MELBOURNE AIRPORT

Environmental Management Plan

September 2021

Document control

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ABBREVIATIONS

Abbreviation	Description
ACM	Asbestos Containing Material
APAM	Australia Pacific Airports (Melbourne)
ARI	Average Recurrence Interval
AST	Above-ground storage tank
CHMP	Cultural Heritage Management Plan
DAWE	Department of Agriculture, Water and the Environment
EMP	Environmental Management Plan
EMS	Environmental Management System
EPA	Environment Protection Authority Victoria
FOD	Foreign Object Debris
HPZ	Heritage Protection Zones
IOC	Integrated Operations Centre
LDAR	Leak detection and repair
OEMP	Operational Environmental Management Plan
PCBs	Polychlorinated Biphenyls
PFAS	Per- and poly-fluoroalkyl substances
SDS	Safety Data Sheets
SIMS	Safety Information Management System
SMF	Synthetic Mineral Fibres
TPZ	Tree Protection Zone
TWA	Trade Waste Agreement
UPSS	Underground petroleum storage system
UST	Underground Storage Tank
VPZ	Vegetation Protection Zones

GLOSSARY OF TERMS

Term	Description
Contractor	An individual or company engaged by APAM to undertake works at Melbourne Airport.
Dangerous goods	Dangerous goods are substances that are corrosive, flammable, combustible, explosive, oxidising or water-reactive or have other hazardous properties. Dangerous goods can cause explosions or fires, serious injury, death and large-scale damage. The Dangerous Goods Act 1985 defines which substances are dangerous goods. Examples of common dangerous goods include flammable liquids (petrol, kerosene, turpentine, flammable paints etc.), corrosives (hydrochloric acid), flammable gases (LP Gas), non-flammable non-toxic gases (carbon dioxide), asbestos and explosives.
Environmental Impact	Any change to the environment, whether adverse or beneficial, wholly or partially resulting from an organisation's activities, products or services.

Term	Description
Environmental Incident	An event that may cause harm or potential harm to an environmental receptor e.g. spills, erosion and sediment-laden water entering drains/waterways; non-compliance with environmental management plans or approvals. Environmental incidents range from minor events in which the impact is limited and contained in a small area, to major events which result in ongoing or extensive contamination.
Environmental Management Measure	A control or mitigation measure required to prevent or reduce an environmental impact.
Fill Material	Industrial waste soil which does not contain unacceptable levels of contamination, as defined by the Environment Protection Regulations 2021.
Foreign Object Debris (FOD)	An aviation term for refuse / debris that could potentially cause damage to staff, aircraft or equipment.
Hazardous substances	Hazardous substances include any substance, whether solid, liquid or gas, that can pose a significant risk to health, safety and/or the environment if not managed correctly. They may have health hazards, physical hazards or both. Examples of hazardous substances include but are not limited to fuels, compressed gases, paints, pesticides, detergents and other chemicals.
Industrial waste	Industrial waste includes waste from: ▪ commercial, industrial and trade activities ▪ accommodation, cafes and restaurants ▪ building and road construction, renovations, demolitions and repairs All waste generated at Melbourne Airport is industrial waste and may also be classified as priority waste or reportable priority waste.
Major Project	A significant development at Melbourne Airport for which a Major Development Plan is required to be submitted to the Federal Government for approval in accordance with the requirements of the Airports Act 1996 (Cth).
Priority waste	Priority waste is a subset of industrial waste, as defined by the Environment Protection Regulations 2021, which requires additional controls due to its higher level of hazard, its potential for mismanagement, or to encourage resource recovery or resource efficiency.
Project Manager	The person responsible for delivery of a project or activity at Melbourne Airport.
Reportable priority waste	Reportable priority waste is a subset of industrial waste, as defined by the Environment Protection Regulations 2021, which carries the highest-level controls for managing specific risks. Additional controls for this waste type include transportation only by permissioned vehicles and mandatory tracking of waste during transportation.

1.0 INTRODUCTION

1.1 Management Goals and Objectives

This Environmental Management Plan (EMP) is designed to assist in the delivery of the environmental management principles described in APAM's Melbourne Airport Environment Policy by identifying the potential environmental risks that are posed by APAM operations and describing the measures that will be taken to eliminate or mitigate those risks.

The implementation of this EMP will also assist in meeting the actions outlined in APAM's Airport Environment Strategy and Environmental Management System (EMS).

1.2 EMP Purpose

The purpose of this EMP is to describe:

- The minimum environmental management requirements to be implemented to meet APAM's management goals and commitments;
- The roles and responsibilities of APAM personnel in implementing this EMP;
- Environmental monitoring and reporting requirements;
- Environmental incident response procedures; and
- Procedures for reporting and responding to EMP non-conformances and incidents as well as corrective and preventative actions.

1.3 Scope

This EMP outlines the minimum environmental management requirements that must be met during all operational and construction activities within the boundaries of Melbourne Airport controlled land. The EMP covers APAM's routine operations and activities broadly including:

- Construction and demolition work;
- Repair and maintenance work;
- Storage, handling and use of hazardous substances;
- Vegetation and estate management.

This EMP applies to all APAM Departments and applies to operations carried out by, and on behalf of APAM. It also provides guidance regarding APAM's expectations of environmental management for third parties.

Where the APAM building approval process triggers the need for a project specific EMP, this document should be used as a guide in developing the project specific EMP to address APAM's minimum environmental management requirements. The development of a project specific EMP must also consider potential environmental risks outside the scope of this EMP and identify appropriate project specific controls to address those risks. For reference, the environmental assessment process for building approvals is summarised in APPENDIX C.

This EMP includes a number of general environmental management expectations relating to waste, air and noise management which apply to all activities undertaken across the airport. In addition, APAM's emergency response and complaints handling procedures apply in all instances, and to all activities and areas of operation across Melbourne Airport. These general procedures are outlined in Section 4.

Environmental management measures relating more specifically to the activities associated with construction and demolition work, repair and maintenance work, storage, handling and use of hazardous substances and vegetation and estate management are outlined in Section 5.

1.4 Exclusions

Whilst not specifically subject to this EMP, the following parties and activities should consider the requirements of this EMP when developing environmental control measures:

- APAM contractor EMPs;
- Tenant Operational Environmental Management Plans (OEMPs) required under APAM lease agreements;
- 'Major Projects' that require project specific management plans;
- Third party contractor EMPs.

The following activities are not included in the EMP scope:

- Major emergency response or preparedness activities.

1.5 EMP Structure

This document has been structured to include:

- A list of applicable activities and broad operation types to which this EMP applies (**Table 3, Section 2.0**);
- The minimum general environmental management requirements relating to waste, air quality, noise management, emergency response and handling complaints (**Section 4**);
- The minimum environmental management measures relating more specifically to the activities associated with construction and demolition work, repair and maintenance work, storage, handling and use of hazardous substances and vegetation and estate maintenance (**Section 5**);
- Reference to a range of other management documents (**Section 6**) which also apply to APAM's operations and activities. These include Corporate Procedures, Operational Policies and Procedures, Guides, Templates and Forms which have been informed parts of this EMP;
- The minimum requirements for compliance and monitoring (**Section 7**);
- **APPENDIX A** presents the EMP Risk Assessment;
- **APPENDIX B** provides an overview of the legislative and regulatory context applicable to activities at Melbourne Airport considered in this EMP;
- **APPENDIX C** provides an overview of the environmental assessment process for building approvals;
- **APPENDIX D** includes a list of products (soil binders, herbicides and pesticides) which have been reviewed by the APAM Environment and Sustainability Team and are deemed suitable for use at Melbourne Airport; and
- **APPENDIX E** provides a Dangerous Goods Manifest template.

1.6 Roles and responsibilities

1.6.1 Department Managers

APAM Department Managers have overall responsibility for:

- Ensuring compliance with applicable environmental legislative requirements;
- Ensuring personnel and contractors within their departments are aware of, and understand the EMP requirements relevant to their area/scope of work;
- Ensuring the necessary resources and processes are in place for implementation of required environmental management measures; and
- Providing feedback in the regular review of this EMP.

1.6.2 Project Managers

Project Managers are required to:

- Communicate with personnel and contractors regarding site specific environmental issues and compliance with the EMP;
- Ensure that sufficient information about environmental risk is provided to relevant personnel;
- Coordinate the implementation of environmental management measures during work;
- Undertake site inspections on a regular basis to monitor the implementation and effectiveness of environmental management measures;
- Ensure non-conformances are identified, recorded and reported;
- Communicate incidents to the APAM Department Manager and the APAM Environment and Sustainability Team.

1.6.3 All Personnel

All APAM personnel are required to:

- Undertake activities consistent with this EMP;
- Communicate incidents to the APAM Project Manager; and
- Ensure that they attend the provided environmental training relevant to their role and responsibilities.

1.6.4 APAM Environment and Sustainability Manager

The APAM Environment and Sustainability Manager is responsible for:

- Coordinating the development and regular review of this EMP;
- Supporting the Environment and Sustainability Team to carry out site inspections on a regular basis to monitor the implementation and effectiveness of this EMP; and
- Coordinating feedback from APAM Department Managers in the review of this EMP.

1.6.5 APAM Environment and Sustainability Team

The APAM Environment and Sustainability Team is required to:

- Assist APAM Department Managers and Project Managers in the induction and training of relevant personnel involved in implementing this EMP;
- Review and endorse operation or activity specific EMPs;
- Contribute to regular reviews of this EMP;

- Carry out inspections on a regular basis to monitor the implementation and effectiveness of this EMP; and
- Report and respond to incidents and facilitate the implementation of corrective actions.

1.7 Project Contacts

Table 1 is to be completed to include details (name and contact number) of the relevant Operator or Project contacts, depending on EMP application.

Table 1: EMP Contact List

Melbourne Airport Integrated Operations Centre (IOC)	(03) 9297 1601
APAM Environment and Sustainability Manager	0473 300 570
Landside Environmental Asset Manager	0403 768 695
Project Manager / Development Manager *[Include both APAM and external contacts as relevant]*	
Site Supervisor	
Principal Contractor (if relevant)	
List of subcontractors (if relevant)	
Principal Contractor's representative available 24/7 (if relevant)	

1.8 How to use this EMP

Table 2 provides an overview of how to apply the EMP.

Table 2: Applying the EMP

Step	All EMP uses	Additional considerations for project specific EMPs
Step 1. Identify activities	■ Refer to the Risk Assessment (Table A5) in APPENDIX A. ■ Identify the relevant operation (Column 1) and activities (Column 2) for the task or project to be conducted. ■ For each relevant activity, refer to the corresponding environmental controls (Column 4). *Note:* if additional activities or environmental impacts are identified, or if the assessment of risks does not align with the task or project to be conducted, then additional environmental controls may need to be developed in consultation with the APAM Environment and Sustainability Team.	■ Additional project or location specific environmental risks which may apply must be considered. ■ Additional environmental management measures must be developed to address risks identified. ■ Project specific EMP to be approved by APAM Environment and Sustainability Team prior to works. See note below.
Step 2. Apply EMP controls	■ The relevant environmental controls must be implemented during APAM operations and activities.	■ Project specific EMP to be implemented during works.
Step 3. Monitor implementation of EMP	■ Project Manager to monitor EMP compliance. ■ Non-conformances are to be reported as environmental incidents. ■ APAM Environment and Sustainability Team to conduct periodic inspections to assess EMP compliance.	As per Step 3 - All EMP uses

A note on project specific EMPs

Project specific EMPs submitted to the APAM Environment Team for approval must in in a A4 format and size. Maps and plans can be provided in A3 format and size where required. For specific purposes and projects, other submission formats and sizes may be considered and accepted by APAM. The applicant must discuss this and have this variation approved by the APAM Environment and Sustainability Team prior to submission.

2.0 APAM OPERATIONS AND ACTIVITIES

Table 3 outlines the broad operation categories and activities included within this EMP scope.

Table 3: APAM Operations and Activities

Operation Category	Possible included activities
Construction and demolition	■ Construction of new buildings / civil infrastructure ■ Demolition or renovation of existing buildings / civil infrastructure ■ Earthworks ■ Operation of vehicles, plant and equipment ■ Geotechnical and exploratory ground investigation ■ Management of imported raw material stockpiles ■ Management of contaminated soil stockpiles ■ Storage, handling and use of hazardous substances ■ Vegetation clearing
Operations	■ Storage, handling and use of hazardous substances ■ Operation of vehicles, plant and equipment ■ Maintenance and repair of vehicles and plant ■ Vegetation assessments and clearing ■ Mowing and slashing ■ Landscaping ■ Use of herbicides, fertilisers and pesticides ■ Fire hazard management (firebreaks, prescribed burning etc.) ■ Pest animal control ■ Cattle grazing ■ Waste management ■ Maintenance of civil hydraulic infrastructure

3.0 RISK ASSESSMENT

APPENDIX A presents the Risk Assessment covering the activities commonly carried out by APAM Departments. Environmental management measures have been developed to achieve an environmental risk rating of medium or less.

The risk assessment process informing the development of this EMP adopted likelihood and consequence definitions consistent with APAC's Enterprise Risk Management Approach.

3.1 Assessment of environmental risks

Table 4 summarises the key risks identified for APAM operations and activities assessed as having a medium risk rating after controls. All other risks were assessed as low or very low after controls. Refer to APPENDIX A for the full assessment of identified risks.

Table 4: Risk assessment summary

Operation	Activity	Potential Environmental Impacts	Risk Rating
Construction	Earthworks / Geotechnical and exploratory ground investigation	■ Generation of dust ■ Generation of wastewater from stormwater or groundwater accumulated within excavations ■ Generation of waste spoil and redundant infrastructure	Medium
	Storage, handling and use of hazardous substances	■ Pollution of land, surface water or groundwater from spill of chemicals	Medium
Operations	Storage, handling and use of hazardous substances	■ Pollution of land, surface water or groundwater from spill of chemicals	Medium
	Use of herbicides, fertilisers and pesticides	■ Pollution of land, surface water or groundwater from incorrect application of herbicides, fertilisers or pesticides ■ Pollution of land, surface water or groundwater from chemical spills	Medium
	Fire hazard management (firebreaks, prescribed burning etc.)	■ Loss of control of fire whilst undertaking prescribed burning ■ Unintended impacts to native flora and fauna or landscaped areas	Medium
	Waste management	■ Inappropriate disposal / management of generated waste	Medium

4.0 GENERAL ENVIRONMENTAL MANAGEMENT REQUIREMENTS

A number of general environmental management measures relating to waste management and air and noise management apply to all activities undertaken across the airport. In addition, APAM's emergency response and complaints handling procedures apply in all instances, and to all activities and areas of operation across Melbourne Airport. These general environmental management measures are outlined in Sections 4.1-4.5 below.

Environmental management measures relating more specifically to the activities associated with construction and demolition work, repair and maintenance work, storage, handling and use of hazardous substances, and vegetation and estate management, as developed through the EMP risk assessment process, are outlined in Section 5.

4.1 Waste management

4.1.1 Roles and responsibilities

APAM Asset Operations Department

APAM's Asset Operations Department is responsible for ensuring effective waste management within the airport terminals and office facilities. It also provides support and advice to other areas of the business in relation to waste management.

Third Party Site-Wide Waste Contractor [IKON]

IKON is the assigned APAM contractor responsible for the collection and disposal of waste generated from terminals T1, T2, T3 and T4, APAM offices and landside public areas.

Tenants and operators

- All operators are responsible for the safe containment and disposal of any waste their operation generates.
- All operators must ensure they have adequate waste disposal facilities for their operation and that waste is contained at all times.
- Tenants within T1, T2, T3 and T4 must dispose of waste generated from their tenancy to the designated bin rooms.

Construction contractors

- All construction contractors are responsible for the safe containment and disposal of any waste associated with their project.
- All construction contractors must ensure they have adequate waste disposal facilities for their activities and that waste is contained at all times.
- Waste management responsibilities during construction apply to the construction site, site offices and any laydown areas associated with the project.

All Airside Personnel

- All airside personnel involved in waste disposal operations are to ensure all containers are within their designated areas and are not overflowing.
- All airside personnel are expected to stop and pick up any Foreign Object Debris (FOD) found on the apron and movement areas. It is expected that all personnel will also immediately remove FOD that could potentially create a hazardous situation or cause damage.

4.1.2 Waste types and management pathways at Melbourne Airport

With regard to off-site disposal, all waste generated at Melbourne Airport is categorised as industrial waste under the Environment Protection Regulations 2021, with some waste also being classified as priority waste or reportable priority waste. The duties and obligations associated with each waste type accumulate. For example, reportable priority waste must be managed in accordance with the industrial, priority and applicable

reportable priority waste duties. The general environmental duties that apply to each waste type are summarised in Figure 1.

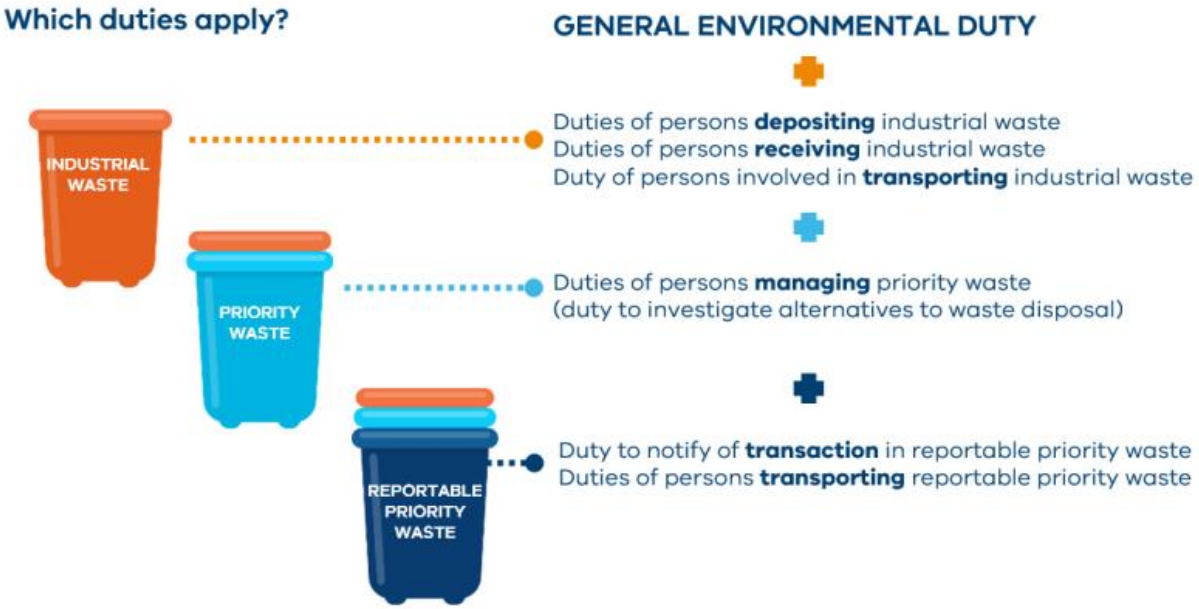


Figure 1: Which duties apply to different waste types[1]

An indication of likely waste types for different waste streams generated at Melbourne Airport is provided in Table 5. Prior to off-site disposal, all waste must be classified to determine the applicable waste type and waste code(s).

Where there is an option to reuse or manage waste material on site, this must be done in accordance with the Airports (Environment Protection) Regulations 1997 and this EMP.

[1] Source: EPA Victoria, *Guide to classifying industrial waste*, Publication 1968.1, 12 August 2021

Table 5: Melbourne Airport Waste Management Streams

Waste Stream	Waste Description	APAM Approved Reuse/Recycling or Disposal Methods	Likely Waste Type (Off-site disposal)
Workshop / maintenance waste	Waste generated from maintenance of vehicle, plant and equipment, or from airfield maintenance activities, including (but not limited to) used spill-kit absorbent materials; air emission filters; oily rags; waste oils and solvents etc.	■ Provision must be made for the segregated management and storage prior to its transport off-site. ■ Transported off-site to a facility authorised to receive the waste.	Priority waste / Reportable priority waste
Asbestos-containing material (ACM)	Solid waste from demolition of buildings or infrastructure which contains asbestos.	■ Off-site disposal to a facility authorised to receive ACM.	Reportable priority waste
Quarantine and biosecurity waste	Waste that could potentially introduce foreign disease or pests into Australia. Often generated from inbound international aircraft and can include cabin waste, amnesty bins, seizures from passenger baggage and imported cargo. This waste may contain quarantinable pests and diseases.	■ The regulation of all quarantine waste is the responsibility of the Department of Agriculture, Water and the Environment (DAWE). ■ Only companies approved by DAWE are permitted to handle, transport, treat or dispose of quarantine waste.	Reportable priority waste
Construction and demolition waste	Solid waste from construction and demolition activities such as concrete, asphalt, bricks, rock and aggregate.	■ Crushed and used within the airport as aggregate, backfill or as road base. ■ Surplus transported off-site to a recycling or disposal facility authorised to receive the waste.	Industrial waste (unless contaminated)
General landfill waste	Miscellaneous solid wastes, such as food scraps and packaging which cannot otherwise be recycled. Currently, this waste stream includes organic waste (see below).	■ Transported off-site to a facility authorised to receive the waste.	Industrial waste
Organic waste	Solid waste that contains organic matter capable of being decomposed, usually made up of food stuffs and may attract wildlife if mismanaged.	■ Transported off-site to a recycling facility authorised to receive the waste. ***Note:*** APAM does not currently segregate organic waste for recycling (i.e.	Industrial waste

Waste Stream	Waste Description	APAM Approved Reuse/Recycling or Disposal Methods	Likely Waste Type (Off-site disposal)
		composting), however this is being considered for implementation.	
Office paper	Recyclable product	■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste
Cardboard	Recyclable product	■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste
Confidential documents	Recyclable product which requires secure handling and destruction	■ Collected by a secure document management contractor for off-site destruction and recycling.	Industrial waste
Electronic waste	Electronic waste (e-waste) comprises waste electrical or electronic equipment. Televisions, mobile phones, computers and their peripherals (e.g. mice, keyboards), whitegoods and fluorescent lighting are all forms of e-waste.	■ Transported off-site to a recycling facility authorised to receive the waste.	Priority waste
Scrap metal	Recyclable product	■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste
Timber	Recyclable product	■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste / Priority waste (if treated with hazardous substances)
Plastics	Recyclable product	■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste
Glass	Recyclable product	■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste
Timber pallets	Recyclable product	■ Return to supplier ■ Transported off-site to a recycling facility authorised to receive the waste.	Industrial waste / Priority waste (if treated with hazardous substances)

Waste Stream	Waste Description	APAM Approved Reuse/Recycling or Disposal Methods	Likely Waste Type (Off-site disposal)
Green waste	Vegetation waste generated during landscaping and estate maintenance works	■ Woody waste (tree trunks / branches) to be mulched and reused on-airport. ■ Other green waste (cuttings, weeds etc.) to be placed in organics waste bin located adjacent to Building 114 or transported off-site to a recycling or disposal facility authorised to receive the waste. ■ Prohibited and controlled weeds must be destroyed in accordance with applicable legislation.	Industrial waste
Excavated soil / spoil	Soil or other solid material excavated during construction or maintenance works.	■ Subject to waste classification. Refer to Section 5.4 for methods.	Industrial waste / Priority waste / Reportable priority waste
Slurry	Slurry generated from concrete coring, non-destructive digging or underground boring activities. Waste classification depends on chemical analysis.	■ Transported to the Water Treatment Plant at Gate 11 (with prior approval from the APAM Environment and Sustainability Team). ■ Transported off-site to a treatment/disposal facility authorised to receive the waste. ■ Dried out on site in an engineered, lined drying pond, subject to approval from the APAM Environment and Sustainability Team. The dried solids can then be managed as per soil.	Industrial waste / Priority waste / Reportable priority waste
Wastewater	Includes any non- amenities water that requires disposal or other management. It includes wash waters.	■ Can be reused on site for dust suppression purposes if quality meets reuse criteria, subject to approval by the APAM Environment and Sustainability Team. ■ Transported to the Water Treatment Plant at Gate 11 (with prior approval from the	Priority waste / Reportable priority waste

Waste Stream	Waste Description	APAM Approved Reuse/Recycling or Disposal Methods	Likely Waste Type (Off-site disposal)
		APAM Environment and Sustainability Team). ■ Classified and disposed of off-site in accordance with regulatory requirements or to sewer in accordance with a Trade Waste Agreement (TWA).	
Trade waste	Trade waste is waterborne waste (other than waste that is a prohibited substance, human waste or stormwater) generated at Melbourne Airport from food service and commercial businesses, as well as any other wastes licenced to be disposed of to sewer.	■ Discharged to sewer in accordance with a TWA.	N/A

Table 6: Waste container specifications and identification

Waste Type	Example of appropriate containment
Foreign Object Debris (FOD) – Red Container Red wheelie containers are to be used for clean waste that poses a FOD hazard. FOD waste bins are to be clearly marked and covered. ***Note:*** priority waste such as oil cans / oily rags / filters etc. must not be disposed of in the FOD bins.	
General landfill waste General waste generated on the airport must be placed in secure rubbish containers – watertight, animal proof and covered. Compactors are recommended to be used for large operations particularly those involving putrescible waste.	 

Workshop/Maintenance Priority Waste – Orange Container

Priority waste from workshop/maintenance activities on the airport must be placed in secure rubbish containers – watertight, covered and lined to prevent leaks. They must also be constructed to prevent the buildup of fumes inside the container.

Orange wheelie containers are to be used for priority waste from workshop/maintenance activities and are to be clearly marked.

Note: Labelling on all orange bins to be updated to reflect the new waste type “PRIORITY WASTE”

Recyclable Waste

Within the terminals and office buildings, designated bins are provided for paper and secure documents recycling, e-waste recycling, cardboard recycling and mixed recycling for plastics, glass and paper/cardboard.

Outside of terminals and office buildings, cages with a self-closing lid are recommended where applicable for clean cardboard recycling and must be clearly marked.

Currently, only cardboard is recycled in T2 Departures Airside. All other waste must be treated as quarantine waste.

Quarantine and Biosecurity Waste

Receptacles for the collection of quarantine and biosecurity waste are to be clearly marked and covered. These receptacles are not to be moved or in any way interfered with except by authorised staff from companies approved by DAWE to handle, transport, treat or dispose of quarantine and biosecurity waste. Items must not be removed from biosecurity and quarantine waste receptacles.

4.1.3 Wastewater and trade waste

APAM Departments who utilise current Trade Waste Agreements for the disposal of effluent to sewer must ensure compliance with the agreement. Only the permitted types of liquid wastes may be disposed of to Trade Waste.

4.1.4 Summary of waste management controls

A – Waste management				
Objectives		■ To carry out the management of waste in accordance with regulatory requirements. ■ To promote sustainable management of resources. ■ To reduce waste disposed of to landfill. ■ To optimise the use of sustainable materials. ■ To reduce the level of contamination in waste streams for reuse / recycling.		
Specific legislation/ regulation /guidance		■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth) ■ Biological Control Act 1986 ■ Catchment and Land Protection Act 1994 ■ Environment Protection Act 2017 (only limited application in relation to waste requirements) ■ Environment Protection Regulations 2021 (only limited application in relation to waste requirements)		
Control ID		Required environmental management measures	Timing	Reference
A	1	■ Prioritise application of the waste hierarchy. In order of most favourable to least favourable: - Avoidance of waste generation. - Reduction of waste generation. - The reuse of materials wherever possible. - Recycling of materials which cannot be reused. - Disposal.	At all times	

A – Waste management				
A	2	■ APAM is committed to being single-use plastic free. At a minimum, the following single-use plastics must not be used: - Single use plastic straws - Single use plastic cutlery - Single use plastic plates - Single use plastic drink-stirrers - Expanded polystyrene food containers - Expanded polystyrene drink containers - Plastic cotton bud sticks. APAM also encourages use of compostable items in place of plastic wherever possible.	At all times	
A	3	■ Designated waste management areas must be established for sorting of wastes into waste streams.	At all times	
A	4	■ Wastes must be managed in accordance with the APAM Approved Reuse/Recycling or Disposal Methods presented in Table 5.	At all times	Table 5
A	5	■ Waste must be segregated and placed into designated containers as detailed in Section 4.1.2.	At all times	Section 4.1.2
A	6	■ All operations and activities must have adequate waste disposal facilities.	At all times	
A	7	■ Terminal tenants must dispose of all waste into bins provided and return full bins to designated bin rooms in readiness for collection and disposal by IKON.	At all times	
A	8	■ The management of waste in airside locations must comply with the Melbourne Airport Operational Safety Policy, *Airside Waste Management.*	At all times	

A – Waste management				
A	9	■ Operators are responsible for ensuring that their leased areas (including surrounding fences) are clean, tidy and free from Foreign Object Debris (FOD).	At all times	
A	10	■ Plastic wrap must not be used for securing luggage or other items to baggage carts.	At all times	
A	11	■ All airside personnel involved in waste disposal operations must ensure all bins are within their designated areas and are not overflowing.	At all times	
A	12	■ The location of all bins positioned on the airside is to be approved by Melbourne Airport.	At all times	
A	13	■ Waste collection is to be carefully planned to avoid the attraction of wildlife or FOD hazards.	At all times	
A	14	■ Airside operators are responsible for ensuring staff and contractors remove all waste they produce from the apron and dispose of this correctly (this includes pallets, shrink wrap, headsets and equipment parts). Operators must ensure all staff are aware of their obligations when airside and are sufficiently supervised.	At all times	
A	15	■ Waste bins provided across work areas must be fit for purpose to contain the intended waste stream securely, prevent leaks or spills, reduce odour, and to prevent the attraction of vermin.	At all times	
A	16	■ Waste bins must contain labels which are large, clearly visible and in good condition.	At all times	
A	17	■ Construction projects must achieve a minimum of 80% of construction waste will be reused or recycled during the project.	During construction	
A	18	■ Construction projects are strongly encouraged to engage with the circular economy / reuse of material on site at Melbourne Airport. For example, there are opportunities to use recycled water, concrete, asphalt, soil, mulch etc. from other activities within the airport. The APAM Environment and Sustainability Team can assist with identifying these opportunities.	During construction	

A – Waste management				
A	19	■ Construction projects must provide regular waste disposal reports to the APAM Environment and Sustainability Team. A template of the waste disposal report in the required format will be provided by the APAM Environment and Sustainability Team.	Monthly or at the completion of construction (as advised by the APAM Environment and Sustainability Team)	
Priority waste / reportable priority waste			Timing	Reference
A	20	■ Solid and liquid priority waste / reportable priority waste must be segregated from general waste.	At all times	
A	21	■ Solid and liquid priority waste / reportable priority waste must be stored in containers that prevent discharge into the environment.	At all times	
A	22	■ Priority waste / reportable priority waste bins and waste liquid storage must be adequately labelled and located close to work sites.	At all times	
A	23	■ APAM personnel must advise the APAM Facilities Maintenance Department in the event that priority waste / reportable priority waste receptacles are full and require emptying.	As required	
A	24	■ A register must be kept and maintained of all reportable priority waste stored at the site by the Project Manager. The EPA Waste Tracker system must be used for the off-site disposal of all reportable priority waste generated at the site. Records must be provided to the APAM Environment and Sustainability Team upon request.	At all times	
Wastewater			Timing	Reference
A	25	■ Water must be used efficiently, and work should be planned to minimise the amount of wastewater generated on site.	At all times	

A – Waste management				
A	26	■ Wastewater must be reused on site for applications such as dust suppression, when of a suitable quality. Prior to any planned reuse, relevant water quality parameters must be measured and provided to the APAM Environment and Sustainability Team for approval.	During construction	
A	27	■ If wastewater cannot be reused on site, it must be either: - transported to the Water Treatment Plant at Gate 11 (with prior approval from the APAM Environment and Sustainability Team), - classified and disposed of off-site in accordance with regulatory requirements, or - discharged to sewer in accordance with a Trade Waste Agreement (TWA).	During construction	
A	28	■ APAM Departments who utilise current Trade Waste Agreements for the disposal of effluent to sewer must ensure compliance with the agreement.	At all times	
A	29	■ Written approval must be obtained from the relevant APAM Civil & Hydraulics Infrastructure Asset Manager prior to establishing any new Trade Waste Agreement.	At all times	
Managing hazardous building waste			Timing	Reference
A	30	■ Prior to any repair or demolition of built structures which may contain hazardous building materials including Asbestos Containing Materials (ACM), Synthetic Mineral Fibres (SMF), lead paint or Polychlorinated Biphenyls (PCBs), the Melbourne Airport Hazardous Building Materials and ACM Register must be consulted via the APAM Head of Asset Operations to determine the likelihood of such materials being encountered.	Planning / approval stage	

A – Waste management				
A	31	■ The APAM Asbestos Identification and Removal Process must be followed. In summary, prior to undertaking any activities onsite, contact the APAM Contracted Hygienist to: 1. Arrange a visit to the site to see the location of the work, and talk about the scope of the demolition, refurbishment work and / or civil works proposed. This should cover all activities which could disturb ACM; 2. The APAM Contracted Hygienist will tell you about of findings from previous work and inspections in the area and review with you the Asbestos Register; 3. The APAM Contracted Hygienist will advise recommended control actions to take to manage the risk from identified asbestos materials in the project area.	Planning / approval stage	
A	32	■ Environmental management must include all specific management controls recommended by the APAM Contracted Hygienist in addition to the measures outlined in this EMP.	At all times	
A	33	■ Work is to immediately stop in the event that hazardous building materials are unexpectedly found or suspected during the course of work. The APAM Project Manager is to be contacted immediately, and the APAM Head of Safety Risk and Compliance to be informed. Access of personnel is to be restricted prior to the attendance to site of a suitably qualified third party occupational hygienist to assess.	At all times	
Green waste			Timing	Reference
A	34	■ Woody waste (tree trunks / branches) must be either: - mulched and reused within the project area, in consultation with the APAM Environment and Sustainability Team, or - transported to the laydown yard at Melrose Drive in coordination with Landside Environmental Asset Manager.	At all times	
A	35	■ All other green waste (cuttings, weeds etc.) must be placed in the organics waste bin located adjacent to Building 114 or transported off-site to a suitably licensed recycling or disposal facility.	At all times	

A – Waste management				
A	36	■ Prohibited and controlled weeds must be managed in accordance with the Catchment and Land Protection Act 1994.	At all times	
Concrete waste			Timing	Reference
A	37	■ Clean, hard concrete waste (e.g. broken up slabs) may reused on site at Melbourne Airport. Advice from APAM Environment and Sustainability Team should be obtained prior to any stockpiling or reuse.	During construction	
A	38	■ Where possible, concrete trucks should be discharged and washed out off-site.	During construction	
A	39	■ If off-site discharge and wash out is not possible, a designated concrete wash out area must be maintained on site. The wash out area must: - be located at least 20m away from drainage lines, stormwater drains and water bodies; - be conveniently located for washing out equipment and clearly signposted; and - be appropriately lined and bunded to ensure that all wastewater and slurry is fully contained. Examples of suitable concrete wash outs include: plastic-lined skip bins, plastic-lined berm trap.	During construction	
A	40	■ Liquid waste from concrete wash out must be managed as per wastewater.	During construction	A18 – A22
A	41	■ Dried concrete waste from concrete washout must be transported off-site to a suitably licensed recycling or disposal facility.	During construction	

4.2 Air quality

B – Air Quality				
Objectives		■ To minimise the impact of dust and other air emissions on local air quality and avoid nuisance to sensitive receptors.		
Specific legislation/ regulation /guidance		■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth) ■ Climate Change Act 2017 ■ Renewable Energy (Jobs and Investment) Act 2017 ■ The National Greenhouse and Energy Reporting Act 2007		
Control ID		Required environmental management measures	Timing	Reference
B	1	■ Vehicles and equipment must be fitted with appropriate emission control equipment and routinely maintained in accordance with manufacturer's instructions. Maintenance records must be kept.	At all times	
B	2	■ Vehicles and equipment must be turned off when not in use.	At all times	
B	3	■ Dust generation from the use of heavy plant, equipment and vehicles is to be limited by the following controls: - All heavy plant, equipment and vehicles must remain within approved worksite and access areas. ***Note:*** an example of how the approved worksite and access areas can be delineated is shown in Figure 2. - All trucks carrying potential dust generating materials must have their loads fully covered. - Speed limits on all access roads and tracks must be established to minimise dust generation and speed limits adhered to. - Use dust suppression techniques on roadways if required e.g. water carts, soil stabiliser, rumble grids. - Wheel wash and truck wash down prior to leaving dusty work sites.	At all times	

B – Air Quality				
B	4	■ Water carts must be used to control dust during pavement demolition and earthworks.	At all times	
B	5	■ Where practicable, earth moving and/or excavation works are to be limited during high wind events.	At all times	
B	6	■ The APAM Environment and Sustainability Team may direct earth moving/excavation works to cease where excessive dust is generated, and/or during high wind events.	At all times	
B	7	■ Earthwork and ground disturbing activities must be planned and staged to reduce the duration and extent of exposed soils.	At all times	
B	8	■ Disturbed areas must be reinstated as soon as practicable with ground cover/surfacing suitable for the site conditions (e.g. size of area to be stabilised; topography; soil type; and duration of work). At least 70% ground cover (combined plant and mulch) is considered necessary to provide satisfactory erosion control.	At all times	
B	9	■ If exposed areas cannot be reinstated within 7 days, then stabilisation measures must be implemented as per Section 5.3.	As required	Section 5.3
B	10	■ Hardstand areas are to be kept clean of soil and other loose material which may give rise to dust emissions.	At all times	
B	11	■ Temporary stockpiles in place for less than 7 days must be managed to prevent dust emissions. This may include the use of mist sprays or water carts.	At all times	
B	12	■ Temporary stockpiles in place for more than 7 days must be stabilised to prevent dust generation. Suitable stabilisation techniques include covering of stockpiles or application of an approved soil binder (refer to APPENDIX D for a list of approved soil binders).	At all times	APPENDIX D

Figure 2: Yellow chain and star pickets used for delineation of areas

4.3 Noise management

C – Noise management				
Objectives		■ To minimise the impact of noise emissions and avoid nuisance to sensitive receptors.		
Specific legislation/ regulation /guidance		■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth)		
Control ID		Required environmental management measures	Timing	Reference
C	1	■ Works or activities which have the potential to generate significant levels of noise must be planned and undertaken during standard working hours (7am - 6pm Monday to Friday). If this is not possible, then works must be undertaken as directed by the APAM Project Manager.	Planning stage	
C	2	■ Where practicable, separation distances must be maximised between locations of noise generating works and receptors sensitive to noise impacts.	At all times	
C	3	■ Suitable routes and times of travel must be determined and adhered to in order to reduce potential disturbances to sensitive receptors.	Planning stage	
C	4	■ Speed limits on all access roads and tracks to be adhered to.	At all times	
C	5	■ Plant and equipment used on Melbourne Airport land must be properly maintained to manufacturer's requirements. Internal combustion engines are to be fitted with a suitable muffler in good repair. Maintenance records are to be kept.	At all times	
C	6	■ Daily start up checks must be undertaken on all plant, equipment and vehicles.	At all times	
C	7	■ All plant, equipment and vehicles must be turned off when not in use.	At all times	
C	8	■ Where noise levels are impacting on amenity, corrective actions such as the substituting of machinery and equipment for less noisy equipment must be considered and implemented, where practicable.	At all times	
C	9	■ Noise attenuation measures must be used where assessed as practicable (i.e. screens, enclosures, barriers etc.).	During construction or as required	

4.4 Emergency response

The Melbourne Airport Integrated Operations Centre (IOC) is the point of contact for all emergency calls across APAM. The IOC co-ordinates the required response for any incident or emergency situation.

Melbourne Airport Integrated Operations Centre (IOC) - (03) 9297 1601

4.4.1 Spill response

All airside activities must adhere to the *Airside Operational Safety Policy - Spill Prevention and Response*.

Spill Response Kit – Yellow Container Yellow wheelie containers are to be used for the storage of diatomaceous earth (kitty litter) for spill response and are to be clearly marked. Containers should also have a semi-secured lid to prevent staff using them as general rubbish bins. Staff must be instructed to ensure they do not utilise these bins to dispose of waste**.**	

In all areas, the following steps should be undertaken in the event of a spill:

- Take immediate action to **control** a chemical spill as soon as it is safe to do so (e.g. reposition a punctured drum to prevent further loss of containment; move leaking containers to a bunded area).
- Take action to **contain** the spill to stop the material entering stormwater drains, drainage lines or contaminating soil (e.g. seal nearby drains; apply spill kit materials to form a dam) [refer to Figures 3 and 4].
- **Report and notify:** Any spill greater than five litres, or spills that enter a waterway/drain or damage an environmentally significant area, must be reported immediately to the IOC on (03) 9297 1601. The IOC will contact the relevant personnel; including the APAM Environment and Sustainability Team.
- **Clean up spill** and surrounding impacted areas and **dispose of clean up waste materials**. Depending on the material spilt and the clean-up methods employed, priority waste / reportable priority waste may be generated. Refer to Section 4.1 for waste management guidance.

Figure 3: Example of spill kit contents being used to contain a leak

Source: http://www.censol.co.uk/spill-kits.html

Figure 4: Example of spill protection for drains

Source: https://www.globalspill.com.au/product/urethane-sand-filled-barrier-3-0m-long-pcbsfu3-0/

4.4.2 Incident response and reporting

For the purpose of this EMP an environmental incident is defined as an event that may cause harm or potential harm to an environmental receptor e.g. spills, erosion and sediment-laden water entering drains/waterways; non-compliance with environmental management plans or approvals. Environmental incidents range from minor events in which the impact is limited and contained in a small area, to major events which result in ongoing or extensive contamination.

The minimum requirements for incident response and reporting are outlined below:

- All environmental incidents, near misses or hazards must be reported via the Safety Information Management System (SIMS) or directly to the APAM Environment and Sustainability Manager as soon as possible (incident notification).
- All spills exceeding a volume of 5 litres or that enter a stormwater drain must be immediately reported to the IOC.
- Following the incident notification, an incident report must be provided to the APAM Environment and Sustainability Team within 48 hours of any environmental incident.
- When reporting an incident, the following information must be provided

    1. Details of the incident (*clearly describe the circumstances leading up to and including the incident such as an estimate of the impacted areas (m^2), nature of material, volume of spill, equipment and persons involved. Include images where available.*)
    2. Immediate actions taken (*what occurred immediately after the incident, response, notification, clean-up etc.)*
    3. Identification of root causes (*what is the underlying failure/event/contributing factor that led to the incident. For minor/moderate incidents, this can follow the '5 Why' method.*)
    4. Corrective actions (*what was/will be implemented to prevent/minimise the risk of this incident reoccurring*)
    5. Timeframe for implementation of corrective actions

6. Any other relevant information related to the incident, or as requested by APAM.

- Report all incidents internally regardless of the severity.
- Implement processes to ensure contractors, service providers, other people at work and visitors report all incidents internally regardless of the severity.
- Provide feedback to reporting parties, contractors, service providers and employees on the findings of incident investigations and incident trends relative to their area.
- Ensure the timely reporting of regulator-reportable incidents and preserve the incident site unless it is not safe to do so.[2]
- Ensure incidents are investigated by the responsible parties, for the purposes of identifying corrective actions and preventing reoccurrence.

For further information on incident reporting and investigation refer to the *APAC Safety Management Standard*.

4.5 Complaint handling

Feedback from the public can take several forms, including:

- Phone calls;
- Email correspondence;
- Direct conversation;
- Social media (Twitter / Facebook); or
- Web contact form.

If you receive any queries or complaints regarding environmental matters:

- Encourage the person to contact Melbourne Airport directly (Google Search 'contact us Melbourne Airport'). Feedback is then distributed to the relevant internal manager/staff who will respond.
- If the person does not want to use the web contact form, get their details and a clear understanding of what their concern is, then pass on this information to the APAM Environment and Sustainability Manager.

[2] https://www.melbourneairport.com.au/getattachment/Corporate/About-us/Safety/APAC-Safety-Management-Standard-20170701-PUBLIC-VERSION.PDF.aspx?lang=en-AU

5.0 ENVIRONMENTAL MANAGEMENT REQUIREMENTS FOR APAM'S ROUTINE OPERATIONS AND ACTIVITIES

5.1 Storage, handling and use of hazardous substances

D - Storage and handling and use of hazardous substances				
Objectives		■ To comply with regulatory requirements relating to the storage and handling of hazardous substances. ■ To minimise impacts on the environment associated with storage, transport, use and handling of hazardous substances. ■ To prevent and minimise environmental impacts following a spill event. ■ To reduce the use of hazardous substances.		
Specific legislation/ regulation /guidance		■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth) ■ Dangerous Goods Act 1985 ■ Dangerous Goods (Storage and Handling) Regulations 2012 ■ Occupational Health and Safety Act 2004 and Occupational Health and Safety Regulations 2017 ■ Australian Standard AS1940 - 2017 Storage and Handling of Flammable and Combustible Liquids.		
Control ID		Required environmental management measures		
General			Timing	Reference
D	1	■ The storage, transport, use and handling of all hazardous substances must be in accordance with relevant legislation. ***Note:*** hazardous substances include any substance, whether solid, liquid or gas, that can pose a significant risk to health, safety and/or the environment if not managed correctly. They may have health hazards, physical hazards or both. Examples of hazardous substances include but are not limited to fuels, compressed gases, paints, pesticides, detergents and other chemicals.	At all times	
D	2	■ Storage areas for hazardous substances must not be located within 20m of any drainage inlets, open drains, water courses or areas of native vegetation, unless otherwise approved in writing by the APAM Environment and Sustainability Team.	At all times	Ecology mapping (refer Environment and

D - Storage and handling and use of hazardous substances				
				Sustainability Team)
D	3	■ Storage areas for hazardous substances must include secondary containment controls such as permanent or portable bunding in accordance with relevant regulatory requirements as contained in the *Code of Practice for the Storage and Handling of Dangerous Goods* or Australian Standard AS1940 - 2017 *Storage and Handling of Flammable and Combustible Liquids*.	At all times	Figures 5 to 8
D	4	■ Areas where hazardous substances are frequently used and handled must be located on impervious hardstand with appropriate bunding so any spills can be confined and cleaned up.	At all times	
D	5	■ Spill kits must be readily available in close proximity to areas where hazardous substances are stored, used and handled. Relevant personnel must be trained in the use of spill kits.	At all times	
D	6	■ All spills of hazardous substances must be cleaned up and any resulting waste material must be contained and disposed of at an appropriately licensed facility.	At all times	Section 4.4.1
D	7	■ All hazardous substances are to be stored in appropriate sealed and labelled containers.	At all times	
D	8	■ Hard copies of the relevant SDS must be available within each work area where hazardous substances are stored.	At all times	
D	9	■ The storage of any hazardous substances must be carried out in accordance with storage instructions provided in the SDS, on labels and as per regulatory requirements, and in accordance with applicable technical standards or other relevant product information.	At all times	

D - Storage and handling and use of hazardous substances				
D	10	■ Storage areas for hazardous substances must be bunded so that the capacity of the bund is sufficient to contain at least 110% of the volume stored. Where installation of bunding in accordance with this specification cannot be implemented, alternative equivalent controls to the satisfaction of the APAM Environment and Sustainability Team must be installed.	At all times	
D	11	■ Fuel and chemical containers or fuel containing equipment such as generators must be transported on spill trays.	At all times	
D	12	■ Fuel containing equipment such as generators or pumps must be self-bunded or located within a bunded area.	At all times	
Refuelling			Timing	Reference
D	13	■ Plant, equipment and vehicles must be refuelled within designated refuelling areas. Where practicable, refuelling areas must not be located within 20m of any drainage inlet or open drain/ drainage line. Where this separation distance cannot be maintained, drain seals must be in place prior to refuelling activity.	At all times	
D	14	■ Refuelling areas must be located on impervious hardstand with appropriate bunding and, where practicable, be graded to a spill collection point.	At all times	
Control of leaks from plant, vehicles and equipment			Timing	Reference
D	15	■ All vehicles, plant and equipment must be maintained in accordance with manufacturer's specifications and kept in good working order.	At all times	
D	16	■ Daily start up checks must be undertaken on all plant, equipment and vehicles (including leaks/spill checks).	At all times	
D	17	■ All scheduled maintenance activities must be undertaken within designated workshop areas. Any in-field maintenance or refilling / refuelling required should utilise small volumes to limit the quantity of material that could be potentially spilt.	At all times	

D - Storage and handling and use of hazardous substances				
Dangerous goods			Timing	Reference
D	18	■ Secondary containment including bunding for dangerous goods storage areas must be in accordance with relevant regulatory requirements as contained in the *Code of Practice for the Storage and Handling of Dangerous Goods* or Australian Standard AS1940 - 2017 *Storage and Handling of Flammable and Combustible Liquids*.	At all times	
D	19	■ Quantities of dangerous goods stored must be kept to a minimum, commensurate with their usage and shelf life.	At all times	
D	20	■ A register for dangerous goods stored and handled on site must be maintained. It must record the location, volume and types of dangerous goods stored and be updated when a new dangerous good is introduced to the premises; when the use of an existing dangerous good is discontinued, and upon revision of the provided SDS.	At all times	Refer to template in APPENDIX E

Figure 5: Bunding example 1

Source: pp. 29 http://www.worksafe.vic.gov.au/__data/assets/pdf_file/0005/118436/Code-of-Practice-for-the-Storage-and-Handling-of-Dangerous-Goods.pdf

Figure 6: Bunding example 2

Source: pp. 29 http://www.worksafe.vic.gov.au/__data/assets/pdf_file/0005/118436/Code-of-Practice-for-the-Storage-and-Handling-of-Dangerous-Goods.pdf

Figure 7: Bunding example 3

Source: https://bestbunding.com/pages/bund-wall-design-and-construction

Figure 8: Bunding example 4

Source: https://omnituff.com/shop/retain/dangerous-goods-storage/collapsible-bunding/collapsible-bunding-custom-sizes-available/

5.2 Erosion and sediment control

E - Erosion and Sediment Control				
Objectives		■ To minimise erosion of disturbed areas by wind and water during activities involving earthworks and other ground disturbing activities. ■ To prevent surface water quality impacts resulting from erosion and sediment transport from disturbed areas and stockpiles. ■ To maximise site stability and revegetation opportunities.		
Specific legislation/ regulation /guidance		■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth) ■ State Environmental Protection Policy (Waters)		
Control ID		Required environmental management measures	Timing	Reference
E	1	■ Weather forecasts must be considered when planning earthwork and ground disturbing activities. Where practicable, earthwork and ground disturbing activities must be avoided during periods of heavy rainfall or high winds.	Planning stage and at all times during works	
E	2	■ Earthwork and ground disturbing activities must be planned and staged to reduce the duration and extent of exposed soils.	Planning stage and at all times during works	
E	3	■ The choice and specification of all erosion and sediment control measures must be fit for purpose and appropriate for the intended application. Site conditions including topography and soil type should be taken into account. Refer to Table 7.	At all times	Table 7
E	4	■ All erosion and sediment control measures must be maintained for the duration of activity and until the site is stabilised.	At all times	
E	5	■ All erosion and sediment controls must be inspected to ensure they remain effective: - At least daily when rain is occurring; - At least weekly (even if work is not occurring); and	At all times	

E - Erosion and Sediment Control				
		- 24hrs prior to expected rainfall.		
E	6	■ Erosion and sediment controls must be designed to handle a one-in-two-year storm event (two-year ARI with intensity of six hours) for temporary structures, and a one-in-fifty year storm event for permanent structures.	Planning stage	
E	7	■ Acceptable temporary erosion and sediment structures include (but are not limited to) combinations of one or more of the following types, dependent upon the required application: - soil binders; - geotextile silt fences; - earth bunds; - mulch filters; - biodegradable logs (coir logs); - rock check dams; - grass filter strips; or - gravel sausages. Refer to Table 7 for guidance on temporary controls.	Planning stage	Table 7 Figure 9 to Figure 13
E	8	■ For large scale works or works of a long duration (>3 months), more permanent sediment controls may be required. The APAM Environment and Sustainability Team may request a site-specific erosion and sediment control plan designed by a suitably qualified engineer based on guidance information from IECA Best Practice Erosion and Sediment Control, based on the project and site risk.	As required	
E	9	■ Prior to the commencement of ground disturbing work, any stormwater pits, drains or any open channels in close proximity must be protected.	At all times	
E	10	■ Storm water pits along established roadways subject to sediment deposits must be fitted with appropriate sediment controls, such as kerb inlet protectors, (geofabric) filter material to capture sediments, and/or gully pit baskets (e.g. Enviropod, Ecosol Litter Basket or similar).	At all times	
E	11	■ Silt loads must be treated as close to their source as possible using effective sediment traps.	At all times	

E - Erosion and Sediment Control				
E	12	■ Erosion and sediment controls must be positioned so as to prevent stormwater runoff from flowing over disturbed sites.	At all times	
E	13	■ Erosion and sediment controls must be positioned to minimise the ingress of stormwater to excavations to reduce requirements for dewatering of excavations.	At all times	
E	14	■ A water truck for dust suppression must be used to reduce the surface and air transport of fine sediment during ground disturbing works.	As required	
E	15	■ Disturbed areas must be reinstated as soon as practicable with ground cover / surfacing suitable for the site conditions (e.g. size of area to be stabilised; topography; soil type; and duration of work). At least 70% ground cover (combined plant and/or mulch) is considered necessary to provide satisfactory erosion control. Weed growth cannot be counted towards vegetation establishment unless approved by the APAM Environment and Sustainability Team. Refer to revegetation and weed management controls outlined in Section 5.5.	At all times	Section 5.5
E	16	■ Soil binder can be applied for dust suppression where exposed surfaces are likely to remain for over 7 days.	At all times	
E	17	■ Any landscaping works conducted during site reinstatement must adhere to the controls outlined in Section 5.5.		Section 5.5
Control of sediment during dewatering				
E	18	■ Sediment laden water must not be discharged to a drainage line, stormwater drain or watercourse.	At all times	Environmental mapping (refer Environment and Sustainability Team)
E	19	■ Sediment laden water accumulated in trenches or excavations, must not be applied to land unless agreed to in writing by the APAM Environment and Sustainability Team.	At all times	

E - Erosion and Sediment Control				
E	20	■ Where excavation depths are likely to intercept groundwater, a Dewatering Plan must be prepared prior to the commencement of work to outline the following: - An understanding of the underlying hydrology (water levels, flow direction and rates, groundwater quality); and - A description and justification for the proposed dewatering effluent disposal method. The Dewatering Plan will require review and approval by the APAM Environment and Sustainability Team prior to commencement of dewatering works.	Planning / approval stage	
Soil stockpile management				
E	21	■ Stockpile dimensions must achieve a maximum 2:1 width to height ratio.	At all times	
E	22	■ The number and size of stockpiles must be minimised as far as practicable.	At all times	
E	23	■ Stockpiles must be placed at least 20m away from drainage inlets, open drains and water courses, unless otherwise approved in writing by the APAM Environment and Sustainability Team.	At all times	
E	24	■ Stormwater must be diverted around stockpiles.	At all times	
E	25	■ Sediment retention structures must be placed downslope of any stockpile.	At all times	
E	26	■ Stockpiles must be managed to reduce the risk of bird attraction.	At all times	
E	27	■ Stockpiles must be stabilised to prevent erosion of material by wind and water.	At all times	

Table 7: Potential erosion and sediment control measures

Notes:

- This is a short list of devices that may be suitable. For more information refer to IECA guidelines and / or contact an environmental specialist for guidance.
- Straw bales are **not** to be used as a sediment control measure at Melbourne Airport. Straw bales quickly lose their strength once wet, and readily fail if poorly installed and/or poorly maintained.

Erosion and sediment control	Description and application	Benefits	Disadvantages	Ongoing management requirements	Application parameters		
					Size of catchment	Suitable topography	Project duration
Silt fence	Silt fences are temporary, permeable barriers of geo-textile installed in a trench and supported by star pickets or wooden posts. Silt fences slow the velocity of run-off and offer some filtration as run-off passes through the silt fence.	Silt fences are an easy and cheap measure to install for large distances, e.g. if an entire, down-slope side of a site must be protected. Can be reinforced.	Can only be used in areas of sheet flow. Not suitable for use in concentrated flow. Most effective in removing coarse particulates from run-off. Have limited filtering capacity of fine or dispersive soils. Must be installed correctly to be effective.	Require de-silting when sediment has built up to $^{1}/_{3}$ the height of fence or when collected sediment is preventing effective operation.	Suitable for small and large sites	Flat - moderately sloping sites.	Good longevity if well maintained
Coir logs	Coir logs are comprised of the fibre obtained from the husks of coconuts. They slow the velocity of run-off and offer some filtration. Predominately used in areas of concentrated flow. Also, frequently used for creek bed stabilisation. They may also be used to protect drainage inlets.	Relatively cheap. These have longevity up to 5 years.	Necessary to strip an area beneath the log to ensure firm contact with the ground. They're most effective in removing coarse particulates. They have limited filtering capacity for fine or dispersive soils. Must be installed correctly to be effective.	Coir logs require de-silting when sediment has built up to 1/3 the height of the measure, or when the built-up sediment is preventing the coir log from working effectively. Logs will require replacing when they become clogged with trapped sediment.	Best application for drainage lines and drain protection.	Flat - moderately sloping sites.	Good longevity if well maintained

Erosion and sediment control	Description and application	Benefits	Disadvantages	Ongoing management requirements	Application parameters		
					Size of catchment	Suitable topography	Project duration
Rock check dams	A permeable bund constructed from suitably sized rock. Predominantly used in areas of concentrated flow.	Achieve effective dissipation of concentrated flow.	Rock bunds are most effective in removing coarse particulates. They have limited filtering capacity for fine or dispersive soils.		For large catchment areas specifically where high volumes of run-off are to be encountered/.	Moderate to sloping.	Suitable for longer duration projects.
Grass filter strips	Turf strips can be used as an erosion control (prevention of erosion beneath the turf) and to slow the velocity of run-off and offer filtration as run-off passes through the grass.	Including grass filter strips can be a cost-effective way to promote the stabilisation and revegetation of large areas through seeding.	Strips must be placed correctly. Will not function if water flow is allowed to concentrate through grass. Must be placed to avoid rill erosion caused by surface runoff being diverted along the upslope edge of the turf.	Water grass strips wherever possible to maintain healthy and vigorous growth. Inspect after each run-off event and check for concentrated rill erosion forming along the upper edge of the tuft. Alternative diagonal turf strips may be required upslope of the edge of the turf to prevent rill erosion. Alternatively, sandbags can be used to divert runoff through grass.	Small/ localised catchment areas	Moderate to sloping.	Suitable for longer duration projects.

Erosion and sediment control	Description and application	Benefits	Disadvantages	Ongoing management requirements	Application parameters		
					Size of catchment	Suitable topography	Project duration
Gravel sausages / rock logs	These are most commonly used to protect kerb inlets. They are used to dam run-off behind the gravel sausage, and slow velocity of run-off so sediment falls out of suspension. Some filtration also occurs as run-off passes through the gravel sausage.	These are cost effective, portable and can be applied in a variety of ways to maximise effectiveness based on the configuration of the drains or features to be protected.	Will require desilting.	Gravel sausages require de-silting when sediment has built up to 1/3 the height of the measure, when the built-up sediment is preventing the log from working effectively, or when the sausage is clogged and run-off can no longer flow through it.	Small/ localised catchment areas	Best suited to flat areas	Good longevity if well maintained
Sediment bags	Sediment bags can be used to filter medium to coarse sediment particles and other particulate matter from pumped water. They are typically used when dewatering small quantities of sediment-laden water.	Commercially available product, and bags are small and easy to handle (when empty).	Bags can be difficult to handle when full. Use is limited to low flow rates and/or small volumes of water.	Bag must be inspected regularly (at least daily) during dewatering. Repairs may need to be made, or the filter bag replaced if damaged. Bag may also need to be replaced if sediment blockage decreases the flow rate to an unacceptable level, or when the bag is full of sediment.	Small/ localised catchment areas	Flat - moderately sloping sites	Suitable for short to medium duration projects.

Erosion and sediment control	Description and application	Benefits	Disadvantages	Ongoing management requirements	Application parameters		
					Size of catchment	Suitable topography	Project duration
Hemp/jute matting Erosion blanket	This matting can be placed over sloped areas to provide temporary scour protection from raindrop impact and sheet flow. Matting can also facilitate vegetation establishment at the conclusion of earth works and will naturally degrade.	Easy and effective way to protect sloped areas. In addition to sediment control these can prevent weed growth and have a longevity of 12-24 months.	Not suitable for moderate to high traffic areas.	Inspect after each rainfall event. Maintenance as required to repair washout, breakage, or reinstate matting.	Suitable for small and large sites	Moderate to sloping	Good longevity with minimal maintenance

Figure 9: Grass filter strip

Source: http://prj.geosyntec.com/npsmanual/vegetatedfilterstrips.aspx

Figure 10: Proper placement of silt fencing for slopes

Source: https://www.belairmd.org/362/Stormwater-Management

Figure 11: Silt fence failure

Source: https://ceds.org/esp.html

Figure 12: Sediment bag example

Figure 13: Coir Log example

Source: https://aussieenvironmental.com.au/product/coir-logs-1-5m-x-200mm/

5.3 Surface water and stormwater

F – Surface water and stormwater				
Objectives		■ To prevent the pollution of waterways. ■ To increase the resilience of receiving waterways to airport stormwater flows by maintaining or improving waterway habitats.		
Specific legislation/ regulation/ guidance		■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth) ■ Catchment and Land Protection Act 1994 ■ State Environmental Protection Policy (Waters)		
Control ID		Required environmental management measures		
General surface water controls			Timing	Reference
F	1	■ Weather forecasts must be considered when planning earthwork and ground disturbing activities. Where practicable, earthwork and ground disturbing activities must be avoided during periods of heavy rainfall or high winds.	Planning stage and at all times during works	
F	2	■ If a major rainfall event is forecast while works are being undertaken, personnel must undertake a risk assessment and identify and undertake appropriate mitigation measures (i.e. the additional of further erosion and sediment controls; monitoring upstream flow conditions; reschedule activities etc.).	As required	
F	3	■ Prior to the commencement of ground disturbing work, any stormwater pits, drains or any open channels in close proximity to work sites must be protected.	At all times	
F	4	■ Stormwater pits along established roadways subject to sediment deposits must be fitted with appropriate sediment controls such as kerb inlet protectors, (geofabric) filter material to capture sediments, and/or gully pit baskets (e.g. Enviropod, Ecosol Litter Basket or similar).	At all times	
F	5	■ Stormwater must be diverted around work areas to prevent sedimentation and pollution.	At all times	

F – Surface water and stormwater				
F	6	■ Dewatering of stormwater accumulated within open pits and trenches must give consideration to the relevant environmental controls measures for Waste Management (Section 4.1.4) and Erosion and Sediment Control (Section 5.2). Potential options for dewatering include, subject to approval by the APAM Environment and Sustainability Team: - use of flocculant to drop out sediment prior to discharge or disposal - use of sediment controls and dewater to grass - transport to an appropriate treatment facility on site (i.e. Water Treatment Plant at Gate 11) or off-site.	At all times	Section 4.1.4 Section 5.2
F	7	■ Routine visual inspections must be undertaken regularly while carrying out works within the vicinity of any watercourse to identify any sedimentation impacts.	At all times	
Works within waterways and riparian areas			Timing	Reference
F	8	■ Vegetation must not be cleared and fill must not be placed within 50m from any watercourse unless specifically assessed and approved through the APAM building approval process.	At all times	
F	9	■ A detailed environmental assessment and project specific EMP must be prepared for any project work required within the channel or banks of a waterway on Melbourne Airport land.	Planning / approval stage	
F	10	■ All routine activities such as maintenance of existing stormwater infrastructure are to be carried out in accordance with approved plans and procedures.	At all times	
New stormwater infrastructure			Timing	Reference
F	11	■ The design of all new stormwater infrastructure must seek to minimise pollution with consideration to water sensitive urban design.	Planning and design stage	
F	12	■ Prior to connecting new stormwater infrastructure to the active stormwater network, all aspects of the new infrastructure (pipes, pits etc.) must be free from sediment and other pollution. CCTV footage of sub-surface pipes must be provided to the APAM Project Manager for verification. The	At all times	

F – Surface water and stormwater				
		Environment and Sustainability Team must verify cleanliness of new infrastructure before it becomes live.		

5.4 Land and groundwater contamination

G – Land and groundwater contamination				
Objectives		■ To prevent contamination of land and groundwater. ■ To maximise the potential for reuse of excavated soil. ■ To manage existing contamination issues in accordance with guidance issued from the Department of Infrastructure and Regional Development and in accordance with the PFAS National Environmental Management Plan		
Specific legislation/ regulation/ guidance		■ National Environment Protection (Assessment of Site Contamination) Measure, 1999 ■ Airports Act 1996 (Cth) ■ Airports (Environment Protection) Regulations 1997 (Cth) ■ PFAS National Environmental Management Plan, January 2020 ■ Melbourne Airport PFAS Management Framework		
Control ID		Required environmental management measures		
Bulk fuel storage controls			Timing	Reference
G	1	■ All above ground storage tanks (ASTs) and underground storage tanks (USTs) and associated infrastructure must be included in a scheduled leak detection and repair (LDAR) program to ensure leaks and losses of stored fuels are identified and repaired as quickly as possible. This needs to occur with sufficient frequency, sensitivity and reliability to provide a high level of confidence that a release will be detected in sufficient time for a response to be implemented before a significant risk is posed to human health or the environment. For more detail, see EPA Victoria "*Guidance on underground petroleum storage systems in Victoria*" (Publication 888.4, August 2015).	At all times	
G	2	■ ASTs and USTs which are no longer used must be decommissioned so that they do not pose an on-going risk to the environment.	As required	
G	3	■ Installation of best practice underground petroleum storage system (UPSS) infrastructure must be included for new tank installs and upgrades. Refer to EPA Victoria "*Guidance on underground petroleum storage systems in Victoria*" (Publication 888.4, August 2015).	As required	

G – Land and groundwater contamination				
G	4	■ Where practicable, new tanks must be self-bunded and installed above ground.	As required	
G	5	■ Copies of all LDAR results must be provided to APAM's Environment and Sustainability Team.	At all times	
Control of imported materials to site			Timing	Reference
G	6	■ Any fill material brought to site (including landscaping topsoil) must be free from contamination. If fill material is sourced from a licensed quarry, a letter from the quarry on letterhead stating the material is from a virgin source and free from contamination must be provided to the APAM Environment and Sustainability Team for approval prior to any fill material being delivered to site. If fill material is not from a licensed quarry, then the material must be appropriately assessed and classified as 'Fill Material' in accordance with the EPA Victoria *Waste disposal categories – characteristics and thresholds* (Publication 1828.2). Sampling for PFAS and the Fill Material upper limits is required to appropriately classify the material as 'Fill Material'. Sampling must be completed per EPA Victoria Publication IWRG702 based on the volume of material that is expected to be imported to site. The material classification report including all test results must be provided to the APAM Environment and Sustainability Team for approval prior to any fill material being delivered to site.	At all times	
G	7	■ Imported soils, mulch and other vegetation supplies must be free of weeds, debris and other contaminants.	At all times	
Management of excavated spoil and infrastructure			Timing	Reference
G	8	■ Prior to ground disturbing activities the APAM Project Manager must consult with the APAM Environment and Sustainability Team to determine whether the project may affect or be affected by contaminated soils or groundwater.	Planning / approval stage	

G – Land and groundwater contamination				
G	9	■ An environmental assessment must be conducted by a suitably qualified consultant and a detailed spoil management plan prepared for substantial works requiring earthwork and spoil generation across contaminated or potentially contaminated areas. The spoil management plan must be approved by the APAM Environment and Sustainability Team prior to works proceeding.	As required	
G	10	■ All excavation works must be undertaken in accordance with the Melbourne Airport PFAS Management Framework.	At all times	
G	11	■ If works uncover an area of suspected or actual contamination, works must cease and the site made secure to enable an inspection and assessment of contamination levels. The APAM Project Manager must consult with the APAM Environment and Sustainability Team to determine how spoil management should proceed.	As required	
G	12	■ Excavation must be carried out in such a way to maximise the generation and conservation of topsoil for reuse.	During earthworks	
G	13	■ As far as practicable, reduce the volume of waste spoil generated from earthworks.	Planning / prior to earthworks	
G	14	■ Excavated soil must be free from rock, rubble and general waste.	During earthworks	
G	15	■ Excavated rock and concrete must be separated from excavated soil and managed in accordance with the waste management controls outlined in Section 4.1.	During earthworks	Section 4.1
G	16	■ Contaminated spoil must not be removed from site until waste classification sampling has been carried out, and the APAM Environment and Sustainability Team approves off-site disposal. Off-site disposal must be undertaken in accordance with regulatory requirements. This requirement also applies to any redundant infrastructure which has known or potential contamination, such as concrete drainage infrastructure, tanks etc.	At all times	
G	17	■ Contaminated soil/materials must be kept separate from other soil/materials to prevent cross-contamination.	At all times	

G – Land and groundwater contamination				
G	18	■ Wherever possible, excavated topsoil should be reused at surface level during revegetation of the works area. If topsoil cannot be reused, it should be used or stockpiled for future use at a location approved by the APAM Environment and Sustainability Team.	Rehabilitation stage	
G	19	■ Safe Work Method Statements for any project or activity in contaminated or potentially contaminated areas should include controls for working with potentially contaminated soils.	At all times	
Contaminated stockpile management			Timing	Reference
G	20	■ The stockpiling of contaminated materials on a work site is only permitted as a short-term measure whilst material is classified prior to management or disposal. If a contaminated spoil stockpile is required to remain on site for over 14 days, the APAM Department Manager or Project Manager must consult with the APAM Environment and Sustainability Team regarding additional control measures which may be required.	At all times	
G	21	■ If material requires temporary stockpiling, stockpiles must be located at least 20m away from drainage inlets, open drains and water courses, made stable and contained on site utilising bunding or silt control methods. If rain or windy conditions are forecast, stockpiles must be covered to prevent the infiltration of rain water and to reduce erosion by wind.	At all times	
G	22	■ Contaminated stockpiles are not to have water applied as a dust suppressant unless approved in writing by the APAM Environment and Sustainability Team.	At all times	
Management of contaminated water from dewatering activities			Timing	Reference
G	23	■ Where excavation depths are likely to intercept groundwater, a Dewatering Plan must be prepared prior to the commencement of work to outline the following: - An understanding of the underlying hydrology (water levels, flow direction and rates, groundwater quality); and - A description and justification for the proposed dewatering effluent disposal method. The Dewatering Plan will require APAM Environment and Sustainability Team review and approval prior to commencement of dewatering works.	Planning / approval stage	

G – Land and groundwater contamination				
G	24	■ If groundwater is unexpectedly encountered during works, the Project Manager is required to consult with the APAM Environment and Sustainability Team to determine how water management should proceed.	As required	

5.5 Flora and fauna and landscaped areas

H – Flora and fauna				
Objectives		■ To preserve, maintain and restore natural areas and existing landscaped sites on the airport, with a focus on enhancing environmentally significant areas such as wetlands, waterways and areas of native vegetation including grasslands and the grey box woodland. ■ To achieve effective management of important habitat values through the implementation of Melbourne Airport's Environment Management Plan for High Priority Biodiversity Areas. ■ To reduce the spread of pest plants and animals. ■ To maintain and enhance terminal and Melbourne Airport Business Park landscaped areas for visual amenity, site stabilisation and to mitigate heat island impacts.		
Specific legislation/ regulation/ guidance		■ Airports (Environment Protection) Regulations 1997 (Cth) ■ Airports Act 1996 (Cth) ■ Environment Protection and Biodiversity Conservation Act 1999 (Cth) ■ Environment Protection and Biodiversity Conservation Regulations 2000 (Cth) ■ Catchment and Land Protection Act 1994 ■ Wildlife Act 1975		
Control ID		Required environmental management measures		
General			Timing	Reference
H	1	■ Prior to any works commencing the APAM Project Manager must consult with the APAM Environment and Sustainability Team to determine whether the project is in an area that has, or potentially has, significant flora and fauna features.	Planning / approval stage	
H	2	■ Prior to any works within paddocks and grazing areas, the Landside Environmental Asset Manager must be contacted to seek advice regarding cattle movements and management.	Planning / approval stage	
H	3	■ Landside gates must be locked immediately after entry/exit.	At all times	

H – Flora and fauna				
H	4	■ Removal or disturbance of native flora and fauna or landscaped areas must be avoided as far as possible. Where it is unavoidable, approvals and/or permits will be required. This should be identified as early in the project as possible.	At all times	
H	5	■ To avoid injury to fauna, all plant, vehicles and equipment must stay within designated areas/ roadways/ access tracks and must comply with any location specific speed limits.	At all times	
H	6	■ If fauna are encountered within work zones, work that may cause harm to the animal must be suspended until the animal has moved on of its own accord or removed and relocated by a suitably qualified and experienced wildlife contractor (refer to the APAM Environment and Sustainability Team).	At all times	
H	7	■ Excavations are to be covered if left overnight to prevent fauna becoming trapped, or suitable escape ramp installed in case of entrapment.	At all times	
H	8	■ If sick or injured wildlife are encountered, contact the IOC: **Melbourne Airport Integrated Operations Centre (IOC)** - (03) 9297 1601	At all times	
H	9	■ Damage to vegetated and/or landscaped areas adjacent to the work site should be avoided. If damage occurs, advice on remediation must be sought from the APAM Environment and Sustainability Team.	At all times	
H	10	■ Work areas must be managed to reduce the risk of attracting wildlife (e.g. minimise exposed areas, prevent ponding of water on site, waste bins to be covered).	At all times	
Bushfire prevention			Timing	Reference
H	11	■ When working in heavily vegetated areas of Melbourne Airport, Project Managers must monitor bushfire weather forecasting and forewarning systems during bushfire risk periods. This is of particular relevance where hot works are permitted. Hot works are not permitted during declared total fire ban periods.	At all times	
H	12	■ Flammable material must not be stockpiled or stored near hot works activities (including vegetation stockpiles).	At all times	

H – Flora and fauna				
Physical protection of flora and fauna during work			Timing	Reference
Vegetation Protection Zones (VPZ)				
H	13	■ Vegetation Protection Zones (VPZ) must be established and regularly monitored and maintained to protect all significant flora, fauna and habitat on or adjacent to the work site.	At all times	
H	14	■ Each VPZ must be established prior to works commencing.	Prior to works	
H	15	■ A representative of the APAM Environment and Sustainability Team must sign off on the VPZ before works can proceed. In some cases, verification of the VPZ location by a suitably qualified ecologist may be required.	Prior to works	
H	16	■ Vegetation protection fencing must be clearly signed with "**Vegetation Protection Area - No Unauthorised personnel, Materials or Equipment beyond this point**" or similar. An example of adequate signage is provided in Figure 14.	At all times	Figure 14
H	17	■ Vegetation protection fencing must be installed from the construction site side with all waste materials removed immediately. Vegetation inside the zone must not be impacted by the installation (or removal) of fencing.	At all times	
H	18	■ VPZ can only be accessed by suitably qualified personnel for the purpose of approved maintenance or inspections (e.g. weed control, surveys).	At all times	
H	19	■ Vegetation protection fencing is not to be removed or relocated without prior approval from the APAM Environment and Sustainability Team.	At all times	
H	20	■ Any unauthorised breaches into the VPZ must be reported immediately to the APAM Environment and Sustainability Team.	As required	
Tree Protection Zones (TPZs)			Timing	Reference
H	21	■ Tree Protection Zones (TPZs) must be established to protect all trees and landscaped areas to be retained on or adjacent to the site prior to works commencing.	Prior to works	

H – Flora and fauna				
H	22	■ The radius of a TPZ is calculated by multiplying the trunk diameter at breast height (measured at 1.4m from the ground) by 12. A TPZ must have a minimum radius of 2m.	At all times	
H	23	■ A TPZ must be delineated by vegetation protection fencing (e.g. star pickets with safety flagging).	At all times	
H	24	■ There must be no disturbance within a TPZ and no damage to the bark, roots and limbs of trees and shrubs to be retained.	At all times	
H	25	■ Trenching must not occur within the dripline of trees with a diameter of 10cm or greater (taken at 1.4m from ground). Dripline = the area of ground defined by the outermost circumference of a tree canopy where water drips onto the ground.	At all times	
Vegetation removal			Timing	Reference
H	26	■ All tree and vegetation removal works must be in accordance *with Melbourne Airport Removal and Replacement of Vegetation on Airport Property Procedure* (EMS Document No. PP010).	At all times	
H	27	■ Where possible, habitat trees and features such as hollow logs must be retained.	At all times	
H	28	■ Salvaged native and landscaped vegetation approved for removal must be used in any associated landscaping or reinstatement works where practicable. Any surplus material must be managed in accordance with the green waste management requirements outlined in Section 4.1.4.	At all times	Section 4.1.4
H	29	■ Tree roots and limbs must only be removed by suitably qualified personnel.	At all times	
H	30	■ All relevant permits and offsets must be obtained prior to vegetation removal. Any specific environmental management measures outlined in the permits must be adhered to during the works.	Prior to and during works	
H	31	■ Ensure all measures are taken to encourage native fauna to relocate from the area prior to vegetation removal work. The APAM Environment and Sustainability Team may request that a suitably qualified and experienced fauna expert (wildlife handler) be present during the removal works.	At all times	

H – Flora and fauna				
H	3234	■ Any vegetation removal within the airside estate must be undertaken in accordance with airside standards, in particular MAS-CVL-001 Grassing (Airside).	At all times	
Revegetation of disturbed land			Timing	Reference
H	33	■ Landscaping plans must be submitted to the APAM Environment and Sustainability Team for approval prior to any rehabilitation/re-vegetation works commencing and must give consideration to the following: - All revegetation works are to align with a Modern Australian Native Landscape design incorporating low maintenance and drought resistance plant species. - All plants growing to a height of greater than 3 metres must be assessed for potential bird/bat attraction.	Prior to works	
H	34	■ Revegetation works must be undertaken for all work areas that are impacted by vegetation removal.	At all times	
H	35	■ Rehabilitation and revegetation works must be undertaken progressively.	At all times	
H	36	■ Trees and shrubs must be planted appropriately. Refer to Figure 15 for guidance.	At all times	Figure 15
H	37	■ Adequate stabilisation must be maintained across disturbed surfaces until revegetation works are complete and plant cover is established. Refer to Erosion and Sediment Control in Section 5.2.	At all times	Section 5.2
H	38	■ Following topsoil replacement grass seeding should be conducted to re-establish grass cover. Hydroseeding is the recommended method, however other methods such as direct seeding can be used subject to approval by the APAM Environment and Sustainability Team. The approved grass species mix for seeding (and minimum application rates) is made up of the following: - 50% Sheeps Fescue (40kg/ha) - 25% Creeping Red Fescue (20kg/ha) - 25% Vic Perennial Rye (20kg/ha)	Rehabilitation stage	

H – Flora and fauna				
H	39	■ Where possible, seeding should not be conducted during summer months.	Rehabilitation stage	
H	40	■ Any revegetation works within the airside estate must be undertaken in accordance with airside standards, in particular MAS-CVL-001 Grassing (Airside).	Rehabilitation stage	
H	41	■ Fertiliser may be used during revegetation subject to approval from the APAM Environment and Sustainability Team.	Rehabilitation stage	
H	42	■ Seeded areas must be monitored and watered regularly to ensure establishment rates are adequate. Monitoring of grass establishment must be documented and provided to APAM upon request.	Rehabilitation stage	
H	43	■ Any weeds that impact on grass establishment must be treated as per the controls outlined in this section. Weed growth cannot be counted towards vegetation establishment unless approved by the APAM Environment and Sustainability Team.	Rehabilitation stage	
Weed and pest control			Timing	Reference
H	44	■ Work zones must be regularly inspected by a suitably qualified person for presence of noxious or invasive weeds and pest animals (e.g. rabbits and foxes).	At all times	
H	45	■ Work zones must be kept free from weeds and pest animals for the duration of the works, reinstatement and any maintenance period.	At all times	
H	46	■ Any weed or pest animal management must be undertaken within the designated work site by using best practice management techniques.	At all times	
H	47	■ Weed prevention measures must be undertaken, including the following; - All personnel must be trained in issues relating to weed hygiene during the site induction. - Slashing must not occur when targeted weeds are setting seed. - Shade-cloth must be installed on perimeter fencing to prevent spread of wind-blown weed seeds where requested by the APAM Environmental and Sustainability Team.	At all times	

H – Flora and fauna				
		- Work must be planned and undertaken in the sequence of low to high risk weed presence.		
H	48	■ Weed and pest control activities must be done in accordance with the following; - Use of any materials (i.e. herbicides, pesticides etc.) must be in accordance with the SDS and manufacturer's instructions. - Weed and pest control must be undertaken by suitably qualified and experienced personnel. - Herbicide/pesticide use in or adjacent to water bodies and drainage lines must be minimised, with waterway sensitive products used subject to approval by the APAM Environment and Sustainability Team. - Any spraying of herbicide for weed control is to be undertaken by spot and/or boom spraying with appropriate, non-residual herbicide, with no off-target damage/killing of native flora species via herbicide drift/over-spraying. Pre-emergent herbicides are not to be used at any time unless approved by the APAM Environment and Sustainability Team. - Subject to native vegetation protection and Cultural Heritage Management Plan (CHMP) requirements, weeds may also be removed by mechanical or manual methods. - Weed disposal must be undertaken in accordance with regulatory requirements. - Vertebrate pest animal control must be conducted in accordance with the Melbourne Airport Integrated Pest Management Plan and undertaken by suitably qualified and experienced personnel.	At all times	
H	49	■ The APAM Environment ad Sustainability Team may request that weed hygiene declarations be provided by the supplier for all vehicles, plant and materials brought to site.	As required	
H	50	■ Plant, equipment and vehicles are to be visually inspected for weeds or soil prior to mobilisation or use at a work zone and must be washed or cleaned if required. Washing must only occur in a fully contained area (e.g. plastic lined and bunded) and the residual wastewater and solids disposed of appropriately.	At all times	

H – Flora and fauna				
H	51	■ Plant, equipment and vehicles which come into contact with, or are used in areas where there is a potential for weed seed spreading must be cleaned sufficiently to remove weed seeds prior to leaving the work site. Washing must only occur in a fully contained area (e.g. plastic lined and bunded) and the residual wastewater and solids disposed of appropriately.	At all times	
H	52	■ Any weeds that may germinate from soil accumulated in the wash down area must be controlled.	At all times	
H	53	■ To prevent the spread of mosquitoes and other disease vectors the following measures must be implemented: - All water filled barriers must be completely sealed. Barriers that utilise a flap require the flap to be taped down and monitored during the breeding season. - Eliminate/empty any standing water. If this is not practicable, the standing water must be treated (e.g. aquatin droplets). - Repair any external leaks as soon as practicable in order to prevent the establishment of new breeding sites. - Conduct an annual mosquito treatment (larvicides)/trapping program despite an outbreak.	At all times	
Prescribed burning and fire controls			Timing	Reference
H	54	■ All personnel must comply with fire restrictions and hot works permitting procedures.	At all times	
H	55	■ No burning is permitted on Total Fire Ban days.	At all times	
H	56	■ Works in fire prone areas must be assessed and planned prior to works commencing. Works must not proceed during times of Extreme or Code Red fire danger.	At all times	
H	57	■ Appropriate firefighting equipment must be available at all work sites in accordance with relevant emergency services recommendations.	At all times	
H	58	■ Construction equipment, such as earth moving machinery and water trucks, must be on stand-by at the site during works in high fire risk areas if fire control is required.	At all times	

H – Flora and fauna				
H	59	■ Prescribed burns must be planned with consideration to both internal and external stakeholder requirements and weather conditions. Notifications to all relevant stakeholders must be issued prior to undertaking a prescribed burn.	At all times	
H	60	■ An adequate fire break must be established and maintained around the perimeter of the site prior to undertaking a prescribed burn.	Prior to works	
H	61	■ All personnel associated with prescribed burn works must be suitably qualified and experienced.	At all times	
H	62	■ Equipment used during prescribed burning must be of appropriate type, inspected regularly and maintained.	At all times	

Figure 14: Example of VPZ signage

Figure 15: How to plant a tree or shrub

5.6 Heritage

I – Heritage				
Objectives		■ To conduct site operations and routine activities in a way which preserves the airport's Indigenous and European cultural heritage values. ■ To prevent the damage to any object or site of heritage significance.		
Specific legislation/ regulation/ guidance		■ Airports (Environment Protection) Regulations 1997 (Cth) ■ Airports Regulations 1997 (Cth) ■ Environment Protection and Biodiversity Conservation Act 1999 (Cth) ■ Environment Protection and Biodiversity Conservation Regulations 2000 (Cth) ■ Native Title Act 1993 (Cth)		
Control ID		Required environmental management measures		
General heritage controls			Timing	Reference
I	1	■ Prior to any works commencing the APAM Project Manager must consult with the APAM Environment and Sustainability Team to determine whether the project is to be undertaken in an area that has or potentially has known heritage values.	Planning / approval stage	
I	2	■ Potential heritage features must be understood and delineated as part of the project approvals process.	Planning / approval stage	
I	3	■ A project specific heritage assessment must be completed prior to any works in a cultural heritage sensitive location.	Planning / approval stage	
Staff and contractor induction				
I	4	■ Site induction must include awareness of identified cultural heritage locations and items.	Prior to works	
I	5	■ All site personnel must be made aware of the potential to encounter cultural heritage items and the actions required if an item of heritage significance is found.	Prior to works	

I – Heritage				
Unexpected finds protocol			Timing	Reference
I	6	The following steps must be followed if an item of potential heritage significance is found: ■ Stop work, protect the item and inform the APAM Project Manager and the APAM Environment and Sustainability Manager. ■ Engage a suitably qualified professional to make an assessment of the find. ■ Make required notifications to the regulatory authority. ■ Establish and implement a heritage management plan. ■ Review work plan and adjust if required to adhere to heritage management plan. ■ Resume works.	As required	

I – Heritage				
Physical protection of known heritage sites - Heritage Protection Zones (HPZ)			Timing	Reference
I	7	Heritage Protection Zones (HPZ) must be established to protect all identified areas of heritage significance. The following measures must be undertaken to protect HPZs: ■ Fencing must be erected around relevant areas of heritage significance. ■ Fencing must be clearly signed with "Heritage Protection Area - No Unauthorised personnel, Materials or Equipment beyond this point". ■ Fencing must be installed from the construction site side with all waste materials removed immediately. The areas inside the zone must not be impacted by the installation (or removal) of fencing. ■ HPZs can only be accessed by suitably qualified personnel for the purpose of approved maintenance or inspections (e.g. weed control). ■ Each HPZ must be established prior to works commencing with fencing and signage maintained intact for the duration of the works. ■ Fencing must be monitored and repairs made immediately.	Prior to works	

6.0 OTHER MANAGEMENT CONSIDERATIONS

APAM Departments routinely refer to additional management documents providing department specific guidance. In addition, APAM maintains certification of its Environmental Management System (EMS) to the international standard ISO 14001:2015. As such, there are several approved and endorsed Corporate Procedures, Operational Policies and Procedures, Guides, Templates and Forms which inform parts of this EMP.

These documents may include more specific guidance and/or robust management requirements than those included in this EMP. Additional requirements should be discussed with the APAM Environment and Sustainability Team in the event of any inconsistency between environmental management measures outlined in this EMP and current documents.

6.1 Biodiversity management plans and approvals

- *Environmental Management Plan for High Priority Biodiversity Areas*
- *Grey Box Woodland Fire Management Plan*
- Project specific EPBC Controlled Activity approval and/or Part 13 Permit requirements.

6.2 Cultural Heritage Management Plans (CHMP)

- Project or area specific CHMPs approved by the Registered Aboriginal Party and produced in line with the requirements under the *Aboriginal Heritage Act 2006* (Vic) and *Aboriginal Heritage Regulations 2018* (Vic).

7.0 COMPLIANCE AND MONITORING

7.1 Site Induction requirements

- All APAM site personnel will be trained in the requirements of this plan.
- Toolbox talks, pre-start meetings and targeted training will be provided to site personnel as required.

7.2 Site inspections and compliance assessment

- APAM Department Managers are responsible for ensuring the environmental management measures within this EMP are followed at all times.
- APAM Department Managers are responsible for establishing a suitable EMP compliance assessment and evaluation program for their operations and activities.
- To support the assessment of compliance with this EMP, the APAM Environment and Sustainability Team will schedule regular site inspections across Melbourne Airport operations and activities.
- APAM Environment and Sustainability Team site inspections will provide information from which APAM Department Managers and the APAM Environment and Sustainability Manager may evaluate the effectiveness of mitigation measures described in the EMP and, if warranted, modify the measures.

7.3 Amendments to the EMP

Modifications will be documented by amending this EMP, registering the revision in the Revision History table at the beginning of the EMP, and recorded revisions in the EMP Update Register.

All revisions to the EMP must be approved by the APAM Environment and Sustainability Manager.

APPENDIX A

Risk Assessment

RISK ASSESSMENT

Likelihood is defined as a qualitative probability assessment of the risk occurring, whilst the consequence is defined as the impact of the risk were it to occur. The qualitative likelihood and consequence descriptors used in this assessment are presented in Table A1 and Table A2 respectively.

Table A1: Likelihood descriptors

	Very Unlikely	Probably Not	Chances About Even	Probable	Almost Certain
Description	Risk is not expected to occur	Risk may occur in exceptional circumstances	Risk may occur in some circumstances	Risk will probably occur	Risk is expected to occur
Probability	Risk would be expected to occur ≤ 20% of the time	Risk may occur >20% - 40% of the time	Risk may occur >40% - 60% of the time	Risk may occur > 60% - 85% of the time	Risk may occur more that 85% of the time
Frequency	Less than once every ten (10) years	Between once every ten (10) years and once every five (5) years	Between once every five (5) years and once (1) every year	Between once (1) every year and up to 10 events per year	Greater than ten (10) events a year

Table A2: Consequence definitions

	Limited	Minor	Moderate	Major	Catastrophic
Safety	Slight and recoverable injury or discomfort requiring first aid with no follow up required of any employee, visitor or contractor.	Event resulting in injury or disease that required treatment from a registered medical practitioner but without permanent disability of any employee, visitor or contractor.	Event causing a serious or permanent injury or long-term illness with immediate admission to hospital of any employee, visitor or contractor.	Event causing single fatality and/or total and permanent disability of any employee, visitor or contractor.	Event causing two or more fatalities and/or permanent total disability of any employee, visitor or contractor.
Financial (FY21)	<= 1% EBITDA < $6.59m	> 1% – 2.5% EBITDA > $6.59m - $16.47m	> 2.5% – 5% EBITDA >$16.47m – $32.95m	> 5% – 15% EBITDA >$32.95-m – $98.85mm	> 15% EBITDA >$98.85m
Reputation	Local mention only. Quickly forgotten.	Short term state level concern. Persistent local concern.	Persistent state or national media interest over the short term. Adverse impact on relations with key stakeholders (expressed displeasure by department or government). Minimal to no impact on long term strategic objectives.	Serious public outcry (community action or protests, including online). Persistent intense long-term national public, political and media scrutiny. Adverse impact on relations with key stakeholders (resulting in adverse regulatory change). Potential to impact to long term strategic objectives.	Sustained adverse media coverage which threatens to seriously undermine long term strategic objectives or threatens freedom to operate.
Regulatory	Insignificant non-compliance with legislation, regulation, agreements or contracts that has no impact to operations and/or no requirement to report	Minor non-compliance with legislation, regulation, agreements or contracts that is reportable but has minimal impact to operations and no urgency for rectification	Non-compliance with legislation regulation, agreements or contracts that is reportable and/or requires an immediate response to an external party. This may result in: - Infringement notice (or similar) - External review or audit	Serious (but isolated) breach of legislation, regulation, agreement or contracts, that requires considerable investment to rectify and results in one or more of: - Prosecution or civil action with high compensation (or fine) - Ministerial or formal intervention by regulator (enforceable undertaking) - Restrictions or conditions placed on licence/permit	Very serious breach of legislation, regulation, agreements or contracts, that is difficult to rectify and results in one or more of: - Prosecution or civil action leading to imprisonment or significant sanction - Ministerial or formal intervention by regulator - Licence/permit revocation - Public inquiry
Environment	Transient or Temporary contamination (days) to land, air, groundwater or surface water environment to immediate area around asset or activity. No lasting impact (days) on species, habitat, community amenity or heritage sites. Self-reporting or notification to regulators	Minor contamination to land, air, groundwater or surface water environment (clean up / recovery of a localised event within weeks) Minor impact on species, habitat, community amenity or heritage sites (restoration within weeks) Enforcement action undertaken by regulator	Serious contamination to land, air, groundwater or surface water environment (clean up / recovery within 1 year) Moderate impact on species, habitat, community amenity or heritage sites (restoration within 1 year) Enforcement action undertaken by regulator in the form of a Penalty Infringement Notice (or similar) or Regulatory Notice.	Very serious long terms contamination to land, air, groundwater or surface water environment (clean up / recovery 1 to 4 years) Major impact on species, habitat, community amenity or heritage sites (restoration period 1 to 4 years) Enforcement action undertaken by regulator in the form of an enforceable undertaking or court prosecution.	Permanent, widespread and irreversible contamination to land, air, groundwater or surface water environment Permanent loss of species, habitat, community amenity or heritage sites Enforcement action undertaken by regulator

	Limited	Minor	Moderate	Major	Catastrophic
Business interruption	Minimal or no business interruption on majority of airport operations; Minimal or no business interruption with limited impact on some critical operations. Business interruption with impacts to business processes for up to 2 hours.	Business interruption caused to the majority of the airport operations for up to an hour; Minor business interruption with impact to some critical operations up to 7 days; Business interruption with impacts to business processes for 2-12 hours.	Business interruption caused to the majority of the airport operations for 1-6 hours; or Business interruption with impacts to some critical operations causing significant delays 7 days to 90 days; Business interruption with impacts to business processes for 12-24 hours.	Business interruption caused to the majority of the airport operation for 6 hours to 2 days; or Business interruption with impacts to some critical operations causing significant delays for 90 days to 12 months; Business interruption with impacts to business processes for 24-48 hours.	Business interruption caused to the majority of the airport operations for 2 or more days Business interruption with impacts to some critical operations causing significant delays for greater than 12 months Business interruption with impacts to business processes for >48 hours.
People (Internal)	Minimal impact on team members mental health as a result of action or inaction by APAC of key talent and/or key roles due to voluntary turnover; or Loss of up to 10% or more of non-key roles	>2% of team members receiving mental health support as a result of action or inaction by APAC; 5-10% loss of key talent and/or key roles due to voluntary turnover; or Loss of 10-20% or more of non-key roles	2-5% of team members receiving mental health support as a result of action or inaction by APAC; 10% loss of key talent and/or key roles due to voluntary turnover; or Loss of 20-30% or more of non-key roles	5-10% of team members receiving mental health support as a result of action or inaction by APAC; and/or One critical mental health impact on team members attributable to APAC; and/or >10-<25% loss of key talent and/or key roles due to voluntary turnover; or Loss of 30-50% or more of non-key roles	>10% of team members receiving mental health support as a result of action or inaction by APAC; More than one critical mental health impact on team members action or inaction by APAC; and/or 25% loss of key talent and/or key roles due to voluntary turnover; or Loss of 50% or more of non-key roles

Table A3 illustrates the heat map/ risk assessment matrix which was applied to determine the risk rating for each identified environmental impact after the application of identified environmental management measures. Corresponding APAM management responses are presented in Table A4.

Table A3: Risk rating heatmap

	Limited	Minor	Moderate	Major	Catastrophic
Almost Certain	6	11	18	23	25
Probable	5	10	17	20	24
Chances About Even	4	8	13	19	22
Probably Not	2	7	12	15	21
Very Unlikely	1	3	9	14	16

Table A4: Management Instructions

High (23 -25)	■ Risks that significantly exceed APAC's risk tolerance threshold ■ Immediate and proactive management required as a priority ■ Executive to be notified with regular reporting ■ Need for out of sequence reporting to Board ■ Internal audit findings: resolution within 3 months, CEO approval required for due date extensions
Significant (17 – 22)	■ Risks that exceed APAC's risk tolerance threshold ■ Executive to be notified with regular reporting on progress of treatments ■ Escalation/ notification to Board level through enterprise risk reporting ■ Internal audit findings: resolution within 6 months, CEO approval required for due date extensions
Medium (10 – 16)	■ Active monitoring required ■ Periodic 6 monthly review required ■ Escalation/ notification to executive level ■ Internal audit findings: resolution within 9 months, CFO approval required for due date extensions
Low (4 – 9)	■ Risks that are within APAC's risk tolerance threshold ■ Risks that can be managed as part of "business as usual" ■ Periodic review recommended ■ No need to escalate ■ Internal audit findings: resolution within 12 months, executive approval required for due date extensions
Very Low (1 – 3)	■ Risks that are within APAC's risk tolerance threshold ■ Risks that can be managed through normal and routine procedures ■ No need to escalate ■ Internal audit findings: resolution within 18 months, executive approval required for due date extensions

Table A5: EMP risk assessment

Operation	Activity	Environmental Impact	Environmental controls (relevant section of EMP)	Risk Assessment			
				Likelihood	Consequence	Risk Score	Risk Rating
Construction and demolition	Construction of new buildings and/or civil infrastructure Demolition or renovation of existing buildings and/or civil infrastructure	Noise complaints, reduced amenity	Noise management (4.3)	Very Unlikely	Limited	1	Very Low
		Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Probably Not	Limited	2	Very Low
		Generation of increased stormwater run-off (changes to hydrology)	Surface water and stormwater (5.3)	Chances About Even	Minor	8	Low
		Generation of hazardous building waste	Managing hazardous building waste (4.1.4)	Probably Not	Limited	2	Very Low
		Generation of general building wastes and packaging	Waste management (4.1.4)	Almost Certain	Limited	6	Low
		Wildlife attracted to waste collection areas	Waste management (4.1.4)	Probably Not	Limited	2	Very Low
	Earthworks / Geotechnical and exploratory ground investigation	Erosion of disturbed soils	Erosion and sediment control (5.2)	Chances About Even	Minor	8	Low
		Pollution of surface water caused by sediment in stormwater runoff	Erosion and sediment control (5.2) Surface water and stormwater (5.3)	Probably Not	Minor	7	Low
		Noise complaints, reduced amenity	Noise management (4.3)	Very Unlikely	Limited	1	Very Low
		Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Probable	Minor	10	Medium
		Generation of wastewater from stormwater or groundwater accumulated within excavations	Wastewater (4.1.4) Control of sediment during dewatering (5.2) Surface water and stormwater (5.3) Management of contaminated water from dewatering activities (5.4)	Probable	Minor	10	Medium
		Generation of waste spoil and redundant infrastructure	Management of excavated spoil and infrastructure (5.4)	Probable	Minor	10	Medium
		Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Probably Not	Minor	7	Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
		Spread of weeds	Weed and pest control (5.5)	Probably Not	Minor	7	Low
		Wildlife attracted to exposed areas or standing water	Flora and fauna and landscaped areas (5.5)	Chances About Even	Limited	4	Low
		Wildlife becoming trapped in open excavations	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Limited	1	Very Low
	Operation of vehicles, plant and equipment	Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Chances About Even	Minor	8	Low
		Noise complaints, reduced amenity	Noise management (4.3)	Very Unlikely	Limited	1	Very Low
		Pollution of land, surface water or groundwater from leaks or chemical spills (e.g. fuels, hydraulic fluid)	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Probably Not	Minor	7	Low
		Air emissions from vehicle exhaust	Air quality (4.2)	Almost Certain	Limited	6	Low
	Management of imported raw material stockpiles	Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Chances About Even	Limited	4	Low
		Erosion and sediment runoff	Erosion and sediment control (5.2)	Chances About Even	Minor	8	Low
		Potentially contaminated fill being brought to site for building/landscaping	Control of imported materials to site (5.4)	Very Unlikely	Moderate	9	Low
	Management of contaminated soil stockpiles	Generation of dust	Contaminated stockpile management (5.4)	Chances About Even	Limited	4	Low
		Erosion and runoff of contaminated sediment	Contaminated stockpile management (5.4)	Chances About Even	Minor	8	Low
		Contaminated stormwater runoff	Contaminated stockpile management (5.4)	Chances About Even	Minor	8	Low
		Cross-contamination of clean soils and other materials	Land and groundwater contamination (5.4)	Probably Not	Minor	7	Low
	Storage, handling and use of hazardous substances	Pollution of land, surface water or groundwater from spill of chemicals	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Probably Not	Moderate	12	Medium
		Emissions to air from chemical storage areas or spills	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Very Unlikely	Limited	1	Very Low
		Generation of waste chemical containers	Waste management (4.1.4)	Almost Certain	Limited	6	Low
	Vegetation clearing	Generation of green waste	Green waste management (4.1.4)	Almost Certain	Limited	6	Low

Operation	Activity	Environmental Impact	Environmental controls (relevant section of EMP)	Risk Assessment			
				Likelihood	Consequence	Risk Score	Risk Rating
		Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
Operations	Storage, handling and use of hazardous substances	Pollution of land, surface water or groundwater from spill of chemicals	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Probably Not	Moderate	12	Medium
		Emissions to air from chemical storage areas or spills	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Very Unlikely	Limited	1	Very Low
		Generation of waste chemical containers	Waste management (4.1.4)	Almost Certain	Limited	6	Low
	Operation of vehicles, plant and equipment	Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Probably Not	Limited	2	Very Low
		Noise complaints, reduced amenity	Noise management (4.3)	Very Unlikely	Limited	1	Very Low
		Pollution of land, surface water or groundwater from leaks or chemical spills (e.g. fuels, hydraulic fluid)	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Probably Not	Minor	7	Low
		Air emissions from vehicle exhaust	Air quality (4.2)	Almost Certain	Limited	6	Low
		Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
	Maintenance and repair of vehicles and plant	Noise complaints, reduced amenity	Noise management (4.3)	Very Unlikely	Limited	1	Very Low
		Pollution of land, surface water or groundwater from leaks or chemical spills (e.g. fuels, hydraulic fluid)	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Very Unlikely	Minor	3	Very Low
		Air emissions from vehicle exhaust	Air quality (4.2)	Probably Not	Limited	2	Very Low
		Generation of workshop/maintenance waste	Waste management (4.1.4)	Probable	Limited	5	Low
	Vegetation assessments and clearing	Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Probably Not	Limited	2	Very Low
		Generation of green waste	Green waste management (4.1.4)	Almost Certain	Limited	6	Low
		Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
	Mowing and slashing / Landscaping	Generation of dust	Air quality (4.2) Erosion and sediment control (5.2)	Probably Not	Limited	2	Very Low
		Noise complaints, reduced amenity	Noise management (4.3)	Very Unlikely	Limited	1	Very Low
		Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
		Spread of weeds	Weed and pest control (5.5)	Probably Not	Minor	7	Low
		Generation of green waste	Green waste management (4.1.4)	Almost Certain	Limited	6	Low
		Pollution of land, surface water or groundwater from leaks or chemical spills (e.g. fuels, hydraulic fluid)	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Probably Not	Minor	7	Low
		Erosion of disturbed soils	Erosion and sediment control (5.2)	Probably Not	Minor	7	Low
		Pollution of surface water caused by sediment in stormwater runoff	Erosion and sediment control (5.2) Surface water and stormwater (5.3)	Very Unlikely	Limited	1	Very Low
		Potentially contaminated fill being brought to site for landscaping	Control of imported materials to site (5.4)	Very Unlikely	Moderate	9	Low

Operation	Activity	Environmental Impact	Environmental controls (relevant section of EMP)	Risk Assessment			
				Likelihood	Consequence	Risk Score	Risk Rating
	Use of herbicides, fertilisers and pesticides	Pollution of land, surface water or groundwater from incorrect application of herbicides, fertilisers or pesticides	Flora and fauna and landscaped areas (5.5)	Probably Not	Moderate	12	Medium
		Pollution of land, surface water or groundwater from chemical spills	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Flora and fauna and landscaped areas (5.5)	Probably Not	Moderate	12	Medium
		Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
	Fire hazard management (firebreaks, prescribed burning etc.)	Emissions of combustion released to air	Prescribed burning and fire controls (5.5)	Almost Certain	Limited	6	Low
		Loss of control of fire whilst undertaking prescribed burning	Prescribed burning and fire controls (5.5)	Very Unlikely	Major	14	Medium
		Unintended impacts to native flora and fauna or landscaped areas	Prescribed burning and fire controls (5.5)	Probably Not	Moderate	12	Medium
		Damage to sites or items of heritage significance	Prescribed burning and fire controls (5.5)	Very Unlikely	Moderate	9	Low
	Pest animal control	Pest animals degrading the natural environment on-site	Weed and pest control (5.5)	Chances About Even	Minor	8	Low
	Cattle grazing	Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
		Cattle straying from intended grazing areas	Flora and fauna and landscaped areas (5.5)	Chances About Even	Limited	4	Low
	Waste management	Excessive waste generation	Waste management (4.1.4)	Probably Not	Minor	7	Low
		Inappropriate disposal / management of generated waste	Waste management (4.1.4)	Probably Not	Moderate	12	Medium
		Missed opportunities for reuse or recycling of waste streams	Waste management (4.1.4)	Chances About Even	Minor	8	Low
	Maintenance of civil hydraulic infrastructure	Damage to native flora and fauna or landscaped areas	Flora and fauna and landscaped areas (5.5)	Very Unlikely	Minor	3	Very Low
		Damage to sites or items of heritage significance	Heritage (5.6)	Very Unlikely	Moderate	9	Low
		Pollution of land, surface water or groundwater from leaks or chemical spills (e.g. fuels, hydraulic fluid)	Spill response (4.4.1) Storage, handling and use of hazardous substances (5.1) Bulk fuel storage controls (5.4)	Probably Not	Minor	7	Low
		Generation of waste spoil and redundant infrastructure	Management of excavated spoil and infrastructure (5.4)	Chances About Even	Minor	8	Low
		Generation of maintenance waste	Waste management (4.1.4)	Almost Certain	Limited	6	Low

APPENDIX B

Legislation and regulatory requirements

LEGAL AND REGULATORY REQUIREMENTS / STATUTORY FRAMEWORK

The Commonwealth environmental legislation which is most relevant to APAM is:

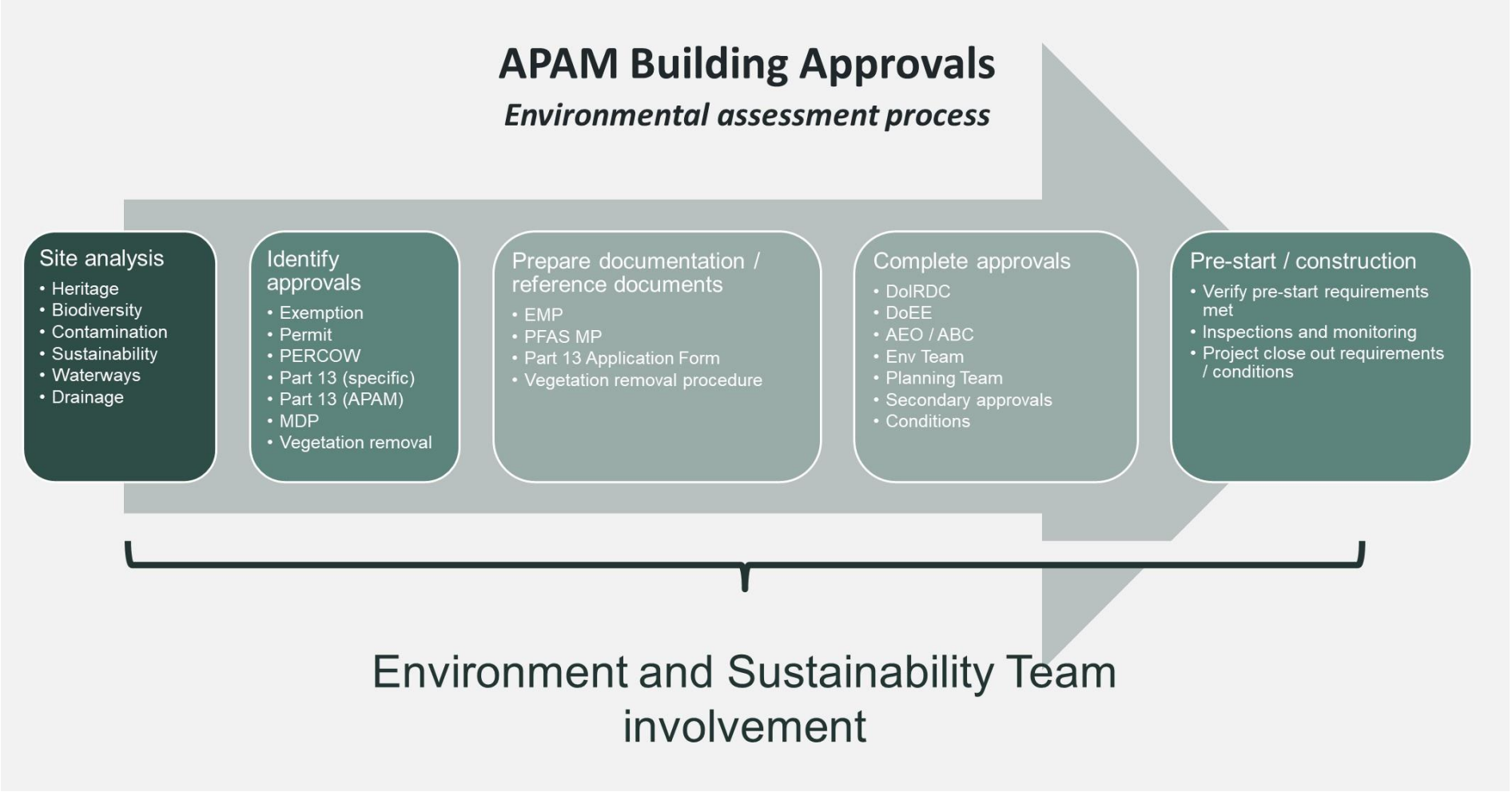
- Airports Act 1996 (Cth), in particular, Part 6 relating to environmental management
- Airports (Environment Protection) Regulations 1997 (Cth)
- Airports (Building Control) Regulations 1996 (Cth)
- Airports Regulations 1997 (Cth)
- Environment Protection and Biodiversity Conservation Act 1999 (Cth)

Victorian State Legislation which may apply to APAM includes the following:

- Biological Control Act 1986
- Catchment and Land Protection Act 1994
- Climate Change Act 2017
- Conservation, Forest and Lands Act 1987
- Dangerous Goods Act 1985
- Environment Protection Act 2017 (only limited application in relation to waste requirements)
- Occupational Health and Safety Act 2004 (although application may be limited for any Commonwealth bodies, public authorities or non-Commonwealth licensees who operate at the airport)
- Pipelines Act 2005
- Safe Drinking Water Act 2003
- Renewable Energy (Jobs and Investment) Act 2017
- Water Act 1989
- Water Efficiency Labelling and Standards Act 2005
- Wildlife Act 1975

APPENDIX C

Environmental Assessment Process for Building Approvals


APAM Building Approvals
Environmental assessment process
Site analysis
• Heritage
• Biodiversity
• Contamination
• Sustainability
• Waterways
• Drainage
Identify approvals
• Exemption
• Permit
• PERCOW
• Part 13 (specific)
• Part 13 (APAM)
• MDP
• Vegetation removal
Prepare documentation / reference documents
• EMP
• PFAS MP
• Part 13 Application Form
• Vegetation removal procedure
Complete approvals
• DoIRDC
• DoEE
• AEO / ABC
• Env Team
• Planning Team
• Secondary approvals
• Conditions
Pre-start / construction
• Verify pre-start requirements met
• Inspections and monitoring
• Project close out requirements / conditions
Environment and Sustainability Team involvement

APPENDIX D

List of Approved Products

LIST OF APPROVED PRODUCTS

The following products have been reviewed by the APAM Environment and Sustainability Team and are deemed suitable for use at Melbourne Airport. Tenants, operators and contractors do not require prior approval to use these products in accordance with manufacturer specifications.

If an alternative product is proposed to be used, approval must be obtained in writing from the APAM Environment and Sustainability Team in advance.

Soil binders

- Vital Bon-Matt HR
- Vital Bon-Matt Stonewall
- 3M SDS-2 Dust Suppressant

Flocculants

- DamClear CL
- Magnafloc LT20

Herbicides

- Glyphosate
- Fusilade (Fluazifop-P)
- Kamba M (MCPA)
- The following herbicides are approved for use within the airfield. If their use outside of the airfield is proposed, then approval must be obtained in writing from the APAM Environment and Sustainability Team in advance:
  - BioWeed Ultra
  - Broadstrike
  - Brushwet
  - Casper
  - Clomac
  - DRIFTEX
  - Hammer
  - Lynx WG
  - Metsol 600
  - Picoflex
  - Spotlight Plus
  - Trichloram
  - Trimac

Note: residual herbicides must not be used, unless approved by the APAM Environment and Sustainability Team

Pesticides
■ The following insecticides are approved for use within the airfield. If their use outside of the airfield is proposed, then approval must be obtained in writing from the APAM Environment and Sustainability Team in advance: - Acelepryn - Aquastar 100SC ■ Pindone (rabbit management)

APPENDIX E

Dangerous Goods Manifest Template

DANGEROUS GOODS REGISTER

Name of Site Owner:	
Name of occupier of the premises (if not the same as above)	
Address of premises:	
Date of preparation:	

Emergency contact details

Contact	Position	Work Phone No.	Mobile Phone No.

Principal Activities Involving Dangerous Goods

Chemical processing □
Storage/warehousing □
Blending/ mixing □
Repacking □
Transport/ Distribution □
Service station □
Retail □
Other □

Does the premises store or handle dangerous goods in excess of the relevant quantities specified in Schedule 2 of the Dangerous Goods (Storage and Handling) Regulations 2012?

YES □ NO □

Does the premise have a current WorkSafe Notification or Dangerous Goods Licence?

YES □ NO □

1. Details of Dangerous Goods stored and handles in bulk or as packaged dangerous goods

Area/Tank Identification Number (as shown on site plan)	Quantity in Packages Note 1	(kg or L)	Quantity in Bulk Note 2	(kg or L)
2.1 Flammable gases				
2.2 Subsidiary risk 5.1, Non-flammable, non-toxic gases				
2.2 Other, Non-flammable, non-toxic gases				
2.3 Toxic gases				
Aerosols				
Cryogenic fluids				
3 Flammable liquids				
4.1 Flammable solids, self-reactive substances and solid desensitised				
4.2 Substances liable to spontaneous				
4.3 Substances which in contact with water emit flammable gases				
5.1 Oxidizing substances				
5.2 Organic peroxides				
6.1 Toxic substances				
8 Corrosive substances				
9 Miscellaneous dangerous substances and				

2. C1 combustible liquids stored and handled in bulk or as packaged dangerous goods

Description and Detail of C1 Combustible Liquid e.g. Product name and/or flashpoint	Quantity in Packages Note 1	(kg or L)	Quantity in Bulk Note 2	(kg or L)

NOTE 1: The following should be used when determining the quantity of dangerous goods stored and handled in packages - see regulation 11(2):

Types Of Goods	What to Measure	Units
Solid (excluding Class 2 dangerous goods)	Net mass of the goods in the container	Kilograms
Liquid (excluding Class 2 dangerous goods)	Net capacity of the container	Litres
Class 2 (gases)	Total capacity of the container	Litres

NOTE 2: The following should be used when determining the quantity of dangerous goods stored and handled in bulk - see regulation 11(3):

Types Of Goods	What to Measure	Units
Solid (in a container) (excluding Class 2 dangerous goods)	Mass that the container is designed to hold	Kilograms
Solid (not in a container)	Undivided mass	Kilograms
Liquid (excluding Class 2 dangerous goods)	Design capacity of the container	Litres
Class 2 (gases)	Total capacity of the container	Litres

3. Goods too dangerous to be transported

Indicate the Product name and maximum quantity of any goods too dangerous to be transported

Product Name of Goods too Dangerous to be Transported	Max. Quantity