Construction Environmental Management Plan

Revision B

RSSS Building
For the ANU College of Arts & Social Sciences
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ENVIRONMENTAL POLICY

Construction Control acknowledges and accepts its obligation to preserve and protect the environment and through its management and staff is dedicated to the implementation of environmentally responsible outcomes in all aspects of the Company's business.

Construction Control is committed to complying with the ISO 14001:2004 standard, preventing pollution and continual improvement as part of the Business Management System (BMS) through which it achieves its environmental targets.

Environmental Objectives and Targets have been set for both project and corporate levels which are defined within the Corporate BMS Manual and Project Management Plan to ensure continual improvement and are aimed at elimination of adverse environmental impacts. These are reviewed on an annual basis to ensure continual improvement and are aimed toward elimination of work related environmental incidents.

The Company’s intent is to manage its business such that its activities have minimal environmental effect on either its projects or the community. Inherent in this philosophy is active waste minimisation schemes including recycling programmes, pollution prevention (including noise) and energy/resource management.

This Policy will be affected through the following:

- Active management reviews of the success and adequacy of the Policy itself including the implementation of rectification measures if required.
- Compliance with all applicable relevant Legislation, regulations and Codes of Practice
- Working with 'like-minded' Clients, Contractors, Suppliers and the like.
- Identification of project specific environmental risks and the development of appropriate Work Method Statements/Management Plans.
- Communication of this Policy to the Company’s management, staff and workforce and; its Clients, Contractors and Suppliers.

Peter Paylen
Managing Director
1. Project Description

Project Overview

6 Storey, 12,000m² Academic building suitable for more than 500 academic staff. The design largely reflects the needs of the end user with a concentration of individual offices in the space, making it more suitable for philosophers and historians.

The building form is a 2000m² “square donut” floor plate, with post tensioned slabs, steel roof and curtain wall façade. The building is equipped with a stand alone roof top plant, two lifts and three stair cores. An open interconnecting stair connects level 2 to level 6 whilst overlooking the central courtyard. The ground floor houses the teaching spaces of tutorial rooms with operable walls and a 140 person lectorial space with retractable seating. The entrances holds a massive gathering area with +4m high ceilings and floor to soffit glazing.
2. Aim and Scope of the Environmental Management Plan

This Environmental Management Plan has been developed by Construction Control with reference to a number of documents including, but not limited to, the following:

- AS/NZS ISO 14001 Environmental management systems

This plan’s objective is to ensure that all environmental aspects and impacts relating to the design & construction at the project site are identified and managed.

The Environmental Management Plan covers the following:

- Identification of construction techniques and or specification of materials during the design phase that will minimise any environmental impacts during construction or long term as a result of the project.
- Defines the roles and responsibilities of all site employees and contractors with regard to the environment.
- Outlines the environmental management processes and procedures.
- Details the emergency procedures for environmental incidents / accidents.
- Nominates the waste minimisation and management plan.
- Identifies the potential environmental impacts from the demolition and construction works (e.g. construction dust, water and soil control, spoil disposal, noise, vibration, waste etc.).

This plan will be implemented for all on site works and all subcontractors and suppliers will be bound to adhere to its requirements.
3. **Environmental Management of the Design Phase**

During the design phase all avenues will be explored to identify (where possible) alternative construction techniques and or materials that can be used to assist in the minimisation of the impact on the environment due to the construction development.

The following guidelines will be applied when deciding on the construction technique(s) and or the material(s) that are to be used and selected for the particular construction task:

- The selection of construction techniques that allow for the efficient use of resources and material utilisation.
- The selection of construction techniques and or materials that are proven to reduce the long term impact on the environment.
- The selection of materials that do not produce harmful waste bi-products.
- The selection of construction techniques and or materials that reduce the amount of waste produced.
- The selection of materials and or products that are recycled and or contain a portion of recycled content.

4.
4. Responsibilities of all Employees and Contractors

4.1. Senior Management

- Prepare and authorise Company environmental policies & objectives.
- Prepare and implement Environmental Plan(s) for all projects.
- Ensure Environmental Management Plans are regularly audited (refer Appendix no.14 for a copy of the audit form), performance of the EMP evaluated, suitable remedial actions taken in the event of a non-compliance and audit results reported to the Client.
- Ensure employees are informed of the contents of the Project Environmental Management Plan.
- Ensure the roles and responsibilities of the Project Team are clearly defined.

4.2. Site Management

- Identify potential hazards and ensure preventative actions are implemented.
- Monitor the Project Environmental Management Plan to confirm compliance by all Subcontractors.
- Ensure complying Environmental Plans are submitted by all Subcontractors consistent with the requirements as identified in the Project Environment Management Plan.

4.3. Contractors and Suppliers

- Identify potential hazards and take all necessary preventative actions to minimise the impact on the Environment.
- Implement all relevant requirements of this Project Environmental Management Plan.
- Co-operate in the monitoring of this Project Environmental Management Plan on site.
- Enforce compliance with environmental procedures by their employees.
- Ensure their personnel understand, accept and adhere to their responsibilities as listed in this Project Environmental Management Plan.
- Provision of environmental training and awareness programmes to all employees.
- Submit Environmental Plans / Safe Work Method Statements ensuring compliance with this Project Environmental Management Plan before commencing work on site.
- Recognise and protect any special environmental characteristics / conditions of the site.
- Participate in the Site Safety and Environmental Committee as required.
- Encourage all workers to actively participate in the recycling of construction waste (where applicable).

4.4. Workers

- Comply with all site environmental requirements and procedures.
- Advise Site Supervisor immediately of any potential environmentally negative impacts in the work area.
- Assist new site personnel in recognizing environmental issues and following required procedures.
## 5. Environmental Management Processes/Procedures

### 6.1 Induction and Training Construction Control Staff

| a) Induction of Construction Control Staff | All Construction Control staff are to be inducted into the requirements of this plan by the Project Manager or their nominee. This is to occur within the first week of their commencement on the project. |
| b) Induction of Construction Workers | All construction workers are to be inducted into key environmental rules and procedures for the project as a part of their site induction to be conducted before their commencement. |

### 6.2 Subcontractor Obligations

| a) Subcontractor compliance with the Environmental Management Plan | All subcontractors are to specify with work method statements how they plan to comply at all times with applicable elements of this plan, before their on site works begin. |
| b) Tender evaluations | Environmental obligations are to be reviewed with all subcontractors as part of the tender interview before a contract is awarded. |

### 6.3 Complaints and Enquiries

| a) Receiving Complaints or Enquiries | All complaints received are to be recorded on a Community Enquiry/Complaint form (refer Appendix no.3 for a copy of the form) with all relevant fields to be completed. |
| b) Responding to complaints | The Project Manager or their nominee is to review all complaints and determine the appropriate response. Response actions taken are to be recorded on the ‘Community Enquiry/Complaint’ form (refer Appendix no.3 for a copy of the form). The Project Manager is to sign the close-out of all complaints. |
### 6.4 Environmental Inspection

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Inspections</td>
<td>Inspections by The Project Manager or their nominee are to be conducted (on an as required basis) to verify all possible controls relevant to the stage of the work are in place. Site supervisors are to visually inspect all environmental controls and construction activities on a daily basis to ensure compliance is being maintained (refer Appendix no.1 for a copy of the ‘Environmental Site Inspection Form’). Provide a report to the ‘Client’ outlining the results of the daily inspection (refer Appendix no.2 for a copy of the ‘Environmental Site Inspection Report’).</td>
</tr>
<tr>
<td>b) Non conformances</td>
<td>Any environmental aspects or controls that are found to be missing or faulty are to be reported on a non conformance report (NCR - refer Appendix no. 12 for a copy of the report). Any NCR raised is to be closed out by the Project Manager on completion of the required remedial corrective action.</td>
</tr>
</tbody>
</table>

### 6.5 Document Control and Records

<table>
<thead>
<tr>
<th>Section</th>
<th>Details</th>
</tr>
</thead>
<tbody>
<tr>
<td>a) Document control – approval</td>
<td>The Project Manager must approve any amendments to this plan.</td>
</tr>
<tr>
<td>b) Document control – distribution</td>
<td>This Plan and any additional environmental method statements, control plans, work instructions will be controlled using the project’s document register system.</td>
</tr>
<tr>
<td>c) Records</td>
<td>Environmental records are included in the project filing and archiving system.</td>
</tr>
</tbody>
</table>
### 6.6 Environment Inspections / Audit Schedule

<table>
<thead>
<tr>
<th>EMP Section</th>
<th>Description</th>
<th>Person Responsible</th>
<th>Daily</th>
<th>Weekly</th>
<th>Monthly</th>
<th>Quarterly</th>
</tr>
</thead>
<tbody>
<tr>
<td>6.4 (a)</td>
<td>Visual site inspection of all physical environmental in place on site.</td>
<td>CC GF / SF</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>5.1</td>
<td>Audit of the Environmental Management Plan (current revision).</td>
<td>CC PM &amp; CC SE</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>9.1</td>
<td>Site inspection of the installed environmental control measures used to minimize the impact on Fauna, Vegetation and Habitat during construction activities.</td>
<td>CC GF / SF</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>9.3</td>
<td>Site inspection of the installed environmental control measures used to minimize the impact on Soils during construction activities.</td>
<td>CC GF / SF</td>
<td></td>
<td></td>
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<td>x</td>
</tr>
<tr>
<td>9.5</td>
<td>Site inspection of the installed environmental control measures used to minimize the impact of Surface Water during construction activities.</td>
<td>CC GF / SF</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>9.6</td>
<td>Site inspection of the installed environmental control measures used to minimize the impact of Pollution and Contamination during construction activities.</td>
<td>CC GF / SF</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
<tr>
<td>8</td>
<td>Waste management report.</td>
<td>CC SE</td>
<td></td>
<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>6.4 (a)</td>
<td>Site inspection client report.</td>
<td>CC PM</td>
<td></td>
<td></td>
<td></td>
<td>x</td>
</tr>
</tbody>
</table>

Note: In the event of a failure or breach to the environmental control(s) that have been installed to manage / protect / minimise the damage to the surrounding environmental the Client will be immediately advised via a completed Hazardous Materials Spillage / Environmental Control Failure Report (refer appendix no.9 for a copy of the report).

Legend:  
CC GF / SF - Construction Control General or Site Foreman  
CC SE - Construction Control Site Engineer  
CC PM - Construction Control Project Manager
6. Environmental Incidents, Accidents and Emergency Situations and Response

Emergency situations that may occur on the site could include:

- Minor spillages of fuel, oil, hazardous materials or other contaminants;
- Failure/damage of environmental controls such as silt fencing or stormwater drain protection

To ensure that the environmental impact of emergency situations is minimised, Emergency Procedures will be developed for the Project including but not limited to;

a) Site supervisor(s) to undertake visual inspection of all environmental controls on a daily basis (as per section 6.4a) to ensure all controls are in good working order to reduce the likelihood of incident / accident due to failure of the environmental control.

b) Nominating a Construction Control Management staff representative who will be available at all times should an environmental emergency arise. Contact details will be displayed on site notice boards along with all other key members of the project team.

c) In the event of a spillage and or failure of the environmental controls the nominated representative will immediately contact the Defence’s Contract Administrator and Regional Environmental Officer. Other interested parties will be contacted after this on an as required basis. A Hazardous Materials Spillage / Environmental Control Failure Report will be completed to identify the cause and effect of the incident (refer appendix no.9 for a copy of the report)

d) All emergency action will take place as soon as possible after the event (refer Appendix no.10 for the ‘Spill Management & Response Procedure’). The first priority is to ensure there is no safety risk to employees or the general public, and secondly to prevent any further spread of pollution, contaminates or hazards. All work found to be causing or directly affected by the event must cease immediately and cannot resume until a risk assessment has been completed and subsequent clearance from the Project Manager received.

e) A hazardous materials register (refer Appendix no.8 for a copy of the register), including copies of material safety data sheets (MSDS) will be kept on site for all potentially hazardous materials for reference, so that in the event of a spillage / incident a safe immediate response can be undertaken.

f) Contractors will provide all relevant safety documentation / MSDS etc. prior to bringing any hazardous substances on site. The Contractors will also advise how the substances are to be stored on site. Refer to Appendix no.13 for a copy of the ‘Environmental Management and Mitigation Plan’.
7. Construction Waste Minimisation and Management

Construction Control is committed to conducting their operations consistent with the Environment Strategy which reflects the ACT Governments target of "No Waste by 2010".

8.1 Waste Hierarchy

Minimise; reduce the amount of waste generated

Reuse / Recycle, reuse, recycle all materials possible to reduce any environmental impact caused from construction waste

Disposal, all unrecyclable materials to be disposed of safely and responsibly

8.2 Waste Management

Hopper bins will be placed on site for the collection of un-recyclable and recyclable waste generated from construction activity and records are to be kept by the nominated waste management contractor to demonstrate the actual percentage of waste recycled by weight. These are to be reported to the client on a quarterly basis (refer Appendix no.4 for a copy of the ‘Waste Minimisation & Management Record’).

Waste records will be kept for the following materials:

- Cardboard – for recycling
- Timber – salvaged for new structural or material use. Any timber waste can be ground up into mulch or garden compost
- Metal – including steel, aluminium and other metals for use in the manufacture of new metal products.
- Soft Plastic – from packaging for new packaging materials
- Polystyrene
- Insulation – for new insulation or soft structural forms
- Concrete – crushed to be used as road base
- Glass
- Bricks – used for clean fill
- Plasterboard – crushed for soil conditioner and for manufacture for new plasterboard.
- Fibrous cement sheet off cuts

Items that are unsuitable for landfill and cannot be recycled include:

- Paints and solvents and their containers.

These items are disposed as hazardous waste in accordance with ACT Government requirements to the Hazardous Waste disposal site at West Belconnen.
To avoid rubbish being blown out of the site area receptacles will be covered or fenced and the site perimeter will be permanently fenced during the construction period.

8.3 Contaminated Waste

The facility is located on a disused landfill and there is a high likelihood that the soil could be contaminated. The following steps will be taken for the identification and removal of contaminated waste if it is evident:

1. **Determine if the site (soil) is contaminated**

   This will be done by undertaking investigative soil samples of the proposed Data Centre footprint. If there is visible evidence of asbestos or other known contaminants within the soil, samples will be taken and sent for laboratory testing and analysis.

2. **Determine extent of contamination**

   If test results come back and confirm the trace of asbestos or other known contaminants within the soil further investigation will be undertaken. This will be in the form of additional excavations at a certain measurements (e.g. five metres) from the contaminated position. Excavations will continue (in one metre increments), either moving towards the known contaminated area or further away, until such time as the contamination is no longer evident. This will determine the contamination line within the site.

3. **Disposal of contaminated soil**

   The soil that is to be removed is to be done in such a way to avoid the contamination of surrounding areas. Where the soil is required to be stock piled, the stock pile is to be securely bunded / protected and set up in a way so as not to be in direct contact with any undisturbed soil. The contaminated soil is to be loaded onto air / water tight trucks and removed by licensed transport companies. The soil is to be taken to either local or interstate approved landfills.

   **Interstate Landfill (NSW)** - The Department of Environment, Climate Change and Water is to be contacted advising of the amount of contaminated soil to be moved, the name of the intended landfill where the contaminated soil is to be dumped and the name of the licensed transport company hauling the contaminated soil. The DECCW will then issue the responsible subcontractor and the ACT EPA with a consignment authorization notice approving of the removal.

   **Local Landfill (Mugga Lane)** - The responsible subcontractor is to transport the contaminated soil to the landfill as agreed and organized with management. There is no requirement to notify the ACT EPA when transporting the contaminated soil, unless the soil is to be reused in restricted ways (i.e. under roads or in industrial / commercial areas).

Note: depending on the extent of contamination the inert waste can be screened out to allow the soil to be reused. Where this is option is available, concentration of contaminant testing is to be undertaken at a rate of one test for every 25m³ of soil to ensure the soil being reused is free of any contamination.
8. Environmental Aspects, Impacts and Management Strategies

The following sub-plans form part of the Project Environmental Management Plan and cover the potential environmental issues associated with the projects during the construction phase of the buildings.

A brief description of the ACT Legislation and Planning Instruments and Commonwealth Legislation applicable to each of the sub-plans has been provided as part of Appendix no.15. In additional further legislation and policies (both ACT and Commonwealth) which may be relevant to project have been listed and briefly described in Appendix 15.
<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Habitat for endangered species</td>
<td>Avoid physical disturbance to threatened communities</td>
<td>Temporarily fence off the sensitive areas so that they are clearly visible as no-go areas to construction staff and vehicles or for storage of soil, building materials or landscaping materials</td>
<td>Conduct daily checks on integrity of control measures and log results</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Establish Induction program with contractor</td>
<td>Keep a record of inducted personnel</td>
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<tr>
<td></td>
<td></td>
<td>Explanation of the significance of the protected land and the threatened species, significance of the species, location and contractor responsibilities in relation to them</td>
<td>Inspect areas rectified after breaches</td>
<td></td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inspect fenced areas</td>
<td></td>
<td></td>
</tr>
<tr>
<td>Soil disturbance</td>
<td>Minimise soil disturbance and avoid off-site migration of soil</td>
<td>Clearly mark out the development footprint to ensure clearing and earthworks remain within these boundaries</td>
<td>Conduct daily checks on integrity of control measures and log results</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Ensure stormwater, erosion and sediment control measures are installed prior to commencement of construction</td>
<td>Report any breaches and rectification to PM</td>
<td></td>
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<tr>
<td></td>
<td></td>
<td>Inspect and endorse works areas and control measures</td>
<td>Check the integrity of control measures after rainfall events and log / report results.</td>
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<tr>
<td></td>
<td></td>
<td></td>
<td>Inspect areas rectified after breaches</td>
<td></td>
</tr>
<tr>
<td>Weed invasion</td>
<td>Prevent introduction and spread of weeds resulting from activities related to the project</td>
<td>Construction vehicles and equipment are to be restricted to designated roads and works areas with no access allowed to protected areas</td>
<td>Conduct daily checks of the site</td>
<td>Contractor</td>
</tr>
<tr>
<td>Environmental Aspect</td>
<td>Objective</td>
<td>Management Strategy</td>
<td>Monitoring and Reporting</td>
<td>Responsibility</td>
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<tr>
<td></td>
<td></td>
<td>Landscaping should incorporate local indigenous species and reflect the existing native vegetation in the vicinity of the project</td>
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</tbody>
</table>
9.2 Cultural Heritage

Background

The RSSS project site is located with the existing Pauline Griffin Building.

A condition of the National Capital Authority Approval, via the Department of Environment, was to require cultural significance assessment of the Pauline Griffin Building. This is inclusive of a heritage assessment of the site and the inclusive of significant items to be re-used in the RSSS building.

Please refer to the NCA/DoE notice of decision for further details.
<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| Cultural Heritage    | Protection of cultural heritage if present at the site | On discovery of artefacts in the topsoil during earthworks, works are to stop immediately and reported to the Client  
Cover issue in Induction Program | Record location, date time sited (refer Appendix no.11 for the ‘Cultural Heritage Record’) | Contractor |
|                      |           | Provide advice on cultural heritage in Induction program  
Respond to reports of discovery and seek professional advice as required | Log records | |
|                      |           | Storage of significant items from the Pauline Griffin Building for re-use in the building | Design documentation and Project Control Group Meetings | Contractor |
9.3 Soil Management

Background

Slopes at the sites are approximately 0 to 5 degrees with minimal potential for soil erosion while vegetated. Any slope will have the potential for soil erosion once cleared.

Issues and Impacts

Heavy rainfall events on the cleared site have the potential to threaten the EPBC protected land. Impacts on the protected land could include site erosion, smothering of plants by sediment and weed invasion.
### Table 3: Management Strategies for Soils – Construction

<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil disturbance</td>
<td>Minimise soil disturbance and avoid off-site migration of sediment and weeds by water erosion</td>
<td>Ensure stormwater, erosion and sediment control measures are installed prior to commencement of construction (e.g. silt fencing)</td>
<td>Conduct daily checks on integrity of control measures and log results Check and rectify breaches during and after rainfall events</td>
<td>Contractor</td>
</tr>
</tbody>
</table>
9.4 Air & Noise Emissions

Background

Construction will generate air and noise emissions. Air emissions include dust from ground disturbance during construction and diesel emissions from construction machinery.

Issues and Impacts

The impacts from air and noise emissions are not considered significant as the construction will occur a considerable distance from residential dwellings or public access. However there may be impact on ANU staff, students and visitors.

Site operation hours will be: 6.30am to 5.30pm Monday to Friday
### Management Strategies for Air and Noise Emissions – Construction

<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
</table>
| Soil disturbance     | Minimise disturbance to soils resulting from wind erosion | Avoid dust producing activities during strong winds  
If excessive dust is being produced, wet down exposed areas  
Vehicles must travel < 15 km/hr on unsealed roads  
Seek PM advice and rehabilitate disturbed areas as soon as practicable  
Maintain landscaped areas to avoid or minimise areas of exposed soil | Establish Complaints Log  
Conduct daily assessment of weather conditions and dust generation  
Record dust related complaints  
Report complaints to PM as they occur for follow-up | Contractor |
| Noise                | Avoid excessive noise during construction activities | Seek ANU advice on site noise procedures (including curfews) | Log noise complaints  
Report complaints to ANU as they occur for follow-up | Contractor |
|                      |           | Provide site noise advice | Respond to complaints |               |
9.5 Surface Water

Background

There are natural drainage lines and watercourses to the North of the proposed development sites. Following local topography, surface water would be expected to flow to the North of the site.

There is a small drainage line down gradient of the former landfill which flows northward along the western boundary towards the Molonglo River. There is an artificial wetland north east of the current site which was created to capture and store stormwater runoff.

Issues and Impacts

Proposed infrastructure works will increase the impervious area due to the new buildings, car park and footpaths. This is likely to increase the total and peak stormwater flows from the site.

At the site, the land slopes gently, draining surface water to the north. Some of the existing stormwater drainage flow will be impeded by the extension, and the wetland may flood and cause damage to existing infrastructure.
<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Surface flow and water</td>
<td>Prevent flooding and contamination of surface on and off site</td>
<td>Ensure stormwater, erosion and sediment control measures are installed prior to commencement of construction Control and redirect stormwater flow to prevent flooding of infrastructure</td>
<td>Conduct daily checks on integrity of control measures and record results Check and rectify breaches during and after rainfall events Report any breaches and rectification to PM daily or after an event</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Inspect and endorse control measures</td>
<td>Check the integrity of control measures after rainfall events Inspect areas rectified after breaches</td>
<td></td>
</tr>
</tbody>
</table>
9.6 Pollution and Contamination

Background

There is no evidence of pollution or contamination on site. The site is an existing correctional facility.

Issues and Impacts

There is very minimal potential environmental impacts associated with contaminated or hazardous materials present on the site.
## Table 6: Management Strategies for Pollution and Contamination – Construction

<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Soil contamination</td>
<td>Assess soil conditions within the site</td>
<td>Conduct soil contamination review prior to works (refer Appendix no.6 for a copy of the report) Seek PM advice Establish contamination survey if required by PM Conduct survey to assess the presence of asbestos or other hazardous materials</td>
<td>Lodge report with ANU Prepare Asbestos Management Plan which is required to be submitted prior to undertaking soil testing (if required).</td>
<td>Contractor</td>
</tr>
<tr>
<td>Harman Asbestos Register</td>
<td>Inform site survey requirements</td>
<td></td>
<td>Review report Recommend way to proceed</td>
<td></td>
</tr>
<tr>
<td>Soil contamination</td>
<td>Avoid accidental contamination of soil</td>
<td>Written approval to be provided from PM and ANU prior to the storing of hazardous materials on site.</td>
<td>Monitor hazardous materials storage enclosure Record all hazardous materials / substances approved for storage on site (list displayed at storage enclosure)</td>
<td></td>
</tr>
<tr>
<td>Environmental Aspect</td>
<td>Objective</td>
<td>Management Strategy</td>
<td>Monitoring and Reporting</td>
<td>Responsibility</td>
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<tr>
<td></td>
<td></td>
<td>Fuels, lubricants and chemicals on site are to be stored in designated areas/ containment facilities such as bunded areas or leak proof trays Implement procedures to prevent fuel and chemical leaks and spills Implement procedure for regular removal of waste to appropriate facilities Implement procedures for clean up of fuel and chemical leaks and spills, ensure personnel are trained and clean up equipment is working and readily available</td>
<td>Conduct daily checks of integrity of bunded areas and other control measures Record any incidences of fuel and/or chemical leaks and spills, report any to PM once identified Maintain records of waste disposal</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Endorse prevention, removal and clean up procedures</td>
<td>Check the integrity of the systems in place after rainfall events Maintain records of waste disposal</td>
<td>CEO</td>
</tr>
<tr>
<td>Encountering Unknown Materials</td>
<td>Prevent exposure to potentially contaminated material</td>
<td>If in doubt over material encountered stop work and seek PM advice Appropriate PPE is to be available on site and used</td>
<td>Report to PM</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Provide advice as required</td>
<td>Keep records</td>
<td></td>
</tr>
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<td></td>
<td></td>
<td></td>
</tr>
<tr>
<td>Environmental Aspect</td>
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<tr>
<td>----------------------</td>
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<td>----------------</td>
</tr>
</tbody>
</table>
| Encountering Asbestos Containing Materials Harman Asbestos Register | Prevent exposure to asbestos | If in doubt over material encountered stop work and seek PM advice  
Appropriate PPE is to be available on site and used  
Management of surface dust by water | Establish action-on and site procedures with PM and ANU if there is an agreed risk from asbestos | Contractor |
| | | Provide advice as required | Update Register | PM |


9.7 Landscape and Aesthetics

Background

The landscape and visual aspects of the project will aim to reflect the existing native vegetation in the vicinity of the site. Visually, the project should complement the existing environment and this can be achieved through sensitive design, landscaping and revegetation.

Issues and Impacts

It is important that landscaping works complement the natural environment of the site, including the site topography, hydrology and nearby native vegetation. It should also help to reduce the environmental impacts of the project by providing areas of native vegetation and helping to direct and filter stormwater runoff.

Visual impacts of the construction can be minimised by rehabilitating and landscaping the developed area as quickly as possible and removing construction waste from the site regularly.

The landscaping for the ANU also needs to assist with security, sight lines and maintenance.
### Table 7: Management Strategies for Landscape and Aesthetics – Construction

<table>
<thead>
<tr>
<th>Environmental Aspect</th>
<th>Objective</th>
<th>Management Strategy</th>
<th>Monitoring and Reporting</th>
<th>Responsibility</th>
</tr>
</thead>
<tbody>
<tr>
<td>Landscape</td>
<td>Ensure landscaping works complement the existing natural environment</td>
<td>Undertake revegetation / landscaping works as soon as possible upon completion of construction</td>
<td>Monitor success of revegetation</td>
<td>Contractor</td>
</tr>
<tr>
<td>Visual aesthetics</td>
<td>Minimise the visual impact of construction work and the completed buildings</td>
<td>All vehicles and equipment are to operate only in works and construction areas and on designated roads Minimise dust producing activities during strong winds Rehabilitate disturbed areas and remove construction waste as soon as possible during and after construction</td>
<td>Log complaints about visual aesthetics Report complaints as they occur to PM</td>
<td>Contractor</td>
</tr>
<tr>
<td></td>
<td></td>
<td>Site inspection as required</td>
<td>Respond to complaints as they occur</td>
<td>Environment Officer</td>
</tr>
</tbody>
</table>
9. References

AS/NZS ISO 14001 Environmental management systems

Financial Management and Accountability Act Part 7

Construction and Operation Environmental Management Plan