Construction Environmental Management Plan

Project Caymus – Bulk Fuel Storage Facility

Latitude 63 Australia

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DOCUMENT HISTORY

Rev	Reviewed by	Approved by	Issued to	Date
1	Adele Faraone	Emma Lewis	Saunders Int.	17/03/2022
2	Todd Dow	Chip Anderson	Latitude 63	17/06/2023
3	Todd Dow	Chip Anderson	Latitude 63	26/10/2023

Recipients are responsible for eliminating all superseded documents in their possession.

Appendices

Tables

Figures

ACRONYMS

AS	Australia Standard
ASS	Acid Sulfate Soils
CEMP	Construction Environment Management Plan
DEPWS	Department of Environment and Natural Resources
DIPL	Department of Infrastructure, Planning and Logistics
DSI	Detailed Site Investigation
EcOz	EcOz Environmental Consultants
EMS	Environmental Management System
EP Act	*Environment Protection Act* (Northern Territory)
EPBC Act	*Environment Protection and Biodiversity Conservation Act (1999)* (Commonwealth)
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plan
MLA	Marine Loading Arm
NEPM	National Environmental Protection Measure
NT	Northern Territory
NT EPA	Northern Territory Environmental Protection Authority
PFAS	Perfluoroalkyl and Polyfluoroalkyl Substances
PPE	Personal Protective Equipment
SDS	Safety Data Sheet
SMP	Structural Mechanical Piping
TPWC Act	*Territory Parks and Wildlife Conservation Act* (Northern Territory)
WMPC Act	*Waste Management and Pollution Control Act* (Northern Territory)

1 INTRODUCTION

This Construction Environment Management Plan (CEMP) has been prepared for Latitude 63 (the Company) by EcOz Environmental Consultants (EcOz).

The Company are constructing a bulk fuel storage facility (the project) at Section 5720, East Arm (the site), located approximately 6 km east of Darwin CBD (see Figure 1-1). The project activities will include earthworks, civil, structural, mechanical and electrical works involved in the construction of storage tanks, along with ancillary buildings.

1.1 Responsibilities

The responsible parties for implementing and monitoring this CEMP are as provided in Table 1-1.

Table 1-1. Project personnel and environmental responsibilities

Responsibility	Personnel	Contact details
Develop CEMP	• Company Project Manager • EcOz Environmental Consultants	Chip Anderson Latitude 63 0458 042 420 canderson@latitude63.com
Develop and maintain environmental management procedures	• Company Project Manager • EcOz Environmental Consultants	
Implement management measures	• Construction Manager • Company HSE Lead • Company Environmental Advisor • Works crews and subcontractors	Todd Dow Latitude 63 0488 399 297 Todd@latitude63.com
Assure CEMP compliance and reporting	• Construction Manager • Company HSE Lead • Company Environmental Advisor	

1.2 Objectives of the CEMP

This CEMP details the environmental management measures and controls necessary to avoid, reduce and mitigate the potential environmental impacts from the project activities, and provides a framework for environmental management to be implemented by the Company, its employees, and all subcontractors throughout the life of the project.

This CEMP has been developed to incorporate the requirements of:

- Relevant environmental legislation
- Relevant environmental regulations, guidelines, and Australian Standards
- Environmental Approval EP2021/008-002
- Development Permit DP21/0311

1.3 Project approvals and previous studies

Project proposals that have the potential to have a significant impact on the environment require referral to the Northern Territory Environment Protection Authority (NT EPA) in accordance with the *Environment Protection Act 2019* (EP Act) and the Environment Protection Regulations 2020 (EPRegulations).

Under the EP Act, the NT EPA will assess the project referral to determine whether or not an environmental impact assessment (EIA) is required. A referral for the project was assessed by the NT EPA and Assessment Report 93 was issued in November 2021 with a draft environmental approval. The Minister for Environment issued Environmental Approval (EP2021/008-002) for the project on 29 November 2021. The approval includes a list of environmental conditions which the project must adhere to during construction and operation of the facility (see Appendix A).

Development permit DP21/0311 was issued on 30 November 2021 under the *Planning Act 1999* to allow the land to be developed for the purpose of a fuel depot with ancillary infrastructure. The permit included a schedule of conditions the design and construction of the facility must adhere to, including appropriate erosion and sediment control throughout development.

As a component of the approvals process, a Detailed Site Investigation (DSI) was undertaken in June 2021 by CDM Smith, to determine the presence of any contamination on the site that may impact on the proposed land use. The DSI was undertaken in accordance with Schedule B2 of the National Environment Protection (Assessment of Site Contamination) Measure. The DSI found that the site was suitable for the proposed land use, and it was recommended that:

- An Acid Sulfate Soil Management Plan (ASSMP) be developed that addresses both acidic soil and groundwater conditions where ASS could be disturbed to mitigate the risk of generating sulfuric acid.
- General construction water management considerations (i.e., dewatering) will need to be given during the construction (i.e., due to the measurable levels of PFAS in groundwater and metals concentrations in excess of guideline values) to ensure that potential risks to the surrounding environment are managed.

Approval has been obtained from the NT Land Development Corporation (LDC) to stockpile excess spoil from the site on an adjacent vacant block – Lot 7146, East Arm. All management strategies and procedures in this plan apply to project works related with the carting and stockpiling of material on this ancillary site.

1.4 Statutory requirements

The following legislation is applicable to the project and will be complied with by the Company:

- *Bushfires Management Act*
- *Dangerous Goods Act*
- *Environmental Offences and Penalties Act*
- *Environment Protection Act*
- *Heritage Act*
- *Marine Pollution Act*
- *Soil Conservation and Land Utilisation Act*
- *Territory Parks and Wildlife Conservation (TPWC) Act*
- *Waste Management and Pollution Control (WMPC) Act*
- *Water Act*
- *Weeds Management Act*
- *Environmental Protection and Biodiversity Conservation (EPBC) Act*
- PFAS NEMP 2021
- ANZG 2018

The following standards and guidelines apply to the project works:

- Australia Standards
- Other int standards
- Codes of Practice
- NT Government Publications
- Australian and New Zealand Environmental and Conservation Council (ANZECC) publications
- National Environmental Protection Measure (NEPM)

1.5 Environmental management framework

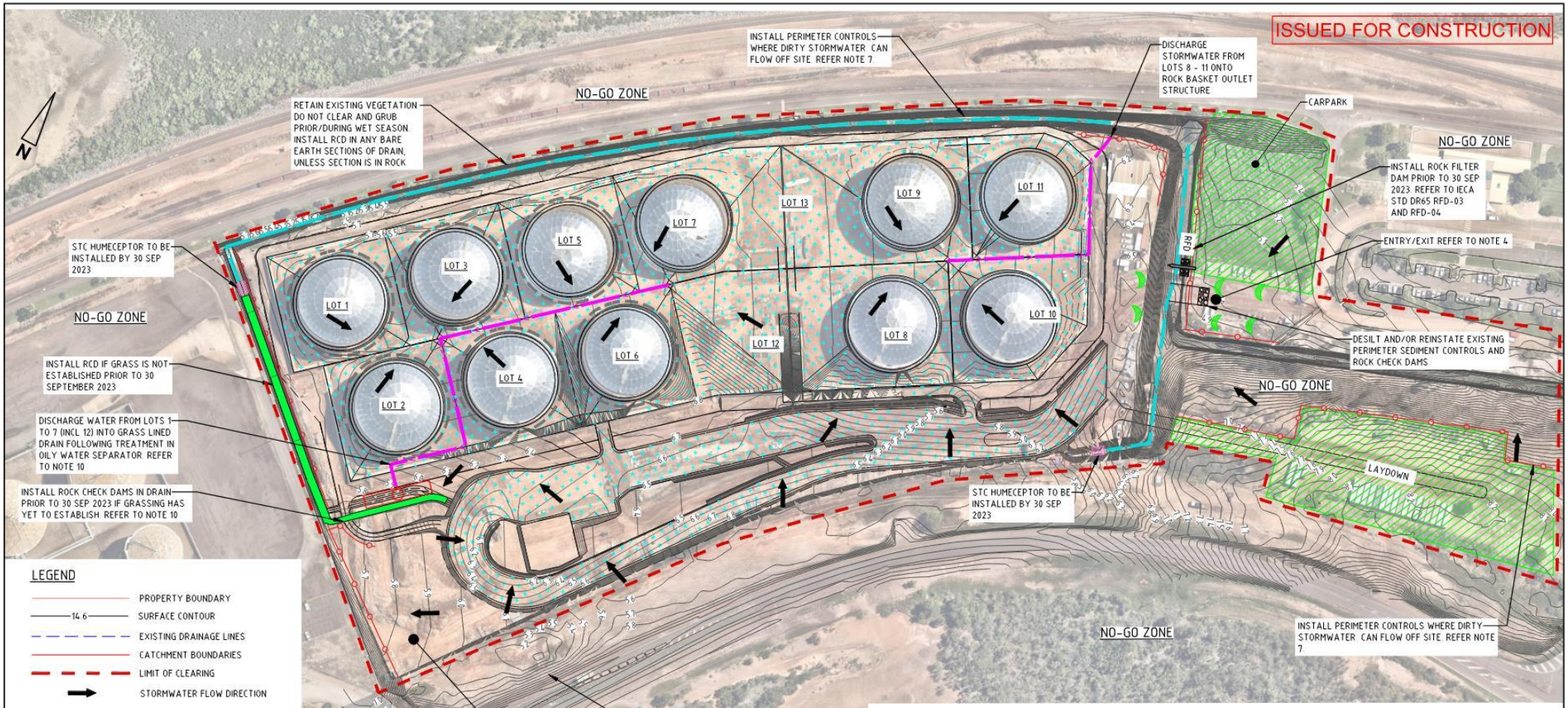
Latitude 63 are committed to the protection of the environment whilst undertaking business operations and have implemented an Environmental Management System (EMS) across the business that is certified under ISO14001. An ISO14001 certified EMS includes processes and procedures to cover the following topics (with regard to environmental management):

- Leadership
- Planning
- Support
- Operation
- Performance evaluation
- Improvement

This CEMP has been prepared to integrate the specific project requirements with the business EMS.

A copy of the Latitude 63 Protection of Health, Safety and Environment (HSE) policy is included in Appendix B.

ISSUED FOR CONSTRUCTION



LEGEND

- PROPERTY BOUNDARY
- 14.6 SURFACE CONTOUR
- EXISTING DRAINAGE LINES
- CATCHMENT BOUNDARIES
- LIMIT OF CLEARING
- STORMWATER FLOW DIRECTION
- SEDIMENT FENCE / MULCH BERM
- RUMBLE PAD OR RUMBLE STRIP
- CLEAN WATER DRAIN/BANK
- SUMP DRAINS
- STC HUMECEPTOR
- ROCK CHECK DAM
- RFD ROCK FILTER DAM
- OILY WATER SEPARATOR
- COMPACTED GRAVEL
- SLURRY SEAL
- GRASS LINED DRAIN

NOTE: REFER TO DRG ESC100 FOR MAIN LEGEND

WARNING

BEWARE OF UNDERGROUND SERVICES

The locations of underground services are approximate only and their exact position should be proven on site

No guarantee is given that all existing services are shown

NOTES:

1. AERIAL IMAGE IS FROM (02/05/2023) (SOURCE: NEARMAP)
2. LIMIT OF CLEARING IS INDICATIVE ONLY. REFER PROJECT DRAWINGS FOR SPECIFIC LIMITS.
3. REHABILITATE ALL DISTURBED AREAS PROGRESSIVELY. USE HYDROMULCHING FOR ALL GRASSING WORKS.
4. ALL VEHICLES MUST USE NOMINATED SITE ENTRY/EXIT CONTROLS. PROVIDE APPROPRIATE TRAFFIC MANAGEMENT CONTROLS TO ENSURE THIS OCCURS.
5. MANAGEMENT OF DUST MUST COMPLY WITH NOTES ON DWG ESC101.
6. WHERE EARTHWORKS ARE COMPLETED AND DISTURBED SURFACES WILL NOT BE ACTIVELY WORKED FOR MORE THAN 30 DAYS IN THE DRY SEASON, OR 10 DAYS IN THE WET SEASON, EXPOSED SURFACES AND BATTERS MUST BE STABILISED USING MULCHING, EROSION CONTROL BLANKETS, SOIL BINDERS, OR GRASSING, AS DEEMED APPROPRIATE BY THE ESCP DESIGNER, AND TO THE SATISFACTION OF DEPWS.
7. INSTALL SEDIMENT FENCES (OR MULCH BERMS) TO ALL AREAS WHERE DIRTY STORMWATER CAN FLOW OFF SITE, INSTALL IN ACCORDANCE WITH IECA STANDARD DRAWINGS AND PROVIDE WINGS/RETURNS.
8. INSTALL ROCK CHECK DAMS IN OPEN DRAINS UNTIL GRASSING IS ESTABLISHED, TO CONTROL FLOW VELOCITIES. ENSURE SPACING IS SUCH THAT THE TOE OF THE UPSTREAM DAM IS LEVEL WITH THE CREST OF THE DOWNSTREAM DAM. ROCK CHECKS ARE TO BE MIN. 300mm HIGH TO SPILLWAY HEIGHT.
9. CONTROL DRAINAGE THROUGHOUT THE SITE TO DIRECT DIRTY WATER IN A CONTROLLED AND NON-EROSIVE MANNER.
10. TABLE DRAINS GRADING INTO OPEN CHANNEL TO INCORPORATE THE FOLLOWING EROSION AND SEDIMENT CONTROL MEASURES:
    - 10.1. INSTALL ROCK-CHECK DAMS TO DRAINS AS PER IECA STD DRAWING RCD-01. ESTABLISH GRASSING OR APPLY SOIL BINDER (E.G. VITAL BON-MATT STONEWALL) AS SOON AS PRACTICABLE (TYP.)
    - 10.2. PROVIDE DN 150 DUMP ROCK CHUTE OVERLYING BIDIM A24 GEOTEXTILE (OR SIMILAR) ON ENTRY INTO EXISTING DRAINAGE CHANNEL WHERE NOT DISCHARGING ONTO A STABLE ROCK SURFACE (TYP.)

10 0 10 20 30 40 50m

0 1:1000-A1 1:2000-A3

No	DATE	INITIAL	AMENDMENT
0	14/09/23	JT	ISSUED FOR CONSTRUCTION

CLIENT: LATITUDE 63

byrne CONSULTANTS
ABN 78 124 388 192
P.O.Box 43420 Casuarina NT 0811
Ph: 08 89472476 Fax: 08 89475098

APPROVED		DRAWN	CHECKED	DESIGNED	CHECKED
ED		JT	JCM	PC	ED

TITLE: **CAYMUS BULK FUEL STORAGE FACILITY**
2023/24 WET SEASON ESCP
WET SEASON WORKS (OCTOBER TO APRIL 2024)

SCALE	PROJECT No	DRAWING No	AMDT
AS SHOWN	NT23046	ESC102	0

2 PROJECT DESCRIPTION

The project involves construction of a bulk fuel storage facility to receive, store and distribute up to 330 ML of flammable and combustible jet fuels, including:

- 11 x 30ML bulk fuel storage tanks (20m high, 45m diameter)
- Bulk storage compounds with large welded steel tanks, bunds, concrete retaining walls and spill containment flooring
- Fire water and additive tanks
- Truck loading gantry
- Marine Loading Arm
- Structural Mechanical Piping
- Ancillary infrastructure (office/control room, pump house, warehouse storage)
- Access road

The construction works include the following components:

- Site clearing
- Establishment of temporary construction facilities (site office, erosion and sediment controls etc)
- Earthworks and civil construction
- Ground improvement works
- Construct tank foundations and concrete bund walls
- Construct stormwater management system
- Fabricate tanks
- Associated mechanical, electrical and instrumentation works

Site establishment works commenced in January 2022 and the project is forecast for completion by late 2023. Latitude 63 are providing the Engineering, Procurement and Construction Management (EPCM) services for the project with the bulk earthworks and ground improvement works being subcontracted to different companies. Latitude 63 will undertake the tank construction works inhouse.

A map of the site layout showing location of key site infrastructure is included in Figure 1-1.

3 ENVIRONMENTAL VALUES

The NT EPA has developed a framework for the assessment of environmental impact that is based on 13 environmental factors. Through the referral process, the NT EPA identified that the project has the potential to impact on environmental values associated with two environmental factors which are summarised in Table 3-1.

Table 3-1. Relevant environmental factors and values of potential impact identified by the NT EPA

FACTOR	VALUES	CONTEXT
SEA		
Marine environmental quality	Sensitive receptors	The site is located adjacent to mangroves and is in the close vicinity of Darwin Harbour waters. Darwin Harbour and mangrove communities are considered sensitive receptors due to their high ecological value. Construction works with the potential to lead to increased runoff volumes and surface water quality impacts through the following: • Clearing works and establishment of hardstand areas (increasing runoff) • Soil loss from land clearing • Accidental release of contaminants such as hydrocarbons
AIR		
Air quality	Sensitive receptors	The site is located within an industrial area adjacent to the Port of Darwin. The nearest receivers are neighbouring industrial premises, and the nearest residence is located at the Haileybury Rendall School about 5.5 km northwest of the proposal. The proposal is 6 km southwest of the city of Darwin. The project is considered to have the potential for significant impact to this aspect during operations however during construction the project is to implement controls to manage air emissions through dust generation and heavy machinery use.

4 RISK ASSESSMENT

Latitude 63 use a five by five risk analysis matrix to determine risk level as detailed in Table 4-1. A construction environmental risk assessment using the Latitude 63 risk assessment procedure has been completed (Table 4-2).

The management measures detailed in this CEMP are reflective of the identified impacts and subsequent management measures listed in the risk assessment.

Table 4-1. Latitude 63 risk analysis matrix

CONSEQUENCE		Examples		
		Injury	Environmental	Financial – Production
A	Catastrophic	Fatality or Permanent Disability	Major impact – immediate and / Or Long-Term Harm	Project Halted – more than $100,000 loss
B	Major	Lost Time More Than 1 month	Off-site impact	Major Effect on Work Schedule - $50,000 to $100,000
C	Moderate	Lost Time Less Than 1 month	Impact localised	Significant Effect on Work Schedule - $10,000 to $50,000
D	Minor	Medical Treatment	Minor impact – immediate Containment / Control	Minimal Effect on Work Schedule - $1000 to $10,000 loss
E	Insignificant	Minor First Aid	Zero impact	No Effect on Work Schedule – less than $1000 loss

PROBABILITY			CONSEQUENCE (or impact) of an event happening				
(Or Likelihood) Of an Event Happening			A	B	C	D	E
Common or Repeating Occurrence	Almost Certain	1	High	High	High	Significant	Significant
Known to Occur, Or, "It Has Happened"	Likely	2	High	High	Significant	Significant	Medium
Could Occur	Possible	3	High	High	Significant	Medium	Low
Not Likely to Occur	Unlikely	4	High	Significant	Medium	Low	Low
Practically Impossible	Rare	5	Significant	Medium	Medium	Low	Low

Management Controls Corresponding to Level of Risk	
Risk Ranking:	Actions to Take & Responsible Persons for Approvals Once Re-Assessed for Proposed Hazard Controls (Residual Risk)
High	Further Planning & Full Risk Assessment Required at Senior Management Level e.g. HSE Manager
Significant	Must Be Addressed & Approved by Project Management e.g. Construction Manager, Project Manager or Supervisor
Medium	To Be Addressed by Leading Hand & Crew – No Formal Approval Required
Low	Document, But No Formal Approvals Required

Table 4-2. Potential impacts, inherent and residual risk ratings

Theme	Environmental Factor/Value	Hazard/Aspect	Incident/event	Possible impact	Assumptions/Limitations/Information	IR*	Mitigation measures	RR*
LAND	Terrestrial Environmental Quality	Erosion	Exposed soils after vegetation clearance and trenching for SMP scope.	Soil erosion due to increased runoff from cleared areas.	Site previously cleared and largely unvegetated	High Risk (12)	Development and implementation of an Erosion and Sediment Control Plan (ESCP) in conjunction with the site-specific CEMP. This plan will be developed in accordance with the *Int Erosion Control Association Australasia (2008) - Best Practice Erosion and Sediment Control (BPESC)*.	Low Risk (5)
LAND	Terrestrial Environmental Quality	Clearing vegetation / ground disturbance	Disturbance of Acid Sulfate Soils due to excavations or trenching of SMP.	Generation of sulfuric acid, release of toxic metals	Bulk excavation works to occur in general fill area. Potential disturbance to ASS during ground improvement works but minimal spoil expected to be generated.	High Risk (12)	Development of an Acid Sulfate Soil Management Plan, including storage and treatment.	Low Risk (5)
LAND	Terrestrial Environmental Quality	Storage and handling of hazardous materials	Leaks and spills from fuel storage areas entering surface or groundwater	Contamination of soil from hazardous materials	No bulk fuel stores on site during construction. Small quantities of construction hazchem such as paints, lubricants, oils, sealants etc.	Moderate Risk (8)	Storage and handling of hazardous materials will be developed as part of the site-specific CEMP. Fuel and flammable chemicals will be stored and handled in accordance with *AS 1940-2004*. Fit for purpose spill kits to be positioned at refueling and storage areas. All personnel on site will be trained in use of spill kits, in the event of an spill.	Low Risk (5)
LAND	Terrestrial Ecosystems	Clearing vegetation / ground disturbance	Loss of habitat and direct mortality on fauna.	Reduced biodiversity value due to loss of habitat	Whilst the Project area is located within the Darwin Harbour Site of Conservation Significance, there are no sensitive or significant vegetation or buffer areas located within or immediately adjacent to the Project area. The closest significant vegetation type to the project area are mangroves which are located approximately 70m from the northern boundary of the Project area. This distance ensures an appropriate buffer is maintained. Construction of the Project will not disturb or cause significant impacts to sensitive or significant vegetation or buffers.	Low Risk (2)	No special environmental values within the area, no mitigation required.	Low Risk (1)

Theme	Environmental Factor/Value	Hazard/Aspect	Incident/event	Possible impact	Assumptions/Limitations/Information	IR*	Mitigation measures	RR*
LAND	Terrestrial Ecosystems	Weeds	Weed introduction and spread	Reduced habitat quality on and off-site due to competition with native plant species	Regional Weed Management Plan is available for the Darwin region.	Moderate Risk (8)	Weed mitigation measures will be incorporated in the sites Construction Environmental Management Plan (CEMP).	Low Risk (2)
LAND	Terrestrial Ecosystems	Pests	Increase of pest species such as rats, cats and dogs at site during construction	Reduced habitat quality and competition with native species	The introduction and movement of pest species resulting from construction activities is not anticipated to be a significant issue.	Low Risk (2)	Putrescible waste will be correctly managed under the CEMP and stored onsite in skip bins between each removal during construction and once the proposal area is used for residential purposes.	Low Risk (1)
LAND	Terrestrial Ecosystems	Bushfire	Uncontrolled bushfire caused by operation of equipment, lighting fires, discarded cigarette.	Localised damage to infrastructure		Moderate Risk (8)	No fires allowed on site. Hot works such as welding not to be undertaken on days of total fire ban or high winds. Smokers appropriate disposal of cigarettes, vehicles maintained. Weeds will be managed in accordance with the *Weed Management Act*.	Low Risk (3)
WATER	Inland Water Environmental Quality	Storage and handling of hazardous materials	Leaks and spills from fuel storage areas entering surface or groundwater	Hydrocarbon contamination of downstream surface waterways or groundwater.	No bulk fuel stores on site during construction. Small quantities of construction hazchem such as paints, lubricants, oils, sealants etc.	Moderate Risk (8)	Storage and use of fuel will be included in the site-specific CEMP. Fuel storage and handling in designated areas and accordance with AS1940 and WHS Regulations Fir for purpose spill kits located on site in re fuelling areas and areas where hazardous substances are stored. All workers to be trained in use of spill kits.	Low Risk (5)
WATER	Inland Water Environmental Quality	Erosion	Erosion of site due to disturbance and exposure of ground surface.	Increased turbidity and sediment loads in ephemeral watercourses		Extreme Risk (20)	Development and implementation of an Erosion and Sediment Control Plan (ESCP) in conjunction with the site-specific CEMP. This plan will be developed in accordance with the *Int Erosion Control Association Australasia (2008) - Best Practice Erosion and Sediment Control (BPESC)*.	Moderate Risk (9)
WATER	Aquatic ecosystems	Contaminated water (surface and groundwater)	Increased nutrients in surface water and groundwater from sedimentation	Decrease in aquatic ecosystems health		High Risk (17)	Development and implementation of an Erosion and Sediment Control Plan (ESCP) in conjunction with the site-specific CEMP. This plan will be developed in	Moderate Risk (6)

Theme	Environmental Factor/Value	Hazard/Aspect	Incident/event	Possible impact	Assumptions/Limitations/Information	IR*	Mitigation measures	RR*
			discharge from proposal	downstream of proposal			accordance with the *Int Erosion Control Association Australasia (2008) - Best Practice Erosion and Sediment Control (BPESC)*. Dewatering plan developed.	
WATER	Aquatic ecosystems	Contaminated water (surface and groundwater)	Release of hazardous chemical from proposal area	Decrease in aquatic ecosystems health downstream of proposal	No bulk fuel stores on site during construction. Small quantities of construction hazchem such as paints, lubricants, oils, sealants etc.	Moderate Risk (8)	Hazardous chemicals (liquids) will be stored in accordance with *AS1940-2004.* and will be incorporated into the CEMP. Chemicals, dangerous goods and other potential contaminates are to be transported, stored and handled in accordance with Australian Standards and best practice guidelines. For example, bunded storage areas are not to be within 50m of natural or built drainage lines, flood prone area, or on slopes steeper than 1:10.	Low Risk (5)
	Marine environmental quality	Storage and handling of hazardous materials	Accidental spill of chemical or hydrocarbon into receiving waters. Construction of Marine Loading Arm at the port resulting in contamination of marine environment.	Decrease in marine ecosystem health surrounding the proposal	No bulk fuel stores on site during construction. Small quantities of construction hazchem such as paints, lubricants, oils, sealants etc.	Moderate Risk (8)	Storage and handling of hazardous materials will be developed as part of the site specific CEMP, in accordance with A*S 1940-2004.* (e.g. Minor chemical storage on open land will be located at least 1m from any water / watercourse). Standard mitigation measures include: Fit for purpose spill kits to be positioned at refuelling and storage areas (Fit for purpose for the hazardous chemical being stored). All personnel on site will be trained in use of spill kits, in the event of a spill. Refuelling activities to be conducted in accordance with the refuelling procedure. Refuelling to be performed by trained, competent and authorised refuelling operator (s). Drip trays/bunds to be used during refuelling process to prevent spills. Refuelling equipment to be fitted with auto shut-off nozzles. Secondary containment of hazardous substances (e.g. double skinned tanks). Site induction/ training to include spill prevention and response. Chemicals and hazardous substances to be stored in fit for purpose containers. Safety data sheets (SDS) to be readily	Low Risk (5)

Theme	Environmental Factor/Value	Hazard/Aspect	Incident/event	Possible impact	Assumptions/Limitations/Information	IR*	Mitigation measures	RR*
							available in area where hazardous substances are used. Identify high risk area and limit vehicle movement / chemical use Follow the spill response procedure: - Location - Control and Contain - Clean-up - Report	
SEA	Marine environmental quality	Contaminated water (surface and groundwater)	Increased nutrients in receiving waters from sedimentation discharge	Decrease in marine ecosystem health surrounding the proposal		Moderate Risk (8)	Development and implementation of an Erosion and Sediment Control Plan (ESCP) in conjunction with the site-specific CEMP. Stockpiled materials will be kept damp or covered to minimise dust. This plan will be developed in accordance with the Int Erosion Control Association Australasia (2008) - *Best Practice Erosion and Sediment Control (BPESC).* Dewatering Plan developed.	Low Risk (3)
AIR	Air Quality	Dust	Dust emissions from cleared/disturbed ground and movement of vehicles and material	Increase in air particulates exceeding guidelines values for environmental values		High Risk (12)	Dust will be managed through the Erosion and Sediment Control (ESCP) section of the CEMP. An Erosion and Sediment Control Plan (ESCP) will be developed in accordance with the Int Erosion Control Association Australasia (2008) - Best Practice Erosion and Sediment Control (BPESC).	Low Risk (5)
AIR	Air Quality	Bushfire	Smoke emissions from uncontrolled bushfire caused from operation of equipment, lighting fires or discarding cigarette	Increase in air particulates exceeding guidelines values for environmental values (Potential implications include - suffocation of sensitive vegetation - increased fire potential)		Low Risk (4)	The bushfires will be managed in accordance with the *Bushfires Management Act 2016* and will be incorporated into the CEMP. The CEMP will include: No fires allowed on site. Hot works such as welding not to be undertaken on days of total fire ban or high winds. Smokers' appropriate disposal of cigarettes, vehicles maintained. Cleared material will not be burnt on site, it will be mulched and use for erosion control or removed from site. Water cart on standby during periods of high fire danger.	Low Risk (2)

Theme	Environmental Factor/Value	Hazard/Aspect	Incident/event	Possible impact	Assumptions/Limitations/Information	IR*	Mitigation measures	RR*
AIR	Atmospheric processes	Greenhouse Gas emissions	GHG emissions from land clearing and use of diesel-powered vehicles and generators	Increase in GHG	The use of a few diesel-powered vehicles and generators over a short time span during construction is identified as a small potential impact.	Low Risk (4)	Greenhouse gas emission from activity will be on par with any small, short-term construction project. No mitigation is required.	Low Risk (2)
PEOPLE	Communities and economy	Dust	Dust emissions result in exceedance of air quality (particulates) guidelines	Dust nuisance on people accessing areas around proposal area.	No public access to site area; the nearest residential receptor is located approximately 4-5km away, and commercial receptors located adjacent to the proposal area.	High Risk (12)	Dust will be managed through the Erosion and Sediment Control (ESCP) section of the CEMP. Additional mitigation measures include: Dust suppression using water carts where necessary. Stockpiles will be covered and kept to heights <3m. Maintain complaints register. An Erosion and Sediment Control Plan (ESCP) will be developed in accordance with the Int Erosion Control Association Australasia (2008) - *Best Practice Erosion and Sediment Control (BPESC).*	Low Risk (5)
PEOPLE	Culture and Heritage	Clearing vegetation / ground disturbance	Disturbance of ground	Damage or destruction of archaeological or heritage sites Damage, desecration, or destruction of Aboriginal sacred sites	AAPA certificates cover the project site registered by other companies for previous works. No registered sacred sites or restricted work areas (RWA) are located within the proposed construction footprint of the Project, or within proximity to the Project boundary. The NT Heritage Branch confirmed no heritage places or Aboriginal archaeological sites are located within the Project area. Due to large parts of the proposed Project area having been subject to previous clearing, the archaeological potential of the area is greatly reduced.	Low Risk (5)	A stop works will be implemented if artefacts are located during activities on site. The project manager will be notified immediately, who will then liaise with the NT Heritage Branch, for further instructions.	Low Risk (3)

5 ENVIRONMENTAL SAFEGUARDS

Environmental safeguards have been developed for the environmental aspects that may be impacted by the project. The following sections have been developed to detail the management actions to be implemented, the personnel responsible, and the timing of implementation throughout the project.

5.1 Environmental induction and training

Action	Responsibility	Timing
All site staff and contractors will be made aware of this CEMP, any environmentally sensitive areas, any heritage or culturally significant areas, and their environmental responsibilities.	Construction Manager	Prior to the works

5.2 Acid sulfate soils

Action	Responsibility	Timing
An Acid Sulfate Soil Management Plan (ASSMP) has been prepared and implemented (where necessary) and incorporates appropriate ASS control measures (see Appendix C).	Construction Manager	Prior to the works

5.3 Soil erosion and sediment management

Action	Responsibility	Timing
An Erosion and Sediment Control Plan (ESCP) has been prepared and implemented and incorporates 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 the works, where necessary, and stabilisation will be undertaken after works are complete. All stockpile sites will be located in previously cleared and distributed areas within the site boundaries. No stockpiles sites will be established within the following areas: • An environmentally sensitive area • Vegetated areas • Where it will affect a cultural and/or heritage site. All necessary erosion and sediment control measures will be installed to effectively manage sediment laden runoff or wind erosion from stockpile areas. Topsoil stockpiles are not to be more than 1.5 m in height. All other stockpiles are not to be more than 2.0 m in height.	Construction Manager	Prior to, during and following the works

Action	Responsibility	Timing
Topsoil that is not contaminated by noxious weeds must be stockpiled for later spreading on batters and other disturbed areas. Control measures are to be in place prior to 30 September to 31 March, with exception of controls that need to be in place year-round regardless of the time of year.		

5.4 Water quality

Action	Responsibility	Timing
Water quality control measures will be implemented to prevent any materials entering drain inlets and waterways. All necessary erosion and sediment control measures will be installed to effectively manage sediment laden runoff as per the project ESCP. Any dewatering will be conducted in accordance with the project Dewatering Plan (see Appendix D). Storage areas for fuel, oils and chemicals will be surrounded by an impervious bund that contains 120% of the largest container stored in the bund. Use double skinned tanks and in compliance with AS1940-2004 The location of storage areas will not be within 50 m 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 50 m away from waterways. Ensure drip trays in place during refueling activities. Spillkit readily available. 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, and appropriately sized and adequately stocked for all chemicals kept on site.	Construction Manager	Prior to, during and following the works

5.5 Air quality

Action	Responsibility	Timing
Dust generated during site activities will be managed through dust suppression activities. Earthworks, unsealed roads or other potential sources of dust i.e. stockpiles, will be sprayed with water to minimise the generation of dust. Spraying of paint and other materials with the potential to become air borne particulates will not be undertaken during windy conditions.	Construction Manager	During the works

Action	Responsibility	Timing
Community notification will be undertaken, where work is likely to cause impact on the public and nearby residents. No burning of vegetation or other materials will be permitted on site. Exhaust emissions from plant and equipment will be minimised by maintaining equipment in accordance with manufacturer's specifications and undertaking periodic visual checks of exhaust systems. Any vehicle transporting waste or other materials that may produce odours or dust will be covered during transportation.		

5.6 Noise and vibration

Action	Responsibility	Timing
Place work compounds, parking areas, equipment, and material stockpile sites away from noise-sensitive receptors/locations. Affected businesses will be notified when work is likely to cause vibration or excessive noise to impact on the public. Works will be restricted to normal working hours (i.e. 7 am to 7 pm Monday to Saturday, and 9 am to 6 pm Sunday or public holidays). All reasonable practical steps will be undertaken to reduce project activity noise and vibration from the site.	Construction Manager	During the works

5.7 Vegetation and fauna

Action	Responsibility	Timing
Minimise areas of clearing by clearly identifying areas to be cleared, selecting appropriately sized clearing equipment and protecting vegetation driplines. Parking areas and turn around points for plant and equipment will be located in previously disturbed and clearly identified areas to minimise roadside vegetation disturbance. 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. Significant vegetation will be protected by physical barriers to exclude machinery, vehicles, or pedestrians from the proximity of the plants' foliage. Vegetation refuse that is deemed as a valuable habitat will be avoided so that it continues to provide wildlife refuge. Should threatened species be identified onsite, works will be stopped immediately, temporary protective barriers will be installed, and advice will be sought from DEPWS. A list, and pictures, of potentially threatened species in the area, as identified by desktop search, will be made available to staff in site offices to aid in identification of any threatened species.	Construction Manager	During the works

5.8 Cultural and historical 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 works that might affect the item will cease and the item protected from damage and disturbance. All personnel working on site will receive training regarding their responsibilities regarding heritage and cultural heritage and will be made aware of any sites or areas which must be avoided. Sites or areas which must be avoided or protected during the works will be identified on a site map and made available to all relevant personnel during the works. If a site or object, or suspected site or object, of heritage or Aboriginal cultural heritage is discovered through the works, the NT Heritage Branch will be contracted immediately.	Construction Manager	Prior to, during and following the works

5.9 Waste management

Action	Responsibility	Timing
Waste generated from site activities will be sorted and amounts estimated and recorded. Remove from the site and dispose of all waste materials, including green waste, food scraps and other putrescible wastes, project waste, chemicals, and effluent in an appropriate manner, in approved legal waste disposal sites or facilities. 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, or a licensed disposal facility. Waste and containers not able to be recycled will be disposed of at a licensed landfill facility. No waste material generated from project operations will be left on site once the activity has been completed and the site will be left in a clean and tidy state on completion of the works.	Construction Manager	During and following the works

5.10 Hazardous materials and dangerous goods

Action	Responsibility	Timing
Plan and execute all works so as to minimise the possibility of pollution of the site and adjoining areas from hazardous materials, dangerous goods, and other potential contaminants.	Construction Manager	Prior to, during and following the works

Action	Responsibility	Timing
Use, store and handle hazardous materials and dangerous goods in accordance with all relevant legislation, manufacturer's instructions, and relevant Safety Data Sheets (SDSs). Employ transporting, handling, storage and application methods that will prevent chemical, fuel and lubricant spillage on the site and adjoining areas. Ensure that all effluent from amenities is discharged into an approved facility, or, if permitted by the controlling authority, the local sewage system. Storage of hazardous materials, dangerous goods or potential contaminants will not occur within 50 metres of drainage lines or flood prone areas. No refueling or maintenance of plant and equipment, or any other activity that may result in the spillage of a chemical, fuel or lubricant will occur on any location with direct drainage to a waterway or environmentally sensitive areas without temporary bunding. Spill clean-up equipment and materials, appropriate for the type and quantities of chemicals used on site, must be kept on site at all times during the works and in a readily accessible location. Clean up spills in accordance with the spill response procedure.		

5.11 Weeds and pest management

Action	Responsibility	Timing
All declared weeds will be managed in accordance with the *Weeds Management Act*. Weed infested areas will be identified then avoided during project activities. Weed infested areas that are programmed for disturbance will be treated appropriately prior to commencement of works to avoid spread of weeds. All personnel managing and using pesticides will receive appropriate training prior to commencing work. Weed treatment will be in accordance with the NT Weed Management Handbook. Weed hygiene will be implemented to control movement of machinery, vehicles and personnel in a manner which avoids movement of weed plants, seeds, or contaminated soil from infested areas into un-infested areas. Machinery and equipment will arrive at and depart from the site in a clean condition, free of seed or mud, and pests (i.e. cane toads). Only clean fill will be used in the works. Wastes will be contained and managed on site, including domestic wastes to prevent the introduction of pest species to the project area. This will include the use of lidded waste containers, regular removal of wastes from site, and inspections of waste containment areas to monitor for pest species.	Construction Manager	Prior to, and during the works

5.12 Fire management

Action	Responsibility	Timing
No fires will be lit for clearing vegetation or disposal of rubbish. Where fires are accidentally started, they will be extinguished immediately, if appropriate and safe to do so. Hot works such as welding not to be undertaken on days of total fire ban or high winds. Water cart kept on standby during periods of high fire danger.	Construction Manager	During the works

6 ENVIRONMENTAL MONITORING

The environmental aspects identified through the risk assessment process will be monitored throughout construction of the project. Table 6-1 provides a summary of the monitoring to be undertaken, the frequency of monitoring efforts and the proposed corrective actions to be implemented in the event that management and mitigation controls are shown to be ineffective. The monitoring aspects relate directly to Sections 5.1 to 5.12, above.

Table 6-1. Project construction environmental monitoring summary

Aspect	Monitoring	Frequency	Corrective Actions and Contingencies
Erosion and sediment control	Visual monitoring of construction activities and effectiveness of the erosion and sediment control structures. Visual monitoring of turbidity in surface water flows / drainage.	Daily visual inspections wet season and monthly during the dry season.	Revision of Erosion and Sediment Control Plan (ESCP) Implement additional efforts to stabilise disturbed soils and surfaces. Undertake regular maintenance on erosion controls during the wet season.
Spills of chemicals, hydrocarbons, or hazardous substances	Visual monitoring for signs of inappropriate chemical storage or handling. Visual monitoring for signs of spills / contaminated soils.	Daily during construction.	Clean-up spills and remove contaminated soils in accordance with the Spill Response Procedure. Conduct additional maintenance on machinery and equipment. Conduct additional training with employees regarding the storage and handling of chemicals and hazardous substances.
Dewatering	All dewatering is undertaken in accordance with the Dewatering Management Plan. Water quality testing will occur prior to release from site.	When dewatering required	Amend the project Dewatering Plan as required. Improve sediment removal systems. Remove hydrocarbons using booms/mats. Utilise flocculants to remove suspended sediments.
Pests and weeds	Machinery and equipment inspections on arrival to the project area for any organic material or seeds.	Daily upon arrival to site. Weekly during construction.	Undertake machinery and equipment wash-down prior to entry to site.

Aspect	Monitoring	Frequency	Corrective Actions and Contingencies
	Visual monitoring of the construction / disturbed site for signs of weed presence/ establishment.		Undertake further target weed spraying activities in accordance with routine operational procedures.
Traffic	Monitoring of correspondence and/or complaints received from stakeholders or interested parties.	Ongoing throughout construction.	Conduct additional stakeholder engagement and consultation efforts.
Dust emissions	Visual monitoring for excess generation of dust and direction of dust dispersion. Regular engagement with neighbours. Recording and management of complaints.	Daily during construction. As required in consultation with stakeholders.	Increase dust suppression efforts. Alteration of activities, in consultation with complainants, where possible to minimise cross-boundary impacts.
Noise and vibration	Noise level checks and maintenance records for all plant and equipment. Regular engagement with neighbours. Recording and management of complaints.	Prior to mobilisation of plant and equipment to site and as required thereafter. Daily during construction. As required in consultation with stakeholders.	Audit of plant and equipment fleet (maintenance inspections, equipment to manufactures specifications) Alteration of activities, in consultation with complainants, where possible to minimise cross-boundary impacts.
Biting insects	Visual monitoring of construction area for evidence of pooling water	Weekly during construction.	Modify construction area to eliminated areas of pooling water with drainage augmentation works.
Waste	Visual monitoring of waste management system Waste register completed and up to date.	Weekly during construction. Ongoing throughout construction.	Clean-up debris and segregate waste as appropriate. Conduct additional training with employees regarding waste management. Review waste management procedures.

A site inspection checklist for the project has been provided in Appendix E.

7 NON-CONFORMANCE AND CORRECTIVE ACTION PROCEDURES

The environmental safeguards stipulated in Section 5 provide the overarching performance indicators for the site, against which management methods can be assessed. If it is identified that the safeguards are not being met, or unexpected issues arise, a process must be in place to implement corrective actions and adapt management methods.

Any non-conformance will be documented through site inspections/audits, using the tables provided in Section 5, stating the nature of the non-conformance and the mechanisms implemented to correct the incident.

The Construction Manager should be notified of any non-conformance within 24 hours of an environmental incident occurring. Non-conformances shall be communicated to the EA Holder (Crowley) by the Construction Manager. Corrective/preventative action should be completed within a timely manner (e.g. within a maximum of seven days of the event occurring) to ensure that the incident is addressed. Records will be kept of all environmental incidents that occur, and corrective actions implemented throughout the duration of the project. If management controls are not implemented and completed in the designated manner, additional training may be required for the Construction Manager, works crews and/or subcontractors.

Corrective actions for each environmental safeguard category are provided in Table 7-1.

Table 7-1. Corrective actions for continual improvement

Category	Target	Corrective Action
Inductions and training	• All Company staff and subcontractors have received a site induction that covers all environmental responsibilities.	• Review induction records and procedures. • Revise induction procedures.
Soil erosion and sediments	• No significant erosion of works areas. • No sediment leaving site as a result of works. • No damage to environmentally sensitive sites (e.g. waterways, floodplains, threatened species habitat, significant habitat), or heritage sites due to stockpile placement.	• Install erosion and sediment controls and ensure they are monitored and maintained. • Delineate and clearly mark out areas for project materials laydown and ensure all workers and subcontractors are made aware.
Water quality	• No significant spills from project activities. • Any spill of stored product is contained within a bund or spill kit materials. • No leaks from equipment. • All dewatering offsite meets discharge criteria	• Maintain good housekeeping. • Increase bunds as required. • Maintain equipment. • Implement spill response procedure as needed. • Review treatment options and update DMP as required.
Air quality	• No significant dust creation or air quality issues resulting from the works.	• Water down disturbed areas to supress dust, when required. • Maintain equipment.
Noise and vibration	• No disturbance to stakeholders, or sensitive receptors from noise and vibrations generated by the works.	• Consult with stakeholders to ensure operations are conducted in a manner that minimises noise impacts as much as practicable. • Undertake works within nominated works hours.
Vegetation and fauna	• The presence of threatened fauna is identified within works areas prior to operations commencing.	• Ensure experienced and knowledgeable personnel are available to assist with the removal of any native fauna.

Category	Target	Corrective Action
	• No threatened flora or fauna species harmed during the works. • All vegetation clearing has prior approval from the relevant authority (i.e. DIPL, DEPWS).	• Delineate and clearly mark out areas for clearing and ensure all workers and subcontractors are made aware. • Identify and exclude any threatened vegetation from clearing activities.
Cultural and historic heritage	• No damage to heritage or Aboriginal artefacts or sites.	• Consult the NT Heritage Branch and AAPA in the event that a heritage or Aboriginal artefact or site is discovered.
Waste management	• No inappropriate disposal of waste or recycling. • No waste left on site following completion of the works. • Site to be clean and tidy.	• Review recycling and waste disposal processes and amend waste management practices. • Maintain good housekeeping.
Hazardous materials and dangerous goods	• All hazardous materials and dangerous goods to be handled and stored appropriately. • No spills or site contamination.	• Maintain a designated storage area for all hazardous materials and dangerous goods. • Implement spill response procedure as needed. • Undertake further training with all workers and subcontractors.
Weeds and pest management	• No new weeds or pests introduced to site, and/or spread of existing weeds and pests.	• Review weed management procedures. • Establish exclusion areas for existing weed infestations. • Implement weed management practices as per the NT Weed Management Handbook. • Remove or contain all pest attractants. • Ensure vehicles are cleaned for weeds and pests prior to entry to site.
Fire management	• No deliberate or accidental fires resulting from the works.	• Undertake further training with all workers and subcontractors.

8 EMERGENCY RESPONSE PROCEDURES

Emergency response planning includes responses to environmental emergencies, and operational actions that cause an environmental incident. The project has a specific Emergency Response Plan (ERP) and Cyclone Management Plan which provide detailed information regarding the types of emergencies that could be experienced at the project as well as specific procedures for bushfire, flood events, cyclones, and severe weather. The ERP also outlines the roles and responsibilities of the Emergency Response Team in responding to emergencies. These plans should be read in conjunction with this CEMP.

General emergency response preparedness is undertaken through the following actions:

- Ensure that all personnel including management have received a site induction that specifically covers emergency response procedures.
- The Site Manager and ERT regularly liaise with staff to ensure that they are competent in responding to emergencies.
- Conduct regular inspections on all emergency response equipment and ensure that all equipment is in good working order.

- Undertake emergency drills to ensure all employees and contractors can be accounted for, assess response to the drill and provide learnings and continual improvements.
- Following an emergency event, undertake an incident debrief and provide all staff with training into improved emergency response procedures or actions.

8.1 Spill response procedure

All spills will be addressed under the following procedure:

- **Assess** the spill by determining:
  - The type of spill
  - Location of the spill
  - Source of the spill, and whether it can be isolated
  - The requirements to address the spill – i.e. personal protective equipment, volume of spill control materials, etc.
- **Severity** of the spill as per Table 8-1 and Table 8-2.

Table 8-1. Assessing the severity of the spill

Type	Potential Consequence
Minor	Reversible and localised impact on the environment. OR Environmental impact requires a programmed commitment of time and/or money to remediate OR would take less than 2 years to recover naturally.
Moderate	Significant but reversible, OR irreversible and localised, impact on the environment. OR Environmental impact requires a programmed commitment of moderate time and/or money to remediate OR would take 2-10 years to recover naturally.
Major / severe	Significant AND irreversible impact on the environment. OR Environmental impact requires emergency commitment of significant time and/or money to remediate OR would take more than 10 years to recover naturally.

In terms of volume, the following can be used as a guideline for determining severity.

Table 8-2. Volume of spill to determine severity

Minor	<100 L to inland waters/land
Moderate	100 – 1,500 L to inland waters/land
Major / sever	>1,500 L to inland waters/land

- **Secure** the spill – if safe to do so, the spill should be immediately secured, by eliminating the source, barricading the area to prevent personnel from accessing the area unnecessarily.
- **Control** the spill – by constructing an earthen bund, or by deploying suitable absorbent spill kit materials (i.e. absorbent booms, absorbent pads, granular absorbents, disposable bags and ties).
- **Dispose** of the contaminated material – which will be determined by the nature and extent of the spill. Advice will be sought from local Councils and the relevant authorities (i.e. the NT EPA) to

determine the appropriate disposal method for the contaminated material. Used absorbent material including granular absorbents, boom and pads shall be put into disposable bags, tied and placed in regular waste bins. Bags will be clearly labelled and transported to a licensed waste disposal facility as soon as possible.

- **Report** the spill – Any spill within the project construction area is to be reported to the Project Manager as soon as possible (and within 24 hours). The Project Manager will be responsible for completing the Section 14 Incident Report Form and reporting the spill to the EA Holder (Crowley) within 12 hours. Moderate or major spills will also need to be reported to the NT EPA.

8.2 Incident reporting

The Construction Manager is the contact person for all emergencies and environmental incidents. The Construction Manager will assist the EA Holder (Crowley) with notification to the administering authority, which must occur within 24 hours of the person responsible for notifying becoming aware of an incident that may have caused or threatens serious or material environmental harm. Report to the NT Environmental Protection Authority (NT EPA) using the Section 14 Incident Report Form as soon as possible after the event, and in any case within 24 hours, as required under Section 14 of the NT *WMPC Act*.

The details of the designated contact persons for emergencies and environmental incidents are included in Table 8-3. This includes contacts for reporting pollution incidents (including non-urgent problems such as dust/noise), heritage and Aboriginal cultural heritage incidents, and contacts for provision of advice.

In the event of an unauthorised discharge, the NT EPA will be notified with a Section 14 pollution incident report Section 14 Incident Report Form . All reasonable attempts will be made to control, contain, clean-up and dispose of the material. An incident investigation will occur to prevent future reoccurrence and conduct environmental monitoring to mitigate prolonged potential risk to the environment.

Table 8-3. Emergency contact details

Entity	Contact Details
NT EPA Pollution Hotline / Pollution reporting	Level 1 Arnhemica House, 16 Parap Road, Parap NT 0820 Pollution Hotline: 1800 064 567 pollution@nt.gov.au
NT Police / Fire	131 444 / 000
Construction Manager	Chip Anderson 0458 042 429 canderson@latitude63.com
Construction Manager	Todd Dow 0488 399 297 Todd@latitude63.com
DEPWS - Works on waterway, fauna sightings, vegetation clearing	Level 1, Goyder Centre, 25 Chung Wah Terrace, Palmerston NT 0830 08 8924 4218 (general services) 08 8999 4455 (water resources general enquiries)
CROWLEY	David Attewill 042 658 234 David.Attewill@crowley.com Angel Watson 904 676 0518 Angela.Watson@crowley.com Scott Mulvihill 907 434 1901 Scott.Mulvihill@crowley.com

8.3 Training and awareness

All construction personnel will complete a site induction prior to commencing work on-site. The induction will include details of the emergency procedures, site familiarisation, environmental awareness, incident reporting, spill response, and familiarisation of the CEMP. A training and induction register will be maintained.

All personnel required to operate machinery and complete their required duties will be appropriately trained, licensed and suitably qualified. All personnel will have a valid construction industry white card and undergo training in first aid and spill response.

9 CONSULTATION AND COMMUNICATION

9.1 Stakeholder engagement

Consultation with stakeholders is undertaken directly through written (letters, emails) or verbal communication (meetings, phone calls) as required. Consultation and communication around environmental requirements and issues are discussed in the Project Weekly Meeting. Relevant stakeholders for the project are outlined in Table 9-1.

Table 9-1. Stakeholder consultation

Stakeholder	Relationship
NT Government	
NT EPA	Environmental assessment, pollution reporting
DIPL	NT Development Consent Authority - DA
Client	
Crowley	Client
Workforce	
Latitude 63	Construction of the BFSF
Employees	Project construction workforce
Subcontractors	Project construction workforce
Surrounding land users	
Vopak	Neighbour – stakeholder engagement
Land Development Corporation	

9.2 CEMP communication

The EA Holder (Crowley) has communicated the requirements relating to construction activities in Environmental Approval EP2021/008-002 and Development Permit DP21/0311 to the Construction Manager. The Construction Manager has prepared the CEMP to address and capture the requirements of the relevant approval documents. The CEMP will be communicated to all construction subcontractors as part of the on-boarding process to ensure they are aware of the expectations and requirements relating to environmental management at the site.

9.3 Complaint management

For any complaints received regarding the operations of the farm or associated activities, a register of complaints will be kept by the Company that records:

- Date and time of complaint
- Method by which complaint was made (i.e. telephone, letter, meeting, etc.)
- Name, address, contact telephone number of complainant
- Details of complaint
- Action taken in response to the complaint, including follow up contract with the complainant
- Any monitoring to confirm the complaint has been satisfactorily resolved
- If no action was taken, the reason for no action being taken.

10 ENVIRONMENTAL AUDIT PROGRAM

Compliance with this CEMP will be audited on a monthly basis to verify compliance with the provisions in Section 5 or else to prompt taking action to rectify items that do not comply. The outcomes of the compliance audit will be presented in a summary report.

Both internal and external reporting requirements are identified within this CEMP. Internal reporting requirements will include:

- Communication, consultation and training outcomes
- Daily and weekly inspection checklists
- Monthly and annual report on monitoring, environmental compliance, incidents and corrective actions
- Records and logs of construction and operational activities
- Internal incident reports
- Monitoring data.

External reporting is required to meet client conditions and statutory requirements

- Annual report on compliance to client
- Incident report to environmental authorities where environmental harm has occurred.

Monitoring and auditing data will be used as a basis for continual review and improvement of the CEMP, and may also be prompted by any of the following:

- Complaints received
- Changes in regulatory requirements
- Changes in best-practice monitoring methods
- Changes in construction activities.

APPENDIX A - ENVIRONMENTAL APPROVAL

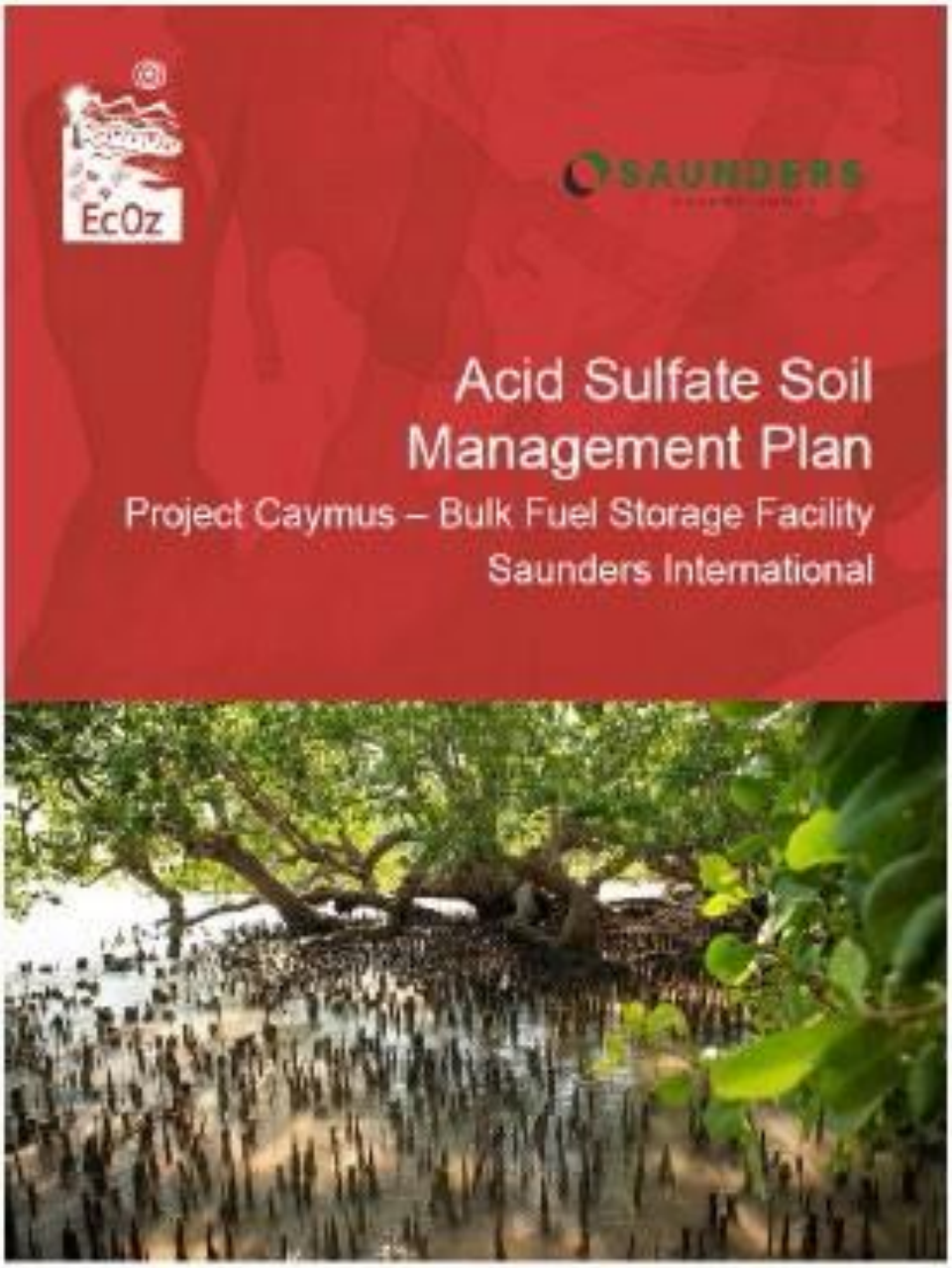
NORTHERN TERRITORY GOVERNMENT

Environmental Approval

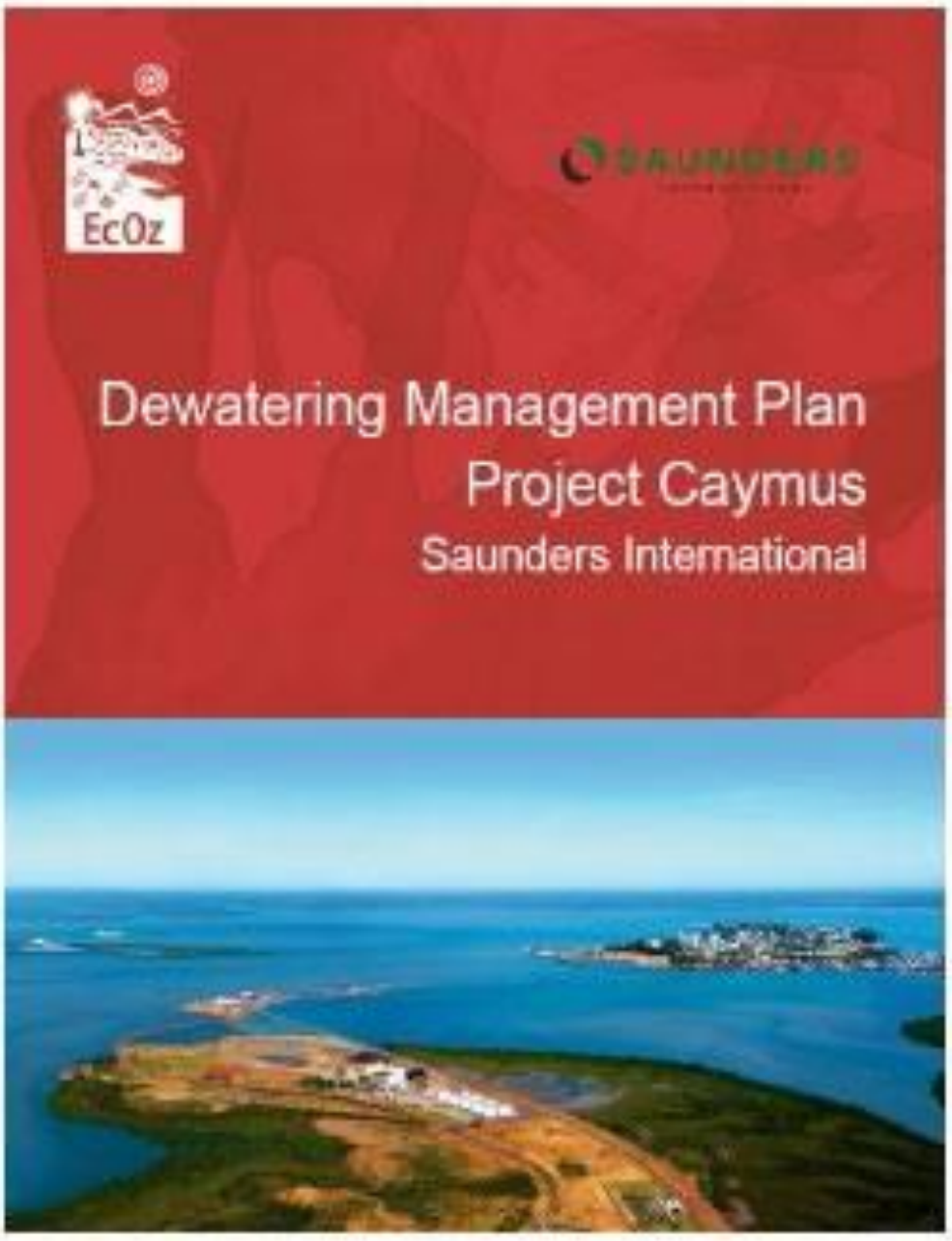
SECTION 65 OF THE *ENVIRONMENT PROTECTION ACT 2019*

Approval number	**EP2021/008 – 002**
Approval holder	Crowley Australia Pty Ltd
Australian Company Number (ACN)	654 468 836
Registered business address	Crowley Australia Pty Ltd Level 1, 8 Beulah Road Norwood, South Australia 5067
Primary contact	Sean Thomas +1.907.777.5542 Sean.Thomas@crowley.com
Action	To construct and operate a bulk fuel storage facility and ancillary infrastructure for the transfer and storage of jet fuel, East Arm, Darwin (Appendix 1).
Address of premises	740 Berrimah Road, East Arm NT 0822, Sections 5720, 5673, 6350, and 5790 Hundred of Bagot
NT EPA Assessment Report number	93
Decision maker	Jo Townsend Chief Executive Department of Environment, Parks and Water Security Delegate for the Minister
Date of approval	25 May 2023

APPENDIX B - ACID SULFATE SOIL MANAGEMENT PLAN



APPENDIX C - DEWATERING MANAGEMENT PLAN



APPENDIX D - SITE INSPECTION CHECKLIST

Caymus Project Environmental Site Inspection Checklist

Work Area / Location:		Date and Time:
Inspected by (include all personnel who took part in the inspection)	Name(s):	
	Position(s):	
	Signature(s):	

#	Inspection items	Yes	No	N/A	Comments
General site management					
1.	Have all actions raised in the previous inspections been closed out?	☐	☐	☐	
2.	Have all actions from any reoent environmental incidents been adequately investigated and appropriately addressed?	☐	☐	☐	
3.	Is the work area free from visible incidents (i.e. chemical / hydrocarbon spills, leachate pools etc.)?	☐	☐	☐	
4.	Have all incidents been reported?	☐	☐	☐	
Water quality management					
5.	Are all drainage lines unobstructed?	☐	☐	☐	
6.	Are erosion and sediment control structures intact and maintained (in good working order)?	☐	☐	☐	
7.	Are surface water structures free from erosion or scour?	☐	☐	☐	
8.	Is potentially contaminated storm water prevented from being discharged into the environment?	☐	☐	☐	
9.	Is dewatering being undertaken in accordance with the Dewatering Management Plan?	☐	☐	☐	
10.	Is all concrete washout occurring in appropriate bunded areas?	☐	☐	☐	
Dust and aesthetics management					
11.	Is the work area free from excessive visible dust?	☐	☐	☐	
12.	Are activities in the area creating minimal dust?	☐	☐	☐	
13.	Is dust suppression of dirt roads and other cleared areas being undertaken where excessive dust is visible?	☐	☐	☐	
14.	Are speed limits being enforced at site to reduce dust?	☐	☐	☐	
15.	Is there scattered rubbish around the site?	☐	☐	☐	
Noise management					
16.	Are all equipment and machinery being maintained to manufacturers standards to prevent noise issues?	☐	☐	☐	
17.	Are any operations occurring outside standard work hours? Have the public, users and surrounding land owners been notified of works?	☐	☐	☐	