

Environmental Management Plan

Project Version: V01	Name	Signed	Date
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1. INTRODUCTION

This Environmental Management Plan (EMP) has been prepared by ANT Asbestos Solutions. The EMP provides framework for environmental management which will be implemented by all employees and subcontractors working on the site.

This document is based around the Northern Territory Government Department of Infrastructure 2013/2014 Standard Specification for Environmental Management document, which prescribes the minimum standards for environmental management.

The EMP identifies site specific environmental risks that may be encountered whilst working on the project and control measures that are to be implemented in order to minimise or eliminate the environmental risks.

2. RESPONSIBILITIES

The responsibilities for implementing and monitoring this EMP are as follows;

Project Manager:

- Ensuring supervisors and employees are provided with all appropriate measures to implement this EMP on site
- Ensure all hazards are identified and risks to the environment are assessed, eliminated or controlled and monitored
- Ensuring that all environmental issues are promptly and thoroughly investigated and appropriately resolved
- Ensuring all work under their control, including subcontractors, is undertaken in accordance to this EMP and statutory environmental requirements
- Identifying any training needs of supervisors and employees to ensure they have adequate knowledge and skills to meet their responsibilities of the EMP

Site Manager:

- Ensuring all work under their control, including subcontractors, is undertaken in accordance to this EMP and statutory environmental requirements
- Ensuring all risk control measures are implemented and monitored
- Ensuring employees and contractors under their control are properly inducted and instructed of the requirements of the EMP pertaining to their part of the works
- Ensuring employees and contractors under their control are provided with the necessary supervision, information, training and access to implement their requirements in EMP as well as company policies and procedures
- Ensure employees under their control have the necessary equipment to carry out their work in an environmentally safe manner
- Supervising on site activities under their control to ensure compliance with the requirements of the EMP and relevant sub plans



Employees and Subcontractors:

- Ensuring they read and understand the EMP
- Ensure that all work they undertaken is in accordance with the EMP and all other relevant site documentation
- Assisting in identifying, accessing and controlling any other potential hazards and risks
- Reporting of any hazards, near miss incidents and accidents to the site manager

3. OBJECTIVES OF THE EMP

This EMP aims to provide a framework for environmental management of the site and to ensure that impacts on the environment and all identified hazards are minimised or eliminated.

4. APPROVALS, LICENCES AND PERMITS

The following approvals, licences and permits have been or will be obtained for this project:

Permits / Approvals:

- NT Worksafe Asbestos Removal Notification
- Notification to adjoining property owners and tenants
- 24h notice given to Alice Springs Waste Disposal Facility Asbestos Disposal
- EPA notification of transport
- Dial Before You Dig
- Compaction Testing
- Traffic Management Approval
- All applicable surveys



5. STATUTORY REQUIREMENTS

GENERAL: Comply with the following as applicable;

- Northern Territory Aboriginal Sacred Sites Act
- Bushfires Act
- Dangerous Goods Act
- Environmental Assessment Act
- Environment Protection and Biodiversity Conservation Act (EPBC)
- Environmental Offences and Penalties Act
- Heritage Act
- Soil Conservation and Land Utilisation Act
- Territory Parks and Wildlife Conservation Act (TPWC Act)
- Waste Management and Pollution Control Act (WMPC Act)
- Water Act
- Weeds Management Act

Comply with the following where applicable:

- Australian Standards
- Other International Standards where Australia does not have a relevant Standard.
- Codes of Practice
- NT Government Publications
- Australian and New Zealand Environmental and Conservation Council Publications (ANZECC)
- Dol Guide Notes

6. ENVIRONMENTAL SAFEGUARDS

6.1 ENVIRONMENTAL INDUCTION AND TRAINING

Action	Responsibility	Timing	Sign Off
All site staff will be made aware of the site EMP,	Site Manager	Prior to	
environmentally sensitive areas and environmental responsibilities.		Construction	

6.2 COMMUNITY LIAISON

Action	Responsibility	Timing	Sign Off
Community members and stakeholders will be notified of	Site Manager	Prior to	
the proposed works prior to their commencement, where		Construction	
required.			
The asbestos removal works requires community			
notification. This notification will be the responsibility of			
ANT Asbestos Solutions and be done by letter drop. Letter			
drop is to occur a minimum of 48 hours prior to works			
commencing.			



Complaints received will be recorded and attended to	Site Manager	Prior to
promptly. On receiving a complaint, works will be		Construction
reviewed to determine whether issues relating to the		
complaint could be avoided or minimised. Feedback will		During
be provided to the complainant explaining what outcomes resulted.		Construction
Supply a written report to the Superintendent detailing the		Within 1 Day
complaint and action taken to alleviate the problem.		of receipt of
		complaint
Complaints about environmental issues, including	Site Manager	Within 1 Day
pollution, supply a written report to the Superintendent		of receipt of
detailing the complaint and action taken to alleviate the		complaint
problem. Feedback will be provided to the complainant		
explaining what outcomes resulted.		

6.3 STOCKPILE SITES

Action	Responsibility	Timing	Sign Off
Asbestos waste will be removed, placed into double lined	Site Manager	Pre, during	
containers and retained on site in a designated zone until		and Post	
sufficient volume is met for transport to the Alice Springs		Construction	
Waste Facility. See site layout map section 10.2 of this			
EMP. A copy of the Site Layout map will also be displayed			
in the site office.			
Demolition materials will be stockpiled and removed from			
site on a regular basis to the Alice Springs Waste Facility			
for disposal of recycling. Stockpiles will not reach more			
then 3m in height at any stage.			
No works shall take place outside of the subject land.			
All Plant and Material lay-down areas are to be within the			
subject land. Access to site shall be through existing areas			
that the subject land encroaches the Road Reserve. The			
subject land shall be pegged out or marked in such a way			
that it is obvious to all workers where there is no access.			
that it is obvious to all workers where there is no access.		1	1



6.4 SOIL EROSION AND SEDIMENTATION MANAGEMENT

Action	Responsibility	Timing	Sign Off
An Erosion and Sediment Control Plan will be prepared and implemented and will incorporate appropriate erosion and sediment control measures.	Site Manager	Prior to and During Construction	
Erosion and sediment control measures will be maintained regularly and after rainfall events.			
Erosion and sediment control measures will not be removed until disturbed areas have been stabilised.			
Disturbed areas will be stabilised progressively with vegetation during construction, where necessary, and stabilisation will be undertaken after works are complete.			

6.5 WATER QUALITY

Actions	Responsibility	Timing	Sign Off
Any water used in supressing dust or asbestos fibres will be disposed of as asbestos containing waste, and all decontamination showers waste water will be passed through filters (25 micron and 5 micron) prior to being disposed of as general waste.	Site Manager	Pre, during and post construction	
Water quality control measures will be implemented to prevent any materials entering drain inlets and waterways. Storage areas for fuels, oils and chemicals will be surrounded by an impervious bund that contains 120% of the largest container stored in the Bund. The location of storage areas will not be within 50 metres of any areas of concentrated water flow, flood and poorly drained areas, on slopes above 10° or near any areas of native vegetation. Drums used as markers will not contain chemicals or fuels.			
Refuelling plant and equipment will be undertaken within bunded areas and more than 50m away from waterways.			
Cleaning of spray bars or equivalent equipment will be undertaken in appropriate areas and in a manner, which prevents or minimises pollution to waters.			
Spill containment equipment kits will be available on site.			
If works are being carried out within a drainage canal, works shall be postponed during or immediately following heavy rainfall or when waterways are running high. The site shall			



be cleared of all plant, equipment and materials to ensure		
that no items are washed away into the Todd River.		



6.6 AIR QUALITY

Action	Responsibility	Timing	Sign Off
Air monitoring will be carried out during all asbestos removal activities.	Site Manager	Prior to Construction	
New air will be brought into the building via the means of Negative Air Pressure Units.		During	
The effectiveness of these units will be monitored continuously through an air pressure monitoring system.		Construction	
Exhaust emissions from plant and equipment will be minimised.			
Any vehicle transporting waste or other materials that may produce odours or dust will be covered during transportation.			
Spraying of paint and other materials with the potential to become air borne particulates will not be undertaken during windy conditions.			
Dust generated during maintenance activities will be controlled.			
Community notification will be undertaken where appropriate where work is likely to cause dust impact on the public and nearby residents.			
No burning of vegetation or other materials will be permitted on site.			



6.7 NOISE AND VIBRATION

Action	Responsibility	Timing	Sign Off
Affected nearby residents will be notified when work is likely to cause vibration or offensive noise to impact on the public.	Site Manager	During Construction	
Works will be undertaken during normal working hours.			
Scheduled Work Hours:			
Asbestos Removal			
Monday to Friday 06:30 – 17:00			
Any work that is undertaken on Sundays, Public Holidays or outside normal working hours will require prior approval.			
All reasonable practical steps will be undertaken to reduce demolition activity noise and vibration from the site.			
All works are to be within EPA noise guidelines.			

6.8 VEGETATION AND FAUNA

Action	Responsibility	Timing	Sign Off
Parking areas and turning points for plant and equipment in previously disturbed areas will be identified prior to commencement of works and provided to site personnel to minimise roadside vegetation disturbance.	Site Manager		N/A
No trees or shrubs have been identified to be trimmed or removed to facilitate the demolition works, including ancillary activities such as access or stockpiling.			
Should a change in demolition tactics & works result in the requirement for trimming trees, approval must be sought from project management prior to commencement.			
Vegetation identified to be significant, including trees, shrubs, ground cover plants or grasses will not be disturbed by either direct physical or non-direct means.			
Vegetation refuse that is deemed as a valuable habitat will be avoided so that it continues to provide a wildlife refuge.			



6.9 HERITAGE

Action	Responsibility	Timing	Sign Off
Should any item be encountered which is suspected to be a relic of heritage value or any relic, artefact or material suspected of being of Aboriginal origin, all work that might affect the item will cease and the item protected from damage and disturbance. The Principal will be notified immediately.	Site Manager		N/A
No trees or shrubs have been identified to be trimmed or removed to facilitate the demolition works, including ancillary activities such as access or stockpiling.			
Should a change in demolition tactics & works result in the requirement for trimming trees, approval must be sought from project management prior to commencement.			
All personnel working on site will receive training regarding their responsibilities regarding cultural heritage and will be made aware of any sites or areas which must be avoided. Such sites or areas will be identified on a site map and made available to all relevant personnel during the works.			



6.10 WASTE MANAGEMENT

Action	Responsibility	Timing	Sign Off
All asbestos waste will be transported as per EPA standards and disposed of as per the WHS Act (2011) at an appropriately licenced land fill site. Refer to Waste Management Plan at point 11.	Site Manager	During and Post construction	
The site will be left in a clean and tidy state during and on completion of the project.			
Waste generated from activities will be sorted and amounts estimated and recorded.			
Where available, waste suitable for reuse or recycling will be reused or recycled.			
Materials and products with recycled content will be proposed for the works wherever these are cost and performance competitive and they are environmentally preferable to the non-recycled alternative.			
Waste oil will be sent to approved recyclers where appropriate.			
Waste and containers not able to be recycled will be disposed of at a licensed landfill site.			
No construction waste material will be left on site once the maintenance activity has been completed.			
The site will be left in a clean and tidy state on completion of the maintenance works.			

6.11 WEED MANAGEMENT

Action	Responsibility	Timing	Sign Off
Weeds will be control or eradicate within the site in accordance with the Weeds Management Act. No declared weeds are spread or introduced within the site for the duration of the works. When weeds are present on the site, consult for the best practice removal and control techniques and any management procedures that may have been developed for particular noxious and declared weeds to be sought.	Site Manager	Prior to and During Construction	
The reuse of weed contaminated topsoil by surface spreading is not to be permitted. Where necessary, horticultural advice is to be sought to determine whether the type and/or proportion of weed cover is significant for the topsoil to be deemed weed contaminated.			



7. ENVIRONMENTAL OBJECTIVES AND TARGETS

Environmental Aspect	Objective	Target
Noise	To minimise disturbance of residence caused by noise on site	Noise levels below applicable noise goals and limits
Soil and Water Quality	To minimise water pollution caused by on site activities	No unauthorised discharges to receiving environment
Air Quality	To minimise adverse impacts resulting from dust generation	No instances of dust related complaints from the public/staff
Contaminated Material	To minimise adverse impacts resulting from contaminated materials	Any contaminated materials identified during the works is to be contained and promptly disposed of to an appropriate landfill facility
Heritage	To preserve any Aboriginal or non- Aboriginal items of significance should these be discovered during works	No instances of damaged to heritage items
Flora and Fauna	To minimise adverse impacts on threatened flora and fauna should these be discovered during works	No instances of damage to threatened flora and fauna
Waste	To minimise generation of waste from activities.	5% reduction in waste to landfill from forecasted amount at the start of the project

8. NON-CONFORMANCE AND CORRECTIVE ACTION PROCEDURES

In the case of an environmental incident the procedures must be followed, and all aspects of the incident addressed for appropriate review.

- Report to Site Manager for non-conformance to be raised
- Site Manager will then raise non-conformance to Project Administration for entry into Environmental Actions Register
- Status of the Non-conformance will be recorded and monitored to ensure timely closure
- Negative trends will be identified and analysed, and preventative actions initiated and implemented to prevent recurrence

8.1 ENVIRONMENTAL AUDITING

Compliance with the EMP will be monitored on an ongoing basis with environmental audits will be undertaken at the following times;

- 4 weeks
- 3 months
- 6 months

Make use of "Evaluation of Compliance" (Form F077) and Evaluation of Compliance Log (Form F078).



9. EMERGENCY RESPONSE PROCEDURES

In the event of any emergency the Site Manager must be contacted to ensure the appropriate action is taken:

Potential Emergency	What to do?	Responsible Person and Relevant Authorities
Injury caused by: Fire Explosion Machinery accidents Minor Injuries	 For serious injury call an ambulance. You should also have the contract details of the nearest doctor, Medical Centre and Hospital Immediately inform the site manager For major injuries contact the Project Manager 	 Emergency Services Nearest Doctor Medical Centre Site Manager Project Manager
Fire: Fire at any of the machines Fire caused by vandalism Fire caused by weather	 Evacuate all personnel to a safe area immediately Call the Fire Brigade (Emergency Services) If the fire is likely to damage any neighbouring property inform the adjacent residents Contact the Site Manager For major fire emergencies contact the Project Manager Inform security if relevant 	 Emergency Services Site Manager Project Manager Adjacent residents
Explosion:	 Evacuate all personnel to a safe area immediately Call Emergency Services immediately Contact any neighbouring residents If service related, call relevant service provider Contact the Site Manager For major fire emergencies contact the Project Manager Inform security if relevant 	 Emergency Services Service Provider Site Manager Project Manager Adjacent residents
Spills: Major spill when filling diesel tank or using machinery Major spill or release of other hazardous chemicals or materials	 For major spills immediately call the fire brigade Identify the source of the spill Refer to the Material Safety Data Sheet (MSDS) If the material is dangerous, evacuate the site immediately and notify the neighbours If it is safe, stop the source of the spill Contain the spill and control its flow Block storm water drains located downstream of spill EPA and local council must be notified about any spills that are likely to threaten the environment If the spill is likely to impact on catchments, contact the Department of Lands, Planning and Environment Clean up small spills promptly to prevent run-off into storm water systems Contact the site Manager or Project Manager Inform security if relevant 	 Emergency Services Site Manager Project Manager Adjacent residents EPA Council Officers Department of Lands, Planning and Environment
Heavy rainstorm and floor – beyond the capacity of the sediment and erosion controls on-site. Or, failure of the sedimentation control measures	 Contain / minimise the flow Contact Council immediately Investigate reasons for failure and prepare incident deport including details of five-day rainfall figures Contact the Project Manager 	Council OfficersSite ManagerProject Manager
Discovery of items of conservation value (e.g. flora, fauna, heritage)	Fence off area as exclusion zone and contact site manager or project manager immediately for further action	Site ManagerProject ManagerPrincipal



Discovery of contaminated material on-site (e.g. underground fuel tanks)	Fence off area as exclusion zone and contact site manager or project manager immediately for further action	Site ManagerProject ManagerPrincipal
Rupture of Pipe lines (water/sewerage pipes)	 Contain / minimise flow Ensure all spilled materials are contained on site or if running off site are direction through sediment control measures Block storm water drains downstream of the spill Contact relevant authority as soon as possible EPA and local government must be notified about any spills that are likely to threaten the environment If the spill is likely to impact on catchments, contact the Department of Lands, Planning and Environment Clean up small spills promptly to prevent run-off into storm water systems Contact the site Manager or Project Manager Inform security if relevant 	 Relevant Authority Site Manager Project Manager Adjacent residents EPA Council Officers Department of Lands, Planning and Environment
Discovery of any aboriginal artefacts or sites	 Work to immediately stop and item to be protected from any further damage and disturbance Notify Site Manager and Project Manager Principal to be notified immediately 	Site ManagerProject ManagerPrincipal

9.1 EMERGENCY CONTACTS

Name		Contact Details
Emergency Services including fire briga	ade, ambulance and police	000
Nearest Hospital	Alice Springs Hospital	(08) 8951 7777
EPA	Environmental Assessments	(08) 8924 4218
	POLLUTION HOTLINE	1800 064 567
Local Council Office – Alice Springs	General enquiries	(08) 8950 0500
Power and Water	EMERGENCY AND FAULTS LINE	1800 245 090
Department of Lands, Planning and Environment		(08) 8951 9200



10. WASTE MANAGEMENT PLAN

Identify major waste streams that will be generated during the Contract including;

- Asbestos waste;
 - to be double bagged and placed into a double lined plywood container and sealed for transport
 - all containers to be clearly labelled as asbestos waste "Danger Asbestos Waste"
 - containers will be transported in an EPA licensed vehicle directly to the Alice Springs Waste Management Facility
 - vehicles will have emergency spill kits and drivers will have obtained relevant asbestos removal training



11. ENVIRONMENTAL MANAGEMENT CHECK LIST

ENVIRONMENTAL MANAGEMENT CHECKLIST

PROJECT	SPEC.NO.	
Checked by	Title	
Work lot	Date	

HOLD POINTS

Obtain the superintendent's approval for the following stages (if applicable);

Spec.Ref.	Item	Checked – Initial and date
	General Environmental Controls - Submit to the Superintendent the proposal for traffic movement, temporary structures (including lamps) cleaning up, erosion control, demolition and the like prior to any work commencing on the site	
5.1	Approvals for extraction areas – Provide documented evidence to the Superintendent that the appropriate approvals have been ascertained or obtained	
5.2	Camp Site/Compound/Workshop – Obtain written permission from the owner or lessee of the land.	
24.2	Prior to commencement of work – submit for assessment the Contractor's Environmental Management Plan (CEMP)	
24.5	Erosion and sediment control management plan – Obtain written approval from the Superintendent prior to commencement of any onsite works	

TESTS

Give sufficient notice so that the Superintendent may witness testing;

Spec.Ref.	Item	Checked – Initial and date



Spec.Ref.	Item	Checked – Initial and date
5.1	AAPA clearance	
	EPA clearance	
	Heritage clearance	
	Land Council clearance	
	Land owner permission	
	Service authorities	
6	Site control approvals	
8	Stockpile management	
9	Water quality	
9.1	Surface water management	
10	Water extraction approvals	
11	Construction site dewatering	
12	Vegetation management	
12.1	Site clearing	
12.2	Weed management	
12.3	Cleaning of vehicles and plant	
12.4	Pruning of amenity trees	
13	Fauna management	
13.1	Pest animal management	
14	Air quality	
	Dust control	
	Exhaust control (plant and vehicles)	
	Mud washed off wheels, soil not able to fall or be blown off load	
15	Contamination management	
15.2	Spillage prevention and containment	
16	Waste management	
	Waste management register	
16.2	Hazardous waste and materials	
16.3	Effluent disposal	
16.5	Notification of the transporting and depositing of waste	
17	Cultural and Heritage management	
17.1	Protection of cultural and sacred sites	
17.2	Sacred sites protection	
18	Community liaison	
18.2	Complaints	
19	Noise control	
19.3	Ground vibration and air blast	



20	Environmental monitoring	
21	Audits	
24	Contractors Environmental Management Plan	
24.2	Prior to commencement of work	
24.5	Erosion and sediment control management plan	
	STATUTORY REQUIREMENTS	
	Refer to clause 27 for list of legislation	
	ENVIRONMENTAL MANAGEMENT PLAN	
	Is an Environmental Management Plan required for the project? If so has plan been submitted? Minimum requirements have been met in the Environmental Management Plan Continuous environmental monitoring is/has been carried out to ensure EMP is being complied with	
	Superintendent audits carried out	
	GENERAL ENVIRONMENTAL CONTROLS	
	Proposals submitted. Refer Hold Point	
	Various specified environmental controls have been complied with	
	COMMUNITY LIAISON	
	Residents, business', communities have been notified	
	Superintendent informed of any complaints within specified timeframe	
	WASTE MANAGEMENT	
	Requirements of Waste Management and Pollution Control Act complied with Waste Management Plan included in	
	Environmental Management Plan	
	Effluent disposed of as specified	
	Illegal dumping has not been carried out	
	WEED MANAGEMENT	
	Weeds eradicated or controlled in accordance with Approved Weed Management Plan	
	Vehicles and Plant cleaned as per specification	
	CULTURAL HERITAGE	
	All personal have received training and made aware of their responsibilities	
	Ministerial approval obtained before commencing work on any heritage listed site	



CLEARANCES	
Approval to Draw Water – Extraction of Water	
guidelines followed	
Approvals obtained for use of Borrow Pits	
SACRED SITES PROTECTION	
Certificates obtained from AAPA, and/or as required by NTASSA	
Appropriate plans developed and implemented for protection of sites	
Superintendent has carried out a Sacred Sites briefing session	
SOIL EROSION MANAGEMENT	
Soil Erosion Management plan included in the EMP	
All work under the contract undertaken in a	
manner which avoids erosion, contamination and sedimentation of the site, surrounding areas and drainage systems	
Control measures have been maintained throughout the course of the work	
All temporary control measures removed and rehabilitated	
RISK ASSESMENT	
Risks identified and solutions provided	
Action Required - ITC issued on items that do not comply	
Action Required The issued of recents that do not comply	
Reported to:	Date:
Final Check	
Made by: Date:	
Comments	