

ant



INSERT PROJECT
NAME

INSERT PROJECT NUMBER



CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN (CEMP)

INSERT DATE



Construction Environmental Management Plan (CEMP)

○ PLAN APPROVAL & INTERNAL DISTRIBUTION

	NAME	POSITION	DATE
Plan Prepared by:			
Plan Implemented by:			

○ RECORD OF AMENDMENTS

DATE	SECTION	WHO
	ALL	
AMENDMENT	INITIAL VERSION CREATED (1)	
DATE	SECTION	WHO
AMENDMENT		

○ PROJECT DETAILS

PROJECT NAME:		PROJECT NO.:	
PROJECT DESCRIPTION:			
SITE ADDRESS:			
CLIENT/ORGANISATION:			
COMMENCEMENT DATE:		COMPLETION DATE:	

○ KEY PERSONNEL (ON AND OFF SITE)

POSITION	NAME	CONTACT DETAILS
Site Manager (ON SITE)		Mob: Email:
Site Safety Officer (ON SITE)	N/A. Site Manager assumes this role.	Mob: REFER ABOVE Email: REFER ABOVE
Project Manager (OFF SITE)		Mob: Email:



Construction Environmental Management Plan (CEMP)

Director
(OFF SITE)

Mob:

Email:

■ INTRODUCTION

This Construction Environmental Management Plan (CEMP) has been prepared by ANT for the project. The CEMP 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 for all NTG projects.

The CEMP 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.

■ RESPONSIBILITIES

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

Project Manager:

- Ensuring supervisors and employees are provided with all appropriate measures to implement this CEMP 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 CEMP 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 CEMP

Site Manager:

- Ensuring all work under their control, including subcontractors, is undertaken in accordance to this CEMP 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 CEMP 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 CEMP 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 CEMP 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 CEMP 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

■ SCOPE OF WORKS

The Anzac Hill School Demolition project involves the demolition and disposal of 3 (three) buildings from the Anzac Hill School, including

- Removal and disposal all asbestos containing materials.
- Removal and disposal of 1 (one) shed
- Removal and disposal of 1 (one) basketball court and shade sail
- Removal and disposal of 1 (one) carpark
- Removal and disposal of all associated concrete, walkways, pavers, gardens, footings, steps and stairs
- Safe decommissioning, termination, relocation and making good all associated services currently on site
- Leaving a bare free draining site on completion
- Ensure all waste material (building and contaminated) is removed from site in accordance with proper procedures including Asbestos containing materials and disposed of at an approved waste management facility.

■ OBJECTIVES OF THE CEMP

This CEMP 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.

■ 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 Waste Disposal Facility – Asbestos Disposal
- EPA – notification of transport
- Dial Before You Dig
- Compaction Testing
- Traffic Management Approval
- All applicable surveys

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)
 - DIPL Guide Notes

ENVIRONMENTAL SAFEGUARDS

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Environmental Induction and Training		
Action	Responsibility	Timing
All site staff will be made aware of the site CEMP, environmentally sensitive areas and environmental responsibilities.	Site Manager	Prior to Construction
Community liaison		
Action	Responsibility	Timing
Community members and stakeholders will be notified of the proposed works prior to their commencement, where required.	Site Manager	Prior to Construction
The asbestos removal works requires community notification. This notification will be the responsibility of ANT Asbestos Solutions and be		



Construction Environmental Management Plan (CEMP)

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 promptly. On receiving a complaint, works will be reviewed to determine whether issues relating to the complaint could be avoided or minimised. Feedback will be provided to the complainant explaining what outcomes resulted. Supply a written report to the Superintendent detailing the complaint and action taken to alleviate the problem.	Site Manager	Prior to Construction / During Construction / Within 1 Day of receipt of complaint
Complaints about environmental issues, including pollution, supply a written report to the Superintendent detailing the complaint and action taken to alleviate the problem. Feedback will be provided to the complainant explaining what outcomes resulted.	Site Manager	Within 1 Day of receipt of complaint
Stockpile sites		
Action	Responsibility	Timing
Asbestos waste will be removed, placed into double lined containers and retained on site in a designated zone until sufficient volume is met for transport to the Waste Facility. See site layout map section 10.2 of this CEMP. 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 Waste Facility for disposal of recycling. Stockpiles will not reach more than 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.	Site Manager	Pre, during and Post Construction
Soil Erosion and Sedimentation Management		
Action	Responsibility	Timing



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An Erosion and Sediment Control Plan will be prepared and implemented and will incorporate appropriate erosion and sediment control measures. 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.	Site Manager	Prior to and During Construction
Water quality		
Actions	Responsibility	Timing
Any water used in suppressing 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. 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.	Site Manager	Pre, during and post construction



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Air quality

Action	Responsibility	Timing
Air monitoring will be carried out during all asbestos removal activities. New air will be brought into the building via the means of Negative Air Pressure Units. The effectiveness of these units will be monitored continuously through an air pressure monitoring system. 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.	Site Manager	Prior to Construction During Construction

Noise and vibration

Action	Responsibility	Timing
Affected nearby residents will be notified when work is likely to cause vibration or offensive noise to impact on the public. Works will be undertaken during normal working hours. Scheduled Work Hours: Asbestos Removal Monday to Friday 06:30 – 16:00 Demolition Works Monday to Friday 07:00 – 16 :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.	Site Manager	During Construction

Vegetation and fauna

Action	Responsibility	Timing
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	



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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.

Heritage

Action

Responsibility

Timing

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.

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.

Site Manager

Waste management

Action

Responsibility

Timing

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.

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.

Site Manager

During and Post construction



Construction Environmental Management Plan (CEMP)

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.

Weed management

Action

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.

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.

Responsibility

Site Manager

Timing

Prior to and
During
Construction

■ 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



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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

■ 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

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■ ENVIRONMENTAL AUDITING

Compliance with the CEMP 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 and Evaluation of Compliance Log Form.

■ 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 report including details of five-day rainfall figures - Contact the Project Manager	- Council Officers - Site Manager - Project 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 Manager - Project Manager - Principal
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 Manager - Project Manager - Principal
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	- Relevant Authority - Site Manager - Project Manager

	▪ 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	▪ 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 Manager ▪ Project Manager ▪ Principal

EMERGENCY CONTACTS

Name	Contact Details
Emergency Services including fire brigade, ambulance and police	000
EPA Environmental Assessments POLLUTION HOTLINE	(08) 8924 4218 1800 064 567
Power and Water EMERGENCY AND FAULTS LINE	1800 245 090
Department of Lands, Planning and Environment	(08) 8951 9200

WASTE MANAGEMENT PLAN

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

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



Construction Environmental Management Plan (CEMP)

■ ENVIRONMENTAL MANAGEMENT CHECK LIST

LOCATION		DATE		TIME	
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HOLD POINTS

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

REFERENCE / REQUIREMENT		CHECKED (INITIAL & 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;

REFERENCE / REQUIREMENT	CHECKED (INITIAL & DATE)

COMPLIANCE CHECKS – refer specification

REFERENCE / REQUIREMENT	CHECKED
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		(INITIAL & 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)	



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	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	



Construction Environmental Management Plan (CEMP)

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	



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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(S) REQUIRED:

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COMPLETED BY:

NAME:	SIGNATURE:	DATE:
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Construction Environmental Management Plan (CEMP)