

Guideline Construction Environmental Management



Background

Since 1998 Adelaide Airport Limited (AAL) and Parafield Airport Limited (PAL) have leased the Adelaide and Parafield Airport sites from the Federal Government. Activity on leased federal airport land is controlled by the Airports Act 1996 (Airports Act), Airport (Building Control) Regulations 1996 (ABCR 1996) and Airports (Environment Protection) Regulations 1997 (Airport Regulations).

The Department of Infrastructure, Transport Regional Development and the Arts (DoITRDA) is charged with administration of the Airports Act and is responsible for overseeing the activities on leased airport land. As head lessees, AAL and PAL are responsible for managing airport activities and are required to report any potential degradation and devaluation of the land from its operations to DoITRDA. To oversee protection of the environment on airports, an Airport Environment Officer (AEO) is employed by DoITRDA to administer the Airports Act and the Airports Regulations.

Building and construction activity on Adelaide and Parafield Airports is subject to statutory controls under the Airports Act, the ABCR 1996 and the Airports Regulations. Accordingly, all building and construction activity must be approved by AAL/PAL and the Airport Building Controller (ABC) via the documented AAL/PAL Building Activity Approval (BA) process.

Assessment of potential environmental risks and their management forms part of the AAL/PAL BA process.

Purpose

The purpose of this guideline is to provide BA applicants and contractors with information on construction environmental management for activities undertaken on airport land and the requirements for on-airport Construction Environmental Management Plans (CEMPs), to minimise delays in BA approvals.

Applicable Environmental Legislation

As discussed above, Adelaide and Parafield Airports are located on federal land and activities occurring on-airport are thus subject to the provisions of the following federal legislation:

- *Airports Act 1996*
- Airports (Environment Protection) Regulations 1997
- Airport (Building Control) Regulations 1996

In addition, local State and Council legislation is relevant where impacts are spreading offsite, or where there is an impact to offsite receptors. This is a common occurrence for construction projects adjoining state land.

Common National, State and Council Legislation for construction environmental management includes:

- PFAS National Environment Management Plan
- South Australian Environment Protection Act 1993
- Local Nuisance and Litter Control Act 2016

Construction Environmental Management Plans (CEMP)

CEMPs are the principal means by which the AAL/PAL Environment Department assess the proposed management of construction environmental risks. CEMPs can either be submitted as part of tender submissions or as part of the BA process.

It is recommended where possible, and for more complex site contamination issues that a suitably qualified environmental consultant be engaged to undertake preparation of the CEMP.

Principal CEMP components

AAL/PAL understand that many contractors have established environmental management frameworks including a CEMP template. As a guide, a standard CEMP template is provided with this guideline representing the minimum standard of detail to adequately manage environmental risks.

In addition, AAL/PAL would prefer to see CEMPs that have adequately addressed these project specific principal components, and any additional unique environmental risks and subject matter should also be incorporated in the plan, especially for high risk or non-routine works.

Other CEMP considerations

In addition to the CEMP components listed above, other factors that need to be considered when drafting CEMPs for on-airport activities, particularly in relation to the unique on-airport regulatory environment, include:

- Specific consideration to the Airport Regulations, in addition to local and state Regulations.
- appropriate reporting of environmental incidents (i.e. to AAL/PAL, who report to DoITRDA and SA EPA as required)
- Consideration of AAL/PAL guidelines (available via AAL) as part of management measures.

BA/CEMP Approval Process

If a CEMP is required for a construction project requiring building approval, the CEMP will need to be reviewed and approved by both AAL (environment staff) and the Airport Building Controller appointed under the Airport Building Control Regulations.

Monitoring & Review

Contractors are required to undertake regular environmental inspections to ensure compliance with contractual requirements and relevant legislation. Inspections should include an audit of the current site activities and the effectiveness of controls, including drainage, chemical storage, dust and air emissions, stockpiles, plant/machinery, waste management and sediment controls.

The Contractor is responsible for reporting all environmental management actions undertaken during construction to AAL. This includes:

- Internal and external audit/inspection results
- Complaints & infringements
- Environmental incidents
- Results of CEMP reviews

Guidelines

AAL/PAL have produced guidelines to provide information on a range of construction related activities with potential environmental impacts and to provide guidance on how these activities can be undertaken in a manner consistent with applicable legislation.

All activities on airport land must be undertaken in accordance with these guidelines and AAL/PAL encourage the use of these guidelines in the development of CEMPs. It is considered acceptable to state in CEMPs that construction activities will be '*undertaken in a manner consistent with the... AAL/PAL Guideline*' (or words to this effect), to demonstrate adequate management of a particular environmental risk.

A brief overview of the guidelines' contents is provided below.

Environmental Site Assessment

Provides information on appropriate soil and groundwater sampling methodologies and the use of the Airports Regulations criteria for comparison with contaminant concentrations.

The Guideline also includes consideration of potential Per- and poly-fluorinated alkyl substances (PFAS) contamination risks (see section below for more detail).

Construction dewatering

Sets out the appropriate management of dewatering, including methodologies and water quality testing.

The guideline also notes that where dewatering presents a risk of possible off-site impact, state environmental legislation is applicable.

Waste fill importation and soil management

Describes the manner in which on-airport or imported soils and fill materials must be managed.

Guidance on imported fill management is consistent with the SA EPA '*Standard for the production and use of Waste Derived Fill*' and the chemical criteria provided in the associated, '*Current criteria for the classification of waste—including Industrial and Commercial Waste (Listed) and Waste Soil*' document.

Acid Sulfate soil (ASS)

Indicates where ASS risks are likely to exist on Adelaide Airport and how to assess these potential ASS risks.

The guideline also outlines the requirements of ASS management plans, where ASS assessment suggests that a management plan is required.

Noise management

Discusses the principal sources of on-airport noise and the responsibilities of contractors to manage construction related noise.

Landscaping

Explains how on-airport landscaping can be undertaken in a sustainable manner that minimises potential risks to aviation due to vegetation penetrating the obstacle limitation surface or encouraging on-airport bird activity.

The guideline also includes a list of acceptable plant species for use in on-airport landscaping.

PFAS contamination

Potential per- and poly-fluorinated alkyl substances (PFAS) contamination risks may need to be considered where:

- the project site is located within an area where firefighting training using aqueous film forming foam (AFFF) is known or suspected to have occurred.
- the subject site is located in the vicinity of a location where PFAS fire-fighting foams were used.
- A location where contaminated groundwater may have migrated to over time.

Further information on the management of PFAS is available within the PFAS National Environment Plan (Version 2.0 or subsequent versions).

Construction Environment Inspections

Once approved on-airport construction works have commenced, the AAL/PAL Environment Department may seek to undertake construction environment inspections. The objectives of these inspections are to:

- confirm conformance with the management measures described in CEMPs
- ensure site activities comply with the relevant environmental legislation
- provide an opportunity for AAL/PAL to assist contractors in assessing and managing environmental risks and/or addressing any identified non-conformances or non-compliances.

Inspections will usually be organised in collaboration with the AAL/PAL Project Officer assigned to the project.

Contractors will generally be provided with copies of inspection reports within 2 days following completion of the inspection. Inspection reports detail any non-conformances or non-compliances and the agreed measures to address them.

Further Guidance and References

Members of the AAL/PAL Environment Department are available to provide further advice on construction environmental management.

Appendix A CEMP Template

INTRODUCTION

This proforma Construction Environmental Management Plan (CEMP) has been developed by **XXX** to meet the environmental management requirements stipulated in the *Airports (Environment Protection) Regulations 1997* as they relate to the site preparation and construction of a **type of facility**, and associated structures and infrastructure, on the **name of precinct**, at **XX Airport**, South Australia.

The CEMP is a critical management tool for ensuring that all works undertaken on site comply with the:

- Airports Act 1996
- Airports (Environment Protection) Regulations 1997
- Environment Protection Act 1993 and associated policies and regulations
- All other relevant environmental regulations where provisions are lacking in the
- Airports (Environment Protection) Regulations 1997
- PFAS National Environment Management Plan
- Other applicable guidelines and codes of practice

The environmental objectives and actions provided in this proforma, although detailed, are given as a guide only. The Principal Contractor is responsible for

(a) ensuring that the information provided in this CEMP is correct, (b) communicating the requirements of this CEMP to all site staff and subcontractors, and (c) and that all actions are carried out on site in accordance with the actions detailed within the CEMP.

Purpose and Structure

The purpose of the CEMP is to ensure that the persons and organisations undertaking the construction of the facility are aware of their environmental protection obligations and to provide a framework (only) for implementing environmental management requirements.

The overall responsibility for implementation of the CEMP rests with the appointed Contractor(s) and AAL.

Party Company/Organisation Name

Table 1 - Project Parties

Project Proponent	Company Name
Project Architect/Engineer	Company Name
Principal Contractor	Company Name

The CEMP consists of a series of environmental management elements. The requirements for each element are addressed using the structure detailed below.

Objective – identifies the broad environmental outcome to be achieved.

Target – performance criteria by which achievement of the objective will be measured.

Management Action – conditions that need to be met or actions that should be undertaken to achieve objectives and targets.

Monitoring – observations or measurements to be made to determine whether targets have been met.

Reporting – chain of reporting and record keeping requirements.

Corrective Action – response following identification of non-conformances

Responsibility – position responsible for managing the element or specified component of the element.

Timing – timing or response requirements for managing the element or specified component of the element.

BACKGROUND AND PROJECT SUMMARY

Describe the construction project site and scope.

List main project activities, in particular those which have an environmental impact. For example activities that produce waste or dust, vehicle refuelling, equipment washdown, dewatering or importation of soil.

The project is scheduled to commence on **date**. The expected date of practical completion is **date**.

The proposed site layout is shown in **Figure 1**.

IMPLEMENTATION AND PROJECT START UP

Key Environment Management Personnel

The key environmental management personnel for this project include the following:-

- Principal Contractor(s) Project Supervisors – [Person Name and contact number](#)
- Site Superintendent – [Person Name and contact number](#)
- AAL Project Officer (PO) – [To be nominated by AAL](#)
- AAL Airport Environment Manager (AEM) – [Person Name and contact number](#)
- Commonwealth Airport Environmental Officer (AEO) – [Person Name and contact number](#)

The Principal Contractor(s) – and their subcontractors – shall be responsible for ensuring compliance with the CEMP through the production and utilisation of an implementation plan or similar. The implementation plan may be appended to this CEMP or developed separately.

The Project Officer and Airport Environment Manager will ensure that all contractors satisfactorily implement the requirements of the CEMP.

All communication between the contractor and AAL staff shall be directed through the Site Superintendent. The Site Superintendent shall be responsible for the day to day administration of environmental Issues on behalf of AAL. AAL will maintain an active monitoring role.

AAL will nominate a Project Officer (stated on the AAL issued Building Consent form) through whom all communications will be received and directed. The Project Officer will liaise closely with the Airport Environment Manager and AEO on all environmental matters including monitoring, reporting and actions as necessary.

Environmental Management Records

All relevant persons/organisations involved in environmental management shall maintain a system for recording environmental management activities, monitoring data and relevant events. This information shall be incorporated into this CEMP. The system shall be maintained in a legible condition and be readily interpretable by a third party.

Compliance Auditing

AAL is responsible for the overall monitoring and auditing of environmental performance of all persons/organisations involved in the project for the period up to the point of practical completion. Review and auditing shall occur as often as necessary to ensure conformance with the CEMP.

Compliance auditing will also include any specific environmental conditions set by the Airport Building Controller as part of the permits issued by DoITRDA.

Reporting

The Principal Contractor(s) shall prepare a brief written report monthly describing the results of:

- Results of all inspections and monitoring events
- Action arising from inspections
- Targets which have not been met, and a description of the corrective action taken to address any non-compliances
- Summary of complaints received on site
- Summary of environmental incidents and emergencies, response measures and corrective actions.

These reports may be prepared in the form of site meeting minutes. A copy of the report shall be provided to the Airport Environment Manager and made available to AAL upon request.

Environmental Awareness and Training

The Principal Contractor(s) shall ensure that all site personnel are aware of their environmental responsibilities and have received the necessary training to meet the environmental obligations associated with their positions. The CEMP will be treated as part of the general site inductions at site establishment, and for all new staff entering the works area.

Complaint Handling

All complaints received on site during the construction period shall be logged by the Contractor(s) as follows:-

- Date of complaint;
- Receiver of the complaint;
- Complainant (name and address if supplied);
- Substance of the complaint; and
- Date and time complaint forwarded to the Contractor.

The Contractor is to advise the Airport Environment Manager as soon as practical of complaints received. The AEM is then responsible for investigation and subsequent resolution. Copies of complaints may be provided to the AEO for review and comment.

Non Conformance with Targets

The Contractor shall notify the [AAL](#) Project Officer and Airport Environment Manager of all identified non- conformances with targets described in this CEMP.

Environmental Incidents and Emergencies

The Contractor shall be responsible for reporting environmental incidents and emergencies to the AAL Aviation Coordination Centre (Ph: 8154 9444), Project Officer and AAL Environment Manager as soon as practicable.

Other Licenses and Permits

The Project Officer shall be responsible for ensuring that all other licenses, permits and consents are in place, current and available for inspection during normal working hours during the construction phase.

Construction Activities

The components of the CEMP aim to manage the potential impacts of those activities undertaken during the construction phase of the development. These activities include, but are not limited to, the following:-

- Site establishment
- Preparation and construction of the subgrade and hardstands
- Installation of services
- Construction of stormwater and drainage systems
- Environmental management of construction activities
- Monitoring requirements
- Reporting.

General Project Management

Site Management

Objective

To ensure the smooth implementation and integration of the CEMP into the work plan.

Management Actions

The Contractor shall:-

- Ensure that the project activities are conducted in accordance with the requirements of the CEMP
- Carry out environmental inspections and coordinate site activities as required by the CEMP
- Promptly advise the Airport Environment Manager of any environmental management action to be taken to maintain compliance with this CEMP and relevant statutory requirements
- Ensure a copy of the CEMP is displayed in the site office at all times and be updated and amended as works progress.
- Ensure that relevant personnel are inducted when on site and that the induction material includes the CEMP
- Advise the Project Officer of relevant construction commencement dates and where applicable provide a project plan
- Advise the Project Officer or Airport Environment Manager immediately if environmental harm or potential harm occurs within or near the construction site

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- Undertake environmental management actions as directed by the Airport Environment Manager or Project Officer
 - Ensure that all personnel under their direct control are aware of potential environmental impacts, and required minimum environmental control measures before they commence any site works.

Construction Environmental Management Plan

Erosion and Sediment control

Objective:

To minimise the potential for soil erosion on-site and the off-site transport of sediment.

Target:

No erosion and/or sedimentation impacts during the construction phase.

EROSION & SEDIMENT CONTROL			
Management Requirement	Action	Responsibility	Timing
Minimize erosion	<ul style="list-style-type: none"> • Areas of land cleared and the period of time that they remain cleared will be kept to a minimum. 	Contractor	During construction
	<ul style="list-style-type: none"> • As appropriate, works will be undertaken in phases designed to minimise land disturbance. 	Contractor	During construction
	<ul style="list-style-type: none"> • Stormwater run-off will be directed around the site where practicable and away from stockpiles in any case. 	Contractor	During construction
	<ul style="list-style-type: none"> • All vehicles will be kept to well defined paved or rubble protected access roads where possible. Areas where ground cover is not to be disturbed will be identified and enclosed by bunting, therefore prohibiting construction traffic 	Contractor	During construction
	<ul style="list-style-type: none"> • Where traffic cannot be confined to paved or rubble protected roads, rutting of roads which may be initiators of erosion will be reinstated at completion of works 	Contractor	During construction
	<ul style="list-style-type: none"> • Sediment control measures will be installed along identified natural and constructed drainage lines before construction commences where applicable. 	Contractor	Prior to the commencement of construction if warranted.
	<ul style="list-style-type: none"> • Sediment control devices will be installed downstream of areas of disturbed soils when applicable. 	Contractor	During construction
	<ul style="list-style-type: none"> • Where vehicle traffic cannot be restricted to paved roadways or temporary rubble cover cannot be applied, wheel wash or rumble strips are to be installed to prevent tracking of soil onto external roads 	Contractor	During construction
	<ul style="list-style-type: none"> • Disturbed topsoil will be stockpiled and maintained for use in rehabilitation if suitable. 	Contractor	During construction
	<ul style="list-style-type: none"> • Stockpiles will be located at least 10 metres from drainage lines and natural waterways. 	Contractor	During construction
<ul style="list-style-type: none"> • The number of stockpiles, areas and time stockpiles that are exposed will be minimised. 	Contractor	During construction	

EROSION & SEDIMENT CONTROL

Management Requirement	Action	Responsibility	Timing
	<ul style="list-style-type: none"> Stockpiles and batters that remain bare for more than 30 days shall be stabilised by whatever means. Where the requirement for stockpiles or batters to remain in place for longer than 30 days is known at project planning stage, the AEM must be notified in advance and the construction CEMP must include specific details for long term stockpile management Sediment controls will be established around stockpiles as necessary Any measures applied to site for erosion and sediment control will be removed at completion of works. 	Contractor	During construction
	<ul style="list-style-type: none"> Sediment controls will be established around stockpiles as necessary Any measures applied to site for erosion and sediment control will be removed at completion of works. 	Contractor	During construction
Monitoring	<ul style="list-style-type: none"> All construction activities will be monitored at least weekly for compliance with the CEMP. All erosion and sediment control devices shall be visually inspected on a regular basis Adjoining roadways shall be visually inspected on a regular basis for evidence of sediment carted from the site. The effectiveness of the CEMP will be reviewed on a regular basis. 	Contractor	During construction
	<ul style="list-style-type: none"> All erosion and sediment control devices shall be visually inspected on a regular basis 	Contractor	Daily and during and after heavy rainfall events
	<ul style="list-style-type: none"> Adjoining roadways shall be visually inspected on a regular basis for evidence of sediment carted from the site. 	Contractor	Daily and during and after heavy rainfall events
	<ul style="list-style-type: none"> The effectiveness of the CEMP will be reviewed on a regular basis. 	Contractor	During construction
Reporting	<ul style="list-style-type: none"> A log of the effectiveness of the erosion and sediment control devices will be prepared, including recommended improvements to the system where appropriate. 	Contractor	During construction
Corrective action	<ul style="list-style-type: none"> Erosion and sediment control devices will be cleared, repaired or replaced whenever inspections show signs of non-compliance or ineffective capability or capacity. Where erosion and sediment control devices are found to not be in accordance with the CEMP, work in the effected area will cease and corrective actions taken prior to recommencing works. Street sweeping to be deployed when sediment on roads is excessive and/or appropriate controls to be implemented (eg rumble grids) to prevent sediment drag out 	Contractor	During construction
	<ul style="list-style-type: none"> Where erosion and sediment control devices are found to not be in accordance with the CEMP, work in the effected area will cease and corrective actions taken prior to recommencing works. 	Contractor	During construction
	<ul style="list-style-type: none"> Street sweeping to be deployed when sediment on roads is excessive and/or appropriate controls to be implemented (eg rumble grids) to prevent sediment drag out 	Contractor	During Construction

Water Quality Management

Objective:

To ensure that the quality of surface water leaving the site or potentially percolating into groundwater is acceptable during the construction phase.

Target:

Maintain or improve pre-construction surface water quality.

WATER QUALITY MANAGEMENT			
Management Requirement	Action	Responsibility	Timing
Minimise impact on surrounding waterways	<ul style="list-style-type: none"> Stormwater shall be diverted around the site wherever practicable and away from stockpiles in any case. The volume of stormwater run-off flowing from the site to the adjacent drainage lines and waterways shall be minimised, as far as practical and in certain cases may require construction of a stormwater detention basin, particularly in close proximity to Airport boundary drains (where this does not affect aviation safety from bird attraction). Groundwater from dewatering activities will not be directed to stormwater drains. Management of pumped groundwater will be discussed with Airport Environment Manager and a specific management plan developed for this activity prior to commencement of dewatering activities and all necessary approvals/permits obtained. Plant (including concrete trucks) shall not be washed down within 15 metres of drainage lines and whenever possible not on airport grounds. Appropriate design and construction of temporary facilities for vehicle/equipment washdown, vehicle/equipment maintenance and vehicle/equipment refuelling is to be implemented All fuel, oil, chemicals and hazardous chemicals generated or used during the construction process shall be stored and ultimately disposed of off-site in accordance with current regulatory requirements including appropriate bunding of storage areas. Safety precautions and contingency plans shall be developed and maintained to ensure accidental spills will not escape into groundwater, stormwater and waterways. 	<p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p> <p>Contractor</p>	<p>Prior to the Commencement of construction.</p> <p>During construction</p> <p>As required</p> <p>During construction</p> <p>During construction</p> <p>During construction</p> <p>During construction</p>
Monitoring	<ul style="list-style-type: none"> No routine water quality monitoring is proposed. However, if complaints are received or the Contractor or AAL believes that the stormwater quality is being effected by construction activities, qualitative monitoring may be required to confirm any impact. 	<p>Contractor</p>	<p>To be determined in consultation with AAL where required.</p>

WATER QUALITY MANAGEMENT			
Management Requirement	Action	Responsibility	Timing
Reporting	<ul style="list-style-type: none"> Should monitoring be required a suitably qualified person/organisation shall review the water quality data as it becomes available and advise the Contractor regarding compliance with quality targets. 	Contractor/AAL	As required
Corrective Action	<ul style="list-style-type: none"> Corrective action shall be undertaken in accordance with the outcomes and recommendations of the water quality monitoring program (if required). 	Contractor	As required

Flora

Objective:

To minimise negative impacts on significant, protected or natural areas of vegetation on or adjacent to the site.

Targets:

To ensure that the significant and protected area of vegetation that has been identified, is retained and not adversely affected by the construction works.

FLORA			
Management Requirement	Action	Responsibility	Timing
Minimise impact on flora and surrounding environment	<ul style="list-style-type: none"> • Areas of significant and protected vegetation, if present, shall be identified by the Airport Environment Manager prior to the commencement of works and Airport Environment Manager notified where works may impact on these areas. • The area identified as significant and protected shall be surrounded by bunting to ensure that there is no access to this area – Refer Figure 1. Any change in scope which may affect these areas must be cleared by the Airport Environment Manager prior to works commencing. • All construction traffic shall be confined to designated access roadways which will be established outside of significant areas. • No vehicle or pedestrian traffic shall be permitted beyond the boundary of the construction site unless along approved roadways or authorised to do so. • Stockpiles shall be located no closer than 10 metres from designated or constructed drainage lines and not within areas of significant and protected vegetation 	Contractor/AAL	Prior to the commencement of works.
		Contractor	Prior to the commencement of works.
		Contractor	During construction
		Contractor	During construction
		Contractor	During construction
Monitoring	<ul style="list-style-type: none"> • Routine monitoring shall be undertaken to check the integrity and positioning of the bunting surrounding any protected vegetation. 	Contractor	Weekly
Reporting	<ul style="list-style-type: none"> • Non-conformance and complaint details shall be forwarded to the Airport Environment Manager as soon as practicable. 	Contractor	During construction
Corrective Action	<ul style="list-style-type: none"> • Corrective action shall be undertaken in accordance with the outcomes of the inspections or notification by other project personnel and in liaison with the Airport Environment Manager. 	Contractor/AAL	During construction

Fauna

Objective:

To minimise the negative impacts on fauna during construction. To minimise risk to aviation safety posed by wildlife attraction.

Targets:

Carry out construction activities with no disruption to wildlife corridors or destruction of native species. Zero fauna injuries or deaths during construction.

No increased risk to aviation safety.

FAUNA			
Management Requirement	Action	Responsibility	Timing
Minimise impact on fauna and surrounding environment	• Restrict work to standard working hours or identify and manage possible risk to fauna where out of hours work may be necessary.	Contractor	During construction.
	• Develop specific management measures where works are to be undertaken in areas where fauna may be present, such as old landfill sites	Contractor	During construction
	• Rubbish bins to be covered at all times to prevent wildlife attraction	Contractor	During construction
	• Soil stockpiles to be managed via water carts or covering where possible, to prevent wildlife attraction	Contractor	During construction
	• Ponding of water to be minimised to prevent wildlife attraction	Contractor	During construction
	• The Airport Environment Manager will be contacted in the unlikely event that sick, injured or orphaned fauna are found during construction.	Contractor	During construction
Monitoring	• Spotting of fauna shall occur during vegetation clearance works.	Contractor	During vegetation clearance
	• Increase of wildlife activity to be reported to AAL Project Officer and Airport Environment Manager	Contractor	As required during construction
Reporting	• A record shall be made of all species injured or killed during construction works.	Contractor	As required during construction
	• The Airport Environment Manager shall be contacted regarding all fauna related incidents.	Contractor/ AE	As required during construction
Corrective Action	• Corrective action shall be in accordance with advice from the Airport Environment Manager.	Contractor/ AE	On advice

Dust

Objective:

To minimise dust during construction activities.

Target:

Zero dust complaints for the duration of the construction phase.

DUST			
Management Requirement	Action	Responsibility	Timing
Minimise impact on surrounding environment	• Watering equipment shall be readily available and used on-site as required during construction.	Contractor	During construction.
	• All dust generating areas shall be watered as required to suppress dust throughout the construction phase or where this is unsuitable, other means of dust suppression will be developed, such as laying down of a coarse working platform .	Contractor	During construction
	• Dust generating activities shall be avoided or minimised, wherever practical, during windy conditions	Contractor	During construction
	• Where high wind conditions are forecast the site must be shut down and secured in such a way as to minimise dust generation, including covering of stockpiles and other actions	Contractor	During construction
	• Stockpiles must be avoided or where necessary, designed and managed to minimise dust generation	Contractor	During construction
	• Drivers are to obey the on-site speed limit and adopt a driving practice where dust generation is minimised.	Contractor	During construction
Monitoring	• Dust emissions and potential dust generating activities and areas shall be monitored visually during construction activities.	Contractor	Daily during construction
	• Monitor and review activities for non-compliances or complaints.	Contractor	During construction
Reporting	• Non-conformances and complaints shall be logged and include the date, time, name and contact number (where relevant) subject of complaint or non-compliance and weather conditions.	Contractor	Weekly
	• The date, time and nature of dust suppression activities shall be logged. • Non-conformance and complaint details shall be forwarded to the Contractor as soon as practicable.	Contractor Contractor	Weekly As soon as practicable during construction
Corrective Action	• Dust generating areas (including excavations, loading and unloading activities) shall be watered or otherwise managed to achieve compliance targets.	Contractor	During construction
	• If necessary, dust generating activities shall cease until corrective actions result in achievement of targets or wind conditions are such that	Contractor	During construction

DUST			
Management Requirement	Action	Responsibility	Timing
	<p>targets are achieved.</p> <ul style="list-style-type: none">• Street sweeping of roadway where sediment drag out is occurring	Contractor	During construction

Noise and vibration Objective:

To minimise nuisance noise and vibration emissions during construction activities.

Target:

Zero noise and vibration complaints for the duration of the construction phase.

NOISE and VIBRATION			
Management Requirement	Action	Responsibility	Timing
Minimise impact on surrounding environment	<ul style="list-style-type: none"> Work hours shall be restricted to the following hours: 7.00 am – 7.00 pm Monday to Saturday Approval shall be sought from the Administering Authority (AAL) for all works that are proposed outside of these hours. All practicable measures shall be taken to reduce the impact from noisy activities on nearby receptors in accordance with the <i>Environment Protection (Noise) Policy 2007</i>. Notification of nearby residents and business to advise them of construction hours (particularly night work) and when to expect noisy activities Fit and maintain appropriate noise attenuation equipment to on-site plant in accordance with manufacturer's specifications. Noise generated from construction, maintenance or demolition of a building or structure at an airport should not exceed 75 dB(A), at the site of a sensitive receptor – Reg 2.02 Airports (<i>Environment Protection Regulations 1997</i>) 	Contractor Contractor Contractor Contractor Contractor Contractor	During construction. During construction During construction Prior to construction During construction During construction
Monitoring	<ul style="list-style-type: none"> No routine qualitative noise monitoring is required. However, if noise complaints are received, qualitative or quantitative monitoring may be required to confirm complaint. 	Contractor	If required

NOISE and VIBRATION			
Management Requirement	Action	Responsibility	Timing
	<ul style="list-style-type: none"> No routine vibration monitoring is required. However, if vibration complaints are received quantitative monitoring may be required especially during demolition works. 	Contractor	If required
Reporting	<ul style="list-style-type: none"> Non-conformances and complaints shall be logged and include the date, time, name and contact number (where relevant) subject of complaint or non-compliance and weather conditions. The date, time and nature of high noise activities shall be logged. Non-conformance and complaint details shall be forwarded to the Administering Authority as soon as practicable. In the event that qualitative noise monitoring is required, the results shall be kept in the office of the AE and available for inspection at any time during normal working hours. 	Contractor Contractor Contractor	Weekly Weekly As soon as practicable during construction As required
Corrective Action	<ul style="list-style-type: none"> In the event that nuisance noise becomes the basis for consistent complaints that are not considered frivolous or vexatious, strategies for noise abatement as outlined in the Guide to Noise Control on Construction, Maintenance and Demolition Sites (AS 2436-1981) shall be considered and implemented where practicable. AS 1055 to be utilised in determining the amount of noise generated from construction, maintenance or demolition of a building or other structure at an airport – Reg 4.01 <i>Airport (Environment Protection) Regulations 1997</i>. 	Contractor Contractor	During construction As required

Land Contamination

Objective:

To minimise the potential for the contamination of the site.

Targets:

No contamination of the site or spreading of contamination during the construction phase.

The containment, collection and appropriate disposal of all solid, chemical and fuel wastes generated on the site.

LAND CONTAMINATION			
Management Requirement	Action	Responsibility	Timing
Minimise impact on surrounding environment	<ul style="list-style-type: none"> • Proof that all imported fill is free of contamination must be provided to AAL prior to the fill being brought onto site. Fill imported onto site must meet the requirements of the <i>Airports (Environment Protection) Regulations 1997</i> and AAL waste fill importation guidelines. 	Contractor	Prior to construction
	<ul style="list-style-type: none"> • No waste products shall be disposed of on-site other than selected soil, rock and cleared vegetation that has come from the site. 	Contractor	During construction.
	<ul style="list-style-type: none"> • Site works must consider the findings of any site contamination assessment that may have been undertaken for the subject site 	Contractor	During construction
	<ul style="list-style-type: none"> • In the event that any known or suspected contaminated soil, water or waste is encountered (particularly asbestos containing material (ACM)), contact the Airport Environment Manager and cease work until instructed otherwise by the Airport Environment Manager. 	Contractor	During construction
	<ul style="list-style-type: none"> • Any soils to be disposed of off-site or used elsewhere on Airport land must be tested and classified for disposal or reuse 	Contractor	During construction
	<ul style="list-style-type: none"> • All equipment maintenance and cleaning shall preferably be carried out at an off-site location. However where this is not practical, equipment maintenance and cleaning shall be carried out on a bunded low permeability surface to ensure soil contamination does not occur. 	Contractor	During construction
	<ul style="list-style-type: none"> • Emergency or breakdown maintenance will be conducted in such a manner as to minimise the potential for spills. 	Contractor	During construction
	<ul style="list-style-type: none"> • Leaking vehicles or containers (fuel, chemical) will not be allowed on site, and if found will be removed or repaired immediately 	Contractor	During construction
	<ul style="list-style-type: none"> • All necessary spill response materials shall be made available and readily accessible. 	Contractor/Project Officer	During construction
	<ul style="list-style-type: none"> • All staff shall be made aware of the location, composition and use of spill 		

	response materials.		
Monitoring	<ul style="list-style-type: none"> All vehicles shall be serviced and maintained to the manufacturer's specifications. 	Contractor	During construction
Reporting	<ul style="list-style-type: none"> Any suspected contamination and subsequent management actions must be reported All vehicle maintenance activities, inspection logs, spills, outcomes of clean up activities and any emergency or incidents involving spills or land contamination shall be logged by the Contractor. In the event of a chemical/fuel spill, the Contractor will notify AAL as soon as possible. Non-conformance and complaint details shall be forwarded to AAL as soon as practicable. All certificates from quarry sourced materials or environmental reports on classification and environmental testing for fill sourced from other sites, which are imported onto site, should be kept on site in a central location and be easily retrievable if requested. 	Contractor	During construction
		Contractor	During construction
		Contractor	As soon as practicable after spill
		Contractor	As soon as practicable during construction
		Contractor	During construction
Corrective Action	<ul style="list-style-type: none"> In the event of a chemical/fuel spill, containment and clean up action will be undertaken immediately. Negatively impacted areas shall be remediated to pre-spill or incident conditions, in accordance with the <i>Airports (Environment Protection) Regulations 1997</i> and other relevant regulations. 	Contractor	During construction
		Contractor	During construction

Waste Management

Objective:

To minimise the potential for environmental impact of wastes generated on site.

Targets:

No contamination or environmental impact of the site by waste during the construction phase.

WASTE MANAGEMENT			
Management Requirement	Action	Responsibility	Timing
Minimise impact on surrounding environment	<ul style="list-style-type: none"> No waste products shall be disposed of on-site other than selected soil, rock and cleared vegetation originating from the site, as approved by AAL. 	Contractor	During construction.
	<ul style="list-style-type: none"> All waste materials from the construction phase shall be regularly cleaned from the site and disposed of off-site in accordance with current regulatory requirements. 	Contractor	During construction, once per week as a minimum
	<ul style="list-style-type: none"> Where waste generated may include ACM from activities such as demolition, a specific waste management plan must be developed by appropriately qualified specialists and included in the CEMP 	Contractor	Prior to construction
	<ul style="list-style-type: none"> Waste generated from construction activities should be managed in accordance with EPA requirements and guidelines, including the use of waste transport certificates and waste tracking forms, as required 	Contractor	During construction
	<ul style="list-style-type: none"> Where proposed activities will generate a large quantity of waste, such as demolition of buildings, a specific resource recovery plan must be included in the CEMP 	Contractor	During construction
	<ul style="list-style-type: none"> All waste materials to be removed off-site shall be contained on-site prior to disposal, using appropriate storage containers or facilities until removed off-site, including the covering of containers/facilities to prevent litter escaping from the site and prevent Foreign Object Debris (FOD). 	Contractor	During construction
	<ul style="list-style-type: none"> Maintain a high quality of housekeeping and ensure that materials are not left where they can be washed or blown away to become litter. 	Contractor	During construction
	<ul style="list-style-type: none"> Provide bins (allowing for waste and recyclable segregation) for construction workers and staff at locations where they consume food. 	Contractor	During construction
	<ul style="list-style-type: none"> Regular inspection of the property boundary shall be undertaken to ensure litter or waste does not escape from the site into neighbouring properties. 	Contractor	Weekly during construction and daily during windy conditions
	<ul style="list-style-type: none"> All staff shall be trained in waste clean up procedures. 	Contractor	During construction

WASTE MANAGEMENT			
Management Requirement	Action	Responsibility	Timing
Monitoring	<ul style="list-style-type: none"> Property boundaries shall be inspected regularly. All waste containment and disposal activities shall be logged, including type and volumes of materials and location of licensed receiving facility. 	Contractor Contractor	Weekly during construction and daily during windy conditions As required during construction
Reporting	<ul style="list-style-type: none"> Non-conformance and complaint details shall be forwarded to AAL as soon as practicable. Copies of waste tracking forms and waste transport certificates should be kept in a central location on site and be easily retrievable if requested 	Contractor Contractor	During construction During construction
Corrective Action	<ul style="list-style-type: none"> In the event of a non-conformance, containment and clean up action will be undertaken as soon as practicable. If litter has escaped from the site or is negatively impacting the boundary, the litter shall be immediately collected and appropriately contained for disposal off-site. 	Contractor Contractor	During construction During construction

Cultural Heritage Objective:

To minimise impacts arising from site activities on items or areas of cultural heritage significance.

Targets:

No impact from site activities on areas of cultural heritage significance identified during the course of the project.

CULTURAL HERITAGE			
Management Requirement	Action	Responsibility	Timing
Minimise impact on areas of cultural heritage significance	<ul style="list-style-type: none"> Areas of potential cultural heritage significance shall be surrounded by bunting to ensure that there is no access to this area Where artefacts or areas of potential cultural heritage significance are found or suspected, works shall cease until further investigation or assessment is conducted by an Archaeologist Site inductions shall include cultural heritage awareness 	Contractor	During construction.
		Contractor/AAL	As required
		Contractor	Prior to construction
Monitoring	<ul style="list-style-type: none"> Operational staff shall remain vigilant during excavation and treatment operations. 	Contractor	During construction
Reporting	<ul style="list-style-type: none"> The Contractor shall notify the Project Officer of finds or potential finds immediately and stop all work until the area has been inspected. The Airport Environment Manager shall be contacted for management advice immediately. 	Contractor	Immediately on discovery
		Contractor	Immediately
Corrective Action	<ul style="list-style-type: none"> Corrective action shall be in accordance with advice from the Airport Environment Manager and relevant regulatory agencies. 	Contractor	On advice

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