is supportive of the strategic, timely delivery of these enhancements and the value they contribute to streamlining accessibility for Melbourne Airport and surrounding areas. This also applies to the Bulla Bypass and Melbourne Airport Link. APAM will continue to work closely with DTP and associated delivery authorities to ensure that the planning for these projects incorporates the needs of airport users.

The potential for future accessibility from the western side of Melbourne Airport was addressed as part of the Melbourne Airport Master Plan 2022. It is not relevant to this MDP since the timing of any development in this area is not expected in the short term. However, should this be considered further, it would be subject to targeted investigation and consultation, including engagement with surrounding local government councils.

Relevant sections will be amended throughout the MDP to ensure that information around the timing, funding and delivery authorities of major road projects is accurate and at the level of detail required to provide sufficient context for the surface transport assessment undertaken.

E8.5.2 On-Airport Road Network

APAM recognises the need to develop the existing on-site road network to maintain efficient access and leverage ongoing enhancements to external roads. The Elevated Roads Project is central to providing this response by adding critical capacity to and from the Tullamarine Freeway, streamlining the flow of traffic through the site while also expanding pick-up and drop-off zones. This project forms part of the strategic response to the airport's forecast growth over the next 20 years, as documented in the Melbourne Airport Master Plan 2022. Importantly, in the medium to long term, MAR is also expected to become operational, introducing mass transit to Melbourne Airport, which in combination with the enhanced road network, will help respond to growth and mitigate traffic impacts.

The potential for intelligent transport systems to enhance the operation, resilience and safety of the internal road network is also strongly supported by APAM, who will develop the network to integrate with DTP's Managed Motorways system. APAM proposes to continue working with the Victorian Government to establish this technology, including considering the activation of Melbourne Drive ramp metering at an appropriate future point in time.

E8.5.3 Construction Traffic

Chapter B8 of the MDP outlines the potential impacts of M3R on baseline transport conditions in the area, based on a comparison of Build and No Build scenarios. This includes an account of construction activity and the assessment of temporary demands on the external network, as well as mitigation measures to address any adverse impacts.

This includes the development of a CTMP. The CTMP will ensure that selected routes offer safe, efficient access to the construction site and that any impacts to the external network are managed appropriately. APAM is currently engaging with DTP to investigate and finalise a construction access from the north of Melbourne Airport.

Access routes

The construction impact assessment in Section B8.6.1 of the MDP identifies proposed access routes, highlighting diverse options to assess further and finalise through the CTMP process. Since the pdMDP was drafted, some changes have been made to the construction activity access plan.

At this stage, Arundel Road or McNabs Road are no longer intended to provide southern access to the construction site (unless under special circumstances). APAM recognises the potential limitations and impacts to these roads that may be associated with M3R construction and the related heavy vehicle movements. Should these routes be needed, opportunities to avoid, protect or mitigate the impact will be further explored and documented in the CTMP. As part of this, priority will also be given to maintaining safety for all road users.

Should the MDP be approved, a CTMP, including a more detailed assessment of traffic impacts, will be developed and submitted to the relevant responsible authorities. As required, this may include traffic modelling of key routes, such as Sunbury Road, to inform the selection of intersection access points and identification of potential upgrade requirements. APAM is currently working closely with DTP to identify a suitable access point from Sunbury Road, with an approval process underway. The aim is to determine any road upgrades or other mitigation measures that are needed to secure safe and convenient site access from the north, with minimal impact on road network performance.

Any further assessment and detail falls outside the scope of the MDP and relies on input from an appointed construction contractor relating to the preferred construction methodology. Information such as detailed construction works, project timelines, access arrangements, shift times and the

scale of traffic have not yet been determined. These details will only be available once detailed construction planning is undertaken and a construction program is finalised.

Similarly, any impacts from construction traffic related to wider projects in the area are not within APAM's scope or control and are not included in any transport assessment for this project.

Traffic impacts

Based on the preliminary assessments outlined in the pdMDP, APAM holds that construction activities associated with M3R are expected to have a 'negligible' to 'minor' impact on surrounding local roads. Traffic modelling undertaken to date has assessed the impact of vehicles generated by construction activities, including construction workforce trips to understand what mitigation measures are needed as a result of M3R. Possible impacts to the external network are understood to be mitigated by the distribution of construction movements between northern and southern access routes, the length of construction, proposed 12-hour period each day, and the expectation that most staff movements will occur outside peak commute times. That said, construction access will be investigated further and documented in the CTMP, which will also outline clear mitigation measures. These strategies will aim to ensure an efficient construction process that succeeds in accommodating the associated truck movements while minimising impacts to the local road network and its users.

Construction staff movements

Finally, construction staff movements will also be included in the assessment of construction traffic impacts as part of the CTMP. APAM is committed to pursuing a multi-modal transport strategy and supports a shift away from private vehicle travel towards more sustainable modes. However, the current reliance of airport workers on cars could present a barrier to this. It is APAM's view that any opportunity to implement a dedicated public or private transport service is at a level of detail that is beyond the scope of the MDP. That said, such a service could offer important traffic mitigation benefits to support the operation of the on-site road network and surrounding local roads. The potential value and feasibility of these opportunities will be investigated, as relevant, in future stages of the M3R approvals and construction process.

E8.5.4 Public Transport

MAR was excluded from the transport modelling in the MDP due to the uncertainty around the timing of the project at the time of the assessment. Should the train connection be operational sooner than expected (or any time before M3R), this would likely enhance transport connections by offering airport users greater choice to access the airport. In practical terms, the current assessment — excluding MAR — represents a more onerous condition for road traffic generation impacts. The eventual introduction of a train connection will only improve the situation.

Regarding comments around the timing of MAR relative to M3R, the need for the runway and extra capacity at Melbourne Airport is a response to forecast air travel demand increases. The Melbourne Airport Master Plan 2022 (Part B7) outlines the forecast growth in passenger numbers which is underpinned by future expected trends in the global aviation industry. The M3R project aims to ensure that Melbourne Airport can respond to the forecast passenger demands and meet the expectations of passengers for their benefit.

The M3R and MAR projects are separately assessed and needed/valued independently from one another. MAR is currently being developed by the Victorian Government, with APAM providing advice and requirements for works within the airport boundary. APAM is strongly supportive of MAR and will prepare a Major Development Plan for works on the airport site for the Commonwealth Government to consider as part of the development of the project.

The design outcome and operation of the future Melbourne Airport Station associated with this project is still being developed with the Victorian Government, including the connectivity to the terminals and station, and required infrastructure for the anticipated rail operations. Current representations of MAR within the MDP, including the alignment path across airport land are at a scale that accommodates various design solutions and reflects the overarching intent of Melbourne Airport Master Plan 2022 to safeguard long-term strategic objectives. The final design and configuration of the rail line and station is the responsibility of the Victorian Government, but APAM advocates for a service offering world-class facilities that maximise user uptake and the overall benefits of this investment.

Relevant sections will be amended throughout the MDP to ensure that information around the timing, funding and delivery authorities of MAR is accurate and at the level of detail required to provide sufficient context for the surface transport assessment undertaken.

It is noted that the reference to a ‘rail line’ to connect to the airport midfield and Western Sub-Precinct is a potential alignment for long-term safeguarding purposes that was also included in the Melbourne Airport Master Plan 2022. This type of arrangement is commonplace at many airports around the world where connection of separate precincts is provided. The exact form of this transit and the specific alignment is to be confirmed at an appropriate point in the future, when development of the precinct is being planned.

E8.5.5 Cycling Access

APAM is supportive of enhancements to the cycling network and associated facilities given the role that these can play in diversifying transport choice, reducing congestion, improving community health and reducing the environmental impact of travel. As highlighted in both the Master Plan 2022 and MDP, APAM endorses the DTP network of Strategic Cycling Corridors and is committed to working with state and local government agencies to safeguard these. The additional routes proposed in the MDP seek to fill gaps in existing corridors both on- and off-site and represent possible strategic opportunities to investigate over the long-term. No further detail around this assessment is required in this MDP since overall network design will likely be influenced by planning decisions beyond APAM’s direct control.

APAM is also committed to exploring the potential for incremental enhancements of the cycling network as part of other major transport investments. For example, APAM is working with the State Government to provide a Shared User Path (SUP) cycling route as part of the MAR project, connecting to Airport Drive and following the viaduct to the station in the terminal precinct.

While APAM recognises the recreational value of roads used for cycling to the southeast of the airport, the specific routes highlighted in submissions are outside the airport boundary. That said, McNabs Road, Arundel Road, and Annandale Road are no longer intended for use during construction (unless under special circumstances), reducing the likelihood and scale of any impacts to existing bicycle riding activity on these roads. Given both the challenges and opportunities involved with establishing a safe, convenient bicycle network, APAM will support state and local government agencies to identify the feasibility of connectivity improvements beyond the Strategic Cycling Corridors that provide strategic links to or through the airport.

E8.5.6 Car parking

The focus of this MDP is on accommodating air travel demand. Additional details on other facilities, including car parking arrangements and their associated fee structure, are not within its scope. Car parking requirements are addressed in the Melbourne Airport Master Plan 2022, which seeks to respond to forecast growth in transport demand and retain car travel as a viable access option. It specifically outlines an overarching strategy for the management of internal roads and associated parking capacity requirements.

This strategy is underpinned by the Elevated Roads Project. The internal road network improvements associated with this project will enhance the convenience of public pick-up and drop-off zones, prioritising these as convenient options for accessing the airport. Beyond this, the proposed increase in short-stay parking capacity will help maintain a diversity of transport choices for people travelling by car.

The capacity, maintenance, and enforcement of on street parking outside the airport's boundary is the responsibility of local governments.

E8.6 Changes to Preliminary Draft M3R MDP

E8.6.1 Off-Airport Road Network

[redacted]

E8.6.2 On-Airport Road Network

[redacted]

Replaced 'other ramp connections to the freeway' heading with 'north-facing ramps connecting to the freeway' in Table B8.4.

E8.6.3 Construction Traffic

Amend Sections B8.6.1.2 and B8.6.1.3 of the MDP to reflect recent updates to proposed construction access routes, as detailed below.

- Included additional text to indicate that the proposed southern access route via McNabs Road/Arundel Road/Annandale Road is no longer intended for use during construction (except under special circumstances). Retain information around the mitigation of impacts to road surface and possible strengthening/rehabilitation works to be investigated under CTMP, as required.
- Included additional detail around the ongoing approvals process for a new roundabout on the Sunbury Road corridor that would offer access from the north of the airport site. This

should highlight that APAM is working closely with DTP to determine the nature and extent of any mitigation works or measures needed.

No other changes are proposed to the sections of the MDP that address construction traffic. Proposed access options, along with expected construction timeframes, workforce details, and construction activity levels, have all been outlined. Preliminary assessments around traffic generation have also been conducted and included in the MDP, including an account of construction staff movements. Any further investigation into the viability of proposed routes and final selection of access points, falls within the scope of, and will be documented as part of, the CTMP.

E8.6.4 Public Transport

[redacted]

[redacted]

[redacted]

E8.6.5 Cycling Access

No changes to the MDP are proposed. Any further detail on the assessment that informed APAM's proposal of new cycling routes is not required. The opportunities that were highlighted in the pdMDP build on DTP's endorsed network of Strategic Cycling Corridors and draws on a broader long-term planning strategy that was addressed in the Melbourne Airport Master Plan 2022.

E8.6.6 Car parking

No changes to the MDP are proposed. The concerns raised in submissions that referenced car parking are more relevant to, and have been addressed in, the Melbourne Airport Master Plan 2022.

E8.7 Summary and Conclusion

The M3R MDP provides an account of baseline transport conditions and anticipated network impacts associated with the proposal. Its purpose is to support the required approval process and facilitate the identification of network requirements needed to accommodate the transport demand associated with the new runway.

A total of 258 submissions that reference 'Off-Airport Road Network Performance and Plans' were received. These cover a range of related sub-issues, including external and internal roads, construction impacts, public transport and cycling access, car parking, as well as some technical comments around wording and maps.

These submissions generally emphasise the additional traffic that they expect M3R to generate, with many suggesting that major road and/or rail upgrades are required to support this and should be developed alongside the proposed airport expansion. A number of submitters recommended accommodating airport growth at an alternative location instead. Some also express concerns with the impacts of construction activity and caution against the use of certain roads that they identify as unsuitable for heavy vehicle traffic. Finally, a few submitters raised issues related to the assessment methodology and the cost and capacity of current parking facilities, while others called attention to the need to maintain cycling access on the roads surrounding Melbourne Airport. The Victorian Government made a number of requests to edit the wording and content of maps relating to external projects.

The sub-Issues raised have been carefully considered and have informed a series of recommended changes to Melbourne Airport's Third Runway (Preliminary Draft) Major Development Plan. This includes updates to reflect revised construction access routes and provide more context around the process and content that will be covered in the development of a Construction Traffic Management Plan. [redacted]

By incorporating the recommended changes, it is considered that this MDP addresses the concerns raised by submitters in line with the purpose of understanding transport impacts and identifying network requirements associated with M3R. Where additional information or action has been requested, these have been appropriately addressed in the Melbourne Airport Master Plan 2022 or are subject to independent development and approval processes. This includes a forthcoming CTMP, which will be undertaken in advance of any construction works.

5.5.3 Theme Summary And Conclusion

APAM explicitly recognises and is cognisant of the potential community impacts, particularly including the health and social impacts, the M3R project may have - these were documented in the relevant MDP chapters.

The analysis of this theme, and the associated issues, has demonstrated that APAM has properly and fully considered the potential community impacts of M3R.

There is no doubt that the changes in the pattern and amount of aircraft noise from M3R will have both beneficial and detrimental effects on people living in many parts of Melbourne and surrounds. It is also clear that across the community, there will be more residents will face an increase in noise than those seeing a reduction. There will be other impacts.

For example, the surface transport assessment found that the overall difference between the Build and No Build scenarios is generally moderate, with reduced road network performance of between five and 20 per cent. It shows increasing congestion over the years, although this varies depending on location and mode.

However, the assessment of the issues demonstrates that the impacts of M3R can be adequately mitigated, and that any residual impacts are considered justifiable having regard to the social and economic benefits of the project to Melbourne, Victoria and Australia.

It is particularly noted in the M3R health impact assessment that economic activity and associated employment opportunities are a key determinant of health, and that the project will generate beneficial local employment opportunities through construction and operation. The economic benefit from the project is recognised by the community, government and private sector.

APAM notes the Australian Government’s commitment to an Aviation White Paper and has advocated that the scope should include an investigation into appropriate measures to manage aircraft at Australian airports. In particular, APAM’s position is that any scheme for compensation should be nationally consistent. The forthcoming Aviation White Paper would be a suitable avenue for addressing a national framework for treatment of noise impacts in communities and associated issues.

5.6 Theme F: Environmental Impacts

5.6.1 Overview of Theme

This Theme relates to the environmental aspects, impacts and risks associated with the proposed M3R development. APAM acknowledges the M3R development will result in large scale removal of native vegetation, disturbance of PFAS contaminated material, and will significantly alter areas within the airport estate which have previously not been developed.

To inform this chapter extensive investigations were competed with regard to contamination (soil and water), surface water, ecology, Indigenous and European heritage, air quality and greenhouse gas emissions. As a result of these investigations the majority of identified risks have been assigned an impact risk rating of medium or lower after the implementation of the mitigation measures proposed in the MDP. The MDP chapters go into further detail regarding proposed mitigation measures and impact assessments.

The investigations and assessment presented in the MDP were completed in accordance with all relevant legislative requirements. For environmental impacts realised on Commonwealth airport land, the principal pieces of environmental legislation are the *Environment Protection and Biodiversity Conservation Act 1999,* the *Airports Act 1996* and associated *Airports (Environment Protection) Regulations 1997*. Where environmental impacts may be realised off-airport, these impacts were assessed in accordance with relevant Victorian legislation, as required.

Based on the submissions received as part of public exhibition APAM considers that the information provided in the MDP appropriately classifies and addresses the potential environmental impacts of the M3R development. Many of the submissions were addressed by information already included in the pdMDP. Where changes have been made in the draft MDP, these are considered minor and are related to the provision of additional detail for context and does not change the outcome of any impact assessments.

Submissions received relating to environmental impacts were received from a range of sources including Government (local and State), private organisations, community organisations and community members. The environmental impact themes which received the majority of submissions were F6 Air Quality and F7 Airport Contribution to Climate Change.

The ‘Environmental Impacts’ Theme was raised in 639 submissions.

The following Issues are considered within the ‘Environmental Impacts’ Theme:

F1: The Airport Site (inc. Contamination)

This issue deals with submissions that generally relate to PFAS contamination on-airport and the potential for PFAS contamination to migrate off-airport via groundwater during M3R construction and operations. This also addresses submissions relating to the management of PFAS contaminated soils generated during construction and how these will be managed.

F2: Waterways

This issue address submissions relating to potential impacts to waterways from M3R construction and operation, in particular to the Maribyrnong River. Majority of submissions were related to the impacts PFAS contaminated surface water will have downstream of the airport on both ecological and human receptors. A number of submissions raised concerns regarding the proposed impacts to Arundel Creek as a result of M3R.

F3: Ecology (On-Airport)

This issue deals with submissions related to the impacts of the M3R development on flora and fauna species on-airport, and in particular protected species and ecological communities. It also addresses concerns raised regarding reduced landscape connectivity as a result of the M3R development.

F4: Indigenous Cultural Heritage

This issue addresses submissions that expressed concern about changes to Indigenous cultural heritage sites as a result of M3R construction. It also addresses submissions which queried potential impacts to offsite heritage sites as a result of M3R operation.

F5: European Heritage

This issue addresses submissions that expressed concern about changes to European cultural heritage sites as a result of M3R construction. It also addresses submissions which queried potential impacts to offsite heritage sites as a result of M3R operation.

F6: Air Quality

This issue deals with submissions that expressed concern surrounding the potential for decreased air quality as a result of M3R construction and operation. A number of submissions also queried whether the MDP adequately addressed Victorian legislation which had been updated after the development of the pdMDP.

F7: Airport Contribution to Climate Change (inc. Greenhouse Gas Emissions)

This issue addresses submissions which outlined objections to the M3R development due to the increased greenhouse gas emissions that would result from M3R and the resulting contribution to climate change. The majority of these submissions were related to emissions associated with M3R operation and increased flight movements, rather than the construction of M3R.

F8: EPBC Act and Offset Management Strategy

This issue deals with submissions which related to Commonwealth offset policies under the *Environment Protection and Biodiversity Conservation Act 1999* and how Melbourne Airport will meet these requirements. These policies will be adhered to by Melbourne Airport due to the proposed large-scale and significant removal of native vegetation as a result of the M3R development.

5.6.2 APAM Response to Issues

This section of the Supplementary Report addresses the Issues grouped into the ‘Environmental Impacts’ Theme. This section:

- Summarises each Issue in the context of Melbourne Airport and the M3R project
- Describes the prevalence of the Issue in the context of the M3R public exhibition – how often it was raised, by who and with what sentiment
- Explains if/how the M3R MDP addressed the issue in its Preliminary Draft version
- Details how APAM has considered submissions that raise each Issue – this consideration includes explanation of APAM’s response/position where balances between impacts and benefits must be sought

- Where public consultation has influenced change/update to the Preliminary Draft version of the M3R MDP, those changes are explained.

F1 The Airport Site

F1.1 Summary of Issue

Several submissions related to the airport site, specifically soil and groundwater impacts in and around the airport. The submissions included questions about PFAS and its management during M3R, potential leaching from soils into the groundwater table, and potential offsite migration into receiving waterways. They covered what processes the Commonwealth has to handle PFAS contaminated soils and request more detail on plans to manage PFAS contaminated soils and other pollutants.

The Hume City Council submission requests further detail about potential disposal of contaminated soil and preference for it to stay on site.

Other matters raised by submitters, including the Victorian Government, pose questions about the application of the new Environment Protection Act, other regulations and independent review of management plans.

F1.2 Number and Types of Submissions

161 submissions contain reference to the 'Airport Site' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Hume City Council, Brimbank City Council and Victorian State Government)

F1.3 Discussion of Submissions

Several submissions relate to the airport site, specifically soil and groundwater impacts in and around the airport. The submissions included questions about PFAS and its environmental impact due to construction of M3R, potential leaching from soils into the groundwater table, and potential offsite migration into receiving waterways. They also cover processes the Commonwealth has to handle PFAS contaminated soils and request more detail on plans to manage PFAS contaminated soils and other pollutants.

In relation to contamination (including PFAS), several submissions from community members state that:

> *"Other sources of pollution arise from the production of waste and ground water pollution."*
>
> *"Commonwealth has not established a safe process for managing PFAS contaminated soils — handling it, storing it and rendering it safe."*
>
> *"What are the precautions taken in movement and storage of PFAS contaminated material that ensures people, waterways and animals are protected?"*
>
> *"The M3R MDP does not detail where the contaminated soil is to go.'*
>
> *"The PFAS contamination resulted from failing to manage and oversight of known sources of toxic substances; it should remain the property of the Commonwealth on airport land."*

The Flight Free Australia submission included the statements below regarding PFAS management:

> *"The MDP provides no information to the public, particularly to those communities around the airport, on the impacts of the works to remove the PFAS contaminated soil — not the number, frequency or hours that trucks will be active."*
>
> *"Melbourne Airport must develop management processes for PFAS before any MDP has been approved."*

Brimbank City Council state they are "supportive of the principles proposed to manage contamination, however specific management measures of the poly-fluoroakyl substances (PFAS) are yet to be confirmed… Council recommends that the draft PFAS strategy is given to the relevant PCG and relevant stakeholders for comment, prior to any approval.".

Melbourne Airport Community Action Group (MACAG) and Melbourne Airport Community Aviation Consultation Group (CACG) had questions about legacy PFAS contamination and the potential for migration offsite including:

> *"Had the PFAS not escaped its estate, would its presence have any impact on the MR3 MDP?"*
>
> *"What is MA doing about legacy PFAS issues that still need to be resolved? Will the PFASMS be a public document? And what will be the reporting framework for this aspect of the project?"*
>
> *"The MR3 Major Development Plan states management processes for PFAS will have to be developed during the runway construction. We cannot have a repeat of the contaminated soil debacle occurring at the Westgate tunnel project which has resulted in contaminated soil going to Victorian landfill, near our community."*
>
> *"Table B3.8 reveals approx. 8 million Tonnes of PFAS contaminated soil could be reused – risk of PFAS migration is high. Loss of containment would impact the surrounds and Keilor as well as risk the agricultural operators to the north of Keilor."*

The Hume City Council submission states concern about the proposed placement of large amounts of potentially contaminated fill (due to potential presence of PFAS) within the headwaters of Arundel Creek. They also request further detail about potential disposal of contaminated soil. They state, "It is preferable that soil (potentially contaminated with PFAS) stays on site and supports the reuse of soil generated by on-site works as fill on site."

Regarding imported fill, Hume City Council state the following:

> *"Imported fill is carefully sourced … MDP should detail standards for the quality of imported fill that would be sourced for onsite works."*
>
> *"The MDP should be updated to specify that Council will be included in discussions for identifying appropriate fill disposal sites outside of the Airport."*

The submission from Airservices asks about the following in relation to PFAS:

> *"The Former Fire Training Ground (FFTG) is not an area associated with Airservices but an area of Commonwealth land that APAM has responsibility for."*
>
> *"Figure B3.8 Concentration map of PFOS+PFHxS total concentrations in soil (near surface). Although this title indicates surface soil only, the use of the Figure in the text*

could be interpreted to mean this is sufficient to identify source areas and to assess their significance, which is not the case for historic sites of contamination."

"B4.6.8.5 Existing water quality conditions... We do not consider the referenced content is correct, as it appears to be biased towards the investigations of fire training ground. However the conclusion relates to the airport in general. Airservices requests this section to be reviewed to accurately reflect the outcomes that are attributed to fire fighting foam, versus other airport sites based on actual sampling and investigation results. We would also like to clarify if the PFOS is the predominant compounds of concern, if or PFOA and other compounds need to be considered."

[redacted]

Some submissions expressed concern about the potential ecological and human health impacts from land contamination migrating offsite via waterways. Airport operations which potentially cause contaminants to migrate offsite and/or affect surrounding suburbs is discussed in the Waterways issue (Issue F2) and the Public Space Amenity and Ecology (off-airport) issue (Issue E7). Other matters raised enquired about contamination relating to construction aspects. These are addressed in the Construction issue (Issue B6).

F1.4 M3R MDP References

Chapter B3 of the MDP addresses soils, groundwater and waste. It considers the potential of M3R to impact, and be impacted by, the condition of soil and groundwater and the potential generation of waste during construction and operation of M3R. It includes discussion around the following concerns raised by submitters:

- The development of a PFAS Management Strategy to address all aspects of PFAS management on site.

- Appropriate mitigation and monitoring measures for soil and groundwater during the construction of M3R.
- The likely sources of waste generated through the construction and operation of M3R and measures to limit the environmental impacts of the waste.

F1.5 APAM Position

PFAS and its impacts associated with the proposed third runway are addressed in detail in the M3R MDP. In response to the submissions regarding the management and movement of PFAS contaminated soil, and requests for specific management controls to be documented, APAM confirms that a PFAS Management Strategy is being developed in accordance with the PFAS NEMP as part of detailed design. The Strategy is being developed specifically for M3R and will be approved by the Commonwealth Government prior to construction commencing.

Regarding the community submissions, along with MACAG and CACG that ask about the management, storage and reuse of PFAS impacted soil; this is being assessed as part of the design process and any reuse of PFAS impacted soil will be subject to Commonwealth approval of the M3R PFAS Management Strategy. The overarching project objective for the PFAS Management Strategy is to "manage PFAS impacts as part of the M3R Project, whilst achieving an improved environmental outcome, meeting regulatory requirements and retaining the confidence of the community".

As surface water is identified as the primary pathway for PFAS discharge off the estate, reuse of PFAS impacted soil during the project, and in the headwaters of Arundel Creek, will include consideration of surface water impacts, the current off-site conditions and risk profile to ensure that the project has a negligible impact off-site. In response to Flight Free Australia’s statement about providing information to the community about truck movements; estimates are available in the Chapter B8 Table B8.11 of the MDP.

APAM acknowledges Hume City Council’s statement “imported fill is carefully sourced” and note that Chapter B3 Section B3.7.3 of the MDP addresses mitigation and management procedures for contaminated wastes. The soil property requirements for any imported fill as part of project works needs to meet both the geotechnical specifications which includes consideration of soil properties such as erodibility as well as EPA Victoria's requirements for assessment and management of Fill Material, and the soil pollutant thresholds of the *Airports (Environment Protection) Regulations 1997*. As part of any assessment of imported fill, it must be demonstrated to not present a risk to the receiving site and the environment which is identified in the management/ mitigation measures for "Importation of Fill" in Table B3.7 Impact Assessment. Any offsite waste transport and disposal would fall under Victorian legislation. Chapter B3 Section B3.7.3 addresses mitigation and management procedures for contaminated wastes.

In response to Airservices submission, Figure B3.8 presents primary and secondary source areas as discussed in Section B3.5.5.1 overlain over the heatmap of PFAS impacts in near surface soil and is provided for context purposes only. There is no statement in the MDP chapter that surface impacts are sufficient to identify source areas or their significance. Table B3.3 states that vertical delineation in key project areas and historic source areas has been undertaken.

Regarding Airservices comments about B4.6.8.5, these statements consider the contamination profile observed in soil, surface water and groundwater data across the entire estate. The presence and occurrence of PFOA is acknowledged in Table B3.3, noting it is in areas where very high concentrations of PFOS and PFHxS (generally above 50mg/kg) are observed in primary source zone areas where there has been historical use of PFAS-containing firefighting foams. It is not considered a key risk driver in the context of the entire estate and off-estate receiving environment which is supported by both the data collected to date and subsequent risk assessments

undertaken as part of estate-wide management and development of the site-wide Melbourne Airport PFAS Management Framework (March 2022).

In relation to submissions requesting the review of management plans, [redacted]t, APAM confirms that the PFAS Management Strategy will be approved by the Commonwealth Government prior to the M3R project commencing, per applicable regulations. APAM will continue to engage with EPA Victoria as relevant.

[redacted]

- [redacted]
- [redacted]
- [redacted]
- [redacted]

Submissions related to PFAS and surface water management are discussed in the Waterways issue (Issue F2).

F1.6 Changes to Preliminary Draft M3R MDP

Figure B3.7 and Table B3.3 have been updated to reflect additional locations that have been assessed since the development of the pdMDP.

Figure B3.9 has been amended to rectify errors within in the call out boxes.

References to the PFAS National Environmental Management Plan (NEMP) have been updated throughout Chapter B3 to incorporate future updated versions.

Section B.3.3.1.1 has been updated to provide further clarity on the application of the assessment criteria.

In response to Airservices submission stating, “The Former Fire Training Ground (FTG) is not an area associated with Airservices but an area of Commonwealth land that APAM has responsibility for.”, wording in Chapter B3 regarding FTG has been revised to acknowledge predecessor use and history.

F1.7 Summary and Conclusion

APAM have read and reviewed all submissions relevant to the Airport Site, as they relate to soils, groundwater and waste. Most of the submissions related to this theme raised concerns specifically around PFAS contamination soils, their reuse and potential impacts on the environment during and post-construction. Chapter B3 of the MDP includes detail regarding areas of contaminated soil and groundwater within the M3R footprint, and the proposed management measures to be implemented as part of M3R.

Further to this, APAM confirms that a PFAS Management Strategy will be developed for M3R in accordance with the PFAS NEMP. The plan will include direction on the reuse of PFAS impacted soil as part of the project. The overarching project objective for the PFAS Management Strategy is to manage PFAS impacts as part of the M3R Project, whilst achieving an improved environmental outcome, meeting regulatory requirements and retaining the confidence of the community. The Strategy will be subject to approval by the Commonwealth Government prior to construction commencing.

The Melbourne Airport Master Plan 2022 includes further information outlining the actions already implemented by APAM to monitor and prevent potential leaching of PFAS from soil into the groundwater table and into receiving waterways offsite. This includes the already completed temporary soil storage facility and construction of two water treatment plants (WTPs).

F2 Waterways

F2.1 Summary of Issue

Several submissions related to the potential impacts to waterways from M3R development, operations and increased air traffic, and note concern about impacts to surface water receptors in and around the airport. Some submissions raised concern about legacy contamination, specifically PFAS and the Maribyrnong River catchment.

Hume City Council and other submissions ask about the impacts to Arundel Creek from potentially contaminated soil. They also request investigations are pursued to minimise the need to fill the waterway.

Some submissions request more information on monitoring and how water quality will be improved.

F2.2 Number and Types of Submissions

124 submissions contain reference to the ‘Waterways’ Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Hume City Council, Brimbank City Council and the Victorian Government)

F2.3 Discussion of Submissions

Several submissions related to the potential impacts to waterways from airport operations and increased air traffic. These submissions note potential adverse impacts to surface water receptors in and around the airport. For example, submissions from community members state that:

> *“the Melbourne Airport estate drains to a number of creeks and rivers meaning increased pollution will be draining into the waters and ecosystems of the Maribyrnong River catchment via Arundel Creek.”*

> *“Airports create a range of potential pollutants including de-icing agents, maintenance and painting chemicals, testing of fire equipment, and fuel leakage and spillage from refuelling and storage. These can either be leaching into groundwater or can contaminate storm water run-off which can pollute nearby water sources.”*

> *“Even though the MDP states that shales and catchment areas will be provided to minimize runoff to the river, the fact remains that the overall surface area of the proposed runway and taxiway system will contribute to significant leaching into the underground*

water system and form escape runoff into the river steam re: A4.8.1.2 (see MDP A4.8.3 Hydraulic structures)."

Some submissions were concerned about legacy contamination, particularly noting PFAS and the Maribyrnong River catchment:

"The operation of Melbourne Airport has resulted in contamination onsite and off-site, would result in the loss of biodiversity and habitat, cultural and post contact heritage through land clearing, drainage and other infrastructure construction."

"We already have PFAS in the local creeks and rivers, as demonstrated by warning signs not to eat any fish nor to let your dog swim in the river. As the Arundel creek will be diverted under the runway, I can only imagine how effective those channels will be in containing PFAS?"

Some submissions expressed concern about the potential human health impacts from land contamination migrating offsite:

"Risk of PFAS migration is high. What is the impact to the community who are growing, or consuming produce grown and irrigated with water from the Maribyrnong River?"

"Residences south of proposed M3R are on tank/ bore and Maribyrnong water any disruption to Public Safety Area (PSA) containment sites would be detrimental to their health."

"…worry about the fuel dumping etc on our homes. What about those that have drinking water tanks all the fumes and fuel going into the water supply"

"PFAS discharge is a community health risk"

"Contaminated soil also poses a risk to flora, fauna and humans who benefit from Arundel Creek. Arundel Creek joins the Maribyrnong, which provides irrigation water to the Keilor Market Garden district."

The Flight Free Australia submission also notes this, stating "In 2019, PFAS escaped the airport estate, contaminating waterways that feed into the Maribyrnong River. The community have been unable to find out who paid for the clean-up, what it cost, or how much contamination there is on the land in the Keilor Valley south of the airport.".

The submission from Airservices asks about the following in relation to waterways, "…there is no indication of the "tenant sampling locations" (i.e. Airservices samples three locations in Deep Creek and has done so since 2014) in Deep Creek, yet such sampling is shown for locations elsewhere on the airport (e.g. the jet base). We suggest either removal of the above references or re-wording to reflect this comment."

Hume City Council (HCC) raise concerns about the impacts to Arundel Creek from potentially contaminated soil stating:

"Council has concerns about the proposed filling, culverting and diverting of the headwaters of Arundel Creek required to enable the construction of the proposed third runway. Council recommends that further options be investigated that would avoid or at least minimise the impacts to the headwaters of Arundel Creek and minimise the need to fill the waterway and potential resultant sedimentation and erosion within the waterway."

"Council is also concerned about the proposed the placement of large amounts of potentially contaminated fill (due to potential presence of PFAS) within the headwaters of Arundel Creek and at the top of the Arundel Creek Catchment.

"Council requests clarification on how the potential impacts to Arundel Creek of potentially contaminated soil will be managed and that these details be included in the revised Third Runway MDP documentation."

HCC also recommend that APAM *"investigate further options to avoid or minimise the impacts to the head waters of Arundel Creek and minimise the need to fill the waterway."*

One submission assumes that *"The pollution of the Arundel creek provides the proof that if the new runway is built the same pollution effect that influenced the Arundel creek will also affect the Maribyrnong River".*

The CACG submission asks *"What will MA do to improve stormwater treatment and water quality to meet international standards?".*

Several community members of Keilor state *"Testing and monitoring of water quality needs to be defined up front in the planning process and not left to be determined later in the CEMP. PFAS should not be omitted from operational water quality condition".*

F2.4 M3R MDP References

Chapter B4 of the MDP addresses surface water and erosion. It includes discussion around the following concerns raised by submitters:

- The potential for M3R to impact soil erosion and surface water quality
- The identification of appropriate mitigation and monitoring measures during construction and operation of M3R.
- The development of a PFAS Management Strategy to address all aspects of PFAS management on site.
- The improvement of the ecological health of receiving waterways.

F2.5 APAM Position

APAM is mindful that surface water leaving the airport site enters receiving waterways in the surrounding municipalities. As such, APAM has developed management measures to prevent, control and reduce environmental impacts as part of ongoing airport operations, with a key focus on PFAS contamination. Actions already implemented by APAM to monitor and prevent potential leaching of PFAS from soil into the groundwater table and into receiving waterways offsite includes the already completed temporary soil storage facility and construction of two water treatment plants (WTPs). One WTP is installed near Arundel Creek at the southern boundary of the airport estate. This WTP is designed to treat baseflow water levels of Arundel Creek and is a pilot program for future use in the M3R water sensitive urban design treatment train.

APAM acknowledges the submission which stated, "*Airports create a range of potential pollutants including de-icing agents, maintenance and painting chemicals, testing of fire equipment, and fuel leakage and spillage from refuelling and storage. These can either be leaching into groundwater or can contaminate storm water run-off which can pollute nearby water sources."*

There is very little use of de-icing agents at Melbourne Airport, generally only a handful of times each year at most. Where de-icing agents are used, appropriate handing and containment procedures are in place to ensure these materials and wastewater generated do not enter any stormwater drainage onsite. In relation to other hazardous materials (e.g. maintenance and

painting chemicals, testing of fire equipment, fuel leakage etc) the management of these is outlined in the Melbourne Airport Environmental Management Plan. Where tenant or construction operations require the use of these materials, tenant Operational Environmental Management Plans and Construction Environmental Management Plans are developed, approved and monitored by APAM to ensure activities are in line with the requirements of the Melbourne Airport Environmental Management Plan.

In response to the submissions regarding surface water and groundwater connectivity *"…leaching into the underground water system and from escape runoff into the river stream."* APAM note this is discussed in Chapter B3 Section B3.7.2 of the MDP. Potential impacts from leaching to groundwater and its ultimate discharge to receiving waters (e.g. Maribyrnong River) have been considered as part of the project. Although surface water runoff is the primary pathway for discharge of impacts off-site, consideration of groundwater pathways have been assessed and will be incorporated into the whole of project Risk Assessment and PFAS Management Strategy.

Potential impacts to waterways (including PFAS) associated with M3R are discussed in detail in Chapter B4. In response to the submissions regarding the management of potential PFAS runoff into waterways and the potential impact to water users downstream, based on offsite sampling conducted in 2021, APAM verified the risk to community as low to negligible. This sampling was targeted to downstream irrigators who use waters from the Maribyrnong for use on their properties, including irrigation of food crops. Results of these investigations will be incorporated into the M3R risk assessments that will be used to develop the project PFAS Management Strategy.

In response to HCC's statement, *"Council is also concerned about the proposed placement of large amounts of potentially contaminated fill (due to potential presence of PFAS) within the headwaters of Arundel Creek".* APAM confirms the reuse of any PFAS impacted soil is being assessed as part of the schematic design process and any reuse of PFAS impacted soil will be subject Commonwealth Government approval of the project specific PFAS Management Strategy. The overarching project objective for the PFAS Management Strategy is to manage PFAS impacts as part of the M3R Project, whilst achieving an improved environmental outcome, meeting regulatory requirements and retaining the confidence of the community. As surface water is identified as the primary pathway for PFAS discharge off the estate, any reuse of PFAS impacted soil in the headwaters of Arundel Creek will include consideration of surface water impacts, the current off-site conditions and risk profile to ensure that the project has a negligible impact off-site.

In response to Flight Free Australia's submission regarding a 2019 event where *"PFAS escaped the airport estate*", APAM does not have any records of this event. APAM did receive a community complaint in May 2020 where small amounts of foam were observed at the Flora St bridge in Keilor which is downstream from Melbourne Airport on the Maribyrnong River. APAM and EPA Victoria investigated this complaint at the time and concluded that it was difficult to scientifically conclude whether the foam was PFAS related without sampling it, but it would seem highly unlikely based on the low concentrations in those locations. Key lines of evidence supporting this position are:

- APAM conducted a round of surface water sampling in March 2020 and recorded the concentrations of PFAS were low at similar locations (~0.1-0.2 ug/L PFOS+PFHxS). If these low concentration levels resulted in foam when waters were agitated, it would also be expected that foam would be observed at other locations with known higher concentrations, however this was not evident.
- It is not unusual for natural foams to form, particularly in late autumn, early winter when there is increased decomposition and organic matter in the water. This is documented in various studies e.g. https://www.michigan.gov/documents/deq/deq-oea-nop-foam_378415_7.pdf, and http://www.bristolavonriverstrust.org/wp-content/uploads/2015/04/Foam-info.pdf.

APAM notes the 2020 community complaint was also raised directly with EPA Victoria, Brimbank City Council and Melbourne Water as it was related to an off-airport location.

In response to Airservices submission relating to tenant monitoring locations, APAM confirms that no locations associated with any third-party monitoring programs such as monitoring undertaken by tenants as part of lease obligations are presented in the Chapter B4 figures. As per discussions in Section B4.6.8, the figure presents APAM monitoring locations to meet its own environmental obligations under its long-term lease of the airport. This section also further validates that the intention of the monitoring network includes verification of tenant monitoring programs whilst avoiding duplication of data collected by tenants.

In response to the submission stating, *"The pollution of the Arundel creek provides the proof that if the new runway is built the same pollution effect that influenced the Arundel creek will also affect the Maribyrnong River".* APAM have implemented a number of mitigation measures to assist in managing known pollution in Arundel Creek, such as the aforementioned PFAS soil containment facility and WTPs. The M3R project will include the construction of an end of line treatment facility which will further manage water quality on Arundel Creek prior to the discharge point from the estate.

In response to the submissions stating*, "Testing and monitoring of water quality needs to be defined up front…"* APAM confirm that ongoing surface water quality monitoring already occurs per the Master Plan 2022 and assess a variety of potential contaminants of concern, including PFAS. PFAS monitoring has been included as part of routine monitoring since 2014. This monitoring is referred to in Chapter B4 Section 4.6.8 with a discussion on existing water quality conditions.

In relation to submissions asking about monitoring and water quality improvements, Melbourne Airport's ongoing surface water monitoring program includes sampling waterways upstream of the airport, within the airport boundary, and downstream of the airport (including in the Maribyrnong River). This also includes some fish species to measure the impacts of PFAS on the environment. Impacts are addressed in Chapter B4 Section B4.7.2.1 of the MDP. The proposed surface water system which includes an end of line treatment train at the discharge point from the estate will be designed to mitigate any potential changes in the timing and flows of runoff ultimately discharging into Maribyrnong River. The system will both mitigate timing and flows as well as reduce pollutant loads. This is supported by modelling that has been undertaken to predict any changes in surface water flow. The surface water system is being designed in accordance with industry standards set by Melbourne Water for improved water quality as part of any proposed modifications to waterways as part of construction projects.

APAM note the potential impacts to Arundel Creek discussed in Section B4.6.2 are identified as potential on-site impacts as a result of direct project works within Arundel Creek. The end of line treatment train proposed for Arundel Creek at the estate boundary is included as part of the project and is being designed to mitigate and improve surface water quality discharge from the estate. The modelling and subsequent design of this structure has been undertaken in accordance with the Commonwealth and Melbourne Water's requirements. Monitoring of both on-site and off-site impacts is already established and has been developed in consultation with relevant Commonwealth and State authorities.

In relation to submissions requesting the review of management plans, [redacted], APAM confirms that the PFAS Management Strategy will be approved by the Commonwealth Government prior to the M3R project commencing, per applicable regulations. APAM will continue to engage with EPA Victoria as relevant.

F2.6 Changes to Preliminary Draft M3R MDP

Figures B4.2, B4.6 and B4.7 have been updated to reflect additional monitoring points and outfall locations.

Section B4.6.8.5, Table 4.9, Table 4.10 and Table B4.11 have been updated to include reference specifically to the Maribyrnong River.

Section B4.6.8 has been updated to incorporate more recent monitoring data collected after development of the pdMDP. Note: the more recent data does not change the outcome of the assessments.

F2.7 Summary and Conclusion

APAM has developed management measures to prevent, control and reduce environmental impacts. The actions already implemented by APAM to monitor and prevent potential leaching of PFAS from soil into the groundwater table and into receiving waterways offsite includes implementation of the Melbourne Airport PFAS Management Framework, as well as construction and operation of the temporary soil storage facility and two water treatment plants (WTPs). One WTP is installed near Arundel Creek at the southern boundary of the airport estate. This WTP is designed to treat baseflow discharge on Arundel Creek and is a pilot program for future use in the potential M3R water sensitive urban design treatment train.

Melbourne Airport's ongoing surface water monitoring program includes sampling waterways upstream of the airport, within the airport boundary, and downstream of the airport (including in the Maribyrnong River).

Potential impacts to waterways (including PFAS) associated with the proposed third runway are addressed in detail in Chapter B4 Section 4.7. APAM confirms the reuse of any PFAS impacted soil is being assessed as part of the schematic design process and any reuse of PFAS impacted soil will be subject to approval of the project-specific PFAS Management Strategy by the Commonwealth Government. The overarching project objective for the PFAS Management Strategy is to manage PFAS impacts as part of the M3R Project, whilst achieving an improved environmental outcome, meeting regulatory requirements and retaining the confidence of the community.

APAM note the potential impacts to Arundel Creek are identified potential on-site impacts as a result of direct project works within Arundel Creek. The end of line treatment train proposed for Arundel Creek at the estate boundary is included as part of the project and is being designed to mitigate and improve surface water quality discharge from the estate. The modelling and subsequent design of this structure has been undertaken in accordance with Commonwealth and Melbourne Water's requirements. Monitoring of both on-site and off-site impacts is already established and has been developed in consultation with relevant Commonwealth and State authorities.

F3 Ecology (On-Airport)

F3.1 Summary of Issue

A number of submissions expressed concern about protecting ecological receptors within and surrounding the airport. Most submissions specifically mention the removal of the Grey Box Woodland as part of M3R development, as well as impacts to protected species including the Growling Grass Frog, Australian Grayling, Swift Parrot, Golden Sun Moth and the Striped Legless Lizard.

Some submissions, including the Victorian Government's, expressed their interest in the minimal removal of the woodlands to reduce habitat loss and retain habitat connectivity.

F3.2 Number and Types of Submissions

140 submissions contain reference to the 'Ecology (On-Airport)' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Hume City Council, Brimbank City Council, Victorian Government and Moreland City Council)

F3.3 Discussion of Submissions

Many submissions expressed concern about protecting ecological receptors within and surrounding the airport. Most entries specifically mention the removal of the Grey Box Woodland as part of M3R development, as well as impacts to protected species including the Growling Grass Frog, Australian Grayling, Swift Parrot, Golden Sun Moth and the Striped Legless Lizard. Example from community submissions include:

> *"The proposed Third Runway will destroy endangered woodland."*
>
> *"The removal of any part of the forest with its inhabitants wildlife and rare birds should be lefty totally undisturbed."*
>
> *"A third runway at Melbourne Airport will increase energy usage, destroy native grasslands and increase noise and pollution "*
>
> *"I oppose the third runway as proposed as it will destroy habitat of critically endangered species including the Swift Parrot, the Golden Sun Moth and the growling Grass Frog."*
>
> *"The Airports (Environment Protection) Regulations (1997) state that any authorised/approved works must ensure that works do not result in adverse consequences for local biota and their associated ecosystems and habitats. It has not been clarified how APAM trust this to be possible with the deforestation of the Grey Box forest and ground disruption in not only the building of the runway and expansion of the Airport, but also its future effects."*

[redacted]

[redacted]

A submission from the CACG asked how the airport will ensure the minimal removal of woodland as part of the M3R design phase. Brimbank City Council (BCC) and Hume City Council (HCC) both expressed their concern for the removal of the Grey Box Woodland, with BCC noting that further considerations in the design and construction of this project be undertaken to reduce the impact to this Threatened Ecological Community (TEC).

BCC also requested further information about ongoing specialised management of the Melbourne Airport development along Deep Creek and the Maribyrnong River, which includes steep escarpments and waterways that support habitat for certain TECs, the Growling Grass Frog, Australia Grayling, other fauna species and cultural heritage values. They also request more detail about habitat disturbance and mitigation measures to be implemented as part of the CEMP, and the engagement of an independent review to *"identify and detail the impacts and management strategies on the existing fauna, listed threatened species and ecological communities.".*

The Greater Sunshine Community Alliance (GCSA) state their support for BCC and *"the need to protect biodiversity and wildlife habitat in a holistic way in areas under the southern runway flight paths is a major priority".* The Friends of Kororoit Creek submission expressed concern about this and state *"our community group is working hard to help restore the Kororoit Creek habitat corridor and protect its biodiversity".*

BirdLife Australia's submission comments on the effect of M3R on native birds, specifically the swift parrot stating *"they are one of 20 Australian bird taxa thought most likely to be driven extinct in the next 20 years under current management practices."*. Birdlife Australia also notes that the number of recordings is likely low due to *"limited or no access of the site to the public, researchers and citizen scientists.".*

Several submissions, [redacted], related to habitat loss and connectivity.

[redacted]

[redacted]

One submitter asked about what performance requirements will be built into the proposed third runway Construction Environment Management Plan (CEMP) and how will Melbourne Airport ensure best practice Urban Ecology management.

Other matters raised include lighting and noise impacts to wildlife, and the risk of fauna being struck by additional road and flight traffic generated as a result of M3R.

Some submissions requested additional assessments be undertaken to understand potential impacts to offsite wildlife, including the Jawbone Wetlands in Williamstown, Hobsons Bay wetlands, and wetlands located in Altona. Potential offsite impacts to wildlife are covered in Theme A8.

F3.4 M3R MDP References

Chapter B5 of the MDP addresses existing ecological attributes within and adjacent to the M3R development footprint, including Commonwealth and State listed endangered and threatened species and ecological communities. It includes discussion around the following concerns raised by submitters:

- The potential ecological impacts associated with M3R including the part-removal of the Grey Box Woodland.
- Associated management and mitigation measures.
- Reduction of habitat removal and habitat connectivity.

F3.5 APAM Position

The majority of submissions related to the ecological impact that will result from M3R development. APAM acknowledges that many of the submissions stated their opposition to any removal of habitat and the resulting impact to fauna and flora on the airport site.

As discussed in Chapter 5, any proposed removal of protected habitat and/or impact to threatened species resulting from M3R development will be completed in accordance with all relevant legislation and will only go ahead with appropriate approvals from the Commonwealth Government. Detailed mitigation measures will be detailed in the project CEMP which will be developed after completion of the detailed design to ensure impacts to ecological receptors are minimised. Offset strategies for flora and fauna are addressed in Theme F8.

[redacted]

[redacted]

Regarding the CACG question *"*how the airport will ensure the minimal removal of woodland*"*. APAM note that since the initial M3R design, there has been a significant reduction in habitat removal area. Details of the reductions are as follows:

- Grey Box (Eucalyptus microcarpa) Grassy Woodland from 154.00 ha to 68.02 ha
- Derived Native Grassland of South-eastern Australia (treed) and from 15.68 ha to 10.72 (derived native grassland).
- Natural Temperate Grassland of the Victorian Volcanic Plain (NTGVVP) from 145.26 ha to 90.49 ha.

In response to the BCC submission regarding specialist management of waterway corridors, APAM continues to engage specialist contractors to manage all riparian zones on airport land including Deep Creek and the Maribyrnong River. Regarding their suggestion for independent review of ecological documents, APAM confirms that all environmental monitoring and advice is provided by a range of suitably qualified technical specialists who follow industry best practice techniques. APAM can also confirm that they have commenced a waterway revegetation program on Deep Creek in partnership with BCC and Melbourne Water.

In response to Birdlife's comments about the number of Swift Parrot recordings being low due to *"limited or no access of the site to the public, researchers and citizen scientists."*. The most recent Swift Parrot survey was undertaken in autumn 2019 (Steele and Peter, 2019). Records in the broader landscape were also considered, and there are regular records of Swift Parrots in the past 10 years from Bulla, Woodlands Historic Park and Keilor (Birddata, 2020).

[redacted]

[redacted]

F3.6 Changes to Preliminary Draft M3R MDP

Chapter 5 has been updated to include the following:

- Additional details about rehabilitation and revegetation and avoidance/mitigation measures in an ecological context.
- Additional details on flora and fauna more generally (not just EPBC Act listed species) and mitigation measures associated with all flora and fauna.
- More information on indirect impacts and avoidance/mitigation measures (including indirect impacts to EPBC Act and FFG Act listed species and communities (e.g. Growling Grass Frog). Further acknowledgement/consideration has been given to indirect impacts that may occur offsite on State land, where the FFG Act applies.
- Additional (newly listed) species in the FFG Act threatened species list that require consideration
- An avoidance map to compare the current footprint with the original footprint and better summarise the reduction in impacts that has occurred.

F3.7 Summary and Conclusion

APAM have read and reviewed all submissions relevant to Ecology on the airport site. Habitat loss and connectivity associated with M3R are addressed in detail in Chapter B5.

Additional detail on mitigation measures will be included in the M3R CEMP which will be developed once the final design is known, to ensure all project impacts are considered and managed appropriately.

As a result of the submission reviews, the MDP has been updated as described in Section F3.6. These updates include impacts to flora and fauna more generally (not just EPBC Act listed species), consideration of species added to the FFG Act since the pdMDP was developed, additional details about rehabilitation and revegetation and avoidance/mitigation measures in an ecological context. The MDP has also been updated to include an avoidance map to compare the current footprint with the original footprint and better summarise the reduction in impacts that has occurred.

F4 Indigenous Cultural Heritage

F4.1 Summary of Issue

Submissions expressed concern about changes made to Indigenous sites during the construction of M3R, and about agreement and/or consultation with Traditional Owners. Other submissions raised the potential impact to heritage areas outside of the Melbourne Airport boundary, namely in the suburb of Keilor and Hanging Rock. The Community Aviation Consultation Group (CACG) submission requests the Cultural Heritage Management Plan (CHMP) for M3R be made public.

F4.2 Number and Types of Submissions

129 submissions contain reference to the 'Indigenous Cultural Heritage' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities.

F4.3 Discussion of Submissions

Some submissions expressed concern about changes made to Indigenous sites. Other raised questions about agreement and/or consultation with Traditional owners. Some examples statements from community submissions include:

> *"Do not build over or wreck more indigenous sites."*
>
> *"The removal of sacred scar trees can't be justified."*
>
> *"You have not reached an agreement with the First Nations peoples as to the impact of the project"*

The Community Aviation Consultation Group (CACG) submission requests the Cultural Heritage Management Plan (CHMP) for the proposed third runway and findings be made public, including information on APAM's relationships with the relevant indigenous groups in relation to the M3R MDP. They also specifically ask *"Does MA propose any means for preserving the history of the Keilor region?".*

Many submissions were received from the community members of Keilor who request that, *"Western and Indigenous Heritage in Keilor be assessed fully and documented. The impacts should be clearly articulated and mitigated."*

The Keilor Historical Society submission noted that *"There used to be a small museum attached to the Old Shire office that used to store the artefacts of the Indigenous (Wurundjeri people)."*

Other matters raised in submissions include the potential impact to heritage areas outside of the Melbourne Airport boundary such as Hanging Rock, stating, *"Please also confirm if the Traditional owner groups for Hanging Rock have been consulted with regards to this Runway project Plan.".*

F4.4 M3R MDP References

Chapter B6 addresses Indigenous Cultural Heritage in further detail and provides an overview of Indigenous cultural heritage values associated with the development footprint, and the potential impacts associated with construction of M3R. It discusses the Cultural Heritage Management Plan that has been prepared and approved for M3R and associated mitigation proposals.

F4.5 APAM Position

APAM is committed to working closely with the Wurundjeri Woi-wurrung to deepen our understanding of the cultural values of the land on which the airport operates. Over 85% of the 2,700ha Melbourne Airport estate has been assessed for cultural values / or has a Cultural Heritage Management Plan (CHMP) in place that has involved and been approved by the Wurundjeri Woi-wurrung, including the footprint of M3R

In response to submissions noting concern over impacts to indigenous sites, APAM has prepared a project-specific CHMP which was approved by the Wurundjeri Woi-wurrung in July 2022.

Development of the CHMP involved extensive consultation with the Wurundjeri Woi-wurrung as the traditional owners and the Registered Aboriginal Party (RAP) for the area which Melbourne Airport operates on. M3R is required to adhere to the conditions outlined in the approved CHMP which includes specific conditions related to artefact salvage, treatment of artefacts and ongoing engagement with the Wurundjeri Woi-wurrung.

The Keilor Historical Society submission noted *"There used to be a small museum attached to the Old Shire office that used to store the artefacts of the Indigenous (Wurundjeri people).".* APAM confirms that in accordance with conditions of the approved CHMP any artefacts that are salvaged as part of M3R will be preserved by specialist heritage advisors and advice sought from the Wurundjeri Woi-wurrung as to how they would like the artefacts to be managed in perpetuity.

In response to the CACG submission request for the M3R CHMP to be made publicly available, APAM note that CHMPs contain sensitive information and therefore may or may not be made publicly available following approval. Any decision to make the CHMP publicly available will be based on advice from the Wurundjeri Woi-wurrung and Aboriginal Heritage Victoria.

In relation the submission that queried potential impacts to offsite heritage sites (e.g. Hanging Rock), APAM notes that as a result of the M3R 'Build' scenario there will be an increased number of flights over areas that may contain heritage values. Within the noise contour 'N60 (24hr) ≥ 10 (for annual average day)' there will be no physical impacts to heritage sites as a result of aircraft movement. There will be relatively little noise interference to heritage sites as a result of aircraft movement but there could nevertheless be some small effect on people's enjoyment of the space. At 60 decibels outside, persons both inside (which would be 50 decibels indoors) and outside would not need to raise their voice when having a conversation. On the occasion where significantly greater than 60 decibels is encountered, persons outside may need to raise their voice when having a conversation. To summarise, it is expected that there may be some low level interference with the potential enjoyment of heritage sites but impacts are expected to be minor, short-term and occasional. These expected impacts will not result in a significant detriment to the enjoyment of the sites.

APAM engaged extensively with the Wurundjeri Woi-wurrung in the development of the M3R project including discussion of impacts on heritage matters on and off-airport, and matters related to impacts offsite were not raised as a concern by the Wurundjeri Woi-wurrung. These potential impacts were also not raised as a concern by the state or the Commonwealth Government.

F4.6 Changes to Preliminary Draft M3R MDP

Chapter B6 has been updated to reference the 'Engage Early – Guidance for Proponents on Best Practice Indigenous Engagement for Environmental Assessments under the Environment Protection and Biodiversity Act 1999 (EPBC Act)' guidelines. The Preliminary Draft MDP referenced superseded guidelines.

Chapter B6 has also been updated to reflect the results of Stage 2 complex assessments which were not complete at the time of pdMDP publication. The results of these assessments did not change the outcomes of impact assessments discussed in the pdMDP.

Chapter B6 has also been updated to reference the final M3R CHMP (CHMP16792) which was approved by the Wurundjeri Woi-wurrung Registered Aboriginal Party in July 2022.

F4.7 Summary and Conclusion

APAM have read and reviewed all submissions relating to Indigenous Cultural heritage. APAM continues to work closely with the Wurundjeri Woi-wurrung to deepen our understanding of the cultural values of the land on which the airport operates.

M3R will adhere to the conditions outlined in the approved CHMP which includes specific conditions related to artefact salvage, treatment of artefacts and ongoing engagement with the Wurundjeri Woi-wurrung. Any artefacts that are salvaged as part of CHMP implementation will be preserved by specialist heritage advisors and advice sought from the Wurundjeri Woi-wurrung as to how they would like the artefacts to be managed in perpetuity.

All assessments of Indigenous cultural heritage values within the M3R footprint and surrounds were completed by suitably qualified archaeologists in consultation with the Wurundjeri Woi-wurrung. The assessments were undertaken to meet Commonwealth requirements and documentation was prepared in accordance with the Victorian requirements for preparation of a CHMP.

F5 European Heritage

F5.1 Summary of Issue

Submissions expressed concern about changes made to European sites and artefacts. Most of these mention offsite impacts to heritage sites in the suburb of Keilor.

The Keilor Historical Society raised matters including consultation with them to assist with recognising heritage sites. They also raised concern about airport development and preservation of the history of the Keilor region, questioning of the credibility of the authors of the heritage sections of the M3R MDP.

F5.2 Number and Types of Submissions

120 submissions contain reference to the ‘European Heritage’ Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities.

F5.3 Discussion of Submissions

Some submissions expressed concern about changes made to European sites and artefacts. Most of these mention offsite impacts to heritage sites in the suburb of Keilor, including the Keilor plains, the Keilor Hotel, Overnewton Castle and Keilor Primary School. Some examples from submissions include:

> *“Western and Indigenous Heritage in Keilor be assessed fully and documented. The impacts should be clearly articulated and mitigated.”*
>
> *“The founder of Melbourne, John Batman in 1835 described the Keilor plains as “The most beautiful sheep pasture I ever saw” in his records. Keilor is also the second oldest suburb in Melbourne. The Keilor Hotel is the oldest family-owned pub in Victoria and continues to operate to this day.”*
>
> *“Keilor was an important location on route to the Gold Fields. It became known as a stopover community with several Blacksmiths, hotels, business, market gardens, farmland, and the Caroline Chisholm Shelter Sheds. Another notable site includes the Overnewton Castle constructed by the pioneer and pastoralists William Taylor.”*
>
> *“Keilor Primary School is one of the oldest schools in Melbourne being established in 1875.”*

The Keilor Historical Society raised the following matters:

> *"The proposals for a third runway wipe out any safeguards of being able to preserve the history of this region. In the material you have prepared you have focused (for European history) on the Western area of the airport and your studies illustrate archaeological studies but they don't record the history of the people who have lived and worked in the west but more particularly in the south."*
>
> *"…in the Cultural Heritage records you state you have consulted with Keilor Historical Society – 2 entries in fact – but our organisation was never contacted with this study."*
>
> *""…known and potential European heritage values…" was a phrase used in the writings. It is not credible to imagine that anyone who has written up this material really understands anything about Keilor or has any sensitivity to the heritage and history of what is about us and that which will be affected so dramatically if these proposals go forward."*

The Community Aviation Consultation Group (CACG) submission asked, "*Does MA propose any means for preserving the history of the Keilor region?".*

F5.4 M3R MDP References

Chapter B7 addresses European Heritage in further detail and identifies the European heritage places within and adjacent to the development footprint, in alignment with Heritage Victoria and National Heritage criteria, and assesses the potential impacts associated with M3R. Appropriate mitigation and monitoring measures are identified.

F5.5 APAM Position

The CACG submission questioned whether APAM *"propose(s) any means for preserving the history of the Keilor region*". This echoed the sentiments of the Keilor Historical Society who expressed concern that airport development may "*wipe out any safeguards of being able to preserve the history of this region*". Chapter B7 of the MDP provides background on APAM's current understanding of European heritage values located within the M3R development footprint and immediate surrounds that may be impacted by M3R. The historical places identified are presented on Figure B7.1.

In response to submissions relating to aircraft flight and air traffic outside the airport boundary potentially impacting heritage locations, APAM notes that as a result of the M3R 'Build' scenario there will be an increased number of flights over areas that may contain heritage values. Within the noise contour 'N60 (24hr) ≥ 10 (for annual average day)' there will be no physical impacts to heritage sites as a result of aircraft movement. There will be relatively little noise interference to heritage sites as a result of aircraft movement but there could nevertheless be some small effect on people's enjoyment of the space. At 60 decibels outside, persons both inside (which would be 50 decibels indoors) and outside would not need to raise their voice when having a conversation. On the occasion where significantly greater than 60 decibels is encountered, persons outside may need to raise their voice when having a conversation. To summarise, it is expected that there may be some low level interference with the potential enjoyment of heritage sites but impacts are expected to be minor, short-term and occasional. These expected impacts will not result in a significant detriment to the enjoyment of the sites.

Regarding the Keilor Historical Society comment that *"It is not credible to imagine that anyone who has written up this material really understands anything about Keilor*…", all heritage assessments and development of the relevant MDP chapters were completed by suitably qualified archaeologists, which involved consultation with relevant stakeholders of the region.

Regarding consultation specifically with the Keilor Historical Society, suitably qualified archaeologists who completed the M3R assessments and MDP chapters did consult with local groups and historical societies during the development of initial historic reports in 2014 for the Runway Development Program (RDP) proposal. These early consultations created the basis of clarifying some of the specific regional background and history, which informed the subsequent field assessment stages for M3R. For the M3R project, these reports did not require substantial review noting that the majority of the proposed M3R footprint had already previously been assessed for European heritage values as part of previous RDP investigations. Some additional consultation did occur with stakeholders but did not occur with the Keilor Historical Society. Consultation is discussed in Section B7.2 of Chapter B7.

F5.6 Changes to Preliminary Draft M3R MDP

Chapter B7 Section B7.6.1.1 has been updated to clarify that any archaeological excavation will be completed by a suitably qualified archaeologist and supervised by a suitably qualified heritage advisor or archaeologist.

F5.7 Summary and Conclusion

Chapter B7 of the MDP provides background on the European heritage values located within the M3R development footprint and immediate surrounds that may be impacted by M3R. Investigations into European heritage values that informed the MDP chapter were completed by suitably qualified archaeologists and involved consultation with relevant stakeholders. It is expected that there may be some low level interference with the potential enjoyment of heritage sites but impacts are expected to be minor, short-term and occasional. These expected impacts will not result in a significant detriment to the enjoyment of the sites

F6 Air Quality

F6.1 Summary of Issue

A number of submissions related to the airport's air quality both onsite due to M3R development, and offsite due to aircraft flight, increased ground transport and traffic to the airport. The submissions expressed concern about the potential health impacts from jet fuel pollution and microparticles/ultra-fine particulates, and asked how these will be monitored and reduced. They also included questions about fumes/odours in the suburbs surrounding the airport.

Some community action groups requested air quality monitoring data be made publicly available. Other submitters also raised this and requested baseline data is collected along flight paths outside of the airport boundary.

The Brimbank City Council submission requested the engagement of an independent expert to determine the impact of odour (fumes) on surrounding communities.

F6.2 Number and Types of Submissions

287 submissions contain reference to the 'Air Quality' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Maribyrnong City Council, Hume City Council, Brimbank City Council, City of Yarra, Victorian State Government and Moreland City Council)

F6.3 Discussion of Submissions

A number of submissions related to the airport's air quality both onsite due to M3R development, and offsite due to aircraft flight, increased ground transport and traffic to the airport. The submissions expressed concern about the potential health impacts from jet fuel pollution and microparticles and ask how these will be monitored and reduced. They also included questions about fumes/odours in the suburbs surrounding the airport. Some examples from submissions include:

> *"The added pollution from this expanded development is totally unacceptable. Air Traffic directly over our town will only increase the pollution which we have now."*
>
> *"There will be further increase of traffic to roads, more noise and pollution"*
>
> *"This will cause significant impacts on road travel times for locals and nearby freeways, not to mention the increases in pollution levels (both noise and vehicle fumes)."*
>
> *"Air pollution from kerosene exhaust waste has proven negative health effects."*
>
> *"The runway will also be responsible for toxic emissions associated with chemicals harmful to human health from particularites and gases including lead, carbon monoxide, nitrogen oxides silicon tetrafluoride, heavy metals, benzene and volatile components, ash and dust."*
>
> *"Air and land-based traffic over and through Brimbank could have a range of associated health, environmental, economic and amenity impacts."*
>
> *"Northerly winds often bring fuel or burning tyre smell into our houses when windows are open."*
>
> *"There are concerns about the health risks associated with the extra pollution resulting from increased air traffic."*
>
> *"There is an increasing body of knowledge around aircraft pollution and human health particularly arising from Brisbane Airport and their experiences. This does not appear to have been reliably assessed or described."*

A number of submissions (community, community organisations and local government) mention the effects of ultra-fine particles from air traffic. Some examples include:

> *"Increased Air Pollution obviously has severe Health Impacts as well. The Nano Particles in Jet Fuel is known to cause lung issues and other serious health concerns."*
>
> *"There have been no independent health risk assessments, particularly in the critical matter of ultrafine particles, which are known to have detrimental effects on our health."*
>
> *"The MDP contains no plan to adequately protect airport-adjacent communities from ultra-fine particulate matter from aircraft engines."*
>
> *"Not addressed is the spread of Ultra fine particles from the (white stream lines at back of flying aircraft) putting us at risk of increased air pollution."*
>
> *"We are also concerned that the chapter appears to make no distinction between particulates of different sizes, while it is well-known that ultrafine particulates pose particular threats to human health – both physical and mental. The levels of these ultra-*

fine particulates should be given, along with specific data on what is known about the potential risks associated with those levels.".

One submission states, *"we note that 'the issue of depletion of stratospheric ozone due to aircraft emission is inconclusive' (B10.7.7.2). This should be followed with an explanation of worst- and best-case scenarios, as depletion of ozone is not easily remedied and therefore not something to risk without adequate risk assessment."*

The Keilor School submissions specifically note that Chapter B10 Section B10.4.2.2 "*Omits Keilor Primary School, Overnewton College, and the various preschools in the Keilor area. These sites are also omitted from each Figure presented in the assessment… It is not acceptable to talk about average impact where you have areas that have well above average impacts. Two sites are showing increases of >200%. Therefore, the assessment is misrepresenting impacts to those areas.*". The submissions also comment that *"The MR3 MDP does not adequately define the extent of pollution delivered to our door from aircraft and fails to address the health impacts we are likely to suffer".*

The Melbourne Airport Community Action Group (MACAG) submission notes that "*Section B10.8.2.3 describes air quality monitoring as a mitigation measure. Further information is required to clarify how monitoring mitigates air pollution."*

MACAG and Hume Residents Airport Action Group both requested air quality monitoring data be made publicly available. Other submitters also raised this and requested baseline data is collected along flight paths outside of the airport boundary.

The Flight Free Australia submission echoes this sentiment and mentions that any health studies relating to air pollution have not been made publicly available. They also comment on the adequacy of MDP planning, stating the "*Construction and operation of the proposed Third Runway will create soil and air pollution hazards. The Third Runway Major Development Plan acknowledges these hazards but includes no plan for avoiding them."*

The Brimbank City Council submission makes comments about modelling the impact of abatement measures, modelling of near-road impacts from increased traffic on surface roads around the airport, and requested the engagement of an independent expert to determine the impact of odour (fumes) on surrounding communities.

[redacted]

Other matters raised include fuel dumping and additional emissions from vehicles. One submission stated their concern about "the additional dumping of aviation burnt fuel on an area that already experiences high vehicle emission loads.".

F6.4 M3R MDP References

Chapter B10 of the MDP addresses likely air quality impacts associated with the construction and ground-based operational activities of M3R. It includes discussion around air quality monitoring as well as relevant mitigation and monitoring measures that will be considered by APAM to address impacts.

F6.5 APAM Position

A majority of the submissions relate to air quality (including odour) outside of the airport boundary. In response to submissions that raised concerns about air quality generated from increased ground transport and traffic to the airport, these aspects are included in the modelling and assessments

discussed in Chapter B10. Specifically, the chapter considers road traffic surrounding the airport to 10 kilometres, for roads modelled to have a material increase in traffic as a result of the airport (as assessed in Chapter B8 Surface Transport).

Regarding submissions that express concerns over air pollution from aircraft (including nano particles in jet fuel, kerosene, and ultrafine particles), the knowledge around the health risks of diesel exhaust particulates has improved in recent years and been reflected in regulatory changes. Chapter B10 includes detailed discussion of the potential air quality impacts resulting from the proposed third runway. APAM has reported Landing and Take Off (LTO) emissions (to mixing height ~3,000 ft) based on results of the AEDT emissions model, as approved by EPA Victoria. This aligns with the methodology presented in Chapter B11 (Greenhouse Gas Emissions), to ensure consistency. The AEDT model does not estimate whole-flight emissions.

APAM note the air pollutants assessed correspond to those pollutants listed in the relevant legislation and those recognised as pollutants of concern in international standards and similar assessments of air pollutants from airports internationally. Pollutants assessed in Chapter B10 include carbon monoxide, nitrogen oxides, benzene (as part of the chemical group 'Volatile Organic Compounds') and dust (in construction). Airborne lead was considered but not assessed in detail given lead in AvGas and Jet A1 fuel is insignificant (refer section 10.4.4.3). This same conclusion would arise for other heavy metals. The emissions model AEDT represents current best practice modelling of emissions from aircraft, and assesses the following pollutants: carbon monoxide, total organic carbon, hydrocarbons, volatile organic compounds, Non-methane hydrocarbons, nitrogen oxides, particulate matter, carbon dioxide, sulphur oxides. AEDT does not output results for heavy metals nor silicon tetrafluoride.

APAM note the submission commenting about ozone depletion points to findings from an international scientific study on ozone impacts from the aviation industry, which flags some areas of scientific uncertainty. However, a significant body of research has been done to assess overall aircraft/aviation impacts and we note that ozone depletion is expected to have a negligible effect on air quality. At present, there is no suitable nor recognised method to assess the impacts of stratospheric ozone in an environmental impact assessment.

APAM acknowledge the submission asking about Brisbane Airport's experiences, and notes that the Brisbane Airport MDP (Volume D: Airspace air emissions) uses a similar methodology to the one adopted for the M3R assessment. The dispersion model (AEDT) used for M3R is the main difference in methodology, noting that AEDT is the most recently published model from the US FAA and is thus the internationally recognised model for aircraft emissions modelling. EPA Victoria validated the adoption of this model as current best practice.

Regarding the comments about "*pollution delivered to our door"* and ultra-fine particulates (UFP), APAM note the detailed modelling of air quality pollutants are assessed in Chapter B10 and potential health impacts are addressed in Theme E1. The current assessment considers impacts from PM_{10} and $PM_{2.5}$. UFP refers to $PM_{0.1}$ particles, which are a subset of PM_{10} and $PM_{2.5}$ particles. Neither Victoria nor the Commonwealth Government have set standards on UFP, in part because they are very hard to measure (and are not measured), and the $PM_{2.5}$ standard tries to cover the impacts of UFP. Several studies are noted to be investigating UFP, however they cannot be reliably modelled or assessed against criteria, and it is uncertain as to whether this criteria will exist in future. Chapter B10 has been updated to include acknowledgement and discussion regarding UFP.

In relation to requests for air quality monitoring to be completed outside of the airport boundary, Melbourne Airport has two air quality monitoring stations that collect air quality monitoring data on an ongoing basis. There is one station location onsite immediately south of the north-south runway (on-airport), and one located offsite to the east of the airport (West Meadows). Data from these stations has previously been made available to EPA Victoria at their request. EPA Victoria also

have a number of air quality monitoring stations in suburbs in the greater Melbourne area which monitor the Melbourne airshed and data is made publicly available on their website.

In response to the Keilor School submission and Maribyrnong City Council regarding impact to sensitive receptors, while a limited number of discrete sensitive receptors were selected surrounding Melbourne Airport to capture sites of greatest impact for the purposes of modelling air pollutants, impacts were also assessed over a uniform grid (to a 50 metre resolution) to cover all airport surrounds. Impacts at the sites mentioned are best represented (conservatively) by receptor 12 for Keilor Primary School and receptor 13 for Overnewton College. APAM notes that Table B10.21 shows impacts from M3R in the absence of background pollutants. As discussed before Table B10.22, the exceedances in the PM_{10} criteria are almost entirely due to background levels of PM_{10}, and not from airport operations. The percentage increases shown in B10.22 show how much the background levels change and are an artefact from the modelling methodology (as approved by EPA Victoria).

In relation to submissions, including Hume Residents Airport Action Group and MACAG that requested air quality data is made publicly available, APAM confirms that all environmental monitoring and advice is provided by a range of suitably qualified technical specialists who follow industry best practice techniques. Air quality monitoring data is not made publicly available. All monitoring data is submitted to the Commonwealth airport environment regulator annually for their review and the Victorian EPA when requested.

MACAG also asked about air quality monitoring being classified as a mitigation measure. Air quality monitoring is noted in Chapter B10 as one component of avoiding, managing and mitigating air pollutant emissions. APAM considers monitoring an important mitigation measure, as without monitoring you cannot adequately quantify the impact requiring mitigation, nor the suitability of proposed mitigation measures. The monitoring discussed in the chapter is consistent with APAM's existing Air Quality Monitoring Program to assess possible impacts from the airport through two off-site stations. Any events detected at the offsite stations result in an investigation to the cause of the event, and remediation actions if the airport was deemed to be responsible for the event. APAM has not finalised mitigation measures to be undertaken for the third runway but propose several options to mitigate emissions, for example:

- Additional fixed ground electrical power and pre-conditioned air for all international gates
- Providing additional electric charging points for airside electric vehicles and equipment
- A plan to support electrifying ground support equipment and auxiliary equipment and to increase efficiency in using diesel equipment (through reduced taxing times and optimal scheduling) at the airport.

In response to Brimbank City Council, modelling the impact of abatement measures will be addressed via the implementation of APAM’s existing APAM Air Quality Monitoring Program. Impacts from increased traffic around the airport is modelled in Chapter B10 in AERMOD (without going to a high resolution at particular road junctions). In response to the request for independent assessment, APAM can confirm air quality specialists from Point Advisory and GHD undertook the assessment for Melbourne Airport, using a methodology validated by EPA Victoria. The main model adopted for the assessment (AEDT) is recognised as the standard international software for use in air quality and noise assessments.

Regarding Brimbank City Council’s request for an independent expert be engaged to determine the impact of odour (fumes) on surrounding communities, APAM has received very few odour complaints in the past from airport activities. Where they have been raised, after investigation the source of the odour has not been able to be successfully identified. APAM commits to investigating any odour complaints that are received from the community, however an independent expert is not proposed to be engaged to determine the impact of odour (fumes) generally on surrounding communities.

[redacted]

The submissions referring to human health effects of air pollutants generated by aircraft is discussed in Theme E1.

F6.6 Changes to Preliminary Draft M3R MDP

Chapter B10 has been updated to align with the new EP Act 2017 as well as EPA Publication 1961.

Chapter B10 has been updated to include discussion on ultra-fine particulates.

F6.7 Summary and Conclusion

A majority of the submissions relate to the impacts of air quality (including odour) outside of the airport boundary. Chapter B10 includes discussion of potential impacts from aircraft flight emissions during the landing and take-off cycle (LTO) as well as potential impacts from increased ground transport and traffic to the airport. The chapter includes proposed mitigation measures that will be considered by APAM.

Regarding submissions that express concerns over air pollution from aircraft (including nano particles in jet fuel, kerosene, and UFP), the knowledge around the health risks of diesel exhaust particulates has improved in recent years and been reflected in regulatory changes. APAM acknowledges UFP and that knowledge on the impact of these from aircraft is still evolving and is not currently addressed in legislation. Chapter B10 discusses in depth the modelling and assessment of potential air quality pollutants associated with the proposed third runway. Operations under the control of APAM will continue to be managed appropriately in order to meet our regulatory obligations. This includes assessment and implementation of the proposed monitoring and mitigation measures discussed in Chapter B10 as appropriate.

Regarding requests for air quality monitoring to be completed outside of the airport boundary, Melbourne Airport has two air quality monitoring stations that collect air quality monitoring data on an ongoing basis. There is one station location onsite immediately south of the north-south runway (on-airport), and one located offsite to the east of the airport (West Meadows). Data from these stations has previously been made available to EPA Victoria at their request. EPA Victoria also have a number of air quality monitoring stations in suburbs in the greater Melbourne area which monitor the Melbourne airshed and data is made publicly available on their website.

The assessments included in the pdMDP were conducted prior to some of the new guidance related to the new EP Act commencing. The dMDP has been updated to align with the new legislation and guidelines.

F7 Airport Contribution to Climate Change

F7.1 Summary of Issue

Many submissions specifically outlined objections to the proposed third runway development and expressed concern about the increased greenhouse gas emissions that will result from M3R, and the potential effects this has on climate change. Most of these submissions related to greenhouse gas emissions generated by aircraft in flight outside of the airport boundary. A number of Government and community submissions state the importance of reducing air travel to curb climate change.

Some submissions included concerns about the increased greenhouse gas emissions that will result from ground transport to and from the airport, as well as the offsets in place to reduce APAM's carbon footprint.

Other matters raised include the potential for cleaner fuel alternatives, developing technology across the aviation industry and the investment in fast rail links across the country.

F7.2 Number and Types of Submissions

213 submissions contain reference to the 'Airport Contribution to Climate Change' Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Maribyrnong City Council, Western Health, Hume City Council, Brimbank City Council, City of Yarra and Moreland City Council).

F7.3 Discussion of Submissions

Many submissions specifically outlined objections to the proposed third runway development and expressed concern about the increased greenhouse gas (GHG) emissions that will result from M3R, and the potential effects this has on climate change. Most of these submissions related to GHG emissions generated by aircraft in flight outside of the airport boundary. Examples from submissions include:

> *"We know that flying is a huge contributor to global warming and the climate crisis".*
>
> *"We need as a global community to accept that we are in a climate and ecological emergency, and that we need to scale back significantly on activities such as air travel, until we can do so in a sustainable and ecologically safe manner."*
>
> *"There are concerns about the health risks associated with the extra pollution resulting from increased air traffic, as well as the environmental impact of increased greenhouse emissions."*
>
> *"Expanding aviation will increase CO2 emissions."*
>
> *"The chapter compares 'build' and 'no build' scenarios, but does not discuss the assumptions made for each of these. For example, does 'no build' assume aircraft will spend more time circling the airport or waiting on taxiways due to delays?"*

Some submissions also included concerns about increased emissions due to ground transport to and from the airport and the offsets APAM have in place to reduce our carbon footprint. One submission stated "*The capacity of the roads would be tested, if not exceeded, and increase the greenhouse gas pollution around the area. This pollution would be on top of that brought in by the extra plane traffic expected*.". Maribyrnong City Council state "*the increased greenhouse gas emissions from road-based transport be quantified to determine the full impact on the environment as a result of the airport expansion*.". Brimbank City Council also note "*while the MDP identifies a list of potential emission control measures, none of these measures have been modelled to assess their effectiveness in minimising emissions… The MDP does not consider overflight emissions or road traffic surrounding the airport*.".

A few submissions mentioned emissions from onsite operations including infrastructure development. For example, one submission specifically mentions emissions from cement production "*Worldwide, the industry creates 8% of global carbon dioxide emission*".

The Moreland City Council (now Merri-bek City Council) submission and Greater Sunshine Community Alliance (GSCA) state the importance of reducing air travel to curb climate change. Stating:

> *"Within the context of a climate emergency we need to be rapidly reducing the emissions and air pollution caused by the transport sector to protect the health and wellbeing of our community and our planet... the federal government needs to urgently invest in alternatives to air travel, such as high-speed rail to reduce emissions from aviation"*
>
> *"We support the position of climate scientist Professor Alice Bows-Larkin that "a moratorium on airport expansion at least in wealthy nations is one of the few options available to dampen growth rates within a timeframe befitting of the 2C target.".*

Some submissions note that the climate change section of the MDP is confined to the emissions within the Airport boundary, stating the following:

> *"Climate change was considered by APAM but this was confined to impacts of construction and sustainability of the airport itself… Therefore for APAM planning to ignore climate change, means that all modelling of future passenger and aircraft numbers is likely to be hugely inaccurate and most likely, a huge overestimate."*
>
> *"It counts only landing and take-off (LTO) emissions, saying that emissions beyond LTO are "largely out of[its] control". But emissions estimates by airports elsewhere do include total flight emissions."*
>
> *"Emissions should be monitored from take off to climb altitude approx. 6mins which is over the communities and where it should be recorded."*

Flight Free Australia's submission also acknowledges that full flight emissions from aircraft are excluded from the assessment of operation emissions in the MDP. They state this is "*not the standard practice when assessing airport emissions elsewhere"* and emphasise that we are in a climate emergency.

Several community submissions request the completion of an "*Environment Impact Assessment including of the increased global heating emissions, together with an "Avoidance Plan*" for assessed impacts and state that "*an independent, fully resourced and transparent assessment is avoided for environmental characteristics and impacts on communities and the 'environment' in its broadest sense. For example, no in-depth consultation of the to-be-impacted public by health or any other professionals has been undertaken and published in relation to noise, air quality, airport hazards and risk, public health, economic and social/community issues*.".

Other matters raised include the potential for cleaner fuel alternatives, developing technology across the aviation industry and the investment in fast rail links across the country. One submission notes, "*Unlike most road travel, there are no other cleaner fuel alternatives. Developments in Biofuels or other technology for the aviation industry are premature and expensive*.". Flight Free Australia state "*Renewables-electrified planes, aviation's only emissions free option, are years away for short-haul and a pipe-dream for long-haul flights*.".

Comments regarding Australian climate change policy have been addressed In Theme A5. Comments regarding broader scale sustainability are addressed in Theme A6.

F7.4 M3R MDP References

Chapter B11 of the MDP addresses GHG emissions associated with the construction and ground-based operational activities of M3R and includes relevant mitigation and monitoring measures. It includes discussion around the following issues raised by submitters:

- Emissions generated within the Airport boundary.
- Melbourne Airport's ability to implement measures to reduce these LTO-related emissions.
- Additional emissions relating to construction of M3R.

Chapter B13 addresses Climate Change and Natural Hazard Risk, which presents an assessment of the current risks to M3R associated with climate change and natural hazards.

F7.5 APAM Position

A large number of submissions detailed their objections to M3R, and in particular the effect on climate change from increased GHG emissions attributable to increased aircraft movements. Chapter B11 discusses the modelling and assessments completed to understand the likely GHG emissions resulting from construction and operation of M3R. GHG emissions directly attributable to aircraft emissions in-flight are subject to different legislation and are outside the airport's direct operational control. These aspects are therefore outside the scope of the M3R MDP. However, APAM recognises the significance of these aspects and works continuously with airlines and stakeholders to pursue positive environmental outcomes in relation to these matters.

In response to the submission requesting more information on "'Build' and 'No Build' scenario" assumptions, APAM notes the scenarios are briefly described in the introduction (B10.1), and the difference between the scenarios is reported quantitatively in Section B10.4.4. The main driver of air quality impacts is the number of aircraft movements and corresponding airport traffic in the road network around the airport. The third runway increases both of these impacts. Under the 'No Build' scenario, Melbourne Airport reaches maximum aircraft movements after 2026. Taxi times and flight paths are input into the model based on defaults set by the AEDT model (built by the U.S. Federal Aviation Administration). Of this, aircraft circling the airport have a negligible impact on ground level pollutant concentrations.

In response to submissions including Maribyrnong City Council, that relate to increased emissions as a result of infrastructure development associated with M3R, Chapter B11, section B11.6 details emissions associated with the construction and ground-based operational activities of M3R. Emissions generated from ground-transport to the airport is addressed in Theme A6. APAM acknowledge that M3R will be a source of greenhouse gas emissions both from ground-based sources and the aircraft using it, which will contribute to climate change. APAM are committed to reduce these emissions across the infrastructure lifecycle to limit any potential adverse impact of M3R on climate change.

Emissions from surface road access are included in the modelling for both the air quality and greenhouse gas chapters. Chapter B11 Section B11.4.6.1 includes information on the likely GHG emissions from construction of M3R, including vehicle usage and vegetation clearance. Road-based transport is assessed in Chapter B11 Section B11.4.6.2 for future years under the 'Build' and 'No build' scenarios. The emissions factors applied to vehicle movements around the airport are obtained from modelling software COPERT, which contains a representative database of vehicles specific to Australia. The vehicle emissions factor is a weighted-average factor considering passenger vehicles, light commercial vehicles, and trucks. EVs have not been factored into emissions factors to ensure modelling remains conservative.

In response to comments asking about pollution from increased flights and road traffic, the Airports Council International Guidance Manual for Airport GHG Emissions Management (2009) was

adopted as the most relevant approach for calculating airport emissions and is used internationally. This guidance states that an airport operator can choose to include “either the LTO cycle or whole of departing flight emissions” (page 8). No other guidance is provided regarding flight emissions reporting by airports in Commonwealth or State legislation in Australia. APAM does not have operational control of whole of flight emissions.

In response to submissions asking about the offsets APAM have in place to reduce our carbon footprint, a portion of APAM carbon emissions are currently offset on an annual basis. These emissions are specifically related to APAM staff air travel, ride share and vehicle emissions. Offsets have been secured on an annual basis. The APAC ESG Strategy includes commitments to further reducing the airport’s carbon emissions with a target of net zero Scope 1 and 2 carbon emissions by 2025. There will be a portion of Scope 1 and 2 emissions that cannot be reduced any further via implementation of onsite solar and green power sourcing. These emissions will be offset by APAM via purchase and retirement of Verified Carbon Units.

In response to Moreland City Council, the GSCA, and submissions commenting on cement production, APAM acknowledges the need for a focus on reducing emissions attributable to the construction sector. M3R will develop a sustainability framework which includes the consideration of building materials and other sustainable procurement targets. This is further considered in Theme B6.

In response to the submissions that raised potential for cleaner fuel alternatives and developing technology across the aviation industry, APAM notes that on 20 June 2022 the Australian Government announced Qantas and Airbus will invest a combined US$200 million to strengthen the sustainable aviation fuel industry in Australia. Sustainable fuels cut greenhouse gas emissions by around 80 per cent compared to traditional fuels and are able to be used in existing engines without significant modification. Moving to sustainable fuels is the easiest way for the aviation sector to cut its emissions in the short to medium term, particularly for medium and long-haul flights. As outlined in the APAC ESG Strategy, APAM will continue to engage with tenants, supply chain, and airline partners on reducing our Scope 3 emissions – including the development of a Scope 3 reduction strategy.

Detailed assessments for GHG emissions are included in B11. GHG were assessed based on relevant Commonwealth legislation with consideration to international and state legislation and frameworks. APAM notes the assessment of impacts and development of the technical MDP chapter B11 was completed by independent and suitably qualified consultants Point Advisory.

F7.6 Changes to Preliminary Draft M3R MDP

Chapter B11 Section B11.2.4 and Section B11.8 have been updated to include reference to the APAC ESG Strategy. This was published in February 2022 so was not able to be referenced in the preliminary draft MDP.

F7.7 Summary and Conclusion

Many submissions detailed their objections to M3R, and in particular the effect on climate change from increased greenhouse gas emissions attributable to increased aircraft movements. Chapter B11 discusses the modelling and assessments completed to understand the likely GHG emissions resulting from construction and operation of M3R. GHG emissions directly attributable to aircraft emissions in-flight are subject to different legislation and are outside the airport’s direct operational control. These aspects are therefore outside the scope of the M3R MDP. However, APAM recognises the significance of these aspects and works continuously with airlines and stakeholders to pursue positive environmental outcomes in relation to these matters. The APAC ESG Strategy includes further commitments and targets to reduce greenhouse gas emissions, in particular relating to Scope 3 carbon emissions.

The Airports Council International Guidance Manual for Airport GHG Emissions Management (2009) was adopted as the most relevant approach for calculating airport emissions and is used internationally. This guidance states that an airport operator can choose to include "either the LTO cycle or whole of departing flight emissions" (page 8). No other guidance is provided regarding flight emissions reporting by airports in Commonwealth or State legislation in Australia. APAM does not have operational control of whole of flight emissions.

APAM acknowledge that M3R will be a source of greenhouse gas emissions both from ground-based sources and the aircraft using it, which will contribute to climate change. Therefore, APAM are committed to reduce these emissions across the infrastructure lifecycle to limit any potential adverse impact of M3R on climate change. As part of the APAC ESG Strategy Melbourne Airport is committed to engaging with stakeholders, including airlines, to understand and reduce the Scope 3 emissions associated with Melbourne Airport.

F8 EPBC Act and Offset Management Strategy

F8.1 Summary of Issue

A few submissions asked about the requirements of the Environment Protection and Biodiversity Conservation (EPBC) Act and in particular in relation to environmental offsets. These submissions requested more information on how flora and fauna will be protected, what steps are being taken to offset habitat loss, and what offsets are payable by APAM as a consequence of M3R.

Submissions also include commentary regarding the efficacy of offsetting natural, established ecosystems and requested that offsets should go beyond the minimum standard requirements.

Some submissions asked for specific detail of the availability offset sites, noting that approval should only proceed after any proposed offset habitat is located and purchased. Some submissions also asked about the existence of an Environmental Impact Statement (EIA) from the Department of Agriculture, Water and the Environment (DAWE, now DCCEEW).

F8.2 Number and Types of Submissions

22 submissions contain reference to the ‘EPBC Act and Offset Management Strategy’ Issue. They were received from:

- Community
- Community organisations
- Non-government organisations and commercial entities
- Government (Hume City Council, Brimbank City Council and Victorian Government).

F8.3 Discussion of Submissions

A few submissions asked about the requirements of the Environment Protection and Biodiversity Conservation (EPBC) Act, and in particular in relation to environmental offsets. They requested more information on how flora and fauna will be protected, what steps are being taken to offset habitat loss, and what offsets are payable by APAM as a consequence of M3R. Submissions also include questions about the efficacy of offsetting natural, established ecosystems.

Examples from community, community organisation and non-government organisation submissions are:

> *“The proposed Third Runway will destroy endangered woodland, and any proposed compensating offsets are likely to be ineffective.”*

"The construction of the runway also negatively affects vital woodlands and proposed offsets are – like most offsets – ineffective."

"The proposed Third Runway will destroy endangered woodland, and any proposed compensating offsets are likely to be ineffective. It is too easy to destroy these precious assets, and extremely difficult, if not impossible, to replace them."

"Other creatures live close to the airport and will lose their habitat if the third runway goes ahead… these species are listed as critically endangered species subject to EPBC Act protection (whose protection isn't strong enough)."

"The EPBC Act offsets policy results in a net loss of habitat. The 2020 interim report of the independent review of the EPBC Act said that "Environmental offsets do not offset impacts of developments"

"The EPBC Act offsets policy would allow the destruction of this woodland, as a heavily fragmented vegetation community."

"The need to offset is mentioned however the how and where isn't?"

Birdlife, Hume City Council (HCC) and Moreland Council noted that offsets should go beyond the minimum standard requirements. Their submissions stated:

"If complete avoidance is not possible, then every reasonable effort must be made to further reduce the extent of loss - with any offsets going well beyond the minimum standard requirements." (Birdlife)

"As part of an industry that generates major environmental and climate change impacts, Council believes Melbourne Airport has a corporate responsibility to exceed the typical requirements for mitigating the environmental impacts and offsets of every Airport project." (HCC)

"for a project of this significance, offsets should be delivered beyond the minimum required to meet Environment Protection and Biodiversity Conservation Act 1999 obligations." (Moreland Council)

APAM acknowledge the HCC submission which requests to *"include specific detail of the availability offset sites necessary to offset the impacts of the project on flora and fauna*.". Flight Free Australia also request more information about this stating "*approval should only proceed after any proposed offset habitat is located and purchased*.". Other community submissions also ask for more details about offset location and purchase dates.

Some submissions asked about the existence of an Environmental Impact Statement (EIA) from the Department of Agriculture, Water and the Environment (DAWE), now the Department of Climate Change, Energy, the Environment and Water (DCCEEW), stating:

"Where and when has the assessment accreditation and advice under the EPBC Act obtained from the Department of Agriculture, Water and the Environment been made available to the people of Melbourne?"

"The potential environmental impact of a new runway anywhere is huge, yet an Environment Impact Statement from by the Department of Agriculture, Water and the Environment (AWE) on the proposed Third Runway was not undertaken prior to publication of the preliminary draft MDP."

HCC expand on this stating “Council believes an EIA would have been more preferable to assist in community confidence that the environmental impacts of the third runway have been fully and transparently considered and assessed.”.

[redacted]

F8.4 M3R MDP References

The proposed offset management strategy is detailed in Chapter E3 Offset Management Strategy.

The provision of appropriate offsets in accordance with the EPBC Act are outlined in Chapter B5.

F8.5 APAM Position

For direct impacts to significant ecological values that cannot be avoided, the provision of appropriate offsets in accordance with the EPBC Act Environmental Offsets Policy will be the primary mitigation measure. There is no legislative requirement to provide offsets for state significant ecological values, but as these values largely correspond with nationally listed species and ecological communities, it is anticipated that the proposed offset strategy will assist in mitigating impacts on these values.

The proposed offset management strategies for flora and fauna are addressed in Chapter E3. By offsetting the large-scale and significant native vegetation removal for the project, the proposed offset strategy will contribute conservation gains that will mitigate significant impacts to the environment as a whole on Commonwealth land.

Further to this, as part of general estate management, the 2022 Master Plan includes commitments to implement tasks related to biodiversity and conservation management. These include investigating a whole of airport biodiversity offsets strategy and revegetating areas of land under our management to support biodiversity, stream health and cultural heritage in areas identified as 'Recreation, Conservation and Water Management'.

An example of this revegetation was APAM's celebration of World Environment Day in early June 2022 when APAM brought together more than 140 people from APAM, service providers, tenants, contractors and business partners to plant more than 1,500 trees and shrubs. The team built on previous years' efforts to improve canopy cover along Moonee Ponds Creek on the airport's north-eastern boundary, and provide habitat for animals, reduce erosion and promote natural regeneration. A further 600 trees were also planted along the Deep Creek / Maribyrnong River corridor as part of ongoing waterway enhancement on that corridor. Around the Melbourne Airport terminal precinct in FY22, we have also planted over 7,000 native shrubs and some trees to provide micro-habitat for small birds, reptiles and insects. Programs similar to this will continue to be progressed in addition to commitments made as part of the M3R MDP and address the comments from the Victorian Government regarding improving habitat within and adjacent to the airport.

Regarding the requests for offsets going beyond the minimum requirements, it is noted that APAM are meeting all legislative requirements and are also engaging with the Department of Climate Change, Energy, the Environment and Water (DCCEEW) to ensure approval of the proposed offset management strategy.

In response to the submission asking for additional information about offset agreements to be made publicly available, APAM has updated the MDP to include information on offsets that are already secured. Secured agreements for biodiversity offsets will not be made publicly available. APAM can confirm ecological management and offset strategies have been created in accordance with relevant statutory requirements and policy.

APAM acknowledges the submissions which ask about the existence of an Environmental Impact Statement (EIA) from the DAWE (now DCCEEW). APAM notes an EIA is not required for the MDP environmental assessment in accordance with the Airports Act 1996 (which specifies specific environmental requirements) and to meet the requirements and offset guidelines in the EPBC Act. The MDP itself is the required environmental assessment and was provided for public comment and will be referred to DCCEEW for review as part of the Department of Infrastructure, Transport, Regional Development, Communications and the Arts (DITRDCA) review and approval process.

[redacted]. The EPBC Act Environmental Offsets Policy (p. 7) states: "Offsets provide environmental benefits to counterbalance the impacts that remain after avoidance and mitigation measures.". Offsetting is not listed as a mitigation measure in Table B5.33 but included as an impact management measure. This table has been updated in the dMDP to clarify this.

F8.6 Changes to Preliminary Draft M3R MDP

Chapter E3 and B5 of the MDP will be updated to include more detail about offsets (including offsets that are already secured, and those proposed to be secured), residual impacts, mitigation measures and impact monitoring.

F8.7 Summary and Conclusion

The proposed offset management strategies for flora and fauna are addressed in Chapter E3. By offsetting the large-scale and significant native vegetation removal for the project, the proposed

offset strategy will contribute conservation gains that will mitigate significant impacts to the environment as a whole on Commonwealth land.

APAM are meeting all legislative requirements related to offsets and are engaging with the DCCEEW to ensure the approval of the proposed offset management strategy.

APAM has updated the pdMDP to include information on offsets that are already secured. Secured agreements for biodiversity offsets will not be made publicly available. APAM can confirm ecological management and offset strategies have been created in accordance with relevant statutory requirements and policy.

APAM notes an EIA is not required for the MDP environmental assessment in accordance with the Airports Act 1996 (which specifies specific environmental requirements) and to meet the requirements and offset guidelines in the EPBC Act. The MDP itself is the required environmental assessment and was provided for public comment and will be referred to DCCEEW for review as part of the DITRDCA review and approval process.

5.6.3 Theme Summary and Conclusion

APAM has considered all submissions relating to environmental impacts as part of development of the MDP. The pdMDP included a high level of detailed information regarding all identified environmental aspects and impacts. There were a few areas of concern raised in submissions which required additional detail to be included in the MDP, however these changes are considered minor and do not change the outcome of the environmental impact assessments presented in the pdMDP. In response to submissions APAM have made the following key changes to the M3R MDP:

- Revised chapters to ensure all current legislation, regulations and guidelines are referenced and addressed as required. A number of key pieces of regulation were updated after development of the pdMDP (e.g. the Victorian Environment Reference Standard 2021)
- Revised Chapter B6 – Indigenous Cultural Heritage to capture results of complex assessments completed after development of the pdMDP
- Revised Chapter B5 – Ecology to include further information on potential indirect impacts to protected species, and to provide additional detail regarding potential impacts to species protected under Victorian legislation.
- Revised Chapter E3 – Offset Management Strategy to include further information on proposed offset sites, both on-airport and offsite.

APAM believes the M3R MDP adequately identifies and assesses the potential environmental aspects and risks associated with the M3R development. The MDP includes proposed mitigation measures for these risks as appropriate. APAM notes that due to detailed design not being complete, a number of mitigation measures cannot be finalised in the M3R MDP. As noted in the M3R MDP, APAM will develop a number of key management documents related to Theme F issues as part of the detailed design process that will continue post-approval. These include:

- Construction Environmental Management Plan
- PFAS Management Strategy
- Offsets Management Strategy

These plans will be provided to the Commonwealth for review and subsequent approval prior to implementation as part of the M3R development.

6 Draft M3R MDP

The Draft M3R MDP which accompanies this report has been prepared in accordance with all relevant requirements of the Airports Act and has had due regard to the comments raised in the submissions received. This section demonstrates how the Draft MDP satisfies the requirements of Sections 91 and 94(3) of the Act.

6.1 Changes to the Preliminary Draft MDP

APAM has taken into account and had due regard to the written comments on the Preliminary Draft MDP which resulted in the need for some changes to the document. These changes are highlighted in red within the Draft MDP to show where these changes have been made within the document. The rationale behind the changes made within the Draft MDP are documented and discussed within Section 5 of this report. The changes are identified under the *Changes to the Preliminary Draft M3R MDP* sub-heading within each Issue section.

There have also been some administrative amendments or corrections that resulted from a further internal review of the Preliminary Draft MDP where content needed to be updated, for example, references to the 'proposed' Master Plan 2022 or changes to planning scheme provisions. These changes to the MDP have also been highlighted in red to clearly show what has changed since the public exhibition phase.

6.2 Section 91 - Contents of MDP

Section 91 sets out the matters that must be addressed in a MDP. It is our submission that all of these matters have been addressed. Table A1.2 in Chapter A1 of the Draft MDP shows where each of the requirements has been addressed in the MDP.

6.3 Section 94(3) – Approval of MDP by Minister

Section 94(3) of the Act sets out the matters that the Minister must have regard to when deciding whether to approve a Draft MDP. The following table outlines APAM's response to those matters.

Table 46: Responses to Section 94 Matters

Section 94(3) In deciding whether to approve the plan, the Minister must have regard to the following matters:	APAM Response:
(aa) the extent to which the plan achieves the purpose of a major development plan (see subsection 91(1A));	The plan achieves the purpose of a major development plan. The MDP outlines the details of M3R as it relates to the airport. As outlined in Chapter B2, the MDP is consistent with the airport lease for the airport and the approved Master Plan 2022.
(a) the extent to which carrying out the plan would meet the future needs of civil aviation users of the airport, and other users of the airport, for services and facilities relating to the airport;	The MDP sets out in detail the planned provision of a new runway to accommodate forecast aviation growth. The need for the project is outlined in Chapter A2.

Section 94(3) In deciding whether to approve the plan, the Minister must have regard to the following matters:	APAM Response:
(b) the effect that carrying out the plan would be likely to have on the future operating capacity of the airport;	Carrying out M3R will have positive effects on the operating capacity of the airport, as outlined in Chapter A2.
(c) the impact that carrying out the plan would be likely to have on the environment;	The environmental impacts of M3R are described in the MDP in extensive detail. The MDP acknowledges that there will be environmental impacts and some suburbs around the airport will be affected by aircraft noise and other effects. The MDP includes details of various measures to mitigate and manage these effects during both construction and operation of M3R.
(d) the consultations undertaken in preparing the plan (including the outcome of the consultations);	The extensive consultations undertaken in preparing the MDP and the outcomes of the consultations are discussed in Chapter A6 of the MDP and Section 3 of this report.
(e) the views of the Civil Aviation Safety Authority and Airservices Australia, in so far as they relate to safety aspects and operational aspects of the plan;	CASA and Airservices were both consulted extensively about the MDP and Airservices made a submission.
(f) if the plan relates to a sensitive development: **(i) whether the exceptional circumstances that the airport-lessee company claims will justify the development of the sensitive development at the airport; and** **(ii) the likely effect of the sensitive development on the future use of the airport site for aviation related purposes; and** **(iii) the likely effect of the sensitive development on the ground transport system at, and adjacent to, the airport.**	The MDP does not relate to a sensitive development.

7 Conclusion and Recommendation

The M3R MDP is the culmination of over three years of work by APAM and airport stakeholders.

This Supplementary Report has:

- Demonstrated compliance with the relevant requirements of the Airports Act relating to the preparation and content of MDPs
- Addressed the relevant requirements of the Airports Act relating to submission of a Draft MDP to the Minister for approval
- Demonstrated that APAM has had due regard to the comments raised in the submissions that were received during public exhibition of the Preliminary Draft M3R MDP.

APAM commends the Draft MDP to the Minister and respectfully requests that it be approved under Section 94 of the Airports Act.