Jemena
Port Kembla Pipeline Project
CONSTRUCTION ENVIRONMENTAL MANAGEMENT PLAN

Document No.: GAS-599-PA-EV-001 | Revision 4

Rev	Description	By	Checked	QA	Nacap Approved	Date
4	Issued for Use	BRO	RPO	BPH	JHE	30-NOV-2022
3	Issued for Use	BRO	RPO	BPH	JHE	18-NOV-2022
2	Issued for Use	BRO	HHE	BPH	JHE	30-SEP-2022
1	Issued for Use	BRO	HHE	BPH	JHE	19-AUG-2022
0	Issued for Use	BRO	BPH	NFU	JHE	8-AUG-2022
B	Issued for Review	BRO	ZFR	BPH	JHE	23-MAY-2022
A	Issued for Review	BRO	JHE	BPH	JHE	28-MAR-2022

REVISION HISTORY

This table describes changes made for numerical revisions after Rev 0

Date	Rev	By	Description
19/08/2022	1	BRO	Implementation of minor comments following Jemena review – CODE 2
30/09/2022	2	BRO	Implementation of minor updates following review of subplans
14/11/2022	3	BRO	Updates following DPE review.
30/11/2022	4	BRO	Minor update following DPE review.

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LIST OF EMERGENCY AND KEY CONTACTS

Organisation/Position	Contact Details
Environment Line (EPA Pollution Hotline)	131 555 The Environment Line handles general inquiries about environmental issues and takes reports of pollution for which the EPA has regulatory responsibilities. Environment Line is a one-stop pollution and environmental incident reporting service provided by Environment and Heritage Group (EEG) and EPA.
Fire and Rescue NSW	000 (for pollution incidents that present an immediate threat to human health or property) 1300 729 579 (for pollution incidents that do not present an immediate threat to human health or property)
Wollongong Council	General Enquiries (02) 4227 7111
NSW Ports	General Enquiries 1300 922 524
Port Authority NSW	24-hour community enquiries and complaints line (02) 9296 4962 enquiries@portauthoritynsw.com.au
Port Kembla Coal Terminal	Administration (02) 4228 0288
BlueScope	Laura Davis Laura.davis@bluescopesteel.com +61 467728547
Transport for NSW	General Enquiries (02) 8202 2200

Organisation/Position	Contact Details
GrainCorp	Dylan Clarkson +61 409 739 697 dclarkson@graincorp.com.au
AIE	Andrew Petch +61 401 175 917 Andrew.petch@ausindenergy.com
Jemena	Community Feedback - 1300 081 989 Justin Anderson 0435 092 889 justin.anderson@zinfra.com.au
Nacap	Jason Heard Nacap Project Manager j.heard@nacap.com.au +61 488 087 393

ACRONYMS

Term	Meaning
AIE	Australian Industrial Energy
ALARP	As Low As Reasonably Practicable
AQMP	Air Quality Management Plan GAS-599-PA-EV-005
ARA	Appropriate Regulatory Authority
AS/NZS	Australian Standard/New Zealand Standard
ASS	Acid Sulfate Soils
BC Act	Biodiversity Conservation Act 2016
BCD	Biodiversity Conservation Division
BDAR	Biodiversity Assessment Report
BMP	Biodiversity Management Plan GAS-599-PA-EV-006
CEMP	Construction Environmental Management Plan (this plan)
CEP	Construction Execution Procedures
CIL	Cringila Inlet Facility
CLL	Construction Line List
CoA	Conditions of Approval
CPESC	Certified Professional in Erosion and Sediment Control
CROW	Construction Right-of-Way
CSSI	Critical State Significant Infrastructure
CTR	Compliance Tracking Register
DLP	Defects Liability Period
DN	Diameter Nominal

Term	Meaning
DPE	Department of Planning and Environment
EA	Environmental Assessment
EC	Endangered Community
EEC	Endangered Ecological Community
EES	Environment, Energy and Science Group
EGP	Eastern Gas Pipeline
EIS	Environmental Impact Statement
ELL	Environmental Line List
EOL	End of Line
EPA	Environment Protection Agency
EMM	Environmental Management Measure (as developed as part of the EA)
EMS	Environmental Management System
ENM	Excavated Natural Material
EPL	Environmental Protection Licence
ESA	Environmental Sensitive Area
ESCP	Erosion and Sediment Control Plan
ISO	International Standards Organisation
KGMS	Kembla Grange Meter Station
KP	Kilometre Point
LECH	Land, Environment and Cultural Heritage
LLL	Landowner Line List
MIJ	Monolithic Insulating Joint

Term	Meaning
MNES	Matters of National Environmental Significance
NATA	National Association of Testing Authorities
NCR	Non-Compliance Report
NDT	No Destructive Testing
NMP	Noise Management Plan GAS-599-PA-EV-004
NPW Act	National Parks and Wildlife Act 1974
NRAR	Natural Resources Access Regulator
NSW	New South Wales
NTU	Nephelometric Turbidity Unit
OOHW	Out of Hours Work
PASS	Potential Acid Sulfate Soils
PCT	Plant Community Type
PKGT	Port Kembla Gas Terminal
PKL	Port Kembla Lateral
PKPP	Port Kembla Pipeline Project
POEO Act	Protection of the Environment Operations Act 1997
PPE	Personal Protective
Principal	Jemena
RAP	Registered Aboriginal Party
ROW	Right of Way (Construction Easement)
RFT	Request For Tender
RMS	Roads and Maritime Services

Term	Meaning
SDS	Safety Data Sheet
SEPP	State Environmental Protection Policy
SOW	Scope of Work
SSD	State Significant Development
SSI	State Significant Infrastructure
SWMP	Soil and Water Management Plan
SWMS	Safe Work Method Statements
TEC	Threatened Ecological Community
TfNSW	Transport for NSW
TMP	Traffic Management Plan
WAL	Water Access Licence
WAP	Works Activity Procedure
4WD	4 Wheel Drive
VENM	Virgin Excavated Natural Material
WMP	Waste Management Plan GAS-599-PA-EV-008

GLOSSARY

Term	Meaning
Company/Principal	Jemena / AIE
Contractor	Nacap
Environmental Aspect	An element of an organisation's activities or products or service that can interact with the environment.

Term	Meaning
Environmental Assessment	Includes the following EIS and Modification Reports: > Port Kembla Gas Terminal EIS and Modifications 1, 2 and 3, and > Eastern Gas Pipeline EIS and Modifications 1 and 2.
Environmental Impact	Any change to the environment whether adverse or beneficial, wholly or partially resulting from an organisation's environmental aspects.
Hazard	A source or a situation with a potential for harm in terms of human injury or ill-health, damage to property, damage to the environment, or a combination.
HAZID	Hazard Identification risk assessment
Incident	An occurrence or set of circumstances that: > causes or threatens to cause material harm to the environment; and > may or may not be or cause a non-compliance
Landcom Blue Book	Provides updated guidance for the design, construction and implementation of measures to improve stormwater management, primarily erosion and sediment control, during the construction-phase of urban development.
Material harm to the environment	Section 147 of the POEO Act defines material harmto the environment as: (a) harm to the environment is material if— (i) it involves actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial, or (ii) it results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000 (or such other amount as is prescribed by the regulations), and (b) loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment.
Non-compliance	An occurrence, set of circumstances, or development that is a breach or exceeds the limits of performance measures and or criteria outlined in the relevant approval and subsequent management plans.
Non-conformance	A non-conformance occurs where Work is completed that is not in accordance with the specified standards.

Term	Meaning
Pre-Commencement Form 2	Nacap utilise a system, which acts as a project control gateway (known as a Form 2) for each construction activity to commence. The Form 2 is a document reviewed and signed off by LECH Manager and Project Manager. This form is a pre-commencement gateway for each construction activity within a discrete section of works. The Form 2 is a key means of communicating to the activity supervisor management controls for any given portion of the works.
Project	Port Kembla Pipeline
Regulatory Requirements	Government acts and regulations that are environment specific which prescribe legal obligations encompassing the employer and contractor.
Risk	Effect of uncertainty on objectives. Often expressed in terms of a combination of the consequences of an event (including changes in circumstances) and the associated likelihood of occurrence [ISO Guide 73:2009, definition 1.1]
Stakeholder	Party with vested interest in the works
Third Party	Any party external to the works that has been identified as a stakeholder

1 INTRODUCTION

1.1 Background

Australian Industrial Energy (AIE) have approval to build a new Liquid Natural Gas (LNG) import terminal at the Port Kembla inner harbour with the aim to sell gas to the east coast market. The gas is planned to be processed on a Floating Storage and Regasification Unit (FSRU) and imported into the existing gas networks through a new pipeline that will connect the AIE Port Kembla Gas Terminal (PKGT) with the Jemena owned gas transmission network via the Eastern Gas Pipeline (EGP). In February 2021, Jemena and AIE entered into a Project Development Agreement.

The Port Kembla Pipeline Project (PKPP) involves the construction of an approximately 12.1 kilometres long, 18" (DN450) buried steel gas transmission pipeline and a new End of Line (EOL) facility in the vicinity of the Jemena's existing Kembla Grange Metering Station (KGMS). The proposed PKPP Project is comprised of three sections (refer to Figure 1):

- Segment 1.1 – 4.3 km pipeline from PKGT to Springhill Road to be built by Jemena; owned by AIE with some services provided in operation by Jemena.
- Segment 1.2 – 2.2 km pipeline from Spring Hill Road to Five Islands Road, and
- Segment 2 – 5.6 km pipeline from Five Islands Road to KGMS which includes the Kembla Grange Tie-in Facility to be built, owned and operated by Jemena.

The project is approved by the Department of Planning and Environment (DPE) under a number of Infrastructure Approvals:

- SSI-9471 Port Kembla Gas Terminal Infrastructure Approval under Section 5.19 of the Environmental Planning and Assessment Act 1979 which incorporates Segment 1.1 and 1.2.
- SSI-9973 Eastern Gas Pipeline Modification 1 - Port Kembla Lateral Pipeline Infrastructure Approval under section 5.25 of the Environmental Planning and Assessment Act 1979 pertains to Segment 2.
- SSI-9973 Eastern Gas Pipeline Modification 2 - Transfer of Pipeline Segment to transfer Segment 1.2 from AIE SSI-9471 PKGT Infrastructure Approval.
- Modification to the AIE SSI-9471 Port Kembla Gas Terminal to remove segment 1.2 from the Infrastructure Approval.
- Staging Plan approved by DPE for SSI-9471
    - Stage 1: Early Enabling Works commenced in May 2021
    - Stage 2a: Marine Berth Construction – Land Based commenced January 2022
    - Stage 2b: Marine Berth Construction and Dredging – Land and Marine based commenced March 2022, and
    - Stage 3: Pipeline installation including ties ins, proposed to commence in June 2022
- Staging Plan approved by DPE for SSI-9973
    - Stage 1: Pipeline installation, and
    - Stage 2: Construction of Kembla Grange Metering Station (KGMS)

1.2 Purpose of this CEMP

This Construction Environmental Management Plan (CEMP) presents the framework for environmental management for the PKPP Project and includes sub plans and associated environmental management measures. This CEMP has been prepared to ensure construction is carried out in accordance with project regulatory requirements, all relevant standards (including ISO 14001), procedures, resources and practices to ensure that all reasonable and practical measures to mitigate all identified environmental risks to as low as reasonably practicable (ALARP) and to ensure that the activities across all works do not pollute the environment in a way which causes or may cause environmental harm.

This CEMP and subplans adopts an integrated approach considering and identifying environmental management measures overarching the sequencing of construction related activities as well as detailing the environmental aspects and management measures specific to the PKPP Project. This CEMP prescribes all applicable procedures, processes and practices to be undertaken by Nacap personnel and subcontractors in order to manage environmental risk, effectively minimising impacts on the surrounding environment, and to ensure compliance with regulatory and other obligations during delivery.

This CEMP and sub-plans present the framework for environmental management for the Project and have been prepared to:

- Comply with Project Approvals:
    - SSI-9471 dated 24 April 2019 and consolidated Conditions of Approval (CoA) dated 3 September 2020, and
    - SSI-9973 dated 12 November 1997 and consolidated Conditions of Approval (CoA) dated 4 May 2022.

- Comply with all applicable legislation and regulatory requirements
- Comply with Nacap's corporate Environmental Management System (EMS) certified to AS/NZS ISO 14001:2015
- Support the Environmental Management Strategy as required under Schedule 4, Condition 1 of SSI-9471
- Align with the Post Approval Guidance - Environmental Management Plan Guideline for Infrastructure Projects April 2020
- Identify and provide specific mechanisms for Project compliance with applicable policies, approvals, licences, permits, consultation agreements and legislation
- Describe the environmental management related roles and responsibilities
- Identity environmental management objectives, management measures and monitoring and evaluation requirements including auditing and reporting
- Identify and provide specific mechanisms for Project compliance with applicable policies, approvals, licences, permits, land access and consultation agreements and legislation
- Identify training and awareness requirements for personnel and subcontractors
- Provide specific mitigation measures and controls that will be applied on-site to avoid or minimise adverse environmental impacts and how these will be managed
- State objectives and targets for issues that are important to the environmental performance of the Project
- Describe how the management and mitigation controls will be monitored to ensure they are being adequately implemented
- Manage complaints, incidents, non-conformance and associated corrective action management
- Manage reporting and notifications to authorities, regulators and stakeholders as required, and
- To mitigate all identified environmental risks to as low as reasonably practicable (ALARP).

1.3 Scope of this CEMP

It is proposed that this CEMP and sub plans apply to all environmental aspects of the Project arising from works in accordance with the approved staging plan across SSI-9471 (Stage 3 – pipeline construction) and SSI-9973 (Stage 1 – pipeline installation) as per the approved Joint Post Approval Strategy Memo dated March 2022 attached as Appendix A and as outlined below in Table 1.

This CEMP will inform Project Managers, Supervisors, Construction Personnel, Subcontractors and relevant stakeholders on the management of the Project Environment during construction activities.

This CEMP forms part of the Project Construction Environment Management System and describes the mitigation and management measures and protocols derived from the Project environmental assessment (EA) and associated Modifications.

This CEMP applies to the Construction phase of the works only and in accordance with the CoA will be implemented during construction.

Table 1 – CEMP scope relevant to SSI-9471 and SSI-9973

Infrastructure Approval	Post Consent Stage	Description of Works	Segment of Works

			As detailed in Sect 1.4 and Figure 1
SSI-9471	Stage 3	Pipeline construction from PKGT to KGMS	Segment 1.1
SSI-9973	Stage 1		Segment 1.2
			Segment 2

1.4 Project Description

The Project comprises the following Works:

- Construction and pre-commissioning of approximately 12.1 km of DN 450 high pressure gas transmission pipeline between AIE Port Kembla Gas Terminal (PKGT) and the EOL Facility at Kembla Grange, and
- Construction and installation of approximately 120m of DN 450 high pressure gas transmission pipeline between the EOL and the hot tap tie in point on the EGP.

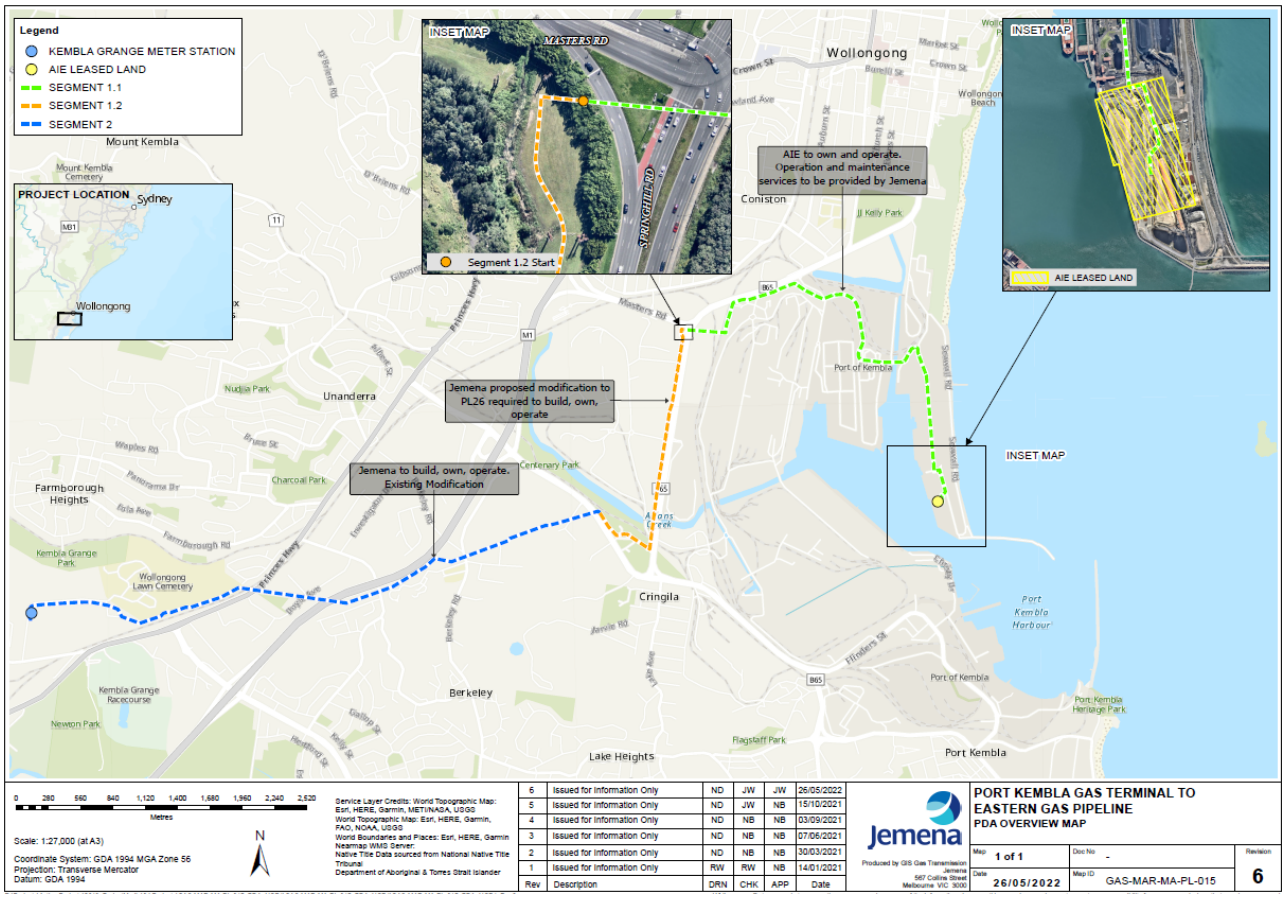


Figure 1 – Project Layout

1.5 References

The following are principal documents referenced in this document:

Table 2 – Reference Documents

Document No.	Title of Document
GAS-551-SW-PL-001	Pipeline Construction SOW
GAS-556-SP-PL-007	Construction Specification
GAS-599-HSE-004	Environmental Management Plan
GAS-554-AC-PM-001	SSI 9471 - Port Kembla Gas Terminal - Infrastructure Approval
GAS-556-AC-PM-001	SSI 9973 Modification 1 - Port Kembla Lateral Looping Pipeline – Infrastructure Approval
GAS-599-PA-RA-001	Joint Post-Approval Strategy - AIE's Port Kembla Gas Terminal to Jemena's Eastern Gas Pipeline
GAS-599-RP-RA-007	Eastern Gas Pipeline - Port Kembla Lateral Looping Modification Report
GAS-599-RP-RA-008	Eastern Gas Pipeline Modification 2 - Modification Report
	Port Kembla Gas Terminal Environmental Impact Statement

1.6 Principal Contractor Details

Table 3 – Principal Contract Details

Nacap Details	
Business name:	Nacap Pty Ltd
Address:	Ground Floor, 599 Doncaster Road, Doncaster Victoria 3108
ABN:	33 006 306 994
Main phone number:	03 8848 1888
Contact person:	Jason Heard Nacap Project Manager
Contact mobile:	+61 488 087 393
Contact email:	j.heard@nacap.com.au

1.7 Construction methodology and timing

The construction methodology for the works will generally involve but not be limited to:

- Early access works comprising:
  - Environmental investigations, monitoring and works including installation of environmental controls to prepare the site ahead of construction
  - Areas of work where access is available and approved prior to full site access dates, and
  - Establishment of pipe yard, laydowns, site offices and ablutions.
- Site survey and set out
- Construction ROW (CROW) preparation
  - Development and maintenance of project access points, tracks and roads
  - Location and non-destructive confirmation of all foreign services
  - Property management works to enable CROW access and construction

- Installation of temporary construction gateways where specified,
- Installation of erosion temporary drainage, erosion and sediment controls, and
- Clear and grade of the CROW as specified

- Transport of pipe to the CROW including stringing and bending operations
- Trenching works
- Trenchless crossing works
  - Horizontal directional drilling (HDD)
  - Thrust bore
- Welding and Non-Destructive Testing (NDT)
- Field joint coating works
- Lowering in of pipe and backfill
- Facility tie in works
- Mainline valve works and tie ins
- Cathodic Protection Works
- Hydrostatic testing
- Other pipeline works as specified:
  - Property Management Works
  - Permanent fencing and gateways
  - Watercourse rehabilitation
  - Trench breakers
  - Pipeline marker posts
  - Miscellaneous works required to satisfactorily complete the works
- Inspections, monitoring and auditing of construction works
- Waste management
- Decommissioning and removal of temporary works and facilities including offices and ablutions
- Removal of temporary drainage, erosion and sediment controls
- Installation of permanent drainage, erosion and sediment controls, and
- Reinstatement and restoration of land to pre-disturbance condition, rehabilitation and monitoring (including DLP).

Construction is expected to commence in October 2022 for a duration of approximately 11 months with practical completion forecast for September 2023.

1.8 CEMP Approval

1.8.1 Internal approval of CEMP and Subplans

This CEMP and associated Subplans will undergo ongoing review by Nacap, AIE and Jemena Project Management including relevant subject matter experts providing support to the Project. Feedback received will be reviewed and, where necessary, incorporated into this CEMP in advance of any statutory consultation and review. Following the review and revision process, internal signoff by the Project Management Team representative will be provided.

1.8.2 External approval of CEMP and Subplans

Consultation on this Plan will be undertaken with the following stakeholders:

- Department of Planning and Environment (DPE)
- Transport for NSW (TfNSW)
- Wollongong City Council, and
- Sydney Trains

Comments and feedback received during consultation will be incorporated into the Plan where relevant before being submitted to the DPE for approval.

Details of the consultation associated with this Plan is presented in Appendix B.

1.9 CEMP Distribution

A controlled hard copy of this CEMP and supporting documentation will be maintained and reside at the Project construction site office. Registered copies of this CEMP and supporting documentation will be distributed to the Project team, the DPE, all relevant personnel and interested third parties as required. It will also be available to view on the Project website(s).

https://jemena.com.au/pipelines/eastern-gas-pipeline

https://ausindenergy.com

2 COMMUNICATION

2.1 Regulatory Consultation and Communication

All communication with DPE, Agencies and other Stakeholders associated with the Project will be directed through the Nacap Project Manager who will liaise with the AIE and Jemena Representatives to identify the required support and response requirements.

2.2 Internal Communication

The immediate day-to-day responsibility for communication lies with the Site Project Management Team

The following internal communication forums will occur during the execution of works:

- Inductions
- SWMS Workshops
- Daily Pre-start meetings

- Field based awareness talks regarding specific aspects and known heritage sites
- Regular toolbox meetings (project workforce), and
- Weekly construction management team meetings

2.3 Community, External and Third-Party Communications

Regular communication with stakeholders/landholders will be undertaken during construction activities. Nacap is committed to supporting AIE and Jemena as the primary contacts in the development and maintenance of relationships with landholders and communities along the PKPP route to engender a positive culture in delivery of safe operations into the future.

Nacap will build upon the stakeholder and community engagement phase undertaken by both AIE and Jemena during project development. Consultation and communication will continue throughout the construction phase with the following key methods of engagement to be provided by AIE and Jemena and supported by Nacap on an on-going basis:

- Community Information Line
  - AIE (1800 789 177)
  - Jemena (1300 081 989)
- Project Website (including access to Project updates and newsletters:
  - AIE https://ausindenergy.com
- Jemena https://jemena.com.au/pipelines/eastern-gas-pipeline/port-kembla-lateral-looping
- Project contact email
  - AIE info@ausindenergy.com
  - Jemena portkembla@jemena.com.au
- Face to face discussions and onsite meetings, and
- Written notifications, emails and phone calls.

The Project Lands and Stakeholder Management Plan (GAS-599-PA-LM-003) will provide the framework and guidance for the conduct of Nacap's communication and interface with stakeholders/landholders.

All significant stakeholder/landholder issues not readily resolved by Nacap construction personnel shall be directed to the Nacap Supervisor who will notify the Nacap Project Manager. Issues received via Nacap requiring dispute escalation will be referred to the relevant AIE and or Jemena Representative. Complaints and disputes will be managed in accordance with Section 2.5.

All communications will be recorded in the Nacap communications register and provided to AIE and Jemena periodically and as requested.

2.4 Media Protocol

If any Project personnel have any contact with a media representative, they will:

- Respond in a polite and courteous manner, and
- Inform the media representative that they are not the authorised spokesperson and provide contact details for the relevant AIE and Jemena representative or nominated media contact.

2.5 Complaints and Disputes Management

Complaints and disputes received through the AIE and Jemena community contact portals described above will be managed directly by AIE and Jemena in accordance with the relevant AIE and Jemena corporate complaints management system. This will include dispute management and escalation. The Nacap Project Manager and LECH Manager will receive advice and provide support in the management and close out of any complaints received requiring Nacap response and corrective action in accordance with the Contract and as described below.

In the event of complaints or disputes raised directly with Nacap during construction by landholders and any relevant Stakeholders such as members of the community, the relevant AIE and Jemena representative will be notified immediately. The Nacap LECH Manager will be responsible for the management of complaint, the details of which shall be entered into the Project Complaints Register for monitoring of appropriate close-out and resolution.

The following details will be recorded and provided to the relevant AIE and or Jemena Representative:

- Name, address and contact details of the complainant
- Details of the complaint, and
- Corrective actions

An incident report where required will be provided within 24 hours.

Complaints from the broader community will also be referred to AIE or Jemena representative or lodged via the relevant community portal or online Project Complaints Management System. In this regard, the broader community is defined as individuals or organisations not directly affected by the construction process undertaken by the Project.

3 ENVIRONMENTAL PLANNING AND GOVERNANCE

3.1 Planning and Governance

This CEMP sits within the framework of the Environmental Management System (EMS) certified to ISO14001:2015, outlined in Section 4.1. This CEMP is supported by a series of environmental subplans, procedures and internal protocols to maintain a high level of governance with Project environmental requirements. Where appropriate, the environmental requirements will be integrated into site-specific documentation as discussed in the sections of this CEMP that follow.

The Nacap EMS includes subscription to an environmental legislation monitoring service (Enviro Matters Environmental News Alerts), to ensure the works remain up to date with changing environmental legislation or other requirements. Further, Nacap also maintains a subscription to SAI Global, the online service of Standards Australia, so that all management staff can access the latest relevant standards as required.

The Lands Environment and Cultural Heritage (LECH) Manager is responsible for reviewing the updates to determine the relevance of the change. When necessary, this CEMP, subplans and any other subordinate documents will be amended to ensure compliance. Regulatory approvals will be obtained or amended as necessary and work practices altered to ensure compliance. All relevant Nacap personnel and subcontractors will be advised of the change through pre-starts, toolbox talks, specific training and other methods detailed in Section 4.

The EMS is supported by project risk assessments, regulatory and the Project environmental requirements and site-specific documentation.

3.2 Legal and Other Requirements

Compliance with environmental planning regulatory obligations is essential for successful and lawful completion of the works. This CEMP outlines how Project personnel will undertake measures to manage all environmental impacts, in compliance with all relevant environmental legislative requirements.

A register of relevant legal requirements for the Project is contained in Appendix C. This register will be reviewed and updated with any applicable changes at regular intervals during construction, and at least annually as part of the management review.

Any changes made to the legal requirements register will be communicated to the project team where necessary through toolbox talks, specific training and other methods detailed in Section 4.

3.3 Conditions of Approval (CoA) requirements for CEMP

This Plan has been prepared to comply with DPE Approvals and the Joint Post Approval Strategy for SSI-9471 and SSI-9973 and associated consolidated conditions of approval as listed in Table 4 Conditions of Approval requirements CEMP.

Table 4 – Conditions of Approval requirements CEMP

CoA	Condition	Refer to Section within This Plan
SSI 9471 - Port Kembla Gas Terminal – Stage 3 Works		

Schedule 3 CoA 11	Prior to the commencement of construction, the proponent must prepare a Spoil Management Plan to the satisfaction of the Planning Secretary and in consultation with the EPA, DPE Water, NSW Ports, Port Authority of NSW and, an EPA accredited contaminated site auditor. The plan must be consistent with the Emplacement Cell Report and include:
	(a) a Contaminated Spoil Protocol that includes:
	• procedures for identifying and managing unexpected finds of contaminated or asbestos containing materials along the pipeline route and at Berth 101;
	• a strategy for addressing any contamination that has been encountered, if required (including the remediation and/or removal of contaminated soil or groundwater); and
	• details on how environmental and health risks will be mitigated and managed;
	(b) a Dredge and Excavation Management Plan that:
	• includes an investigation of all reasonable and feasible measures to reduce the road haulage of spoil;
	• describes all activities to be undertaken during dredging, excavation and disposal works;
	• describes in detail the location and depth of disposal areas during all stages of construction, including the final form of the emplaced material;
	• includes procedures for handling, transporting, storing and disposing of dredge and excavated material, including:
	  • potentially acid forming material;
	  • contaminated material;
	  • asbestos containing materials; and
	• includes a description of measures that would be implemented to:
	  • minimise the generation and dispersion of sediments during dredging and disposal;
	  • minimise soil erosion and discharge of sediment and other pollutants to lands and/or Port Kembla harbour;
	  • monitor and manage odours and air emissions during handling of sediments or from stored material prior to emplacement within the disposal area; and
	• includes contingency measures in the event of a failure of the silt curtains; and
	(c) a Water Quality Monitoring Plan that includes:
	• a description of the water quality monitoring that would be undertaken to monitor turbidity and pollutant concentrations surrounding dredging and disposal works, including real-time turbidity monitoring;
		Part C
		Soil and Water Management Plan GAS-599-PA-EV-007
		Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001

CoA	Condition	Refer to Section within This Plan
	• a broader program to monitor harbour-wide water quality trends and the ecological health of Port Kembla Harbour; • objectives and performance criteria, including trigger levels for investigating any potential or actual adverse impacts associated with construction activities on water quality and the ecology of Port Kembla Harbour; • a plan to respond to any exceedances of the trigger levels and/or performance criteria, and minimise any adverse water quality impacts of the development; and • reporting procedures for the results of the monitoring program.	
Schedule 3 CoA 15	Prior to the commencement of construction, unless the Planning Secretary agrees otherwise, the Proponent must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: (a) be prepared in consultation with RMS, NSW Ports and Council; (b) include details of the transport route to be used for all construction traffic; (c) include details of the measures that would be implemented to minimise traffic safety issues and disruption to local users of the transport route/s during construction works, including: • facilitating the use of barges to transfer spoil to the disposal site; • temporary traffic controls, including detours and signage; • ensure loaded vehicles entering or leaving the site have their loads covered or contained; • minimise dirt being tracked on the public road network from development-related traffic; (d) includes a driver's code of conduct that addresses: • travelling speeds; • driver fatigue; • procedures to ensure that drivers adhere to the designated transport route/s; and • procedures to ensure that drivers implement safe driving practices;	**Part C Traffic Management Plan GAS-599-PA-CN-002**
Schedule 3 CoA 18	Prior to commencement of construction, the Proponent must prepare an Unexpected Finds Protocol for managing heritage items identified during construction of the development, in consultation with BCD and the Illawarra Local Aboriginal Land Council, to the satisfaction of the Planning Secretary.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Heritage and Human Remains Procedure GAS-599-PR-CH-001**
Schedule 3 CoA33	Prior to commencement of construction, unless otherwise agreed by the Secretary, the Proponent must prepare an Air Quality Management Plan for the development to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with the EPA; (b) describe the measures that would be implemented to ensure compliance with the conditions of this approval and EPL including: • objectives and performance criteria, including trigger levels for investigating any potential or actual adverse impacts associated with air emissions; • proactive and reactive management measures for air emissions; • a plan to respond to any exceedances of the trigger levels and/or performance criteria, and minimise any adverse air quality impacts of the development (c) include an air quality monitoring program that includes: • a detailed description of the air quality monitoring that would be undertaken; • real-time dust monitoring during construction and point source discharge monitoring from the FSRU during operations; • a gas leak detection and repair program; and • reporting procedures for the results of the monitoring program;	**Part C Air Quality Management Plan GAS-599-PA-EV-005**
C1	Prior to the commencement of construction, the Proponent must prepare an Environmental Management Strategy for the development to the satisfaction of the Planning Secretary. This strategy must: (a) provide the strategic framework for environmental management of the development;	**Section 4**
	(b) identify the statutory approvals that apply to the development.	**Section 3.3**
	c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the development.	**Section 5**
	d) describe the procedures that would be implemented to: keep the local community and relevant agencies informed about the development being carried out; receive, handle, respond to, and record complaints. resolve any disputes that may arise during the course of the development. respond to any non-compliance.	**Section 2**

CoA	Condition	Refer to Section within This Plan
	respond to emergencies; and	
	e) include: copies of any strategies, plans and programs approved under the conditions of this approval; and a clear plan depicting all the monitoring to be carried out in relation to the development.	**Part C, and Section 8**
SSI 9973 Modification 2 - Port Kembla Lateral Looping Pipeline		
B6	(d) works as approved through the out-of-hours work protocol outlined in the CEMP required by condition C1.	**Part C Noise Management Plan GAS-599-PA-EV-004**
B11	An Unexpected Contaminated Land Finds Procedure must be prepared before the commencement of construction and must be followed should unexpected contaminated land (or suspected contaminated land) be excavated or otherwise discovered during construction. This Procedure must be included in the CEMP required by Condition C1.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001**
B14	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds and human remains in accordance with guidelines and standards published by the Heritage Council of NSW or DPE EES Group. This Procedure must be included in the CEMP required by Condition C1.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Heritage and Human Remains Procedure GAS-599-PR-CH-001**
C1	Prior to commencing construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) for the Port Kembla Lateral Looping Pipeline to the satisfaction of the Secretary. This plan must: (a) be prepared in consultation with Council, Sydney Trains and TfNSW;	**Section 2.1 and Appendix B**
	(b) identify the statutory approvals that apply to the construction and commissioning of the Port Kembla Lateral Looping Pipeline;	**Section 3.3**
	(c) describe the role, responsibility, authority and accountability of all key personnel involved in the environmental management of the Port Kembla Lateral Looping Pipeline	**Section 5**
	(d) describe the procedures that would be implemented to: keep the local community and relevant agencies informed about the construction and commissioning of the Port Kembla Lateral Looping Pipeline; receive, handle, respond to, and record complaints; resolve any disputes that may arise; respond to any non-compliance; and respond to emergencies; and	**Section 2 Section 8.4 Section 8.5 Section 7.3**
	e)include: the following sub-plans: • noise, including an out-of-hours work protocol; • air quality; • biodiversity; • soil and water management; • water management; • traffic management; and • waste	**Part C**
	a clear plan depicting monitoring to be carried out in relation to the Port Kembla Lateral Looping Pipeline	**Section 8**
C2	The CEMP sub-plans must state how: (a) the mitigation measures identified in the Modification Report will be implemented; and (b) the relevant terms of this Schedule will be complied with.	**Part B Appendix G Management Measures Part C Subplans**
C3	The Biodiversity CEMP sub-plan must:	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**

CoA	Condition	Refer to Section within This Plan
	(a) identify areas of land that are to be retained as outlined in the BDAR; and b) identify all measures in the BDAR to mitigate and manage impacts on biodiversity, including performance measures for each measure.	
C4	The Traffic Management CEMP sub-plan must: (a) describe the measures that would be implemented to comply with the transport management requirements in condition B5; (b) include details of the transport route to be used for all construction and operational traffic; (c) include details of the likely peak hour vehicle movements including detail of vehicle types and the distribution of the movements on the road network; (d) include a swept path analysis of entry and exit at all construction access points; (e) include sight distance plans for all construction access points; (f) include details of any oversize and over-mass vehicles anticipated for the construction, operation and decommissioning of the Port Kembla Lateral Looping Pipeline; and (g) include a Driver Code of Conduct	**Part C Traffic Management Plan GAS-599-PA-CN-002**

3.4 Environmental Management Measures – EA and Modification Derived

The relevant Environmental Management Measures (EMM) derived from the Project Environmental Assessment and subsequent Modifications and how they are addressed in this CEMP is presented in Table 5.

Table 5 - Environmental Management Measures – EA and Modifications

EMM	Commitment	Refer to Section within This Plan
SSI 9471 - Port Kembla Gas Terminal – Stage 3 Works		
C02	Removal of any remnant ACM fragments from the ground surface. The removal should be undertaken by a licenced removalist in accordance with relevant SafeWork NSW codes of practice. Following removal, a licenced asbestos assessor should inspect the site and provide a clearance certificate confirming removal of asbestos.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001**
C03	Inclusion of an unexpected finds protocol for contamination in the Construction Environmental Management Plan (CEMP) for the work associated with construction activities.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001**
C05	Preparation and implementation of a construction environmental management plan (CEMP) to include an unexpected finds protocol (UFP) to effectively manage the potential contamination issues identified from both a human health and environmental perspective. This would include the assessment of materials to be disturbed across the site to inform appropriate management strategies	**This Plan Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001**
C06	Assessment and classification of all material to be disposed of offsite as per NSW EPA (2014) Waste Classification Guidelines, Part 1: Classifying Waste and Part 4: Acid Sulfate Soils prior to off-site disposal.	**Part C Waste Management Plan GAS-599-PA-EV-008**
C07	If the proposed pipeline alignment is likely to intersect groundwater, assessment of groundwater quality in those sections should also be carried out to inform construction management of potential contamination issues.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001**
W5	Preparation of a Construction Environmental Management Plan (CEMP) including specific dredge management plan to provide a framework for the environmental management of construction activities to minimise the environmental risks to a level that is as low as practically possible for this project.	**This Plan**
W10	A site specific erosion and sediment control plan (ESCP) will be prepared as part of the CEMP to provide control of all land based excavation and stockpiling requirements. All erosion and sediment control measures shall be designed, implemented and maintained in accordance	**Part C Soil and Water Management Plan GAS-599-PA-EV-007**

EMM	Commitment	Refer to Section within This Plan
	with 'Managing Urban Stormwater: Soil and Construction Volume 1' (Landcom 2004) ('the Blue Book).	
W11	A site specific emergency spill plan will be developed, and will include spill management measures in accordance relevant EPA guidelines. The plan will address measures to be implemented in the event of a spill, including initial response and containment, notification of emergency services and relevant authorities (including Roads and Maritime and EPA officers)	**Part C Biodiversity Management Plan GAS-599-PA-EV-006 Section 9 of Appendix G**
W12	An emergency spill kit will be kept on site at all times. All staff will be made aware of the location of the spill kit and trained in its use.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006 Section 9 of Appendix G**
W13	Machinery will be checked daily to ensure there is no oil, fuel or other liquids leaking from the machinery. All staff will be appropriately trained through toolbox talks for the minimisation and management of accidental spills.	**Section 9 & 10 Appendix G**
TB2	Staff will be inducted and informed of the limits of clearing and the areas of vegetation to be retained.	**Section 2 Appendix G Part C Biodiversity Management Plan GAS-599-PA-EV-006**
TB3	A trained ecologist is to be present for construction activities that may impact frog habitat which includes dewatering / removal of detention basins and trenching immediately adjacent to Typha drainage line (west of Springhill Road) Temporary frog-proof fencing should be installed around drill sites, road side drains and detention ponds near the project site to be retained to prevent frogs from being injured or killed by equipment The trench is to be covered at night to prevent fauna from falling in An inspection is to be conducted each morning to check the trench for frogs Any frogs identified will only be handled by an ecologist or wildlife rescue representative Any Green and Golden Bell Frogs or other resident frogs are to be handled in accordance with the Chytrid fungus hygiene protocols (DECC 2008c) and released into the most appropriate nearby habitat area	**Section 2 Appendix G Part C Biodiversity Management Plan GAS-599-PA-EV-006**
TB4	Priority weed control measures will be implemented as part of the CEMP to prevent their spread in the study area.	**Section 2 Appendix G Part C Biodiversity Management Plan GAS-599-PA-EV-006**
TB5	Declared priority weeds will be managed according to requirements of the NSW Biosecurity Act 2015 Soil material and stripped groundcover vegetation with the potential to contain priority weeds will not be removed from the project site Soil disturbance will be avoided as much as possible to minimise the potential for spreading weeds.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
TB6	A site specific erosion and sediment control plan will be prepared as part of the CEMP. All erosion and sediment control measures shall be designed, implemented and maintained in accordance with relevant sections of 'Managing Urban Stormwater: Soil and Construction Volume 1' (Landcom 2004) ('the Blue Book) (particularly section 2.2) and 'Managing Urban Stormwater: Soil and Construction Volume 2A – Installation of Services' (DECC 2008b). The erosion and sediment control plan will include stockpiles, stormwater runoff, trees, site boundaries, site access and storage areas.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007**
TB7	Areas disturbed during the works will be rehabilitated, including stabilising disturbed soils to resist erosion and weed invasion via establishment of with a suitable turf species such as a native Couch or repaving roads and sealed surfaces. Stabilisation activities will be carried out progressively to limit the time disturbed areas are exposed to erosion processes Activities with a risk of soil erosion such as earthworks will not be undertaken immediately before or during high rainfall or wind events.	**Part C Soil and Water Management Plan GAS-599-PA-EV-007** **Section 8 Appendix G**
TB8	A site specific emergency spill plan will be developed, and will include spill management measures in accordance relevant EPA guidelines. The plan will address measures to be implemented in the event of a spill, including initial response and containment, notification of emergency services and relevant authorities (including Roads and Maritime and EPA officers)	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Section 9 of Appendix G**
TB9	An emergency spill kit will be kept on site at all times. All staff will be made aware of the location of the spill kit and trained in its use	**Part C Soil and Water Management Plan GAS-599-PA-EV-007 Section 9 of Appendix G**

EMM	Commitment	Refer to Section within This Plan
TB10	Any herbicides used for weed control will be applied to the manufacturer's specifications and as outlined in the manufacturer's Material Safety Data Sheet	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
H1	The construction workforce would be given a heritage induction and supporting material to be able to identify materials of potential heritage value and how to respond.	**Section 12 Appendix G**
H2	A protocol to be followed in the event of an unexpected find would be developed and would include clear lines of communication and stop work procedures to be followed.	**Section 12 Appendix G** **Part C Unexpected Heritage Finds and Human Remains Procedure GAS-599-PR-CH-001**
T1	A Construction Traffic Management Plan be prepared prior to the commencement of works with site induction for construction personnel being undertaken to outline the requirements of the CTMP. The aim of the CTMP is to maintain the safety of all workers and road users within the vicinity site including but not limited to: · site access routes · construction parking arrangement · traffic management · pedestrian and bicycle rider management roadside hazards.	**Part C** **Traffic Management Plan GAS-599-PA-CN-002**
T2	A traffic control plan would be developed in accordance with the NSW Roads and Maritime Services Traffic control at work sites and AS1742.3 – Traffic control devices for works on roads.	**Part C** **Traffic Management Plan GAS-599-PA-CN-002**
T2	Traffic management planning would seek to minimise traffic movements where possible during the morning and afternoon peak hours.	**Part C** **Traffic Management Plan GAS-599-PA-CN-002**
T3	Construction workers would be encouraged to car pool or utilise public transport where practicable.	**Part C** **Traffic Management Plan GAS-599-PA-CN-002lan**
NV1	Provide site inductions to all employees, contractors and subcontractors. The induction must at least include: · All relevant project specific and standard noise and vibration mitigation measures · Relevant licence and approval conditions · Permissible hours of work · Any limitations on noise generating activities with special audible characteristics · Location of nearest sensitive receivers · Construction employee parking areas · Designated loading/unloading areas and procedures · Site opening/closing times (including deliveries) · Environmental incident procedures.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV2	Plan traffic flow, parking and loading/unloading areas to minimise reversing movements within the site.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV3	Notify the affected receivers detailing the construction activities, time periods over which they would occur and the duration of works. Provide contact details to the affected receivers. If noise complaints are received, they should be recorded and attended noise monitoring should be conducted to assess compliance with the predicted construction noise levels.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV4	Quieter construction methods should be used where feasible.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV5	Minimise pipeline construction activities near sensitive receivers during more sensitive time periods (evening, night).	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV6	Turn off equipment after use.	**Part C** **Noise Management Plan**

EMM	Commitment	Refer to Section within This Plan
		GAS-599-PA-EV-004
NV7	No swearing or unnecessary shouting or loud stereos/radios on site. No dropping of materials from height, throwing of metal items and slamming of doors. No excessive revving of plant and vehicle engines. Controlled release of compressed air.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV8	The CEMP must be regularly updated to account for changes in noise and vibration management issues and strategies.	**Section 8.6**
NV9	Simultaneous operation of noisy plant within discernible range of a sensitive receiver is to be avoided. The offset distance between noisy plant and adjacent sensitive receivers is to be maximised. Plant used intermittently to be throttled down or shut down. Noise-emitting plant to be directed away from sensitive receivers.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV10	Non-tonal reversing beepers (or an equivalent mechanism) must be fitted and used on all construction vehicles and mobile plant regularly used on site and for any out of hours work, including delivery vehicles.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV11	Loading and unloading of materials/deliveries is to occur as far as possible from sensitive receivers. Select site access points and roads as far as possible away from sensitive receivers. Dedicated loading/unloading areas to be shielded if close to sensitive receivers. Delivery vehicles to be fitted with straps rather than chains for unloading, wherever possible.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV12	Where possible reduce noise from mobile plant through additional fittings including residential grade mufflers.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV13	Where practicable, pre-fabricate and/or prepare materials off-site to reduce noise with special audible characteristics occurring on site. Materials can then be delivered to site for installation.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV14	Stationary noise sources, such as pumps, should be enclosed or shielded whilst ensuring that the occupational health and safety of workers is maintained. Appendix F of AS 2436:1981 lists materials suitable for shielding	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
NV15	Use structures to shield residential receivers from noise such as site shed placement; earth bunds; fencing; erection of operational stage noise barriers (where practicable) and consideration of site topography when situating plant.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**
AQ1	Water material prior to it being loaded for on-site haulage, where appropriate.	**Part C** **Air Quality Management Plan GAS-599-PA-EV-005**
AQ2	Aim to minimise the size of storage piles where possible.	**Part C** **Air Quality Management Plan GAS-599-PA-EV-005**
AQ3	Limit cleared areas of land and clear only when necessary to reduce fugitive dust emissions.	**Part C** **Air Quality Management Plan GAS-599-PA-EV-005**
AQ4	Control on-site traffic by designating specific routes for haulage and access and limiting vehicle speeds to below 25 km/hr.	**Part C** **Air Quality Management Plan GAS-599-PA-EV-005**
AQ5	All trucks hauling material will be covered on the way to the site and maintain a reasonable amount of vertical space between the top of the load and top of the trailer.	**Part C** **Air Quality Management Plan GAS-599-PA-EV-005**
AQ6	Operations conducted in areas of low moisture content material should be suspended during high wind speed events or water sprays should be used.	**Part C** **Air Quality Management Plan GAS-599-PA-EV-005**
LV4	Temporary boardings, barriers, traffic management and signage would be removed when no longer required.	**Section 4.3** **Reinstatement Rehabilitation Plan GAS-599-PA-CN-003**
LV5	Materials and machinery would be stored neatly during construction works.	**Appendix G**

EMM	Commitment	Refer to Section within This Plan
LV6	Roads providing access to the site and work areas would be maintained free of dust and mud as far as reasonably practicable.	**Part C Air Quality Management Plan GAS-599-PA-EV-005**
S2	Stakeholder engagement would be carried out prior to and during construction with key stakeholders and the community to provide information about the project activities and provide a feedback mechanism for residents.	**Section 2.3 Lands and Stakeholder Management Plan GAS-599-PA-LM-003**
W1	Develop and implement a waste management plan for construction that integrates all statutory requirements for waste in NSW and includes: — systems to sort and track the actual types and quantities of waste generated — measures for separating waste based on classification of management options including colour coded bins options for offsite reuse, reprocessing, recycling and energy recovery of waste	**Part C** **Waste Management Plan GAS-599-PA-EV-008**
G1	All plant and equipment used during the construction works shall be regularly maintained to comply with the relevant exhaust emission guidelines	**Part C Air Quality Management Plan GAS-599-PA-EV-005**
G2	Sustainable procurement practices will be adopted where feasible.	**Part C Air Quality Management Plan GAS-599-PA-EV-005**
G3	The following measures will be considered by contractor(s): Construction materials sourced locally where possible Construction materials that have minimal embodied energy be selected Use of PVC plastic minimised Construction materials that are low maintenance and durable Plant and equipment will be switched off when not in constant use and not left idling Plant and equipment brought onsite will be regularly serviced and energy efficient vehicles or equipment will be selected where available Any plant and equipment that is not working efficiently (i.e. emitting excessive smoke) will be removed from site and replaced as soon as possible Construction works will be planned to ensure minimal movement of plant and equipment, including barges	**Part C Air Quality Management Plan GAS-599-PA-EV-005**
SSI 9973 Modification 2 and 3 - Port Kembla Lateral Looping Pipeline		
M 01	Standard mitigation measures outlined in the approved EGP EIS (November,1996), along with mitigation measures per the APGA Code of Environmental Practice, will be implemented during construction and operation of the proposed modification.	**Appendix G Part C - Subplans**
BDAR 01	Installation of appropriate exclusion fencing around trees and vegetation to be retained in the study area. This would include appropriate signage such as 'No Go Zone' or 'Environmental Protection Area". – The radius of the tree protection zone (TPZ) is calculated for each tree by multiplying its diameter at breast height (DBH) by 12. (TPZ = DBH x 12) in accordance with the Standards Australia Committee (2009). – A TPZ should not be less than 2 metres nor greater than 15 metres, except where crown protection is required (Commonwealth of Australia 2009).	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
BDAR 02	• All material stockpiles, vehicle parking and machinery storage will be located within cleared areas proposed for clearing, and not in areas of native vegetation that are to be retained.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
BDAR 03	• Any habitat trees inclusive of large nesting material to be removed is inspected prior to clearing by an appropriately qualified ecologist to avoid and minimise the potential for injuries to fauna that may be occupying hollows. – Habitat trees with nests require a pre-clearance assessment 24 hours prior to felling.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
BDAR 04	• Where appropriate native vegetation cleared from the study area should be mulched for re-use on the site, to stabilise bare ground.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
BDAR 05	• Wet down areas to reduce dust generation during construction.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006** **Air Quality Management Plan GAS-599-PA-EV-005**
BDAR 06	• Sedimentation and erosion control measures including silt fencing, sediment traps, etc. to prevent sediment-laden stormwater exiting the construction areas and to prevent scouring	**Part C**

EMM	Commitment	Refer to Section within This Plan
	and erosion of land beyond the development footprint. All erosion and sediment control measures are to be constructed and installed in accordance with relevant guidelines, are to be regularly maintained for the duration of the construction period and are to be carefully removed at completion of works. – Implementation of temporary stormwater controls during construction and to ensure that discharges to the drainage channels are consistent with existing conditions.	**Biodiversity Management Plan GAS-599-PA-EV-006** **Air Quality Management Plan GAS-599-PA-EV-005**
BDAR 07	• Weed and pathogen management including weed hygiene protocols for personnel, machinery and construction materials entering and exiting construction areas to minimise risk of weed and pathogen introduction and spread.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
BDAR 08	• Waste management to ensure food scraps and other organic waste that may attract introduced predators (e.g. fox, cats) or other pests (e.g. rats) is not stored for prolonged periods within the construction site.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
BDAR 09	• If bush rock or boulders are encountered during site preparation, these should be moved into adjacent habitats within the study area, and should not be removed from the site.	**Part C Biodiversity Management Plan GAS-599-PA-EV-006**
ADD02	Discovery of Unanticipated Aboriginal Objects All Aboriginal objects and Places are protected under the NPW Act. It is an offence to knowingly disturb an Aboriginal site without a consent permit issued by the EES. Should any Aboriginal objects be encountered during works associated with this proposal, works must cease in the vicinity and the find should not be moved until assessed by a qualified archaeologist. If the find is determined to be an Aboriginal object the archaeologist will provide further recommendations. These may include notifying the EES and Aboriginal stakeholders	**Part C Unexpected Heritage Finds and Human Remains Procedure GAS-599-PR-CH-001**
ADD 03	Discovery of Aboriginal Ancestral Remains Aboriginal ancestral remains may be found in a variety of landscapes in NSW, including middens and sandy or soft sedimentary soils. If any suspected human remains are discovered during any activity you must: 1. Immediately cease all work at that location and not further move or disturb the remains. 2. Notify the NSW Police and EES' Environmental Line on 131 555 as soon as practicable and provide details of the remains and their location. 3. Not recommence work at that location unless authorised in writing by EES.	**Part C Unexpected Heritage Finds and Human Remains Procedure GAS-599-PR-CH-001**
NV18	Install noise barriers between stationary plant such as generators, water treatment, desander and horizontal directional drill and noise sensitive receivers. Barriers may be plywood hoarding or construction blanket installed on temporary fencing.	**Part C** **Noise Management Plan GAS-599-PA-EV-004**

4 ENVIRONMENTAL MANAGEMENT FRAMEWORK

4.1 Environmental Management System (EMS) overview

The EMS for the Project is based on Nacap's Corporate EMS certified to ISO14001 and comprises a suite of documentation including this CEMP, other management sub plans as required and subordinate documentation including policies, procedures and protocols as relevant to construction activities and or associated environmental risks.

The EMS provides a framework to support management of the Project environmental requirements and defines how Nacap will identify and minimise environmental risk and meet the environmental objectives during delivery of the works.

The EMS includes:

- Nacap Management System Manual 3902-CORP-001
- Nacap's Corporate Environmental Protection and Awareness Policy
- Nacap Project Construction Environmental Management Plan (This Plan)

- Other management plans (as required by the consolidated conditions of approval and / or as identified in Jemena SOW)
- Subordinate procedures / protocols, and
- Permits and approvals.

The following sections of this CEMP are aligned with the requirements of ISO 14001:2015, which are also enshrined in our Management System:

- Section 4.4 and Appendix E – Environmental Policy
- Section 4.5 – Environmental Objectives
- Section 4.7 – Management of Change
- Section 8.6 – Management (CEMP) review
- Appendix F – Environmental Aspects and Impacts Register, and
- Section 4.8 and Appendix G – Environmental Management Measures.

4.2 CEMP Structure and Subplan Framework

This CEMP comprises three sections:

PART A: Provides background information and the overarching systems approach to environmental management and mitigation controls for the project

PART B: Comprising Appendices in support of PART A, and

PART C: Comprising the required series of environmental management subplans outlined in the CoA including:

(a) Noise Management Plan GAS-599-PA-EV-004

(b) Air Quality Management Plan GAS-599-PA-EV-005

(c) Biodiversity Management Plan GAS-599-PA-EV-006

(d) Soil and Water Management Plan GAS-599-PA-EV-007

(e) Traffic Management Plan GAS-599-PA-CN-002, and

(f) Waste Management Plan GAS-599-PA-EV-008.

The sub plans are structured to incorporate mitigation and control measures in meeting the project's environmental risk assessment outlined in Section 4.6 and includes, construction Activity Specific Environmental Management Measures and Aspect Specific Environmental Management Measures, each of which identifies the following:

- Environmental aspects
- Environmental performance objectives and standards
- Measurement criteria
- Management measures and responsibilities, and
- Compliance monitoring, and records.

4.3 CEMP Subordinate Procedure and Forms

In support of this CEMP and subplans, a range of subordinate documents, records and reporting will be developed prior to commencement of works. The following list is not exhaustive but provides examples of typical documents to be used during construction:

- Work Activity Procedures:
  - Construction Work Activity Procedures (WAPs) for each aspect of construction applicable to each construction crew. Each WAP will incorporate a section on the specific environmental consideration, controls, and monitoring specific to that aspect of work that the WAP covers, and
  - A suite of Safe Work Method Statements (SWMS). SWMS are prepared for all construction works activities and incorporate safety and environmental aspects and controls. SWMS Review Cards are also typically used during works to manage non-routine construction activities and for the management of day to day "change" i.e. process change, personnel change, environment change or equipment change (see also Section 4.7 Management of Change)
- Environmental Sensitivity mapping (Environment Control Plans)
- Progressive erosion and sediment control plans
  - Erosion and Sediment Control Plan GAS-599-PA-EV-003
- Procedures forms and other documents:
  - Environmental Inspection Reports
  - Various registers in maintaining records relating to environmental and non-environmental activities for the duration of the project, and
  - Project specific subordinate environmental procedures developed in accordance with the requirements for the work.
    - Weed and Pest Management Procedure GAS-599-PR-EV-001
    - Reinstatement, Rehabilitation Plan GAS-599-PA-CN-003

The contractor will also utilise a system, which acts as a project control gateway (known as a Pre-Commencement Requirements - Form 2) for each construction activity to commence. The Form 2 is a document reviewed and signed off by the Project Manager. This form is a pre-commencement gateway for each construction activity within a discrete section of works. The Form 2 is a key means of communicating to construction supervisors the environmental management controls for any given portion of the works. An example of a Pre-Commencement Requirements - Form 2 is included in Appendix D.

4.4 Environmental Protection and Awareness Policy

The Nacap Environmental Protection and Awareness Policy is provided in Appendix E and has been developed in accordance with Section 5.2 of ISO 14001:2015 to demonstrate our commitment to environmental protection and awareness in our service provision.

4.5 Environmental Objectives and Targets

The PKPP Project is committed to best practice environmental management, sustainability and mitigating all identified environmental risks to as low as reasonably practicable (ALARP). The environmental impact of construction activities will be minimised through:

- Ensuring that all construction activities are planned and managed to minimise impacts and disturbance to stakeholders and the natural environment
- Compliance with all applicable environmental laws, client requirements and codes of practice
- Minimising waste generation, the consumption of resources, GHG emissions and encouraging recycling
- Applying environmental and sustainable management standards and best practice across all construction activities (including external contracts)
- Ensuring that the contractor's personnel and subcontractors receive appropriate environmental and sustainability training and awareness, and
- Establishing measurable performance targets as a means of continually monitoring and improving environmental performance.

This commitment is underpinned by environmental documentation within the contractors corporate Environmental Management System, including policies, procedures, and guidelines.

The objectives and targets for the PKPP Project to be undertaken in relation to the Environment are listed in Table 6 Objectives and Targets.

Table 6 – Objectives and Targets

Objective	Target
Project construction activities do not cause harm to the environment and heritage	Zero harm to environment and heritage
Ensure all personnel, subcontractors and visitors are inducted, consulted and receive regular updates and information on project environmental aspects and impacts for duration of works.	100% Completion of Inductions Daily Pre-Start Inputs by Environment Team Monthly Toolbox Inputs by Environment Team
Ensure that personnel and subcontractors are aware of environmental hazards and risks associated with construction activities and relevant scope of work under the contract.	100% attendance recorded at SWMS workshops
To conduct construction activities in compliance with all relevant approvals and environmental legislation.	100% Compliance No regulatory infringements, including PINS and prosecutions
Promote a positive reporting culture. To minimise the occurrence and severity of environmental incidents during construction activities.	All environmental incidents to be reported within 2 hours and investigated appropriately.
Ensure all corrective actions are closed out by the nominated due dates	No corrective actions outstanding past due date >7 days

4.6 Environmental Risk Assessment

The Project risk management process is based on AS/IS0 31000 and Nacap's Safety Essential #16 Hazard Identification Risk Assessment and Control (HIRAC). This ensures environmental risks are identified, assessed, mitigated, and controlled for all construction related activities, adopting a best practice approach in accordance with the Plan – Do – Check – Act model.

Risk identification and mitigation planning shall commence prior to the commencement of works and incorporate consideration of the Environmental Assessment input documentation that informed the Principal Approval(s) and Modifications for the PKPP Project, including but not limited to, relevant project environmental management assessment reports and project environmental studies.

These required input documents are used to identify and evaluate environmental risks associated with discrete construction tasks and to record them in the Project Aspects and Impacts Register (AIR) attached as Appendix F. Each activity will be assessed to identify associated environmental hazards, initial risk consequence levels, mitigation measures and how to avoid, manage and/or minimise risks and the residual risk to ALARP following the implementation of the identified measures (controls).

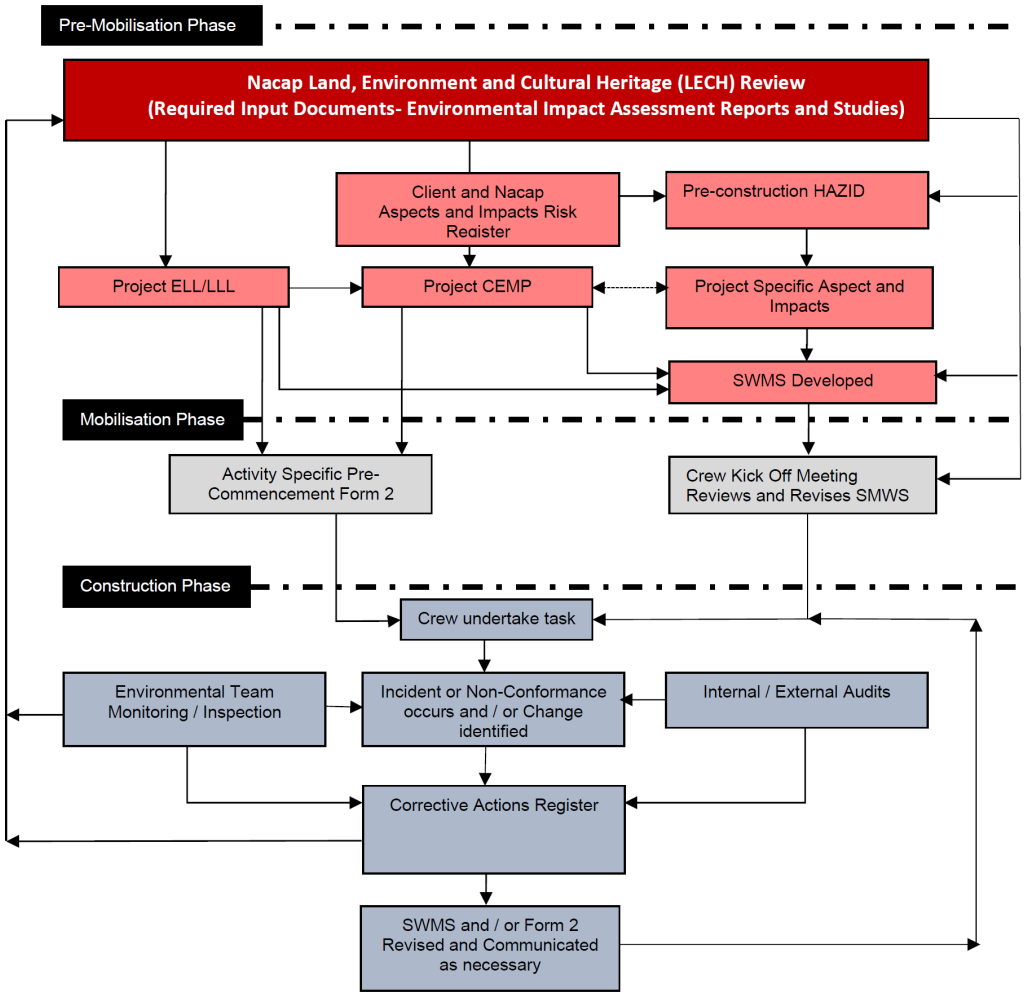
Additional environmental risk assessment workshops (HAZID) will be undertaken to ensure potential risks associated with the construction activities (the subject of this Plan) have been properly considered and that appropriate and adequate controls have been identified.

The AIR will be used to develop and assign environmental control actions into Project management plans, procedures, and subordinate documentation such as Pre-Commencement Form 2 and Safe Work Method Statements (SWMS).

During construction, management measures and controls to prevent and mitigate risks to ALARP will be checked for effectiveness through:

- Pre-start reviews of environmental hazards, risk assessments and controls
- Check and testing of all engineering controls
- Review and allocation of responsibility and accountability for implementing and maintaining the environmental mitigation and controls to ALARP
- Maintaining communication within and across work teams and stakeholders in relation to identifying environmental hazards, risks and controls
- Reporting of non-conformance and requirements for management of change where it is observed or detected, and
- Ongoing environmental training and awareness sessions

Figure 2 below highlights the CEMP risk assessment approach from Pre-Mobilisation Phase to Construction Phase.



Key: Environmental Line List (ELL); Landowner Line List (LLL); Safe Work Method Statement (SWMS)

Figure 2 : Nacap Environmental Risk Assessment Approach

4.7 Management of Change

The Project is committed to undertaking a review or assessment of all tasks prior to commencing works to identify changes to:

- People – someone new or has someone left the work crew
- Plant/Equipment – new plant/equipment introduced or removed from activity
- Process – scope or work method, and
- Physical Environment – weather or terrain.

Ensure that any changes are communicated to personnel, environmental hazards and controls are recorded on Site Work Method Statement (SWMS) or SWMS review card and signed off by all involved in the task.

4.8 Environmental Management Measures

Environmental management, mitigation, control and contingency measures have been developed based on a review of the Environmental Assessment input documentation and risk assessment as detailed in Section 4.6.

Environmental Management Measures are outcome-based to incorporate the project's environmental risk assessment. Construction activity based environmental management measures are presented in a matrix Appendix G of this CEMP. Aspect related environmental management measures are also presented in the various subplans outlined and referenced in Part C.

Construction Activity and Aspect derived environmental management measures identify the following:

- Environmental aspects and impacts
- Environmental performance objectives and standards
- Measurement criteria
- Management measures and responsibilities
- Compliance monitoring, and
- Records.

Additional management measures will also be developed to meet the Project's compliance obligations and will be identified through ongoing environmental risk assessment, environmental monitoring, surveys and/or targeted studies during construction.

4.9 Environmental Line List

The Environmental Line List (ELL) lists all significant environmental features encountered on the CROW in a linear format. This includes significant flora and fauna, introduced species, boundaries, roads, foreign services, watercourses, known Aboriginal cultural heritage sites and known heritage sites.

The Project ELL is attached as Appendix H.

4.10 Environmental Control Plans

Environmental control plans will be developed where required to communicate site specific sensitivities and controls for higher environmental risk areas. Environmental control plans will identify:

- Areas of environmental sensitivity and 'No Go' zones including any protective measures such as fencing
- Sensitive receivers and relevant control measures
- Known areas of contamination, ASS and PASS
- Watercourse and drainage crossings and culverts and other measures
- Areas that require site specific erosion and sediment control measures
- Work areas, machinery or vehicle parking, stockpile areas, storage and laydown areas
- Other environmental controls or management measures, and
- Monitoring sites, where required.

Environmental control plans where developed will be included in Pre-Commencement Form 2 packages and will be used to inform environmental awareness through pre-starts, toolboxes and field based targeted awareness around site specific sensitivities and controls.

4.11 Erosion and Sediment Control Plans

Erosion and Sediment Control Plans (ESCPs) are planning documents that identify the site layout and the approximate location of drainage, erosion and sediment control structures onsite. They cover all construction stages from initial vegetation clearing through to rehabilitation when temporary drainage, erosion and sediment control are no longer required and are removed. Standard ESC treatments in accordance with the relevant requirements of *Managing Urban Stormwater: Soils and Construction (Landcom, 2004)* and *Best Practice Erosion and Sediment Control (International Erosion Control Australasia IECA 2008)* will be contained within Part C, Soil and Water Management Plan GAS-599-PA-EV-007. The SWMP will also contain the Erosion and Sediment Control Framework which will inform the development of detailed site-specific temporary drainage, erosion and sediment control plans where required for high risk works during construction and the establishment of permanent measures during reinstatement**.**

4.12 Environmental Procedures, Permits, Registers and Forms

The Project EMS includes procedure, permits, registers and forms that provide instructions related to environmental management and monitoring of environmental performance. An indicative list of the procedures, protocols, permits, registers and forms relevant to the Project is provided in Table 7. Additional procedures, permits, registers and/or forms will be developed as required.

Table 7 – Indicative environmental procedures, protocols, permits, registers and forms

Procedure/permit/register	Function
Pre-Commencement Form 2	This form is a pre-commencement gateway for each construction activity within a discrete section of works. It is a key means of communicating to the activity supervisor LECH management controls for any given portion of the works
Communications Register	Register for recording communications with landowners, stakeholders and Third Parties
Complaints Register	Register for tracking complaints through to close out
Environmental Incident Register	Register for tracking environmental incidents through to close out
Environmental Non-Conformance Register	Register for tracking non-conformance through to close out
Correctives Action Register	Register for tracking corrective actions in response to complaints, incidents and non-conformance

Environmental Line List	Register of environmental sensitivities that may require site specific management and awareness
Landowner Line List (PMP Register)	Register of location of landowners and specific requirements for access and construction identified in PMPs and access agreements
Third Party Crossing Register	Register of location of Third Party asset crossings and specific requirements for access and construction
Out of Hours Works Protocol	A protocol to outline how works outside of Normal Work Hours will be undertaken, controlled and communicated with stakeholders and sensitive receptors
Fauna Interaction Register	Register of fauna interaction locations, release and welfare
Dewatering Register	Register of insitu water quality testing to validate dewatering of excavations
Water Discharge Register	Register of quantity and location of water discharge during works
Water Monitoring Register	Register of water monitoring locations and results
Waste Tracking Register	Register of waste quantity and disposal including tracking records for regulated waste
Water use Register	Register to record the take of water from approved water sources for construction and hydrotesting
Disturbance Register	Register to record actual disturbance including plant community type (PCT).
Fuel Use Register (GHG Emissions)	Record of diesel fuel use across the project
Sensitive Receptor Register	Record of location of sensitive receptors, separation distance, background noise levels and forecast construction noise levels (based on EA)
Noise Monitoring Register	Register to record noise monitoring locations and records
Air Quality (Dust) Register	Register to record dust monitoring locations and records

Weed Hygiene Protocol	A protocol to guide project weed hygiene practice during construction
Dewatering Protocol	A protocol to guide project dewatering practice during construction
Fauna Handling permit	Required to take or destroy (including removal or relocation) protected or threatened fauna
Road Opening/Occupation Permits	Required by road authorities for works in road reserve/road occupation under the Roads Act 1993
Waterway Crossing Permits	Required by waterway authorities to enable works in waterways
Rail Crossing Permits	Required by Rail operators for works within rail corridor
Other Third Party Works Permits	Required by Third Party asset operators for works within easements
Hot Works Permit	Required for hot works within the Fire Danger Period and/or on a Total Fire Ban Day
Environmental Inspection Report Form	Form to assess and record effectiveness of controls, observations, issues, and associated actions to confirm compliance or address environmental non-conformances associated with construction activities.
Reinstatement Inspection Report From	Form to assess and record effectiveness of reinstatement commitments including observations, issues, and associated actions

5 PEOPLE, ROLES AND RESPONSIBILITIES

5.1 Project Team Roles and Environmental Management Responsibilities

An Organisation Chart will be developed prior to the commencement of construction. Position descriptions describe the responsibilities specific to positions on the Project.

Environmental compliance and care is the responsibility of the whole project team. Table 8 details the key environmental resources and responsibilities allocated to the Project and other roles that have environmental responsibilities.

Table 8 - Project Environmental Management Responsibilities

Role	Responsibilities
JEMENA	

Role	Responsibilities
Project Manager	> Ensure overall compliance in accordance with requirements of the Infrastructure Approval (SSI 9973), CEMP and all related Subplans. > Ensure notifiable environmental incidents are reported to the appropriate stakeholders. > May suspend work until adequate environmental safeguards implemented. > Ensure environmental compliance reporting obligations are adequately met
Approvals and Stakeholder Manager	> Obtain the key approvals including: o Ensuring revision and update to the CEMP and Subplans in response to the relevant matters, and o recommendations contained in the Development Consent (SSI 9973) and submit to the Minister of Planning for approval. > Liaise with regulators and other agencies as required and point of escalation for any environmental incidents and non-conformance. > Conduct stakeholder engagement and community consultation activities as required and point of escalation for any complaints.
HSE Officer	> Monitor the implementation of the CEMP and subplans > Monitor contractor compliance with the CEMP, approvals and approval conditions, including issues raised in audits and requiring corrective action to be taken where necessary. > Provide environmental assistance as required.
Supporting Team Members	> Monitor contractor compliance with the CEMP, approvals and approval conditions, including issues raised in audits and requiring corrective action to be taken where necessary. > Provide environmental assistance as required
AIE	
AIE Project Director	> Ensuring provision of adequate resources to achieve the health, safety and environmental objectives for the project
AIE Senior Project Engineer – NGP	> Proactively stewards the effective implementation works in accordance with requirements of the Infrastructure Approval (SSI 9471), Environmental Strategy and all related Subplans. > Demonstrate proactive support for health and safety environmental requirements
AIE HSE Manager	> Coordinate due diligence activities (eg audits) to assess compliance with regulatory requirements and internal standards

Role	Responsibilities
	> Liaise with regulators and other agencies as required and point of escalation for any environmental incidents, non-conformance and community and stakeholder complaints. > Identifying environmental issues as they arise and proposing solutions. > Coordinate and facilitate periodic environmental inspections with the key contractors. > Environmental Reporting
NACAP	
Project Director (Management Representative)	> The Project Director provides environmental leadership and ensures that adequate, competent and experienced resources are provided and supported in the implementation of this CEMP.
Project Manager	> Provide support and guide in the implementation of this CEMP and associated controls > Provide management and leadership in the implementation of this CEMP > Ensure adequate resources are provided for implementing and maintaining environmental controls and mitigation measures > Take action including the stopping of work in response to natural events and activities which may impact on the environment or compromise the performance objectives, standards and commitments contained in this CEMP > Take action in the event of an environmental emergency and allocate the required resources to minimise environmental impact and harm.
Lands, Environment and Cultural Heritage (LECH) Manager	> Provide support and guide the implementation of this CEMP and associated controls > Provide environmental input and support to construction and associated methodologies including training and awareness needs assessment > Ensure all efforts are made to establish a relationship of trust and openness with all stakeholders and Third Parties > Provide and support a structured and documented approach to ensure compliance with the Landholder Line List (LLL), Third Party Agreements, and all relevant public authority permits and approvals > Ensure that all commitments outlined in the LLL, Third Party Agreements, permits and approvals are communicated across construction disciplines and implemented > Manage the Contractor's responsibility for Stakeholder and Third Party notifications, agreements, contacts, records and correspondence

Role	Responsibilities
	> Manage liaison and Contractor interface with public authorities and Third Parties regarding applicable secondary permits and approvals > Provide regular updates and reports of lands and stakeholder liaison progress and arising issues to AIE and Jemena Representatives, including any variations / discrepancies in relation to agreed commitments > Routine record keeping and reporting in support of commitments in this CEMP, and > Promptly report all complaints, breaches and damages to the Nacap Project Manager and the relevant AIE and Jemena Representative > Support and guide site environmental incident investigation and reporting > Review internal and external project audits and coordinate the implementation of audit recommendations.
Environment Advisor	> Provide and coordinate monitoring, inspections and audits of works > Provide and coordinate site-based training preparation and delivery > Routine record keeping and reporting in support of commitments in this CEMP > Reporting of hazards and incidents and implementing any rectification measures > Provide site based environmental incident investigation and reporting and corrective action management.
Fauna Handler	> Undertake pre-clearance surveys, trench checks and relocation of fauna in accordance with regulatory requirements.
Project Supervisors	> Provide leadership for the implementation of commitments contained in this CEMP > Reporting of hazards and incidents and implementing any rectification measures.
Subcontractors	> Subcontractors engaged to perform works on behalf of Nacap will operate in accordance with all applicable legislation, Nacap procedures and this CEMP. > Subcontractors are required to report all incidents to their Nacap Supervisor immediately.
All Project Personnel and Visitors	> All Project personnel and visitors will uphold a general environmental duty to take all reasonable and practical measures to ensure that the activities on the whole site do not pollute the environment in a way which causes or may cause environmental harm.

5.2 Subcontractors

Subcontractors working on the Project are required to work in accordance with the approved CEMP. Nacap will monitor environmental performance of subcontractors and their compliance over the length of the Contract. The environmental requirements of the Project will be summarised in contract documentation and all subcontractors will be required to undergo a Nacap Induction prior to commencement of works.

5.3 Specialist Consultants

Nacap may use specialist environmental consultants/subcontractors to support the Project. Table 9 provides a list of likely specialist environment, sustainability and planning consultants, and their proposed scope of work on the Project – this list is not intended to be exhaustive and additional resources and subject matter experts may be utilised as required.

Table 9 – Specialist Consultant/Subcontractors

Discipline/Specialist	Scope
Noise	Provide subject matter support in relation the development and approval of the Noise Management Plan GAS-599-PA-EV-004. Provide support to noise monitoring and reporting
Contaminated Land Specialist	Provide subject matter support in relation to management of contamination if encountered on site as outlined in the Soil and Water Management Plan GAS-599-PA-EV-007
CPESC	Provide subject matter support in relation to the development of the Soil and Water Management Plan GAS-599-PA-EV-007, particularly in relation to ESC. Prepare/review/endorse high risk ESC plans Provide support to ESC monitoring and reporting
Heritage Specialist	Heritage advice, archaeology management, heritage documentation and reporting in support of unexpected finds

5.4 Community and Stakeholders

Nacap has prepared a Lands and Stakeholder Management Plan GAS-599-PA-LM-003 to guide engagement with the community, stakeholders, landholders and third parties during construction. The majority of day-to-day issues raised by landholders and stakeholders relating to inconveniences arising from construction activities will be resolved through direct interface with Nacap construction personnel.

Any significant issues not readily resolved by construction personnel will be directed to the Nacap Project management team. Any remaining issues requiring dispute escalation will be referred to the AIE and Jemena Representative. All significant Stakeholder interactions will be entered onto the Stakeholder Interaction Register.

Further to Section 2.3, which outlines ongoing communication with community and external stakeholders, this CEMP also contains a Community and Stakeholder Communication Protocol for the

construction phase of the project which summarises the commitments contained in the Project Lands and Stakeholder Management Plan GAS-599-PA-LM-003. Refer to Appendix I.

5.5 Landowner Line list

The LLL has been developed by AIE and Jemena outlining individual Landowner concerns, boundaries and constraints in a progressive linear format. It outlines precise kilometre point (KP) references and ownership of land parcels and road crossings which Supervisors can use to address specific property requirements during construction. It also identifies the critical concerns, issues, values relevant to a particular parcel of land through which the pipeline traverses. The LLL summarises information not limited to: biosecurity, topsoil management, services, fencing, rehabilitation and other issues pertinent to the landholders wishes during and post construction.

5.6 Third Party Infrastructure

Third party infrastructure will be identified in the Construction Line List (CLL). It is expected that ongoing engagement with Third Party stakeholders will be required during all works phases to progress works permits and access agreement requirements. In particular, there will be a requirement to liaise with asset owners for all assets expected to be encountered during works to confirm asset clearance and other mitigation, protection or contingency requirements, including possible settlement monitoring at the railway crossings.

6 TRAINING AND AWARENESS

Training of the workforce is an important part of raising awareness to environmental issues and ensuring workforce competence and Project compliance. All project personnel including client representatives along with all subcontractors & visitors will receive training appropriate to their involvement in Project construction works activities consisting of:

Project Specific Environmental Induction

Project CEMP

Environmental Line List – Lists all significant environmental features encountered on the CROW in a chronological linear format. This includes significant flora and fauna, introduced species, boundaries, roads, foreign services, watercourses and Heritage areas.

Job specific Environmental Training and/or Competency for the operation of plant and equipment (skill specific), and

Continuing Environmental Awareness during works.

6.1 Project Induction

All construction personnel shall complete Project specific environmental induction prior to undertaking any works on the site. Topics to include:

- Relevant legislation and regulatory requirements
- Access conditions and respecting landholder and third party requirements
- Complaints management
- Site specific and general hazards in various operational facilities
- The requirement to minimise impacts to flora and fauna

- Aboriginal Heritage issues
- Non-Aboriginal Heritage issues
- Use of designated access roads and adherence to speed limits for dust control reasons
- Exclusion zones and Environmental Sensitive Areas (ESAs)
- Drainage, erosion and sediment control
- Air and water quality
- Noise and vibration
- Waste management
- Contaminated lands
- Acid Sulfate Soils (ASS) and Potential Acid Sulfate Soils (PASS)
- Emergency response
- Spill management and response
- Biosecurity, weed hygiene and weed control
- Incident and emergency response and preparedness, and
- For high environmental risk activities, the induction will be augmented by a discussion of the key management measures and reportable incidents for the activity as contained in this CEMP.

6.2 Environment Training

In addition to Project Inductions, job specific Environmental Training and/or Competency for the operation of plant and equipment (skill specific) will be completed. A record of all training and attendees will be maintained in the induction and training register. For high environmental risk activities, the inductions will be augmented by a discussion of the key management measures and reportable incidents for the activity as contained in this CEMP. An induction register will be maintained.

6.3 Environmental Awareness

Targeted environmental awareness training will be provided to all project personnel or groups of workers with a specific authority or responsibility for environmental management or those undertaking an activity with a high risk of environmental impact as determined by the LECH Manager. Ongoing environmental awareness will be also fostered among all project personnel and subcontractors and delivered in the field for the duration of works.

Environmental awareness training will include the following:

- CEMP
- ELL & LLL
- SWMS Workshops
- Daily Pre-Starts
- Tool Boxes
- Targeted Noise, Soils, Heritage, Flora and Fauna awareness and mitigation (pre-start alerts), and

- Noticeboards and electronic media.

6.3.1 Toolbox Training

Toolbox training will be prepared and delivered by the LECH Manager/Project Engineers/Supervisors/HSE Manager (or delegate). Toolbox training is typically short duration training that is risk and/or aspect focussed, delivered in the field and topics may include:

- Environmental Incident identification, response and reporting
- Erosion and sedimentation control and dewatering
- Noise, light spill minimisation and hours of work
- Spills and leaks (including the application of remediation products)
- Aboriginal and non-Aboriginal heritage
- Community awareness
- Requirements for working near watercourses
- Fauna management and handling
- Management of soils
- Management of unexpected contamination
- Management of ASS/PASS
- Vegetation clearing controls and protection and avoidance/management requirements
- Smoking, hot works and fire hazard awareness
- Waste management, minimisation and recycling, managing regulated waste, and
- Air quality.

6.3.2 Daily Pre-Start Meetings

The pre-start meeting is a tool for informing work teams the day's activities, safe work practices, LECH and environmental protection requirements, work area restrictions, activities that may affect the works, coordination and Simultaneous Operations (SimOps), hazards and other information that may be relevant to the day's work.

The Site Supervisor will conduct the daily pre-start meeting with the work team before the commencement of work each day (or shift) or where changes occur during a shift. Daily pre-start meetings are generally succinct in nature and take approximately 10-15 minutes. The LECH /environmental component of pre-starts will be determined by relevant foreman and environmental personnel and will include any LECH/environmental issues that could potentially be impacted by, or impact on, the day's activities. Topics may include but may not be limited to:

- Weather observations / forecast
- Work area restrictions, activities that may affect the works
- Environmental focus for the day (e.g. Housekeeping/ litter clean-up, water management, dust control, etc.)
- Feedback on environmental issues that have recently occurred within the area or other areas of the project

- Notices about up and coming events such as environment and community meetings, audits, environmental inspections
- Feedback on previous day's work practices; and
- Feedback from environment, community and stakeholder meetings.

All attendees will be required to sign on to the pre-start and acknowledge their understanding of the issues explained. Pre-start topics, dates delivered and a register of attendees will be recorded using Nacap's Pre-start meeting record.

6.3.3 Targeted Environmental Awareness

Targeted environmental awareness will be provided to individuals or work teams with a specific authority or responsibility for environmental management, those undertaking an activity with a high risk of environmental impact or to ensure the competency of the relevant project team members is appropriate for their responsibilities and expected work activity. The need for targeted environmental awareness will be assessed by the LECH Manager and / or Environmental Advisor. Awareness sessions will generally be undertaken directly in the field at environmental sensitivities or communicated via electronic or printed environmental alerts.

6.4 Training Needs Matrix

The initial training needs matrix has identified the required knowledge and competence in relation to environmental management for the project as well as project specific environmental knowledge and awareness. The training identified in Table 10 below, is not exhaustive and will be reviewed as part of CEMP review process.

Table 10 – Initial Training Needs Matrix

Training Element	Project Manager	Construction Managers	Superintendents	Engineers	HSE	Quality	LECH	Foreman / Supervisor	Leading Hands	Labourers	Subcontractors	Site Administration
Project induction	X	X	X	X	X	X	X	X	X	X	X	X
CEMP on-boarding	X	X	X	X	X	X	X	X	X	X	X	X
Project approvals, licences, permits obligations and requirements	X	X	X	X			X	X				
Out of hours works approvals and permit processes and requirements	X	X	X	X	X		X	X				
Dewatering		X	X	X	X		X	X	X	X	X	
Environmental incident identification, response and management	X	X	X	X	X		X	X				
Environmental management obligations and due diligence	X	X	X	X			X	X				
Erosion and Sediment Control Framework Bluebook / IECA		X	X	X			X	X				
Selecting and installing erosion and sediment control measures			X	X			X	X				
Acid sulphate soils management for construction sites	X	X	X	X			X	X				
Noise monitoring for construction	X	X	X	X	X		X	X				
Environmental sampling techniques							X					
Unexpected finds procedure	X	X	X	X			X	X				
Developing environmental monitoring programs					X		X					
ICAM or similar incident investigation training	X	X	X		X		X					
Environmental Management Systems	X	X			X	X	X					
Environmental Management Systems Internal Auditor					X	X	X					
Rail Safety Worker	X	X	X	X	X			X				
Complaint Management	X	X	X	X	X	X	X	X				

7 ENVIRONMENTAL INCIDENT AND EMERGENCY PLANNING, PREPAREDNESS AND RESPONSE

7.1 Environmental Incidents

Incidents are defined as an occurrence or set of circumstances that causes or threatens to cause material harm and which may or may not be or cause a non-compliance. The consequences of such incidents may result in material environmental harm, damage, or asset loss. 'Near misses' are extraordinary events that could have reasonably resulted in an incident.

Material harm is defined as unauthorised harm that:

- Involves actual or potential harm to the health or safety of human beings or to the environment that is not trivial, or
- Results in actual or potential loss or property damage of an amount, or amounts in aggregate, exceeding $10,000, (such loss includes the reasonable costs and expenses that would be incurred in taking all reasonable and practicable measures to prevent, mitigate or make good harm to the environment).

The key to effective incident prevention is ongoing monitoring, inspections and awareness training. During construction, the following onsite preventative strategies are implemented to reduce the likelihood and severity of incidents / emergencies:

- Weekly inspections of active work sites
- Completion of Environmental Inspections
- Close-out of corrective actions (as required)
- Prompt inspections, maintenance and repairs of environmental controls
- Ongoing environmental awareness training
- Emergency drills
- Environmental audits of worksites, subcontractors and general compliance, and
- Environmental and safety information on hazardous substances (e.g. SDS) will be available at the main site office together with information as to where such substances are to be stored.

The Nacap LECH Manager is responsible for incident management and associated duties required in accordance with environmental protection legislation. It follows to ensure appropriate environmental responses and controls are considered and implemented. This will entail onsite liaison with the relevant crew(s) and provision of verbal advice to respond to the incident and to advise on any amended work practices required to avoid recurrence.

For the Project an environmental incident is considered to include the following but not limited to:

- A pollution incident (i.e. dust, noise, hydrocarbon spill, water pollution)
- Where there is the potential for a legal or regulatory breach
- Significant impact on people or the environment (flora and fauna) has been/ may be caused by the incident
- Native vegetation is accidentally or unintentionally damaged or removed
- Impacts on indigenous or non-indigenous heritage aspects

- Injury or fatality to a native fauna species (including listed species), and

In the event of an environmental incident a first reporting step will be the provision of a Heads-Up Notification (an Initial Report and Notification via email) detailing brief facts about the incident to be circulated to an agreed list of Project management personnel and relevant AIE and Jemena project personnel. This will be done as soon as practicable but no later than two (2) hours after the incident. The details of the incident will be recorded in the Incident Register by the Nacap LECH Manager or delegate for tracking through to resolution and completion of any required corrective actions (Corrective Actions Register – refer to Section 8.5).

The incident will be managed and aligned with the relevant AIE and Jemena Incident Management Systems requirements. An incident report will be provided to AIE / Jemena in accordance with the Nacap Incident Reporting Procedure. The subsequent Incident Report will include:

- Date, time and location details
- Incident Classification and the type of environmental impact including water, air, land, noise or waste management
- A description of the incident and root cause
- Whether the incident relates to contaminant spill or release and if so the type and approximate quantity of the release
- Specific details and sources if relating to fires
- Whether the incident resulted in regulatory Non-Compliance or security breaches
- Actions for resolution / close out, and
- Corrective actions to assist in preventing recurrence.

Should it be determined by AIE / Jemena that the incident is reportable to DPE or any other relevant agency or Regulator, the Nacap Project Manager shall liaise with the AIE and or Jemena Representative and provide support to ensure that the incident is reported in the required timeframe and format required.

In accordance with the CoA DPE must be notified in writing via the Department's Major Projects Website immediately after AIE or Jemena becomes aware of an incident on site.

Upon completion of an investigation, the findings and recommendations shall be distributed to the relevant work crews for discussion at prestart meetings. If the root cause analysis provides justification for amended work practices or processes a review and reissue of relevant documents (such as CEMP, SWMS and Pre-Commencement Form 2) will be undertaken as outlined in Sections 8.

7.2 POEO Act Incident Notification

In accordance with the Protection of the Environment Operations Act 1997 (POEO Act) the Environment Protection Authority (EPA) must be notified of pollution incidents that cause or threaten material harm to the environment.

'Material harm to the environment' as described in Section 147 of the POEO Act, includes on-site harm, as well as harm to the environment beyond the premises where the pollution incident occurred.

A 'pollution incident' includes a leak, spill or escape of a substance, or circumstances in which this is likely to occur. 'Pollution incident' is defined in the Dictionary to the Act as follows:

"Pollution incident means an incident or set of circumstances during or as a consequence of which there is or is likely to be a leak, spill or other escape or deposit of a substance, as a result of which pollution has occurred, is occurring or is likely to occur. It includes an incident or set of circumstances in which a substance has been placed or disposed of on premises, but it does not include an incident or set of circumstances involving only the emission of any noise."

As the EPA is the appropriate regulatory authority (ARA), Jemena will notify EPA via the EPA Environment Line (telephone 131 555) in accordance with Part 5.7 of the POEO Act and will be managed through Jemena's incident management procedure provided as Appendix H in the Jemena Environmental Management Plan (EMP) GAS-599-HSE-004.

All notifiable incidents will also be managed, documented, and reported in accordance with Section 7.1 of this CEMP.

7.3 Environmental Emergency Response

Environmental emergency response requirements and communication processes will be detailed in the Nacap Emergency Response Plan (ERP) (GAS-599-PA-HSE-008). The Nacap ERP will be developed in consultation with AIE and Jemena prior to the commencement of construction and will outline project requirements for the management of foreseeable emergency situations that may arise during the course of work as part of the Project. The primary objective of the ERP being to facilitate timely and effective responses to emergency situations with the goal of minimising harm to:

- People
- Environment
- Assets, and
- Reputation.

The overall project emergency response framework comprises two levels:

- Level 1 – Construction Emergency Response emergency events managed by Nacap Project site personnel and internal or external resources, typically:
    - Serious or temporary injury/illness
    - Moderate effects on biological or physical environment
    - Permanent damage to items of Aboriginal cultural significance
    - Negative media and heightened community concern, or
    - Serious breach of legislation with investigation required for reporting an agency or authority.
- Level 2 – Company Emergency Response – emergency events that may involve regulatory intervention and threats to Company's reputation or viability. For example:
    - Permanent injury/illness or fatalities
    - Major offsite release or spill (contained or immediately reported) with significant impact on highly valued species or habitats to the point of eradication or impairment of the ecosystem
    - Community fatality or serious injury
    - Negative national media, or

- Major breach of legislation.

The Nacap ERP will be provide response capability for Level 1 events.

Level 2 escalation to the relevant AIE or Jemena ERP at the direction of AIE and or Jemena or in the event the the incident is assessed to have broader ramifications, at which point the AIE / Jemena plan shall become the principal document used in developing a response.

Emergency practice drills will be scheduled and carried out on site, will be scenario based and test a variety of the identified potential emergency situations. All emergency exercise activities and results shall be documented and evaluated for effectiveness. A toolbox meeting shall be held to discuss the exercise and any actions or improvements required.

7.4 Environmental Non-Conformances

Any material non-conformance of the requirements of this CEMP, will be reported regardless of whether it results in any impacts. Material non-conformances will be managed by the Nacap LECH Manager and reported to the relevant AIE and or Jemena representative as soon as practicable but no later than two (2) hours within 1 upon becoming aware of the non-conformance outlining factual information regarding the non-conformance. Material non-conformance being neither trivial nor negligible; or resulting in actual or potential loss or property/environmental damage requiring remediation cost and / or project delay.

8 ENVIRONMENTAL INSPECTIONS, MONITORING, AUDITS AND REVIEW

8.1 Environmental Inspections and Monitoring

The LECH Manager (or delegate) will coordinate environmental inspections and monitoring of works during the construction activities to check and record compliances with works procedures, secondary permits and approvals and this CEMP.

Nacap will undertake daily inspections across active work areas and following rain events greater than 8mm of rain per hour to evaluate the effectiveness of controls. Observations, issues, and associated actions required to rectify or address environmental non-conformances will be recorded on the Environmental Inspection Report (EIR). The EIR is presented as Appendix J. Copies of all environmental inspection reports will be kept with project records.

8.2 Environmental Monitoring

Activity or aspect specific monitoring will be undertaken by the LECH Manager or delegate as detailed in CEMP Subplans or in the environmental management measures Appendix G.

Instruments, equipment or measuring devices used in the monitoring of works will be calibrated before the commencement of works, operated, and maintained effectively in the field by the project team. Any laboratory analyses will be conducted by a NATA certified laboratory. Monitoring records will be provided to Jemena where required to assist with reporting procedures arising from environmental approvals and associated consent conditions.

Specific monitoring requirements for relevant environmental aspects and construction activities in meeting the commitments outlined in the EA and CoA are summarised in Table 11.

Table 11 – Proposed Monitoring Program

Environmental Aspect	Proposed Monitoring

Air Quality	Visual monitoring of work sites and laydown areas Odour monitoring Reactive dust monitoring following complaints.
Biodiversity	Visual monitoring of impacts to exclusion zones Visual monitoring to detect unauthorised disturbance Visual monitoring to detect unexpected finds Monitoring of fauna in open excavations Monitoring of reinstatement (revegetation establishment and weed infestation)
Contamination and waste	Visual monitoring of work sites and laydown areas Pre-clearing visual monitoring of CROW to identify indicators of the presence of PASS/ASS Visual and odour monitoring of excavations and spoil to identify indicators of contamination and PASS/ASS Visual monitoring to detect unexpected finds
Aboriginal and historical heritage	Visual monitoring of impacts to exclusion zones Visual monitoring to detect unauthorised disturbance Visual monitoring to detect unexpected finds
Greenhouse gas	Monitoring and reporting of diesel fuel use (as proxy for GHG emissions) Monitoring of plant and equipment for emission reduction effectiveness
Land stability and ground movement	Identification and proving of all third party services Monitoring of excavation stability and contingency measures during works (Superintendent and HSE Supervisors) Monitoring during works to detect ground movement/settlement at special crossings (Rail/Road/HDD) Monitoring of ESC installation performance (design and effectiveness)
Noise	Daily monitoring to ensure noise levels at nearest sensitive receptor is <75dB (Normal work hours) Monitoring of proposed works outside normal work hours to identify exceedance above background noise levels >10dB (M-F 6-10pm Sat 1-10pm Sun 7am-10pm) Monitoring of proposed works outside normal work hours to detect audible noise within habitable rooms to identify exceedance above background noise levels +0dB (Mon-Sun 10pm-7am) Monitoring arising from noise complaints
Surface Water	Visual monitoring of water quality arising from works – trigger values for works modification and or suspension include – sustained visual turbidity, oily sheens or other visual contaminants Monitoring (insitu) to determine baseline water quality parameters in advance of watercourse crossings (upstream and downstream) Monitoring (insitu) to identify impacts and exceedance of water quality trigger values for works modification or suspension. Insitu monitoring parameters to include: Turbidity, temperature, DO, pH, salinity (refer also to Soils and Water Management Subplan GAS-599-PA-EV-007)

8.3 Environmental Audits

Nacap maintains a management system certified to ISO 14001 and conducts internal audits to assess the environmental management system at a corporate level and at a project level. At a project level, this involves a review of the CEMP systems in place, their effectiveness, and the implementation of project CEMP commitments during construction.

Internal environmental audits shall be conducted by non-site based Nacap personnel in accordance with the Project CEMP, at least twice (once part way through mainline construction and once partway through re-instatement.

It is envisaged that AIE / Jemena and or regulatory authorities may undertake environmental auditing during the performance of the works.

8.4 Non-Compliances

Non-compliances or potential non-compliances are situations and events that do not comply with the requirements outlined in the CoA, subsequent Modifications along with EA commitments including this CEMP and associated subplans and subordinate procedures and documents.

Non-compliances or potential non-compliances may be identified during the following:

- As part of site inspections and monitoring of construction activities
- During internal and external audits, and
- During investigations into complaints, incidents and near misses.

Following detection or identification of a non-compliance a Non-Compliance Report (NCR) will be prepared in relation to the type of aberration from expectations.

All NCRs are recorded on the NCR Register and will be sent to the relevant AIE and or Jemena Representative for approval of the proposed corrective action, and again for close out signature following fulfilment of the approved corrective action.

Should an NCR be raised by the AIE and or Jemena Representative this will be handled via the AIE and or Jemena NCR system and shall be recorded on the NCR register.

Corrective actions will be managed in accordance with Section 8.5 below.

In addition to the NCR register Compliance Tracking Register (CTR) will be developed for the project to track compliance with the requirements of the CoA and subsequent Modifications along with EA commitments. The Nacap LECH Manager will provide the required support and information to track and report on the compliance status of all Nacap construction related CoA and commitments.

DPE Non-Compliance Notification

The Department must be notified in writing via the DPE's Major Projects Website within seven days after the identification of any non-compliance issue. The notification must identify the development, including the application number, set out the condition of approval that the development is non-compliant with, the way in which it does not comply, the reasons for the non-compliance (if known) and what actions have been taken, or will be taken, to address the non-compliance.

8.5 Corrective Actions

Corrective and preventative actions may be identified where deficiencies are observed during site inspections and monitoring or as a result of a non-compliance described above.NCR.

Corrective and preventive actions provide the mechanism to:

- Undertake corrective (reactive) action to eliminate the causes of non-compliance
- Undertake preventive (proactive) action to eliminate potential causes of non-compliance, and
- Enable continual improvement of the EMS.

The Nacap LECH manager will be responsible to enure, the corrective action, the person responsible for the corrective action, and timing for correction to be completed. The corrective actions will be recorded and tracked using the Corrective Actions Register.

The Corrective Actions Register is a key tool that allows analysis of actions arising from regular site monitoring, internal and external audits, and incidents. The LECH Manager will regularly review the register to identify patterns in either crews or activities that are regularly requiring corrective actions and take steps to reduce the incidence of corrective actions and improve compliance. This may require the review and amendment of relevant documents such as the SWMS and Pre-commencement Form 2.

8.6 CEMP Review

This CEMP will be subject to ongoing evaluation of environmental management performance against environmental policies, objectives, and targets, to identify opportunities for continuous improvement.

The continuous improvement process will include:

- Identification of opportunities to improve environmental management and performance
- Identification through incident investigation of the cause or causes of non-compliance
- Development of corrective and preventative measures to address non-compliance and process deficiency
- Assessment of the effectiveness of corrective actions
- Documentation and communication of change and process improvements
- A review of this CEMP will be undertaken annually and whenever there are significant changes in the scope of work and/or subsequent changes to construction methodologies and following harm to the environment arising from any non-compliance with this plan, and
- In accordance with CoA:
    - Within 3 months, unless otherwise agreed with the Planning Secretary, of:

    (a) the submission of an incident report required to be submitted under the CoA

    (b) the submission of an audit report required to be submitted under the CoA, and

    (c) the approval of any modification to the conditions of this approval; or

    (d) a direction of the Planning Secretary

Where a review leads to revisions of the CEMP, then within 4 weeks of the review the revised document must be submitted to the Planning Secretary for approval, unless otherwise agreed with the Planning Secretary.

The updated CEMP will be approved in accordance with Section 1.8. A copy of any updated plan and changes will be distributed to all relevant stakeholders and regulatory authorities.

8.7 Continuous Improvement

This CEMP will be subject to ongoing evaluation of environmental management performance against environmental policies, objectives and targets for the purpose of identifying opportunities for continual improvement.

The continuous improvement process will include:

- Identification of opportunities for improvement of environmental management and performance
- Identification through incident investigation the cause or causes of non-conformance
- Development of corrective and preventative measures to address non-conformance and process deficiency
- Assessment of the effectiveness of corrective actions
- Documentation and communication of change and process improvements, and

Any updates to the CEMP as described above.

9 REPORTING AND RECORD KEEPING

9.1 Record Keeping

The Project shall maintain a documentation and record system in support of this CEMP and monthly Project HSE reporting requirements to enable review and auditing of environmental management systems and procedures. Some of these requirements are identified in Section 4.12 and Table 7.

The following records are expected to be generated through the delivery of the project and as guided by this CEMP:

- Environmental monitoring and inspection records
- Correspondence with Landholders, Stakeholders and Third Parties
- Induction, training and awareness records
- Site and construction activity specific records and registers
- Waste management records
- Reporting of Environmental Incident, non-conformances and corrective actions
- Compliance reports, monthly and annual reports, and
- Audit reports.

9.2 Reporting

Monthly and Annual Reporting will include information on relevant environmental data and commentary as generated and described above in support of regulatory and contractual requirements.

Specific aspect based reporting is outlined in the individual subplans contained in PART C.

10 CONSTRUCTION CONTROL

PART C of this CEMP identifies a number of environmental management subplans to support this CEMP and direct control of various environmental risks on the project. These documents have been prepared to identify requirements and processes applicable to specific impacts or aspects of the Project. They address requirements of the EA, Modification Reports, Consolidated CoA, and other measures identified in the environment assessment documentation. Table 11 outlines the Subplan and subordinate document requirements.

Table 12 – Subplan and subordinate document requirements

CoA	Sub Plan and Subordinate Document Requirement	Refer to Section within This Plan
SSI 9471 - Port Kembla Gas Terminal – Stage 3 Works		
Schedule 3 11	Spoil management protocol	10.5 Part C Soil and Water Management Plan GAS-599-PA-EV-007
Schedule 3 15	Traffic management subplan	10.6 Part C Traffic Management Plan GAS-599-PA-CN-002
Schedule 3 27	Out of hours works protocol	10.2 Part C Noise Management Plan GAS-599-PA-EV-004
Schedule 3 33	Air quality management plan	10.3 Part C Air Quality Management Plan GAS-599-PA-EV-005
SSI 9973 Modification 2 - Port Kembla Lateral Looping Pipeline		
B6	Out of hours works protocol	10.2 Part C Noise Management Plan GAS-599-PA-EV-004
B11	Unexpected contaminated land finds	10.5 Part C Unexpected Contaminated Land Finds Procedure GAS-599-PR-CN-001
B14	Unexpected heritage finds and human remains	10.5 Part C Unexpected Heritage Finds and Human Remains Procedure

		GAS-599-PR-CH-001
C1	Noise management subplan	10.2 Part C Noise Management Plan GAS-599-PA-EV-004
	Air quality management subplan	10.3 Part C Air Quality Management Plan GAS-599-PA-EV-005
	Biodiversity management subplan	10.4 Part C Biodiversity Management Plan GAS-599-PA-EV-006
	Soil and water management subplan	10.5 Part C Soil and Water Management Plan GAS-599-PA-EV-007
	Traffic management subplan	10.6 Part C Traffic Management Plan GAS-599-PA-CN-002
	Waste management subplan	10.7 Part C Waste Management Plan GAS-599-PA-EV-008

The following sections outline construction controls for various aspects of environmental management in relation to the Project.

10.1 Construction Hours of Work

Construction operational hours are 7am to 6pm Monday to Friday, 8am to 1pm Saturday and at no time on Sundays and NSW public holidays.

Where required an Out of Hours Works Protocol will be developed and be included in the Noise Management Plan. Refer Section 10.2 below.

10.2 Construction Activity Based Environmental Management Measures

Construction activity based environmental management measures are presented in a matrix Appendix G of this CEMP. Refer also to Section 4.8. Aspect related environmental management measures are also presented in the various subplans outlined below and referenced in Part C.

10.3 Noise Management

A Noise Management Plan GAS-599-PA-EV-004 (NMP) has been developed to manage construction noise risks on this project. This document has been prepared in accordance with SSI-9973 CoA C1 and B6 (d).

The NMP also contains an Out of Hours Works (OOHW) Protocol prepared in accordance with SSI-9973 CoA B6 (d) and SSI-9471 CoA 3-27.

10.4 Air Quality Management

An Air Quality Management Plan GAS-599-PA-EV-005 (AQMP) has been prepared to manage the construction air quality risks on this project. This document has been prepared in accordance with SSI-9471 CoA 3-33 and SSI-9973 CoA C1.

10.5 Biodiversity Management

A Biodiversity Management Plan GAS-599-PA-EV-006 (BMP) has been prepared to manage the construction flora and fauna risks on this project. This document has been prepared in accordance with SSI-9973 CoA C1.

10.6 Soil and Water Management

A Soil and Water Management Plan GAS-599-PA-EV-007 (SWMP) has been prepared to manage the construction soil and water risks, including erosion and sediment control on this project. This document has been prepared in accordance with SSI-9973 CoA C1.

The SWMP also contains:

- Spoil Management prepared in accordance with SSI-9471 CoA 3-11
- Erosion and Sediment Controls in accordance with AIE environmental management measures (EMM) W10 and TB7 developed as part of the project EIS.
- Unexpected Contaminated Land Finds GAS-599-PR-CN-001 in accordance with SSI-9973 CoA B11 and AIE EMM C05
- Unexpected Heritage Finds and Human Remains in accordance with SSI-9471 CoA 3-18, SSI-9973 CoA B14

- Acid Sulphate Soils Management in accordance with AIE EMM C04, and
- Spill Management in accordance with AIE EMM W16 and TB07.

10.7 Traffic Management

A Traffic Management Plan GAS-599-PA-CN-002 (TMP) has been prepared to manage traffic and associated risks during construction. This document has been prepared in accordance with SSI-9471 CoA 3-15 and SSI-9973 CoA C1.

10.8 Waste Management

A Waste Management Plan GAS-599-PA-EV-008 (WMP) has been prepared to manage the construction waste risks on this project. This document has been prepared in accordance with SSI-9973 CoA C1 and MM W1.

10.9 Aboriginal and Non-Aboriginal Heritage

A Heritage management section has been included in Section 9 of Appendix G – Environmental Management Measures of this CEMP to manage the Aboriginal and non-aboriginal heritage risks during construction. Whilst Aboriginal and non-Aboriginal heritage is not expected to be encountered during construction works, unexpected finds may be encountered and in this event will be managed in accordance with the Unexpected Heritage Finds and Human Remains Procedure , Appendix E of the Soil and Water Management Subplan GAS-599-PA-EV-007.

10.10 Spill Management

Spills will be managed in accordance with the SWMP and Section 9 of Appendix G – Environmental Management Measures of this CEMP.

10.11 Fire, Chemical and Hydrocarbon Management

Fires, Chemicals and Hydrocarbon risks will be managed in accordance with Section 10 of Appendix G – Environmental Management Measures of this CEMP.

10.12 Rehabilitation

Site rehabilitation will be managed in accordance with Section 8 of Appendix G –Environmental Management Measures of this CEMP.

PART B

Appendix	Title
APPENDIX A	JOINT POST APPROVAL STRATEGY MEMO
APPENDIX B	CONSULTATION RECORD
APPENDIX C	LEGAL AND OTHER REQUIREMENTS
APPENDIX D	PRE-COMMENCEMENT REQUIREMENTS - FORM 2
APPENDIX E	ENVIRONMENTAL POLICY
APPENDIX F	ENVIRONMENTAL ASPECTS AND IMPACTS REGISTER
APPENDIX G	CONSTRUCTION ACTIVITY BASED ENVIRONMENTAL MANAGEMENT MEASURES
APPENDIX H	ENVIRONMENTAL LINE LIST
APPENDIX I	COMMUNITY AND STAKEHOLDER COMMUNICATION PROTOCOL
APPENDIX J	ENVIRONMENTAL INSPECTION REPORT

APPENDIX A JOINT POST APPROVAL STRATEGY

Memorandum

Joint Post Approval Strategy – AIE's Port Kembla Gas Terminal to Jemena's Eastern Gas Pipeline

Security:	Protected **Date:** 24 May 2022
To:	Department of Planning and Environment
From:	Jodi Wood
Document Number:	GAS-599-PA-RA-001
Revision:	0 – Issued for Use
Subject:	Joint Post Approval Strategy – AIE's Port Kembla Gas Terminal to Jemena's Eastern Gas Pipeline

1. INFRASTRUCTURE APPROVALS

AIE's proposed Port Kembla Gas Terminal (PKGT) to Jemena's Eastern Gas Pipeline (EGP) pipeline is comprised of three sections:

- Segment 1.1 – 4.3 km pipeline from PKGT to Springhill Road to be built by Jemena; owned by AIE with some services provided in operation by Jemena.
- Segment 1.2 – 2.2 km pipeline from Spring Hill Road to Segment 2 tie-in near Five Islands Road to be built, owned, and operated by Jemena.
- Segment 2 – 5.6 km pipeline from proposed Segment 2 tie-in near Five Islands Road to the existing Kembla Grange Main Line Valve which includes the Kembla Grange Metering Station to be built, owned and operated by Jemena.

The project is approved by DPE under a number of Infrastructure Approvals. The AIE SSI-9471 Port Kembla Gas Terminal Infrastructure Approval under Section 5.19 of the Environmental Planning and Assessment Act 1979 currently relates to Segment 1.1 and 1.2. The Jemena SSI-9973 Eastern Gas Pipeline Modification 1 - Port Kembla Lateral Pipeline Infrastructure Approval under section 5.25 of the Environmental Planning and Assessment Act 1979 pertains to Segment 2. Jemena SSI-9973 Eastern Gas Pipeline Modification 2 - Transfer of Pipeline Segment was approved to transfer Segment 1.2 from AIE SSI-9471 PKGT Infrastructure Approval. AIE anticipate to submit a Modification to the AIE SSI-9471 Port Kembla Gas Terminal to remove segment 1.2 from the Infrastructure Approval in Q2 2022.

2. CONSTRUCTION APPROACH

The construction of the pipeline for Segment 1.1, 1.2 and 2 and the Kembla Grange Metering Station will be managed by Jemena. The construction of the Port Kembla Gas Terminal (PKGT) Start of Line Facility will be managed by AIE. Construction of the approved Cringila Lateral and Cringila In-let Facility is currently on hold, and will not be undertaken as part of this scope.

Jemena intend on engaging separate construction contractors for the pipeline and pipeline tie-in facility scope of work. Given Jemena will be managing the entire pipeline construction of the project, it's proposed that a consolidated and consistent approach is undertaken for managing post consent requirements to facilitate construction in a staged approach.

3. INFRASTRUCTURE APPROVAL STAGING

The current staging plan approved by DPE for AIE SSI-9471 Port Kembla Gas Terminal Infrastructure Approval has divided the construction scope of work into four stages:

- Stage 1: Early Enabling Works commenced in May 2021;
- Stage 2a: Marine Berth Construction – Land Based proposed to commence in January 2022;
- Stage 2b: Marine Berth Construction and Dredging - Land and Marine Based proposed to commence in March 2022; and
- Stage 3: Pipeline Installation including tie-ins, proposed to commence in October 2022.

The construction works associated with the tie-in facility at the PKGT site and a small section of pipeline in this vicinity would be included in Stage 2a and the remainder of the pipeline would be included in Stage 3.

Jemena submitted a Staging Request to DPE on Monday 23 May 2022 for SSI-9973 Port Kembla Lateral Looping to divide the construction scope into two main stages:

- Stage 1: Pipeline Installation, proposed to commence in October 2022; and
- Stage 2: Construction of the Kembla Grange Metering Station proposed to commence in December 2022.

4. PRE-CONSTRUCTION POST CONSENT REQUIREMENTS

This strategy relates to the land based activities associated with the pipeline and facility scope of works. It's proposed that where possible, the post consent requirements will be replicated for AIE SSI-9471 and Jemena SSI-9973 with a single document being developed to address the requirements of both infrastructure approvals. The proposed AIE and Jemena combined strategy with delivering the post consent requirements for the separate pipeline and facility scopes is outlined in Table 1 and shown Figure 1.

Table 1: Post Consent Requirements for AIE SSI-9471 and Jemena SSI-9973

Scope	Segment	Infrastructure Approval	Post Consent Stage
Port Kembla Start of Line Facility on PKGT site	Segment 1.1	AIE SSI-9471	AIE Stage 2a
Pipeline Construction on PKGT site	Segment 1.1	AIE SSI-9471	AIE Stage 2a
Pipeline Construction from PKGT site to Kembla Grange Metering Station	Segment 1.1, Segment 1.2 and Segment 2	AIE SSI-9471 Jemena SSI-9973	AIE Stage 3 Jemena Stage 1
Kembla Grange Metering Station	Segment 2	Jemena SSI-9973	Jemena Stage 2

The attached spreadsheet details the specific conditions in each Infrastructure Approval that require submission to DPE, the approach to documentation and the relationship between the AIE and Jemena approvals. A summary of the specific post consent conditions requiring submission to DPE and the approach for delivery is outlined in Table 2 below.

Table 2: Pre-Construction Post Consent Conditions Required for Submission to DPE and Approach for Delivery

Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
Jemena SSI 9973	A8	At least two weeks prior to the commencement of the construction and commissioning of the Port Kembla Lateral Looping Pipeline, the Proponent must notify the Department of the relevant date via the Major Projects Portal.	Yes	No	Yes	No	Jemena	Not required for AIE approval. Jemena Stage 1 and Stage 2 separate notices.
Jemena SSI 9973	B1	(a) Construction safety study that must be consistent with Australian Standard AS 2885.1, Pipelines – Gas and liquid petroleum (Part 1: Design and construction), and that specifically addresses all safety measures related to construction, testing and commissioning;	Yes	No	Yes	No	Jemena (Construction Contractor)	Not required to be provided to DPE for AIE approval. Jemena Stage 1 pipeline and Stage 2 facilities separate studies.
Jemena SSI 9973	B1	(b) Hazard and operability study for the Port Kembla Lateral Looping Pipeline, that must be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines' and Australian Standard AS 2885, Pipelines – Gas and liquid petroleum, and must be prepared by a suitably qualified, experienced and independent expert; and	Yes	Yes	Yes	Yes	Jemena	Required for AIE approval – Condition 3-21(b). Jemena and AIE scope considered in separate standalone studies. Jemena Stage 1 pipeline and Stage 2 facilities study combined.
Jemena SSI 9973	B1	(c) Final Hazard Analysis that must be consistent with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Guidelines for Hazard Analysis', and must report on separation distances between the Port Kembla Lateral and the Port Kembla Lateral Looping Pipeline.	Yes	Yes	Yes	Yes	Jemena	Required for AIE approval – Condition 3-21(c). Jemena and AIE scope considered in separate standalone studies. Jemena Stage 1 pipeline and Stage 2 facilities FHA report combined.

Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
Jemena SSI 9973	B11	An Unexpected Contaminated Land Finds Procedure must be prepared before the commencement of construction and must be followed should unexpected contaminated land (or suspected contaminated land) be excavated or otherwise discovered during construction. This Procedure must be included in the CEMP required by Condition C1.	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for AIE approval – Condition 3-11(a). Jemena and AIE scope considered in same procedure. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate.
Jemena SSI 9973	B14	An Unexpected Heritage Finds and Human Remains Procedure must be prepared to manage unexpected heritage finds and human remains in accordance with guidelines and standards published by the Heritage Council of NSW or DPIE EES Group. This Procedure must be included in the CEMP required by Condition C1.	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for AIE approval – Condition 3-18. Jemena and AIE scope considered in same procedure. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate.
Jemena SSI 9973	B16	Prior to the commencement of works for the Port Kembla Lateral Looping Pipeline that would impact on biodiversity values, unless otherwise agreed by the Secretary, the number and classes of species credits in Table 1 must be retired to offset the residual biodiversity impacts.	Yes	No	No	No	Jemena	Not required for AIE approval – specific to Segment 1.2 and Segment 2 scope. Required for Jemena Stage 1 pipeline only.
Jemena SSI 9973	B17	Evidence of the retirement of credits in satisfaction of B16 must be provided to the Secretary for approval prior to commencement of works for the Port Kembla Lateral Looping Pipeline that will impact on biodiversity values.	Yes	No	No	No	Jemena	Not required for AIE approval – specific to Segment 1.2 and Segment 2 scope. Required for Jemena Stage 1 pipeline only.

Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
Jemena SSI 9973	C1	Prior to commencing construction, the Applicant must prepare a Construction Environmental Management Plan (CEMP) for the Port Kembla Lateral Looping Pipeline to the satisfaction of the Secretary.	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Not specifically required for to be submitted to DPE for AIE approval. However, specific management procedures / protocols required for AIE approval that would be included in Jemena approval. Jemena and AIE scope considered in same procedure where applicable. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate..
AIE SSI 9471	3-11	Prior to the commencement of construction, the proponent must prepare a Spoil Management Plan to the satisfaction of the Planning Secretary and in consultation with the EPA, DPIE Water, NSW Ports, Port Authority of NSW and, an EPA accredited contaminated site auditor.	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for Jemena approval – Condition C1 (CEMP) and B11. Jemena and AIE scope considered in same procedure where applicable. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate. AIE Stage 2a separate.
							AIE	AIE Stage 2a separate.
AIE SSI 9471	3-11	(a) a Contaminated Spoil Protocol	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for Jemena approval – Condition B11. Jemena and AIE scope considered in same procedure where applicable. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate. AIE Stage 2a separate.
							AIE	AIE Stage 2a separate.

Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
AIE SSI 9471	3-11	(b) a Dredge and Excavation Management Plan	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for Jemena approval– Condition C1 (CEMP) and B11. Jemena and AIE scope considered in same procedure where applicable. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate.. Note - to be incorporated in Contaminated Spoil Protocol.
							AIE	AIE Stage 2a separate.
AIE SSI 9471	3-15	Prior to the commencement of construction, unless the Planning Secretary agrees otherwise, the Proponent must prepare a Construction Traffic Management Plan for the development to the satisfaction of the Planning Secretary.	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for Jemena approval – Condition C1 (CEMP). Jemena and AIE scope considered in same procedure where applicable. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate.
							AIE	AIE Stage 2a separate.
AIE SSI 9471	3-18	Prior to the commencement of construction, the Proponent must prepare an Unexpected Finds Protocol for managing heritage items identified during construction of the development, in consultation with BCD and the Illawarra Local Aboriginal Land Council,	Yes	Yes	Yes	Yes	Jemena (Construction Contractor)	Required for Jemena approval – Condition B14. Jemena and AIE scope considered in same procedure where applicable. Jemena Stage 1 pipeline and AIE Stage 3 combined procedure. Jemena Stage 2 facility separate.

Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
		to the satisfaction of the Planning Secretary.					AIE	AIE Stage 2a separate.
AIE SSI 9471	3-20	Prior or the commencement of construction, unless otherwise agreed by the Planning Secretary, the Proponent must retire biodiversity credits of a number and class specified in Table 1 and Table 2 below in consultation with BCD and to the satisfaction of BCT.	No	Yes	No	No	AIE	Not required for Jemena approval. Required for AIE Stage 3 pipeline only.
AIE SSI 9471	3-21	(b) Hazard and Operability Study (HAZOP) for the development.	Yes	Yes	Yes	Yes	AIE	Required for Jemena approval – Condition B1. Jemena and AIE scope considered in separate standalone studies. AIE Stage 3 and Stage 2a study combined.
AIE SSI 9471	3-21	(c) Final hazard Analysis of the development based on its final design, consistent with the Department's Hazardous Industry Planning Advisory Paper No. 6, 'Hazards Analysis'. The Final Hazard Analysis must be prepared in consultation with SafeWork NSW and the Port Authority of NSW.	Yes	Yes	Yes	Yes	AIE	Required for Jemena approval – Condition B1. Jemena and AIE scope considered in separate standalone studies to be completed. AIE Stage 3 pipeline and Stage 2a facilities FHA report combined.
AIE SSI 9471	3-21	(d) Construction Safety Plan, consistent with most recent Australian Standard AS2885.1, Pipelines - Gas and liquid petroleum (Part 1: Design and construction). The plan must specifically address all safety measures related to construction, testing and commissioning.	No	Yes	No	Yes	Jemena (Construction Contractor)	Not required to be provided to DPE for Jemena approval. Separate standalone plans for AIE Stage 3 pipeline.
							AIE	AIE Stage 2a separate.

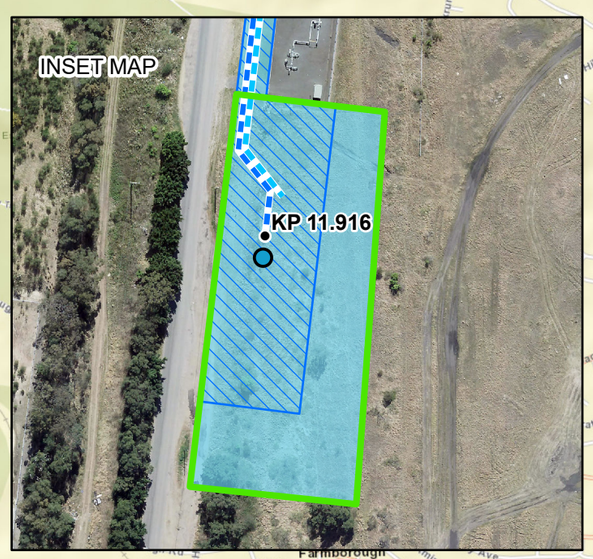
Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
AIE SSI 9471	3-21	(e) A Pipeline Safety Management Study, prepared in accordance with the Australian Standard AS 2885 - 2007, Pipelines - Gas and liquid petroleum. The study must be prepared in consultation with all relevant stakeholders including, but not limited to, Jemena.	No	Yes	No	Yes	Jemena	Not required to be provided to DPE for Jemena approval. AIE Stage 3 pipeline and Stage 2a facilities plan combined.
AIE SSI 9471	3-23	(a) an Emergency Plan and detailed emergency procedures for the development prepared in consultation with Safework NSW, Fire and Rescue NSW and Port Authority of NSW.	No	Yes	No	Yes	AIE	Not required for Jemena approval. Related to Berth with Stage 3 pipeline to be considered.
AIE SSI 9471	3-23	(b) a Safety Management System that must be prepared in consultation with SafeWork NSW.	No	Yes	No	Yes	AIE	Not required for Jemena approval. Related to Berth with Stage 3 pipeline to be considered.
AIE SSI 9471	3-26	Three months after the commencement of operations, the Proponent must submit to the Planning Secretary, a report detailing compliance with 26 (a), (b) and (c).	No	Yes	No	Yes	AIE	Not required for Jemena approval. Related to Berth with Stage 3 pipeline to be considered.
AIE SSI 9471	3-37	Within 18 months of the cessation of operations, unless the Planning Secretary agrees otherwise, the Proponent must rehabilitate the site in consultation with the NSW Ports and to the satisfaction of the Planning secretary. This rehabilitation must comply with the objectives in Table 3.	No	Yes	No	Yes	AIE	Not required for Jemena approval. AIE Stage 3 pipeline and Stage 2a facilities combined.
AIE SSI 9471	4-1	Prior to the commencement of construction, the Proponent must prepare an Environmental Management	No	Yes	No	Yes	Jemena (Construction Contractor)	Not required for Jemena approval, however some overlap with Jemena approval (Condition C1 – CEMP).

Approval	Condition Reference	Condition	Stage Required				Responsibility	Scope
			Pipeline		Facility			
			Jemena Stage 1	AIE Stage 3	Jemena Stage 2	AIE Stage 2a		
		Strategy for the development to the satisfaction of the Planning Secretary.						Jemena Stage 1 pipeline and AIE Stage 3 strategy combined
							AIE	AIE Stage 2a separate.
AIE SSI 9471	4-7	The Proponent must provide regular compliance reports to the Department on the development in accordance with the relevant requirement of the Department's guideline Compliance Reporting Post Approval Requirements (2020), or its most recent edition.	No	Yes	No	Yes	Jemena (Construction Contractor)	Not required for Jemena approval. AIE Stage 3 pipeline and Stage 2a facilities combined.
AIE SSI 9471	4-8	The Proponent must provide regular reporting on the environmental performance of the development on its website in accordance with the reporting requirements in any strategies, plans or programs approved under the conditions of this approval.	No	Yes	No	Yes	AIE	Not required for Jemena approval..
AIE SSI 9471	4-9	Twelve months after the commencement of operations and every 3 years thereafter, unless the Planning Secretary directs otherwise, the Proponent must commission and pay the full cost of an Independent Environmental Audit of the development.	No	Yes	No	Yes	AIE	Not required for Jemena approval. AIE Stage 3 pipeline and Stage 2a facilities combined.
AIE SSI 9471	4-10	Within 12 weeks of commissioning this audit, or as otherwise agreed by the Planning Secretary, the Proponent must submit a copy of the audit report to the Planning Secretary, together with its response to any recommendations contained in the audit report and a timetable for the implementation of these recommendations as required.	No	Yes	No	Yes	AIE	Not required for Jemena approval. AIE Stage 3 pipeline and Stage 2a facilities combined.

Pipeline Construction from PKGT site to Proposed Kembla Grange Metering Station (KGMS), including Segment 1.1, Segment 1.2 and Segment 2

Approval: AIE SSI-9471 - Jemena SSI-9973

AIE Stage 3 - Jemena Stage 1



Proposed Kembla Grange Metering Station (KGMS)
Segment 2
Approval: Jemena SSI-9973
Jemena Stage 2

KP 11.916
KP 11.5
KP 11
KP 10.5
KP 10
KP 9.5
KP 9
KP 8.5
KP 8
KP 7.5
KP 7
KP 6.5
KP 6
KP 5.5
KP 5
KP 4.5
KP 4
KP 3.5
KP 3
KP 2.5
KP 2
KP 1.5
KP 1
KP 0.5
KP 0

Pipeline Construction on PKGT site
Segment 1.1
Approval: AIE SSI-9471
AIE Stage 2a

Port Kembla Start of Line Facility
on PKGT site
Segment 1.1
Approval: AIE SSI-9471
AIE Stage 2a

Legend

FACILITIES-SITES

- Proposed Kembla Grange Metering Station (KGMS)
- Pipeline Construction on PKGT site
- Port Kembla Start of Line Facility on PKGT site
- Proposed Kembla Grange Metering Station (KGMS) Permanent Footprint
- PKGT Site Boundary
- KGMS Site Boundary
- KP Markers

PIPELINE

- KEMBLA GRANGE TO EGP TIE-IN
- SEGMENT 1.1
- SEGMENT 1.2
- SEGMENT 2

PROJECT AREA

- SEGMENT 1.1
- SEGMENT 1.2
- SEGMENT 2

0 375 750 1,500 Metres

Scale: 1:25,000 (at A3)

Coordinate System: GDA 2020 MGA Zone 56
Projection: Transverse Mercator
Datum: GDA 2020

N

Service Layer Credits: World Street Map: Esri, HERE, Garmin, NGA, USGS

Rev	Description	DRN	CHK	APP	Date
0	Issued for Use	JDF	JW	JA	24/05/2022
B	Issued for Information Only	JDF	JW	JA	19/05/2022
A	Issued for Information Only	JDF	JW	NB	21/12/2021

Jemena

Produced by GIS Gas Transmission
Jemena
567 Collins Street
Melbourne VIC 3000

POST CONSENT STRATEGY MAP

PORT KEMBLA PIPELINE

Map	Doc No	Revision
1 of 1	-	0
Date: 24/05/2022	Map ID: GAS-599-MA-LM-021	

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APPENDIX B CONSULTATION RECORD

The following table provides a detailed record of the consultation activities associated with this Plan.

Stakeholder	Date Sent	Send Method	Due Date	Date Received	Comments
Wollongong City Council (WCC)	30/08/2022	Email	13/09/2022	10/11/2022	Completing review, however note that the deadline has passed.
Sydney Trains	30/08/2022	Email	13/09/2022	15/09/2022	No Comments
Transport for NSW	30/08/2022	Email	13/09/2022	21/09/2022	No Comments

APPENDIX C LEGAL AND OTHER REQUIREMENTS

Regulatory and Other Requirements	Description and Relevance
Environmental Planning and Assessment Act 1979 (NSW)	The NSW Environmental Planning and Assessment Act 1979 (EP&A Act) is the core legislation relating to planning and development activities in NSW. It is the principal law overseeing the assessment and determination of development proposals, and all development in NSW is assessed in accordance with the provisions of the EP&A Act
State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)	Identifies development that is considered to be of state significance and includes provisions for SSD and SSI. The SRD SEPP provides for the declaration of development to be critical SSI in accordance with the provisions of Section 5.13 of the EP&A Act. Critical SSI is development that is considered to be essential to the State for economic, environmental or social reasons. The project has been declared as critical SSI and is listed in Schedule 5 of the SRD SEPP.
State Environmental Planning Policy (Three Ports) 2013 (Three Ports SEPP)	Provides a consistent planning regime for the development and delivery of infrastructure on land in Port Botany, Port Kembla and the Port of Newcastle and includes the identification of certain development as SSD or SSI. The project falls within the Port Kembla land application map under the Three Ports SEPP and the provisions of the policy therefore apply to the project. The import terminal is located on land zoned SP1 Special Activities and the gas transmission pipeline will span both SP1 Special Activities and IN3 Heavy Industrial zones. The project meets the definition of a port facility in accordance with the SEPP and is considered to be consistent with the land zonings.
State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)	The ISEPP aims to facilitate the effective delivery of infrastructure across NSW and allows for a range of developments to be permitted with and without consent. Division 9 of the Infrastructure SEPP includes consent requirements for gas transmission or distribution and pipelines. Clause 53(1) states that development for the purpose of a pipeline may be carried out by any person without consent on any land if the pipeline is subject to a licence under the Pipelines Act 1967 or a licence or authorisation under the Gas Supply Act 1996. The project will require a licence under the Pipelines Act and the proposed pipeline is therefore considered permissible without consent. Division 15 of the Infrastructure SEPP applies to railways and includes provisions for development in or adjacent to rail corridors. Clause 86 relates to development that includes penetration of land within, below or above a rail corridor and includes the need for notification of the development to the rail authority. The project includes a gas pipeline that will traverse a rail corridor trigger and therefore will trigger the notification requirements.
State Environmental Planning Policy No 55—Remediation of Land (SEPP 55)	SEPP 55 provides for a statewide planning approach to the remediation of contaminated land and aims to promote the remediation of contaminated land for the purpose of reducing the risk of harm to human health or any other aspect of the environment by: (a) specifying when consent is required, and when it is not required, for a remediation work, (b) by specifying certain considerations that are relevant in rezoning land and in determining development applications in general and development applications for consent to carry out a remediation work in particular, (c) by requiring that a remediation work meet certain standards and notification requirements. In determining a development application, a consent authority is required to consider if the land is contaminated and, if contamination is identified, whether the land suitable in its contaminated state for the purpose for which the development is proposed to be carried out and if any remediation is required to make the land suitable for that purpose.
Ports and Maritime Administration Act 1995	The Ports and Maritime Administration Act 1995 (Ports and Maritime Act) regulates the operation of ports in NSW across a range of matters including commercial operation and port charges that apply, management of port infrastructure, port safety and the functions of port corporations as well as NSW Roads and Maritime Services in relation to port operations. The Ports and Maritime Act provides broad powers to port operators to regulate activities that may pose a risk to the safety or security of the port including but not limited to the movement of vehicles and the loading/unloading of material. NSW Ports is the port operator at Port Kembla.
Protection of the Environmental Operations Act 1997 (NSW)	The Protection of the Environment Operations Act 1997 (POEO Act) establishes the State's environmental regulatory framework and includes licensing requirements for certain and is administered by the EPA
Protection of the Environment Operations (General) Regulation 2009 (NSW)	Provides for the administration of environment protection licenses, Establishes the method of calculating licence fees, including load based licence fees, and environmental protection notice fees.
Protection of the Environment Operations (Noise Control) Regulation 2017 (POEO Regulation)	The EPA regulates noise from licensed industrial premises under Schedule 1 of the Protection of the Environment Operations Act 1997 (POEO Act). If noise above scheduled levels is emitted from the premises because of the occupier's failure to maintain or operate

Regulatory and Other Requirements	Description and Relevance
	the plant, or properly and efficiently deal with materials the EPA can use noise control notices, prevention notices and noise abatement directions to reduce or stop the noise
Waste Avoidance and Resource Recovery Act 2001	The Waste Avoidance and Resource Recovery Act 2001 promotes waste reduction and better use of resources. It includes provisions for waste strategies and programs, and for industry actions to reduce waste, including extended producer responsibility schemes and container deposit schemes. The Act establishes a waste hierarchy for the management waste. In accordance with the hierarchy, waste should in the first instance be avoided through avoidance of unnecessary resource consumption. When waste is produced, options to recover the waste should be looked at including options for reuse, reprocessing, recycling and energy recovery. Waste should only be disposed of where other options have first been investigated.
Pipelines Act 1967	Sections 12 and 13 of the Pipelines Act 1967 (Pipelines Act) outline the licensing application requirements for pipelines. Under Section 11 of the Pipelines Act, a licence is required to: commence, or continue, the construction of a pipeline; alter or reconstruct a pipeline; or operate a pipeline. A licence under the Pipelines Act is required for the construction and operation of the proposed gas transmission pipeline.
Crown Lands Act 1989 (NSW)	The Crown Lands Act 1989, administered by the Minister for Crown Lands, regulates the management of Crown for the benefit of the people of New South Wales
Contaminated Land Management Act 1997 (NSW)	The general object of this Act is to establish a process for investigating and (where appropriate) remediating land that the EPA considers to be contaminated significantly enough to require regulation.
Contaminated Land Management Regulation 2013 (NSW)	This Regulation provides for the recovery of administrative costs by the EPA in connection with orders and proposals made under the Act; provides for the accreditation of site auditors; and prescribes certain offences as penalty notice offences and prescribes penalty notice amounts.
Biodiversity Conservation Act 2016 (NSW)	The Biodiversity Conservation Act 2016 (BC Act) governs the management and conservation of biodiversity in NSW, which includes all flora, fauna and ecological communities, consistent with principles of ecologically sustainable development of the Protection of the Environment Administration Act 1991 (NSW)
Biodiversity Conservation Regulation 2017 (NSW)	Section 6.8 of the Biodiversity Conservation Regulation 2017 (the BC Regulation) requires that a Biodiversity Development Assessment Report (BDAR) for a development application must include details of offsets for impacts, including the number and classes of biodiversity credits required to be retired in accordance with the like-for-like requirements of the offset rules. The credentials of the assessors that established these offsets and the date of the assessment is also required under the BC Regulation
Fisheries Management Act 1994 (NSW)	The broad objective of the Fisheries Management Act 1994 (FM Act) is to conserve, develop and share the fishery resources of the State for the benefit of present and future generations.
Environment Protection and Biodiversity Conservation Act 1999 (Commonwealth)	The Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act) provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places — defined in the EPBC Act as Matters of National Environmental Significance (MNES). The purpose of the EPBC Act is to ensure that actions likely to cause a significant impact on MNES undergo an assessment and approval process. Under the EPBC Act, an 'action' includes a project, undertaking, or activity. An action that 'has, will have or is likely to have a significant impact on a matter of national environmental significance' is deemed to be a 'controlled action' and may not be undertaken without prior approval from the Commonwealth Minister for the Environment (the Minister).
National Parks & Wildlife Act 1974 (NSW)	The National Parks & Wildlife Act 1974 (NPW Act) protects Aboriginal heritage (places, sites and objects) within NSW. Protection of Aboriginal heritage is outlined in s86 of the Act, as follows: • "A person must not harm or desecrate an object that the person knows is an Aboriginal object" s86(1) • "A person must not harm an Aboriginal object" s86(2) • "A person must not harm or desecrate an Aboriginal place" s86(4)
National Parks & Wildlife Regulation 2009 (NSW)	The National Parks and Wildlife Regulation 2009 ("NPW Regulation") provides a framework for undertaking activities and exercising due diligence in respect to Aboriginal heritage. The NPW Regulation 2009 outlines the recognised due diligence codes of practice which are relevant to this report, but it also outlines procedures for Aboriginal Heritage Impact Permit (AHIP) applications and Aboriginal Cultural Heritage Consultation Requirements (ACHCRs); amongst other regulatory processes

Regulatory and Other Requirements	Description and Relevance
Heritage Act 1977 (NSW)	The NSW Heritage Act 1977 makes provisions to conserve the State's historic heritage. It provides for; • The identification and registration of items of State heritage significance; • The interim protection of items of State heritage significance; and • Constitutes the Heritage Council of New South Wales
Native Title Act 1993 (Commonwealth)	The Native Title Act provides a national framework for the recognition and protection of native title i.e. the rights and interests, recognised by common law, possessed under traditional laws and customs of Aboriginal and Torres Strait Islander people. The Act recognises the ownership of land or waters by Aboriginal and Torres Strait Islander groups prior to European settlement and provides a mechanism for determining where native title exists, who holds it, and identifies compensation for actions affecting it. The Act establishes ways in which future dealings affecting native title may proceed and sets standards for those dealings. A Native Title search has been undertaken for the development and it has been determined that there are no registered claims over the Project area
Aboriginal and Torres Strait Islander Heritage Protection Act 1984 (Commonwealth)	The Aboriginal and Torres Strait Islander Heritage Protection Act 1984 enables the Australian Government to respond to requests to protect areas and objects of particular significance to Aboriginal people, if it appears that state or territory laws have not provided effective protection. An Aboriginal and Historic Heritage Assessment has been prepared for the development which has determined that there are no items or areas of Aboriginal cultural heritage significance within the development site.
Code of Practice for Archaeological Investigations of Objects in NSW (2010)	The purpose of this Code of Practice is to: • establish the requirements for undertaking test excavation as a part of archaeological investigation without an AHIP; and • establish the requirements that must be followed when carrying out archaeological investigation in NSW where an application for an AHIP is likely to be made
Guide to Investigating, Assessing and Reporting on Aboriginal Cultural Heritage in NSW (2011)	The purpose of this document is to provide: Guidance on the process for investigating and assessing Aboriginal cultural heritage in NSW and BCD's requirements for an Aboriginal cultural heritage assessment report
Biosecurity Act 2015 (NSW)	The Biosecurity Act 2015) establishes a system for the identification and control of noxious weeds in NSW. The NW Act divides noxious weeds into five categories which determine the level of control required. Responsibility for the control of noxious weeds lies with the owner and/ or occupier of private land and Crown land, local councils and other public authorities.
Water Management Act 2000 (NSW)	The objectives of the Water Management Act 2000 are to provide for the sustainable and integrated management of the water sources of NSW for the benefit of both present and future generations. Water supply work approvals are excluded from an approved SSD project on the basis impact of these works have been assessed and approved as part of the SSD project. It is understood no relevant works were approved in the SSD project hence any new works or works not currently authorised appropriately will require an approval under the Water Management Act 2000 prior to the take of water. Applications for new approvals include an advertising and assessment process. Water Access Licenses (WALs) are not excluded from approved SSD projects. Hence where required, a WAL needs to be obtained prior to the take of water.
Water Management (General) Regulation 2018	This regulation specifies procedural, technical and licence requirements under the Water Management Act 2000, as well as the functions and powers of water supply authorities.
Roads Act 1993 (NSW)	The Roads Act 1993 (Roads Act) provides a framework for the management of roads in NSW. It provides for the classification of roads and the declaration of the Roads and Maritime Services (RMS) and other public authorities for both classified and unclassified roads. The Roads Act confers fractions on RMS and other roads authorities and allows distribution of such functions between RMS and other roads authorities
Coroners Act 2009 (CA Act)	The CA Act provides provisions related to the investigation of certain kinds of death and enables coroners to make recommendations in connection with an inquest or inquiry. Chapter 9, Section 100 states that a person must not dispose of human remains unless the appropriate disposal authorisation has been given. In the unlikely even human remains are discovered during works the applicable provisions of Chapter 4 Section 35 of the Act must be followed in reporting the remains to the NSW Police and coroner/assistant coroner as soon as possible.

APPENDIX D PRE COMMENCEMENT FORM 2

PRE-COMMENCEMENT Form 2

Project Name		Project No.	
Crew / Subcontractor		Works Supervisor	

This form is for the Project LECH Manager to outline land access, environment and cultural heritage constraints for the stated scope of work and must be read in conjunction with Construction Environmental Management Plan (CEMP), work procedures and environmental line list.

The Project LECH Manager or their delegate is to be consulted if any questions or issues arise.

Scope of Work	Start KP	Finish KP

Land Access Requirements

Environmental Sensitivities

Aboriginal Heritage

Historical Heritage

PRE-COMMENCEMENT Form 2

Pre-Commencement Checklist	
All approved access points and access requirements have been established and communicated to supervisor	☐
All disturbance boundaries in relation to the proposed works have been established in accordance with the approved survey.	☐
All environmental and Aboriginal heritage sensitivities and no-go zones have been established	☐
The SWMS for this scope of work contains the relevant environmental risks and management measures	☐
Pre-commencement requirements have been communicated to supervisor	☐

Nacap LECH Manager Name:	
Signature:	**Date:**

Works cleared to proceed except as noted

Nacap Construction Manager Name:	
Signature:	**Date:**

The Works Supervisor must not commence the stated scope of work until this form is signed by the LECH Manager and Construction Manager, or if they are uncertain about any requirements stated herein or in refenced documentation.

APPENDIX E ENVIRONMENTAL PROTECTION AND AWARENESS POLICY

ENVIRONMENTAL PROTECTION & AWARENESS POLICY

Nacap strives for excellence in environmental protection and awareness.

TO ACHIEVE THIS, WE WILL:

MAINTAIN	an environmental management system that meets the requirements of ISO 14001.
COMPLY	with all applicable environmental laws, client requirements and relevant codes of practice.
COMMUNICATE	our environmental protection and awareness policy and procedures to all of our workers and contractors.
EDUCATE	and train our workers and contractors to improve awareness, skills and performance.
SEEK	commitment from all workers and contractors to sustainable environmental practices.
PREVENT	disturbance to known sites of First Nations, archaeological or historical significance.
LIMIT	disturbance of soil, vegetation and wildlife habitats to designated work areas.
ESTABLISH	measurable environmental performance targets and seek to continually improve performance.
APPLY	all practicable steps to prevent pollution and other adverse effects from our operations.
MONITOR	operational environmental performance and promote reporting of environmental hazards, behaviours and incidents.

MATTHEW O'CONNELL
PRESIDENT
NACAP
19/04/2021

3902-POL-02-1 Environmental Protection & Awareness Policy_Rev 13

APPENDIX F ENVIRONMENTAL ASPECTS AND IMPACTS REGISTER

No	ACTIVITY	HAZARD (Cause)	RISK/THREAT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	MANAGEMENT CONTROLS	RESPONSIBILITY	NEW LIKELIHOOD	NEW CONSEQUENCE	RISK LEVEL RESIDUAL
1	Mobilisation and site establishment	Establishment of construction CROW, Laydowns and extra work areas Vehicle and plant access and mobilisation	Unauthorised disturbance to natural systems, agricultural systems, existing land use, Aboriginal and historical heritage and built environment	Environmental, heritage and land use degradation	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Project Signage Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with PMPs Complaints Management Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
2	Mobilisation and site establishment	Plant and equipment arriving from locations that may have carry noxious weeds and pests	Contamination of land by the introduction of new noxious weeds/pests from wheels and vehicle under body.	Environmental and land use degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS development Vehicle pre inspections, wash- down, hygiene requirements, response procedures Site housekeeping Vehicle / Plant Inspections Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with PMPs Environmental Inspections, monitoring and audits Incident Reporting Complaints Management	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
3	Mobilisation and site establishment	Hydrocarbon release due to inappropriate storage or transport methods Uncontrolled release (spills) of liquid hazardous or combustible substance	Uncontained release of hydrocarbons and chemicals	Environmental and land use degradation Impacts to human health	Common (once per month)	Short Term Effect and Small Area	Medium	Project inductions addressing chemical storage and spill response; Procedures for chemical storage Diesel fuel storage within bunded area or intrinsically bunded storage container (doubled skinned) Fuel trailer also double skinned - carries spill kit on board SDS and register kept for all hazardous substances onsite, onsite chemical register maintained Spill response equipment, including containment and recovery equipment, available on site All fuels and chemicals stored away from sensitive environmental areas Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP Environmental Inspections, monitoring and audits Incident Reporting Daily storage system checks and pre-starts Daily vehicle and plant pre-starts and checks	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
4	Mobilisation and site establishment	Construction traffic to and from public roads to approved CCROW access	Impacts to existing users, dust and deposition of materials to road surfaces	Loss of amenity, traffic and road hazards and road use degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project inductions addressing road and access usage Project signage Compliance with TMPs Compliance with CEMP Compliance with PMPs Compliance with Community and Stakeholder Management Plan Awareness through daily pre-starts, toolbox talks and one on one conversations Clean up control readiness (street weeper) Subcontractor management Environmental Inspections, monitoring and audits Incident Reporting Complaints Management	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
5	Construction of site access laydown; establishment of CCROW and temporary facilities	Personnel not being aware or accidently entering areas of the project that are off limits and or environmentally/culturally sensitive	Entering restricted/no go zones and unauthorised disturbance	Environmental, Aboriginal heritage and land use degradation	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Project signage Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with PMPs Compliance with Community and Stakeholder Management Plan Complaints Management	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low

No	ACTIVITY	HAZARD (Cause)	RISK/THREAT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	MANAGEMENT CONTROLS	RESPONSIBILITY	NEW LIKELIHOOD	NEW CONSEQUENCE	RISK LEVEL RESIDUAL
								Environmental Inspections, monitoring and audits Incident Reporting				
6	Construction of site access laydown; establishment of CCROW and temporary facilities	Clearing vegetation or trees adjacent permitted construction footprint - habitat loss, loss of protected flora and fauna, heritage impacts	Unauthorised disturbance to biodiversity, flora and fauna and heritage, landscape and property values	Environmental, Aboriginal heritage and land use degradation	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with PMPs Complaints Management Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
7	Operation of motor vehicles or plant	Operating off approved access and disturbance areas	Vehicles driving in locations that could cause damage to local environment.	Environmental, Aboriginal heritage and land use degradation	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2Establishment and maintenance of No Go ZonesProject Signage and mappingStay on designated tracks Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor managementCompliance with CEMP and ELLCompliance with PMPsCompliance with TMPsEnvironmental Inspections, monitoring and auditsIncident ReportingComplaints Management	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
8	Operation of motor vehicles or plant.	Vehicle maintenance activities/breakdown of plant.	Uncontained release of oils or lubricants to the local environment during routine service activities and operations.	Environmental and land use degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS Development Driver/ Operator training and competency Servicing only on hardstand Temporary catch trays used during vehicle service activities. Spill kits to be made available. Compliance with CEMP Compliance with PMPs Subcontractor Management Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
9	Operation of motor vehicles or plant.	Operating/driving at dawn or dusk	Fauna strike	Fauna injury/death	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS development Driver/ Operator training and competency Speed signage Awareness through notice boards, daily pre-starts, toolbox talks and one on one conversations Compliance with CEMP Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
10	Operation of motor vehicles or plant.	Operating near sensitive areas - e.g. environmental or Aboriginal heritage sites	Damage to protected environmental or heritage areas.	Damage to native vegetation and or Aboriginal heritage	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Establishment and maintenance of No Go Zones Project Signage and mapping Stay on designated tracks Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with PMPs Compliance with TMPs Environmental Inspections, monitoring and audits Incident Reporting Complaints Management	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
11	Operation of motor vehicles or plant.	Spills due to operations and servicing	Hydrocarbon and chemical release to ground	Environmental and land use degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS Development Driver/ Operator training and competency Servicing only on hardstand Temporary catch trays used during vehicle service activities. Spill kits to be made available. Compliance with CEMP Compliance with PMPs Subcontractor Management Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
12	Operation of motor vehicles or plant.	Operating in weed infested areas	Weed spread infestation	Environment and land use degradation	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS development Vehicle pre inspections, wash- down, hygiene requirements, response procedures Site housekeeping Vehicle / Plant Inspections	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low

No	ACTIVITY	HAZARD (Cause)	RISK/THREAT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	MANAGEMENT CONTROLS	RESPONSIBILITY	NEW LIKELIHOOD	NEW CONSEQUENCE	RISK LEVEL RESIDUAL
								Awareness through daily pre-starts, toolbox talks and one on one conversations Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Establishment and maintenance of No Go Zones Project Signage and mapping Stay on designated tracks and CCROW Subcontractor management Compliance with CEMP and ELL Compliance with PMPs Environmental Inspections, monitoring and audits Blow downs or wash downs in event of contact with known weed infestation Incident Reporting Complaints Management				
13	Operation of motor vehicles or plant.	Plant leaving site that may hold excessive amounts of mud and dirt	Amounts of mud and dirt falling onto public roads	Complaints from stakeholders and local residentsEnvironmental and land degradationReputational decline	Common (once per month)	Short Term Effect and Small Area	Medium	Project inductions addressing road and access usageProject signageCompliance with TMPsCompliance with CEMP Compliance with PMPsCompliance with Community and Stakeholder Management PlanAwareness through daily pre-starts, toolbox talks and one on one conversations Clean up control readiness (streetsweeper)Rumble pads to minimise transfer of soils to road surfacesSubcontractor managementEnvironmental Inspections, monitoring and audits Incident ReportingComplaints Management	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
14	Operation of motor vehicles or plant (includes trenchless crossings)	Noise, Vibration and lighting	Nuisance, damage to property, impacts to human health, impacts to flora and fauna	Loss of flora and fauna Environment and land degradation Impacts to property Harm to human health	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Project Signage Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with NVMP Compliance with hours of work and out of hours works protocol Compliance with PMPs Complaints Management Environmental Inspections, monitoring and audits -including site specific and activity reactive site monitoring Daily monitoring to ensure noise levels at nearest sensitive receptor is <75dB (Normal work hours) Monitoring of proposed works outside normal work hours to identify exceedance above background noise levels >10dB (M-F 6-10pm Sat 1-10pm Sun 7am-10pm) Monitoring of proposed works outside normal work hours to detect audible noise within habitable rooms to identify exceedance above background noise levels +0dB (Mon-Sun 10pm-7am) Vibration monitoring of intensive works within 100m of sensitive receptors to detect exceedance of identify trigger values for works modification or suspension (Refer to Construction Noise and Vibration Plan). Monitoring arising from noise and vibration complaints Monitoring associated with planned blasting (to be determined) Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
15	Vegetation Clearing	Unauthorised clearing of vegetation	Loss of vegetation Loss of protected and vulnerable species (FFG EPBC)	Environment and land use degradation	Rarely (once in < 20 years)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Project Signage Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with PMPs Complaints Management Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	low
16	Vegetation Clearing	Unauthorised clearing of vegetation	Disturbance to sites of Aboriginal heritage and cultural significance	Loss or harm to Aboriginal heritage	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Project Signage Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	low

No	ACTIVITY	HAZARD (Cause)	RISK/THREAT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	MANAGEMENT CONTROLS	RESPONSIBILITY	NEW LIKELIHOOD	NEW CONSEQUENCE	RISK LEVEL RESIDUAL
								Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP (CHMPs)and ELL Compliance with PMPs Complaints Management Environmental Inspections, monitoring and audits Incident Reporting				
17	Earthworks	Inadequate erosion and sediment control planning and installation	Erosion and sedimentation	Environment and land use degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with PMPs Compliance with CSWMP Compliance with Waterway Authority Conditions and Controls Compliance with ESCPs Inspection and maintenance of ESCs Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	low
18	Earthworks	Soil and spoil management	loss of topsoil	Environment and land use degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project InductionsProject Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor managementCompliance with CEMP and ELLCompliance with PMPsCompliance with CSWMPCompliance with Waterway Authority Conditions and ControlsCompliance with ESCPsInspection and maintenance of ESCsComplaints ManagementEnvironmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	low
19	Earthworks	Soil and spoil management	Sodic Soils - increased instability and erosion	Environment and land use degradation	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Pre-clearance inspection to identify physical triggers of Sodic soil occurrence Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with PMPs Compliance with CSWMP Compliance with ESCPs Inspection and maintenance of ESCs Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
20	Earthworks	Excavations	Unexpected Aboriginal heritage finds	Damage to heritage or sites of significant Uncovering of human remains	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known sensitivities and constraints Pre Commencement Form 2 Project Signage Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with PMPs Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
21	Earthworks	Excavations	Unexpected contamination including PASS/ASS	Environmental and land use degradation Impacts to human health	Sometimes (once per year)	Short Term Effect and Small Area	Low	Project Inductions and SWMS Development Project Layout developed to avoid known areas of contamination and constraints Pre Commencement Form 2 Pre-clearance checks and establishment and maintenance of No Go Zones Pre-clearance inspection to identify physical triggers of PASS/ASS occurrence Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with CSWMP Compliance with PMPs Environmental Inspections, monitoring and audits Monitoring of excavations for release/entry of landfill gases Incident Reporting	Nacap Project Manager and or delegate	Rarely (once in < 20 years)	Short Term Effect and Small Area	Low

No	ACTIVITY	HAZARD (Cause)	RISK/THREAT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	MANAGEMENT CONTROLS	RESPONSIBILITY	NEW LIKELIHOOD	NEW CONSEQUENCE	RISK LEVEL RESIDUAL
22	Earthworks	Excavations	Damage to riparian and aquatic ecosystems and waterways during open trench construction	Environment degradation, impacts to flora and fauna, water quality and geomorphology	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions and SWMS Development Project Layout developed to avoid known areas of sensitivity and constraints Pre Commencement Form 2 Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with CSWMP Environmental Inspections, monitoring and audits (note requirement for insitu monitoring pre/post construction - water quality triggers) Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
23	Earthworks	Excavations	Entrapped fauna	Injury and death of listed fauna	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions Project Layout developed to avoid known areas of sensitivity and constraints Pre Commencement Form 2 Pre-clearance checks and establishment and maintenance of No Go Zones Pre-clearance checks and management of breeding places Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Environmental Inspections, monitoring and audits (excavation inspections in accordance with CEMP) Trench egress installations in accordance with CEMP Trench refuge installations in accordance with CEMP Incident Reporting	Nacap Project Manager and or delegate	Rarely (once in < 20 years)	Long Term Effect and Small Area	Medium
24	Earthworks	Generation of dust, reduced air quality	Loss of topsoil/spoil and contamination	Environmental and land use degradation, impacts to flora and fauna and impacts to human health	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS DevelopmentProject Layout developed to avoid known areas of contamination and constraints Pre Commencement Form 2Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor managementCompliance with CEMP and ELLCompliance with Community and Stakeholder Management PlanCompliance with CSWMPCompliance with PMPsUse and availability of watercarts for dust suppressionUse of crushed rock on access where specified Environmental Inspections, monitoring and auditsVisual monitoring of work sites and laydown areasOdour monitoringReactive dust monitoring at locations where sensitive receptors fall within the following works proximity:• <35m C&G• <73m Trenching• <45m Backfill• <35m RehabTrigger values for modification or suspension of works are based onState Environmental Protection Policy (Ambient Air Quality) 2006 (SEPP AAQ): 50ug/m3Incident ReportingComplaints Management	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
25	Trenchless Construction	Uncontrolled release of contaminants	Contamination	Environmental and land use degradation, impacts to flora and fauna and impacts to human health	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS Development Pre-clearance checks and establishment and maintenance of No Go Zones Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Implement Unexpected Finds Protocols Compliance with CEMP and ELL Compliance with CSWMP Compliance with Trenchless Construction designs and management plans and subordinate procedures Compliance with PMPs Ensure spill management and response capability including sucker trucks, pumps and booms Localised emergency response covered in ERP Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
26	Water Conservation	Reduced water quality and availability	Sedimentation Dewatering Release of contaminants	Environment and land use degradation Water quality Human Health	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with CSWMP Compliance with ESCPs Environmental Inspections, monitoring and audits (note requirement for insitu monitoring pre/post construction - water quality triggers) Water from trench dewatering to be reused (e.g. dust suppression), if practicable and dependent on quality Water from trench dewatering to be re-infiltrated / evaporated, away from water courses and via sediment pond if practicable. Incident Reporting Complaints management	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low

No	ACTIVITY	HAZARD (Cause)	RISK/THREAT	IMPACT	LIKELIHOOD	CONSEQUENCE	RISK LEVEL	MANAGEMENT CONTROLS	RESPONSIBILITY	NEW LIKELIHOOD	NEW CONSEQUENCE	RISK LEVEL RESIDUAL
27	All works	Fire	Threat of combustion from ignition source	Fire Loss of flora and fauna Environment and land degradation Impacts to agricultural enterprise Harm to human life	Sometimes (once per year)	Long Term Effect and Small Area	Medium	Project Inductions Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP and ELL Compliance with PMPs Maintenance of adequate fire response capability and equipment at site - 1000L fire fighting trailers - to be located with works (i.e. clear and grade and welding) Fire extinguishers on / in all vehicles All stockpiled equipment, materials and waste to be stored in areas of low fire risk Flammable material to be removed from areas around ignition sources, e.g., welding areas Localised fire emergency response covered in ERP Emergency contact details available to all project personnel Housekeeping Permit system to be used for hot tapping and commissioning works SWMSs and pre-starts to consider fire risks Smoking within designated areas with receptacles provided Fire awareness to be reinforced at toolbox meetings - monitoring of weather conditions Fire watchman (spotter) for live line welding Monitor fire service alerts regarding fire ban days etc.; seek exemptions for fire ban / restriction days where appropriate No open fires (camp fires etc.) Environmental Inspections, monitoring and audits Incident Reporting	Nacap Project Manager and or delegate	Highly Unlikely (once in > 20 years)	Long Term Effect and Small Area	Low
28	General Works	Waste material not stored, contained or transported appropriately	Poor Waste management / waste containment compromised, release of contaminants	Impact to human health and environment and land degradation	Common (once per month)	Short Term Effect and Small Area	Medium	Project Inductions and SWMS Development Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor management Compliance with CEMP, CSWMP and ELL Compliance with PMPs Environmental Inspections, monitoring and audits Waste Management including containment, segregation, disposal and record keeping Warning systems on ablution storage tanks Transport of all waste by appropriately licensed operators to licensed facilities Incident Reporting	Nacap Project Manager and or delegate	Sometimes (once per year)	Short Term Effect and Small Area	Low
29	Hydrotesting	Post Hydrotesting water storage spill contaminating land.	Failure of containment, system failure or leaks	Contamination of land, environmental degradation impact to flora and fauna, property and human health	Rarely (once in < 20 years)	Short Term Effect and Small Area	Low	Project Inductions Awareness through daily pre-starts, toolbox talks and one on one conversations Subcontractor managementCompliance with CEMP, CSWMP and ELLCompliance with PMPsEnvironmental Inspections, monitoring and auditsDaily monitoring of containment structures and water transfer equipment and pipeworkIncident ReportingAll storage systems to be linedInstallation of fauna access prevention measures\Prevent access to the public where required or specified	Nacap Project Manager and or delegate	Rarely (once in < 20 years)	Short Term Effect and Small Area	Low

APPENDIX G ENVIRONMENTAL MANAGEMENT MEASURES

Environmental Management Measures

GENERAL MEASURES APPLICABLE TO ALL CONSTRUCTION ACTIVITIES			
No	**Management Measure**	**Timing**	**Responsibility**
1.	All construction personnel and subcontractors are required to undertake a Project induction to cover sufficiently the aspects, impacts and management measures identified in the CEMP and Sub-plans in minimising environmental harm	Prior to Construction	Project Manager
2.	A Community and Stakeholder Communication Protocol will be prepared and implemented to facilitate communication with the community, stakeholders and third parties about construction impacts and timings.	Prior to Construction	LECH Manager
3.	A Complaints Management System will be implemented to facilitate the receipt and tracking of complaints regarding the conduct of construction.	Prior to Construction and ongoing	Project Manager
4.	Develop Environmental Control Plans that identify all land, environment and heritage sensitivities.	Prior to Construction and ongoing	LECH Manager
5.	Environmental Control Plans will be attached to the authority to commence construction (Pre-Commencement Form 2). Environmental Control Plans will also be communicated at daily pre-starts and toolboxes as required or when works are planned in proximity to known sensitivities.	Prior to Construction and ongoing	LECH Manager
6.	All project vehicles, plant and equipment will: Be clear of significant soil/vegetation matter on arrival at site etc and will be inspected and declared weed free at project commencement (i.e. at first entry) All vehicle and plant weed free declarations will be recorded in the Weed Hygiene Register Remain on approved work areas and approved access tracks / roads at all times Clear of significant soil/vegetative matter when moving from one property to the next, and Vehicles, plant and equipment will be reinspected and declared clean following subsequent clean downs	Prior to Construction and ongoing	Project Manager LECH Manager
7.	An Emergency Response Plan will be developed to include all sites associated with the works.	Prior to Construction and ongoing	HSE Manager
8.	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	Construction	Project Manager
Compliance Monitoring	Confirmed implementation of the management measures described above and supported by the records described below.		
Records / Evidence	Induction Register Environmental Control Plans Community and Stakeholder Communications Protocol Pre-Commencement Form 2 Weed Hygiene Register Complaints Register Environmental Line List, and PMPs		

1.0 ACCESS AND SITE MOBILISATION AND ESTABLISHMENT	
Environmental Impacts	Disturbance to landholders, sensitive receptors, stakeholders and/or third parties Disturbance to biodiversity, and Disturbance to heritage.
Environmental Performance Objectives and Standards	To develop, use and manage access roads and work areas to avoid identified environmental, landowner and stakeholder sensitivities. To minimise removal and damage to native flora and fauna To use only the approved Project access roads and works areas To maintain access roads during construction, and To rehabilitate temporary construction access tracks and work areas in accordance with landowner requirements or as agreed with statutory authorities.
Measurement Criteria	Compliance with LLL, Third Party Agreements and Nacap Pre-Commencement Form 2 Project access roads identified and only used by construction vehicles and machinery Compliance with management measures for maintenance of Project access roads, and New construction access roads and work areas and laydowns will avoid environmental, landowner and stakeholder sensitivities identified in pre-construction surveys, studies and reports.

No	Management Measure	Timing	Responsibility
1.	The approved disturbance area established as the final layout as submitted to the Secretary (DPE) and /or site boundaries, approved accesses and "No Go" zones will be surveyed and clearly delineated to define the works area and minimise the inadvertent disturbance or access to unauthorised areas beyond the approved boundaries. Surveys and peg-out will be based on digital data as per the Project final layout survey.	Prior to Construction	Project Manager
2.	During set out make use of existing disturbance for project layout as far as practicable, including access routes and other ancillary workspaces; negotiate with third parties for use of existing disturbed areas where appropriate and within approved, ecological and heritage surveyed areas.	Prior to Construction	Construction Manager
3.	Prior to access: > contact landowners, occupiers and third parties within prescribed notification periods to communicate key information (commencement date, project/maintenance scope, expected completion date etc.), and > Generate and record notifications.	Prior to Construction	LECH Manager and or delegate
4.	Prior to any project disturbance works: Undertake a site inspection, to ground-truth site conditions and that the approved works areas and No-Go Zones are in accordance with, project specific approval conditions and other environmental operating requirements Verify if any sites of known or potential heritage significance are associated with the project/site Where no project specific approvals are provided, Nacap is responsible for identifying areas where vegetation disturbance/clearance is required and acquiring subsequent approvals prior to access and works. delineate and establish the approved works areas and No-Go Zones etc. using flagging/markers Include all land access requirements in the Nacap Pre Commencement Form 2, and Establish photo points and capture pre-disturbance photos.	Prior to Construction	LECH Manager and or delegate
5.	All construction activities will be confined to the established and delineated approved works area and construction access tracks / roads.	Construction	Construction Manager
6.	All vehicles, plant and personnel shall travel and remain on approved access tracks and / or approved work areas at all times. All materials shall be stored within approved works areas and be prevented from overhanging or entering unauthorised areas and "No Go" zones.	Construction	Construction Manager
7.	Appropriate use of access tracks, roads and works areas will involve: Authorised Project vehicles entering the site only, there is no access to private vehicles within the Project area All vehicles delivering materials, plant and equipment shall be registered and are required to maintain appropriate emission controls Construction traffic shall travel at safe speeds as sign posted, and Speed limits may be reduced in dusty conditions.	Construction	Project Manager
8.	Implement property access controls as outlined in land access approvals.	Prior to Construction	Construction Manager

	1.0 ACCESS AND SITE MOBILISATION AND ESTABLISHMENT		
9.	Use best endeavours to identify known property services – notify and rectify as agreed with the landowner. Contact the landowner in event of unexpected finds.	Prior to Construction	Construction Manager LECH Manager
10.	Report all unauthorised property damage and / or interference/conflicts to the landowner and client representative. Cease any works causing damage until the construction methodology has been reviewed and damage rectification agreed with the landowner and client Representative.	Construction	Project Manager Construction Manager LECH Manager
11.	Implement all controls for the management of works related to conflicts/impacts on existing land use and enterprise.	Construction	Construction Manager
12.	Maintain proactive communication with landowners, stakeholders and Third-Parties regarding the advancement of works.	Construction	LECH Manager
13.	During construction works, implement any additional protective measures as required to ensure the specific works activities, plant equipment, personnel, materials or construction waste including excavation materials and spoil do not encroach, enter or overhang known environmental, stakeholder and heritage sensitivities, 'No Go Zones' or new sites that have been identified.	Construction	Construction Manager
14.	A Traffic Management Sub-plan will be developed and approved prior to construction. The Traffic Management Sub-plan will outline identified project road use, traffic and transport impacts and associated management measures.	Prior to Construction	Project Manager
15.	Any roads upgrade works required by road authorities will be undertaken in accordance with the requirements and satisfaction of the road authority.	Construction	Project Manager
16.	A road dilapidation survey and condition report will be undertaken on local roads prior to heavy vehicle use during construction. Any damage to roads as a result of construction works will be rectified to the satisfaction of the roads authority.	Prior to Construction	Project Manager
17.	Specific measures for traffic management, including final route identification, timing of transport, switching and detours, escort and pilot vehicles, site specific traffic control plans, site specific traffic management plans and variable message signage, will be implemented as determined and required when permits are issued.	Prior to Construction	Project Manager
18.	Unnecessary vehicle movements will be minimised where possible.	Construction	Project Manager
19.	Transportation of plant, equipment and materials will be timed to avoid peak traffic flows, wherever practicable and in accord with road authority authorisations and directives.	Construction	Project Manager
20.	Vehicle operators will be advised of designated access routes and roadways during the site specific induction and prior to commencement. Nominated routes will be used to access sites to minimise potential impacts on larger areas of the works locality.	Construction	Construction Manager
21.	Works undertaken in proximity to roadways will be conducted under traffic conditions, (including as described in traffic control plans where relevant), which will be prepared for works impacting traffic and use of roads.	Construction	Construction Manager
22.	Community, stakeholders and third parties potentially affected by works adjacent to roads will be notified in accordance with the TMP and provided with details of the works including expected duration, hours of work and contact details. All reasonably practicable measures will be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access, and parking arrangements will be developed in consultation with affected businesses and implemented before the disruption. Adequate signage and directions to businesses will be provided before, and for the duration of, any disruption.	Prior to Construction	Project Manager LECH Manager
23.	Appropriate signage of works would be displayed in accordance with Road Occupancy Permit, where required.	Construction	Construction Manager
24.	The use of oversized vehicles would be in accordance with relevant regulations and TfNSW guidelines.	Construction	Project Manager

1.0 ACCESS AND SITE MOBILISATION AND ESTABLISHMENT			
25.	Where proposed works are located within the Road Reserve and have the potential to disrupt traffic flows or access, a Traffic Control Plan will be prepared and designed to manage traffic and guide it around or past, or if necessary, through the work site. The plans will be prepared by specialist contractors prior to the commencement of works in consultation with the road authorities.	Prior to Construction	Project Manager
26.	To minimise the transportation of plant material and/ or dirt off site: > Vehicles must keep to hardstand access roads where possible > Inspect vehicles, plant and equipment before travelling to/ from site to remove excess dirt and vegetation material if possible > Minimise unnecessary vehicle movements on unsealed roads during periods of wet weather, and > Cover all loads of plant and dirt before leaving site to avoid loss of load.	Construction	Construction Manager
27.	During construction, all reasonably practicable measures must be implemented to maintain pedestrian and vehicular access to, and parking in the vicinity of, businesses and affected properties. Disruptions are to be avoided, and where avoidance is not possible, minimised. Where disruption cannot be minimised, alternative pedestrian and vehicular access, and parking arrangements must be developed in consultation with affected businesses and implemented before the disruption. Adequate signage and directions to businesses must be provided before, and for the duration of, any disruption.	Construction	Project Manager Construction Manager LECH Manager
28.	Where regular heavy vehicle movements are required to directly pass schools or bus pick up locations along roads in the immediate vicinity of the works, such movements may be restricted (where possible) during the following school pick-up/drop off times: 8.00am to 9.30am and 2.30pm to 4.00pm.	Construction	Project Manager
29.	Refer also to PARTC – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Project Manager
Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: Assessment of compliance with LLL, Third Party Agreements and Nacap Pre-Commencement Form 2 Visual observations and monitoring of works and use of access tracks and roads Inspection of adherence to approved access and haulage routes Inspection and monitoring for the road access to ensure roads are maintained and used in a safe state, and Additional monitoring as required in response to complaints or incidents regarding use of access roads and tracks. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 2.5 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.		
Records / Evidence	LLL Weed Hygiene Register Complaints Register Environmental Inspections ELL PMP Pre Commencement Form 2, and Incident Register.		

2.0 CLEARING AND TOPSOIL STRIPPING

Environmental Impacts	Mixing, inversion or compaction of soil profiles Removal of native vegetation Disturbance to native flora and fauna Temporary habitat clearance Disturbance to heritage Disturbance to landowners, stakeholders and Third Parties Soil erosion Sedimentation and reduction in surface water quality Spread of noxious weeds Exhaust emissions Generation of nuisance dust and noise, and Generation of waste.
Environmental Performance Objectives and Standards	To minimise impacts to native flora and fauna To prevent unplanned or unapproved damage to native flora and fauna To manage heritage sites To prevent the mixing of topsoil and subsoil To ensure erosion and sediment control measures are installed and their effectiveness maintained To manage surface drainage and sediment run-off from stockpiles and cleared areas To control the spread of noxious weeds, and To minimise nuisance noise, dust and odour at sensitive receptors.
Measurement Criteria	Compliance with management measures Compliance with LLL, Third Party Agreements and Nacap Pre-Commencement Form 2 "No Go" areas identified and flagged off or otherwise delineated. No incursions or impacts on "no go" areas No unplanned or unauthorised damage to identified flora, fauna and habitats No unplanned or unauthorised incursions or damage to identified heritage sensitivities Compliance with the Environmental Clearance Process (outlined below) Compliance with process for selection, siting and spacing of erosion and sediment control measures Compliance with Project work hours, and Compliance with the Native Vegetation Clearing Approvals.

No	Management Measure	Timing	Responsibility
1.	Prior to commencement of clearing and topsoil stripping activities, reconfirm land access and Pre-Commencement Form 2 requirements and conditions of any other applicable permits, all "no go" areas, site-specific or special management measures, and other constraints to clearing or vegetation removal will be formally communicated to the Clearing Supervisor.	Prior to Construction	Construction Manager LECH Manager
2.	Confirm that all pre-clearance survey, avoidance / protection or mitigation measures have been completed/installed prior to works commencing on any site.	Prior to Construction	Construction Manager LECH Manager
3.	Prior to commencement of clearing and topsoil stripping works, the approved CROW boundaries, approved accesses and "no go" zones as recorded in the land access agreement will be surveyed and clearly marked on-ground or through the use of tape or barrier fencing to define the works area and prevent the inadvertent disturbance of unauthorised areas beyond the approved boundaries. Surveys and peg-out will be based on digital data as per the Project survey.	Prior to Construction	Construction Manager
4.	Make use of existing disturbance for project layout as far as practicable, including access routes and other ancillary workspaces that are approved for use; negotiate with third parties for use of existing disturbed areas where necessary.	Prior to Construction	Construction Manager
5.	All clearing works will be confined to the approved CROW, project access tracks and civil works areas.	Prior to Construction	Construction Manager
6.	Clearing of native vegetation will be minimised, while maintaining appropriate standards of safety and allowing for efficient construction activities. Disturbance shall be the minimum necessary to establish a safe work site.	Prior to Construction	Construction Manager
7.	Where practicable, not use other areas of retained native vegetation (outside of No-Go Zones), for equipment laydown etc.	Prior to Construction	Construction Manager
8.	Personnel, plant, equipment and materials are not to enter "no go" zones.	Construction	Construction Manager
9.	Ensure vegetation that has been approved for disturbance/clearance is clearly identified to prevent unauthorised disturbance.	Prior to Construction	Construction Manager
10.	During works operators will make best endeavours to ensure machinery contact (such as by machinery booms, extended arms or when swinging buckets) with retained vegetation adjacent to but overhanging the works areas is avoided.	Construction	Construction Supervisors
11.	Cleared vegetation will be stockpiled separately and may be re-used for rehabilitation or for erosion and sediment control.	Construction	Construction Manager
12.	Report any disturbance beyond marked or approved boundaries, or damage to vegetation marked for retention, for investigation and corrective action.	Construction	Construction Manager

2.0 CLEARING AND TOPSOIL STRIPPING			
13.	Topsoil will be stripped to the minimum depth required for the performance of the works. Where present, a minimum of 100mm should be stripped.	Construction	Construction Manager
14.	Topsoil and subsoil shall be stockpiled separately. Topsoil and subsoil will not be stockpiled against trees.	Construction	Construction Supervisors
15.	Topsoil stockpiles will not be driven over or used for the bulk construction of erosion and sediment measures.	Construction	Construction Manager
16.	All stockpiles will be located away from areas of weed infestation.	Construction	Construction Supervisors
17.	Stockpile topsoils and subsoils away from watercourses, and away from areas prone to flooding and signpost clearly; leave breaks in stockpiles to allow natural surface water flows and prevent flooding or water erosion of stockpiles.	Construction	Construction Manager
18.	Leave gaps in stockpiles where access tracks intersect with CROW to allow stakeholder access.	Construction	Construction Supervisors
19.	Report substantial loss of topsoil or damage to stockpiles for investigation and corrective action.	Construction	Construction Manager
20.	Erosion Sediment Control (ESC) planning and implementation will follow a staged process, undertaken prior to and during clearing and stripping, covering: > Pre-construction risk assessment and planning > Ground-truthing and on-site assessment for location of ESC treatments and stabilisation measures > ESC installation > Post ESC installation review, and ESC modifications (as needed).	Construction	Construction Manager LECH Manager
21.	One or more of the following erosion and sediment temporary control measures will be employed across work areas: > Berms > Inverts / drains > Silt / sediment fencing > Sumps and sediment basins > Outlet / discharge scour protection or flow dissipation measures Soil surface and channel stabilisation measures > Construction access provisions, and > Additional breaks in windrows. All ESC measures will be in accordance with Landcom Blue Book and IECA (2008) and /or Appendix P of BPESC (2015).	Construction	Construction Manager LECH Manager
22.	Regularly inspect all erosion sediment control and stockpile containment to ensure they are maintained in an effective condition.	Construction	Construction Manager LECH Manager
23.	Erosion controls will divert water to stable areas, such as vegetated areas or have measures installed to slow or spread discharges.	Construction	Construction Manager LECH Manager
24.	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager
Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: Compliance with ELL/LLL > Implementation of biosecurity measures > Fencing / delineation of "no-go" areas > Integrity and effectiveness of vegetation protection / management measures > Integrity and effectiveness of topsoil, soil and vegetation management and storage measures > Installation, integrity and effectiveness of erosion and sediment control measures, and > Compliant use of project accesses. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP.		

2.0 CLEARING AND TOPSOIL STRIPPING	
	Any stakeholder complaints will be managed in accordance with Section 2.5 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.
Records / Evidence	Complaints Register Environmental Inspections ELL/LLL, and Incident Register.

3.0 TRENCH MANAGEMENT

Environmental Impacts	Soil inversion and mixing of soil types Soil acidification Soil contamination Disturbance to native flora and fauna Entrapment of fauna in open trench, and Generation of nuisance dust and noise.
Environmental Performance Objectives and Standards	To prevent soil inversion and the mixing of soil types To inspect excavations for signs of contamination and PASS To inspect excavations to identify entrapped fauna To minimise nuisance noise, dust and odour at sensitive receptors, and To comply with contingency measures for unrecorded heritage sites.
Measurement Criteria	Separate stockpiling of trench spoil, and Compliance with management measures.

No	Management Measure	Timing	Responsibility
	Trench spoil will be stockpiled separate to topsoil stockpiles / windrows. Particular care will be taken in the placement of trench spoil during the creation of the trench and /or bell holes using excavators, to ensure that topsoil is not compromised / impacted by machinery activity during trenching or subsequent padding activities.	Prior to Construction	Construction Manager
	Trench spoil will not be stockpiled against trees.	Construction	Construction Supervisors
	Breaks in the trench spoil stockpiles will be provided: In accordance with land access requirements to provide access across the CCROW, and To accommodate erosion or sediment control and surface water management measures.	Construction	Construction Manager LECH Manager
	Trench plugs / unexcavated trench will be established for fauna / vehicle access in accordance with land access requirements.	Construction	Construction Manager LECH Manager
	The Environmental Advisor/Fauna Handler will provide advice on the location of fauna related trench plugs/bridges to ensure they are located proximate to vegetation or habitat patches adjacent to the CCROW.	Construction	Construction Manager LECH Manager
	Ramps providing egress points and/or fauna refuges providing suitable shelter such as hessian bags from the sun and predators for trapped fauna are to be placed in the trench.	Construction	Construction Manager LECH Manager
	Inspect open excavations and remove fauna and release into suitable habitat near point of rescue at appropriate distance from trench.	Construction	Construction Manager LECH Manager
	Trenches will be kept open for the minimal period required to undertake works.	Construction	Project Manager
	In the event that heritage sites are discovered during the course of trenching works the contingency measures are detailed in Part C – Soil and Water Management Plan – Unexpected Heritage Finds & Human Remains Protocol.	Construction	Construction Manager LECH Manager
	Contingency measures regarding the exposure of pre-existing and unexpected soil contamination during trenching activities are detailed in Part C – Soil and Water Management Plan – Unexpected Contamination Lands Protocol.	Construction	Construction Manager LECH Manager
	Management of Acid Sulfate Soils during trenching are detailed in Part C – Soil and Water Management Plan Appendix G – Acid Sulfate Soils Management Plan	Construction	Construction Manager LECH Manager
	Refer also to PART C – Subplans > Noise, including an out-of-hours work protocol > Air quality > Biodiversity > Soil and water management > Traffic management, and > Waste.	All Stages	Construction Manager LECH Manager

Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: > Monitoring or field assessment for changes in soil conditions that may require further testing > Integrity and effectiveness of soil and spoil management measures > Management of trench dewatering practices (when relevant) > Integrity and effectiveness of erosion and sediment control measures, and > Frequency and adequacy of trench plugs and fauna mitigation.

3.0 TRENCH MANAGEMENT	
	Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 2.5 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.
Records / Evidence	Complaints Register Environmental Inspections Fauna Register ELL/LLL, and Incident Reports.

4.0 PIPE STRINGING, PREPARATION, WELDING AND JOINT COATING	
Environmental Impacts	Ignition of fire on CROW Soil or water contamination, and Trapped Fauna
Environmental Performance Objectives and Standards	To avoid fires resulting from welding or grinding activities To prevent land or water contamination from welding or joint coating activities To remove all construction debris from the CROW and other Project areas, and Pipe stringing and preparation managed to allow for access and the passage native fauna.
Measurement Criteria	Gaps in strung pipe coincide with trench plugs to allow vehicle and fauna access Operable fire-fighting equipment available with welding crew End caps are present on pipe strings, and Welding or grinding waste removed from the CROW.

No	Management Measure	Timing	Responsibility
1.	Pipe will be transported to and strung directly on the CCROW.	Construction	Project Manager Construction Manager
2.	Gaps will be left in the strung pipe to allow for vehicle and fauna access, in accordance with land access requirements.	Construction	Construction Manager
3.	Individual pipes and welded pipe strings will be raised on skids approximately 150mm, which will allow unimpeded passage of fauna across the easement.	Construction	Construction Manager
4.	Precautions will be taken to prevent the ignition of fire during welding operations, including: The CROW will be stripped of vegetation There will be no combustible material in close proximity to welding or butt fusion activities Appropriate and operable fire-fighting equipment will be carried with the welding crews and personnel trained in its use A water truck will generally be in the vicinity of welding crews (for dust suppression purposes) and will serve as an emergency water source, and Ensure the sides of welding habitats are down at all times where there is a high fire risk.	Construction	Construction Manager
5.	Apply pipeline coatings with reasonable care to minimise primer drips.	Construction	Construction Manager
6.	Waste materials associated with welding will be appropriately managed and disposed of in accordance with PART C – Waste Management Plan.	Construction	Construction Manager
7.	End caps will be installed at the end of all pipe strings comprising 2 pipes, or more, to prevent the entry of dust, debris and fauna into pipe strings.	Construction	Construction Manager
8.	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager

Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: > Frequency and adequacy of gaps left in strung pipes and pipe strings > Effectiveness of waste management > Availability of operable fire-fighting equipment, prior to welding and grinding activities > Crew preparedness for emergencies, including the location / availability of water trucks during welding activities, and > Presence of end caps on pipe strings. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 2.5 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.
Records / Evidence	Complaints Register Environmental Inspections Incident Register Waste Register, and ELL/LLL

5.0 PADDING, PIPELAYING AND BACKFILLING

Environmental Impacts	Soil subsidence Soil inversion and mixing of soil types Compaction of soil profiles Nuisance dust and noise, and Generation of waste.
Environmental Performance Objectives and Standards	To return trench spoil without loss of material, soil inversion or contamination of topsoil To ensure the backfilled trench line is compacted and stable and does not alter surface water flows To prevent erosion or subsidence along the backfilled trench line To prevent harm to fauna during lowering-in and backfilling, and To import weed free padding material (if required).
Measurement Criteria	Use of imported weed-free padding material in areas where trench spoil is not suitable No evidence of spoil at the soil surface, and Compliance with trench compaction management measures.

No	Management Measure	Timing	Responsibility
	When necessary, the pipeline trench will be dewatered before bedding/padding, pipe laying/haunching and backfilling. Water quality and dewatering discharge points will be assessed and preferentially be to vegetated areas. Release to or in proximity of No Go Zones or other areas of sensitivity will be assessed and mitigated accordingly. All release will be adjacent to the CCROW and will not result in releases directly to watercourses unless this is pumped out of watercourses. Discharge, water quality and scour protection or flow dissipation measures will be installed at the release site within the CROW.	Construction	Construction Manager LECH Manager
	Topsoil will not be used for padding / backfilling.	Construction	Construction Manager
	Where suitable bedding/padding/haunching material cannot be provided from trench spoil, weed free material will be sourced from commercial quarries. The source of such material will be reviewed by the LECH Officer to ensure it is weed free.	Construction	Construction Manager LECH Manager
	Open pipeline trench will be inspected for entrapped fauna prior to pipelaying.	Construction	Construction Manager LECH Manager
	Trench backfilling and compaction at trenched waterway crossings will be undertaken to ensure pre-existing soil profiles / properties are restored.	Construction	Construction Manager LECH Manager
	Topsoil will only be reinstated after the excavated spoil has been backfilled and compacted.	Construction	Construction Manager
	The backfilled and compacted CROW will be re-contoured to match pre-existing condition and the surrounding land surface.	Construction	Construction Manager
	Risk assessed ESC measures will be installed on the backfilled and compacted trench line – to control erosion and to direct the flow of surface water, natural seepage and drainage away from the backfilled trench.	Construction	Construction Manager LECH Manager
	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager

Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: > Integrity and effectiveness of soil and spoil management measures > Management of trench dewatering practices > Implementation of biosecurity measures > Compliance with spoil / soil segregation and layered / managed backfilling requirements > Adequacy of trench compaction, as evidenced by surface movement / erosion or subsidence, and > Integrity and effectiveness of erosion and sediment control measures. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 2.5 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.

5.0 PADDING, PIPELAYING AND BACKFILLING	
Records / Evidence	Complaints Register Environmental Inspections Incident Register Fauna Register, and Weed management register (imported material).

6.0 TRENCHLESS CONSTRUCTION

Environmental Impacts	Soil compaction Soil inversion and mixing of soil types Soil and water contamination Nuisance dust, noise and vibration Loss of borehole integrity resulting in loss of drilling fluid, impacting native flora or fauna habitat, and Disturbance to landowners, stakeholders, third party, heritage and environmental sensitivities.
Environmental Performance Objectives and Standards	To minimise disturbance landowners, stakeholders, third party, heritage and environmental sensitivities identified on ELL and LLL To prevent soil inversion and the mixing of soil types To inspect drilling muds for signs of contamination and PASS To manage surface drainage and sediment runoff To prevent unplanned releases to land or water To ensure any potential clean up from loss of borehole integrity occurrences are effectively managed, and To manage waste including drilling fluids at trenchless crossing sites.
Measurement Criteria	Compliance with ELL/LLL Compliance with management measures described below Compliance with HDD Management Plan No unplanned or unauthorised vehicle / machinery access to "No Go" areas or environmental sensitivities as identified in the ELL/LLL Separate stockpiles of topsoil and subsoil No impairment of soil properties or additional constraints on future land uses No project waste remaining in / around HDD areas Compliance with management measures for bunding Volumes of drilling fluid continuously monitored, and Appropriate barrier systems on hand in case of a loss of borehole integrity.

No	Management Measure	Timing	Responsibility
1.	All foreign services within the boundaries of a site will be located prior to any ground-breaking or excavation works.	Construction	Project Manager Construction Manager
2.	All works will be limited to the trenchless crossing design.	Construction	Project Manager
3.	Excavate and size entry and exit pits sufficient to contain all drilling fluids where used.	Construction	Construction Manager
4.	All stockpiles will be managed as Clearing and Topsoil Stripping management measures.	Construction	Construction Manager
5.	Establish earthen bunds around trenchless sites where these use drilling fluids to prevent release of spilled drilling fluids beyond the approved works area.	Construction	Construction Manager
6.	When excavation dewatering is required following major rain events, dewatering discharge points will preferentially be to stabilised or vegetated areas adjacent to works and will not be directly to watercourses. Discharge scour protection or flow dissipation measures will be installed at the release site.	Construction	Construction Manager LECH Manager
7.	In the event that Heritage sites are discovered during the course of excavation works the contingency measures described in PART C -Soil and Water Management Plan will be implemented.	Construction	Construction Manager LECH Manager
8.	Contingency measures regarding the exposure of pre-existing soil contamination during excavation are detailed in PART C –Soil and Water Management Plan.	Construction	Construction Manager LECH Manager
9.	Management of Acid Sulfate Soils during drilling are detailed in Part C – Soil and Water Management Plan Appendix G – Acid Sulfate Soils Management Plan	Construction	Construction Manager LECH Manager
10.	Continuously monitor for leaks, spills, and release of drilling fluids while drilling / boring, stop works immediately and contain if release occurs. If a drilling release is located in general landscape, clear of roads and watercourses it shall be contained with utilisation of one or all of the following measures: > Erection of earth bunds or placement of sandbags > Excavation of sumps (if in allowable location) > Vacuum excess drill fluid with a vac truck, and > Spill kits If the release occurs through the surface of a roadway the following measures will be undertaken: > Deploy traffic control to make area safe for all users and close road during clean up if required	Construction	HDD Subcontractor

6.0 TRENCHLESS CONSTRUCTION			
	> Vacuum excess drill fluid with a vacuum truck > Deploy spill kits on road verge a safe distance from the travel area, and > Wash excess remaining drill fluid into the spill kits placed on road verge.		
11.	Report loss of containment of drilling fluids, for investigation and corrective action.	Construction	HDD Subcontractor
12.	Trenchless construction equipment and infrastructure will be removed progressively from the Project area after works are completed.	Construction	HDD Subcontractor
13.	Decommission any pits and excavate materials inclusive of liners for appropriate disposal.	Construction	Construction Manager
14.	The site will be cleaned up and left secured until tie-ins are completed. All rubbish and construction debris shall be removed and disposed of in accordance with Part C – Construction Waste Management Subplan (WMP). Drilling fluids and cuttings will be managed in accordance with the WMP. Installed pipe sections will be capped at both ends. Backfilling of the bell holes will be completed by Nacap in accordance with approved procedures on completion of tie-ins.	Construction	Construction Manager LECH Manager
15.	Refer to HDD Management Plan	All Stages	Construction Manager LECH Manager
16.	Refer also to Part C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager
Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: Compliance with approved clearing limits Integrity and effectiveness of topsoil, soil and vegetation management and storage measures Installation, integrity and effectiveness of erosion and sediment control measures Compliant use of project accesses Effectiveness of weed hygiene measures Effectiveness of air and noise protective measures Effectiveness of fuel and chemical storage Effectiveness of spill management, and Waste management and removal. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 4.6 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.		
Records / Evidence	Complaints Register Environmental Inspections Weed management register Waste Records, and Incident Reporting.		

7.0 PIPELINE TESTING AND COMMISSIONING

Environmental Impacts	Generation of nuisance dust and noise Soil contamination, and Soil erosion.
Environmental Performance Objectives and Standards	To minimise impacts to water resources To avoid impacts on landowner, stakeholder, third party and environmental sensitivities, and No unplanned discharges of hydrotest water.
Measurement Criteria	Compliance with LLL Compliance with ELL Approval obtained to draw water for hydrotesting and for subsequent disposal Compliance with management measures described below Compliance with dust and noise management measure Compliance with AS1940 for storage and handling of chemicals, and Compliance with SDS for fuels and chemicals.

No	Management Measure	Timing	Responsibility
1.	Water required for hydrotesting, will be sourced in accordance with PKPP approval.	Construction	Project Manager
2.	Source waters will be tested to ensure water quality meets the required hydrotest specifications.	Construction	LECH Manager
3.	For the mainline test sections, hydrotest water will be transferred between test sections using break tanks.	Construction	Construction Manager
4.	A Hydrostatic Test Checklist will be completed and fully complied with prior to pressurisation of each test section to minimise the risk of unplanned hydrotest water discharges.	Construction	Construction Manager
5.	Break points for pipe cleaning and hydrotest purposes will be located a minimum of 150m from sensitive receptors in order to manage potential impacts from noise and dust impacts.	Construction	Construction Manager
6.	At completion of testing the pipeline will be depressurised before discharging the hydrotest water The water will be discharged / reused / disposed of in accordance with the WMP and PKPP approval.	Construction	Construction Manager LECH Manager
7.	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager

Compliance Monitoring	Inspection / assessment of hydrotest water sourcing to ensure it does not generate environmental harm. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 4.6 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.
Records / Evidence	ELL/LLL Complaints Register Environmental Inspections Incident Register Water Test Records, and Waste Tracking.

8.0 REHABILITATION

Environmental Impacts	Mixing, inversion and compaction of soil profiles Loss of topsoil Removal of seed-bank Soil erosion Sedimentation and reduction in surface water quality Spread of weed species and pathogens Exhaust emissions, and Generation of nuisance noise and dust.
Environmental Performance Objectives and Standards	To rehabilitate project disturbed areas such that prior land use activities can be resumed. To rehabilitate project areas in accordance with landowner, stakeholder and third party requirements, and To restore surface levels, land stability and surrounding contours.
Measurement Criteria	Compliance with LLL and ELL requirements Compliance with construction specification, and No construction waste, equipment and infrastructure remain on the project areas following rehabilitation.

No	Management Measure	Timing	Responsibility
	Construction equipment and infrastructure will be removed progressively from the Project area after construction works are completed.	Construction	Project Manager
	Temporary (during construction) erosion control measures will be removed.	Construction	Construction Manager
	Flagging used to identify environmental sensitivities will be removed and disposed of.	Construction	Construction Manager
	All waste / refuse from construction will be removed from the Project areas.	Construction	Construction Manager
	All disturbed Project areas sites (the CROW, temporary access tracks, civil / facilities construction sites and other locations impacted by construction) will be reinstated after construction works are completed, in accordance with the construction specification, LLL and the ELL.	Construction	Construction Manager
	The primary method of regeneration and restoration of unpaved areas will be decompaction and the respreading of the preserved topsoil containing existing seed bank stock and propagules associated with the pre-disturbance landscape.	Construction	Construction Manager
	Rehabilitation will commence as soon as practicable and progress across the Project area after construction works are completed.	Construction	Project Manager
	Undertake any soil amelioration requirements in accordance with LLL.	Construction	Construction Manager LECH Manager
	Following the respreading of topsoil, any cleared vegetation stockpiled for re-use will be re-spread (excluding weed material) to further encourage the propagation of native seed stock and propagules.	Construction	Construction Manager
	No Acid Sulphate Soils (ASS) or Potential Acid Sulphate Soils (PASS), if encountered, will be left exposed on the CCROW following reinstatement. ASS / PASS will be used for backfill and covered by a layer of topsoil. Any excess ASS / PASS may be treated with lime or other soil ameliorants (as shown to be required by supplementary soil testing) and buried on the CROW under a suitable capping layer of "clean" spoil and topsoil or disposed of in accordance with PKPP approval.	Construction	Construction Manager LECH Manager
	Surplus rock/spoil will be managed in accordance with Specification and LLL requirements and will be either: Stockpiled along the CROW, or as agreed with the relevant landholder or occupier Reinstated within the CROW, or Disposed of at appropriate sites.	Construction	Construction Manager LECH Manager
	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager

Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: The effectiveness of site stabilisation, reinstatement and rehabilitation measures, and Waste removal. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP.

8.0 REHABILITATION	
	Any stakeholder complaints will be managed in accordance with Section 2.5and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.
Records / Evidence	Complaints Register Incident Register Environmental Inspections Weed Hygiene Register Waste Tracking, and ELL/LLL Requirements.

9.0 SPILL MANAGEMENT

Environmental Impacts	Contamination to land and water from uncontained chemical and fuel spills, and Community impacts from uncontained chemical and fuel spills.
Environmental Performance Objectives and Standards	To protect human health and the environment from exposure to hazardous substances.
Measurement Criteria	Compliance with AS1940 for storage and handling of fuels and chemicals Compliance with SDS for fuels and chemicals, and Compliance with fire, fuel and chemical management measures.

No	Management Measure	Timing	Responsibility
1.	A spill is a release of any fuel, oil, grease or other chemical substance (liquid or powder) to the environment. Spill kits will be provided and maintained in immediate proximity of hard stand work areas and stores. Vehicle spill kits will be carried on fuel trucks and vehicles (and / or plant) working near major plant and equipment. Relevant personnel will be trained in the use of spill kits.	Construction	Project Manager
2.	Refer to the Code Safe Video located on the Nacap Portal for instruction on Spill Response http://portal.nacap.com.au	Construction	All Personnel
3.	The priorities during spill response are at all times to: > Protect human health and safety > Protect habitat and cultural resources > Protect significant and/or endangered flora and fauna, and > Consider commercial resources.	Construction	All Personnel
4.	Specific priorities for environmental protection are to: Protect surface water and groundwater resources Protect soil, and Protect (endangered) species habitat.	Construction	All Personnel
5.	Spill management includes the following actions: > Halt the continued release of the substance being spilled to minimise the spill volume > Halt, contain and clean up and remediate the spill site using appropriate PPE > Contain the spill if safe to do so to as small an area as possible > Containment methods shall include use of absorbent materials, earth bunds, sandbag bunds, temporary sumps and drain inlet blocks > Every effort shall be made by on site personnel to contain the spill to the smallest area possible to limit the extent of contamination, with priority being to ensure health and safety hazards and sensitive environments are avoided. Every effort will be made to avoid spills entering the surface and ground water systems > In the event of a spill, the individual/s responsible for its detection shall notify the Supervisor as soon as reasonably practicable > **If the spill is beyond the capacity of the immediate project resources follow the Emergency Response Plan** > Clean up and restoration methods will vary according to the extent and nature of the spill and the nature of the environment in which the spill occurred. In most cases, the appropriate action will be the removal of contaminated materials from the site for disposal at an appropriately licensed facility, and > Ensure waste tracking records are kept where required.	Construction	All Personnel
6.	Report improper storage or leaks and spills, including location, size, and nature of spill, and details of clean-up/ remediation for investigation and corrective action; report substantial spills or pollution incidents to the EPA hotline 131 555 as per Sect 7.2 of this CEMP.	Construction	All Personnel
7.	Environmental monitoring of significant spill sites will be undertaken to identify any potential impacts and evaluate the success of response and rehabilitation actions.	Construction	LECH Manager
8.	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Principal Contractor /Subcontractors

Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures Monitoring will include the inspection of availability, use and effectiveness of spill kits, and Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 2.5 and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.

9.0 SPILL MANAGEMENT	
Records / Evidence	Waste Records SDS Environmental Inspections Incident Reports Complaints Register Emergency Response Records, and ELL/LLL.

10.0 FIRE CHEMICAL AND HYDROCARBON MANAGEMENT	
Environmental Impacts	Damage to surrounding land, third party assets and habitats from fire Contamination to land and water from uncontained chemical and fuel spills, and Community impacts from fire or uncontained chemical and fuel spills.
Environmental Performance Objectives and Standards	To have zero fire events resulting from construction, and To protect human health and the environment from exposure to hazardous substances.
Measurement Criteria	Compliance with AS1940 for storage and handling of fuels and chemicals Compliance with SDS for fuels and chemicals, and Compliance with fire, fuel and chemical management measures.

No	Management Measure	Timing	Responsibility
	Provide Fire and Rescue NSW (FRNSW) and NSW Rural Fires Services (RFS), commencement date, locations of proposed activities and site emergency contact telephone numbers as per the ERP.	Prior to Construction	LECH Manager
	Maintain contact with FRNSW and RFS particularly during periods of high fire danger.	Construction	LECH Manager
	Approval to undertake construction activities during periods of total fire ban will be obtained as required.	Construction	Project Manager LECH Manager
	Ensure during construction that personnel available for emergency response have as a minimum: Reliable radio or mobile telephone communications to enable contact from site to emergency services Crews receive bushfire and other emergency reporting training, and have available at all times the ERP, and Supervisors have a working knowledge of reporting and notification tools and contacts for TFB requirements.	Construction	Project Manager
	Precautions will be taken to prevent the ignition of fire during hot works, including: > There will be no combustible material in close proximity to hot works activities > Appropriate fire-fighting equipment will be carried, and personnel trained in its use > Maintain vigilance during hot works or other works with higher fire risk > A water truck will generally be in the vicinity (for dust suppression purposes) and will serve as an emergency water source, and > Total Fire Ban Day restrictions will be implemented unless a Total Fire Ban Exemption Permit has been granted in which case the permit conditions shall be complied with.	Construction	Project Manager Construction Manager LECH Manager
	Fire-fighting equipment will also be present wherever flammable chemicals are stored. Incompatible chemicals will not be stored together.	Construction	Project Manager
	Work areas will be managed to avoid the build-up of vegetation or other flammable material.	Construction	Construction Manager
	No billy fires or similar, or other unapproved open flames, will be lit / used on the Project area.	Construction	Construction Manager
	The construction worksite is a limited smoking workplace. This means that smoking is only allowed in designated areas as agreed during SWMS review for each crew.	Construction	Project Manager
	Operational restrictions arising from the declaration of Total Fire Ban days will be communicated via pre-starts and toolbox talks.	Construction	LECH Manager
	In the event there is a fire on-site during the project, assist FRNSW emergency services as much as possible and as directed by PKPP.	Construction	Project Manager Construction Manager
	Commandeer construction equipment (grader, dozer, water truck) for firefighting (clearing firebreaks, pushing up bunds, wetting surfaces, etc.) where directed by FRNSW and practicable and safe to do so.	Construction	Project Manager Construction Manager
	Local weather warning and bushfire ratings shall be monitored during the Fire Danger Season, including announcements made by the FRNSW and RFS at their website: https://www.rfs.nsw.gov.au/ For emergency response requirements, please dial 000. Any fires that occur onsite must be reported immediately to the Site Manager and recorded as an incident.	Construction	Construction Manager HSE Manager LECH Manager

10.0 FIRE CHEMICAL AND HYDROCARBON MANAGEMENT			
	Report improperly managed sources of ignition or accidental fires for investigation and corrective action.	Construction	All Personnel
	Diesel fuelled vehicles and machinery will be used preferentially in all work areas. All vehicles will be fitted with spark arresters.	Construction	Project Manager
	Refuel and service vehicles, plant and equipment off CROW whenever practicable.	Construction	Construction Manager
	Use double-hulled fuel trucks or trailers to refuel to vehicles, plant and equipment along CCROW, where return to mine site for refuelling is impractical.	Construction	Project Manager
	Ensure refuelling is done using containment controls such as spill mats. Report and contain all spills. Refuelling shall not be unattended.	Construction	Construction Manager LECH Manager
	Carry out refuelling as far as practicable from drainage lines, and at least 50m from watercourses.	Construction	Construction Manager LECH Manager
	No machinery will be operated unless it is securely fitted with a spark-free exhaust and is in good working condition.	Construction	Project Manager Construction Manager
	Machinery will be pre-start checked and regularly maintained to minimise the risk of fuel and oil leaks. This will include cleaning / removal of surplus oils, oil impregnated dust and vegetation matter to reduce fire risks.	Construction	Construction Manager Plant Manager
	Defective equipment / machinery will be shut down, and tagged out, until the defect has been rectified.	Construction	Plant Manager
	All machinery will carry a serviceable fire extinguisher.	Construction	Project Manager Plant Manager
	Where scheduled maintenance of vehicles, plant and equipment occurs onsite ensure these activities are undertaken in a nominated area of the CROW away from sensitive receptors and there is no contaminant release to the environment.	Construction	Construction Manager Plant Manager
	The storage and handling of fuels and chemicals will comply with all relevant legislation and Australian Standards (AS 1940: 2017) and must: > Not be located within 5m of No-Go Zones within the CROW > Be bunded in accordance with AS1940:2017 > Prevent stormwater/rainwater ingress, and > Have fit-for-purpose spill kits available in proximity.	Construction	Project Manager HSE Manager LECH Manager
	Store hydrocarbons and hazardous chemicals in designated areas, away from busy areas or heavy traffic routes.	Construction	Construction Manager
	Store hydrocarbons and hazardous chemicals as far as practicable from drainage lines.	Construction	Construction Manager
	Where practicable ensure hydrocarbon/chemical containers are stored on drip trays/temporary bunds when not within the site store/compound defined storage areas.	Construction	Construction Manager
	All fuels and chemicals on the Project site will be clearly identified. A site manifest including SDSs will be maintained at the site office and at any other relevant locations.	Construction	Construction Manager HSE Manager LECH Manager
	Chemical use will be minimised consistent with safe / efficient construction requirements, and the minimum practicable volume will be kept on site.	Construction	Construction Manager
	Chemicals which pose lower risk to personnel and the environment will be chosen over those associated with higher risk, where viable alternatives are available and of comparable effectiveness.	Construction	Project Manager
	Workforce training will be conducted in Hydrocarbon and chemical handling and spill response and recovery procedures and will include subcontractors. Training will be targeted at members of the workforce or subcontractors routinely handling fuel delivery and transport of chemicals.	Construction	Project Manager HSE Manager LECH Manager
	Spill kits will be kept in the vicinity of all storage tanks and on fuel trucks to minimise response time.	Construction	Construction Manager Plant Manager
	Fuel trucks will be fitted with an automatic shut off nozzle.	Construction	Project Manager Plant Manager
	Waste lubricants, containers with chemical/fuel residues, contaminated soil and any other oily wastes will be contained, bunded and disposed of at an approved disposal facility. Ensure copies of waste tracking forms are retained and provided to PKPP Representative as requested/required.	Construction	Construction Manager Plant Manager LECH Manager
	Store used containers with residual hydrocarbons or hazardous chemicals as if full until disposed of; treat used containers as contaminated waste.	Construction	Construction Manager

10.0 FIRE CHEMICAL AND HYDROCARBON MANAGEMENT			
			Plant Manager LECH Manager
	Refer also to PART C – Subplans Noise, including an out-of-hours work protocol Air quality Biodiversity Soil and water management Traffic management, and Waste.	All Stages	Construction Manager LECH Manager
Compliance Monitoring	Monitoring will be undertaken to ensure compliance with the above environmental management measures. Monitoring will include: Inspection of storage, handling and use of chemicals Inspection of bulk fuel storage bunding Inspection of refuelling practices Inspection of bunds for drum storages and portable pumps / equipment Inspection of availability and effectiveness of spill kits, and Inspection of availability and effectiveness of fire extinguishers. Non-compliance, hazard and incident reporting will be implemented in accordance with Section 8 of this CEMP. Any stakeholder complaints will be managed in accordance with Section 2.5and notified to the Project Manager and appropriate corrective actions implemented including a review of work practices to minimise repeat occurrences.		
Records / Evidence	Waste Records SDS Environmental Inspections Incident Reports Complaints Register, and Emergency Response Records.		

11.0 SUSTAINABILITY

Environmental and Sustainability Performance Objectives and Standards	To ensure that construction activities are planned and managed in the most sustainable manner practicable through minimising: waste generation, consumption of resources, and encouraging recycling and minimisation of waste to landfill.
Measurement Criteria	Monthly reporting metrics to be developed: *Examples being* > Waste o Waste generation o Waste recovery o Waste disposal o Resource Consumption > Water o Potable v Non-Potable Use > Fuel (As proxy for GHG emissions) > Material consumption as supplied to project

No	Management Measure	Timing	Responsibility
	Minimise use of potable water and maximise opportunities for reuse stormwater, wastewater and groundwater.	Construction	Project Manager LECH Manager
	Minimise waste through the Project lifecycle. Reduce materials consumption. Maximise beneficial reuse of spoil towards 100% Maximise recycling of inert/non hazardous waste towards 90%, and Maximise recycling of office waste towards 60% All reasonable steps must be taken to minimise rubbish generated on the Site and adhere to waste management requirements in relation to general, hazardous and recycled waste.	Construction	Project Manager LECH Manager
	Protect and create biodiversity through mitigation measures outlined PART C –Biodiversity Management Plan.	Construction	Construction Manager LECH Manager
	Protect and promote Aboriginal heritage through mitigation measures outlined in PART C –Soil and Water Management Plan.	Construction	LECH Manager
	Make a positive contribution to community health and well-being through: Ensure community and local stakeholder engagement during construction Support PKPP in the delivery of legacy projects to benefit local communities Promote opportunities for local business involvement during construction, and Minimise negative impacts on the community and local businesses during construction.	All Stages	Project Manager LECH Manager
	Influence contractors, subcontractors and materials suppliers to adopt sustainability objectives in their works and procurement	All Stages	Principal Contactor

Monitoring and Reporting	Reporting against and project metrics developed post award
Records / Evidence	Water usage record Fuel Usage Records Materials Use and Procurement Records Chemical Use Records, and Waste records.

12.0 HERITAGE MANAGEMENT

Heritage Impacts	Disturbance and destruction of sites and materials of Aboriginal cultural heritage significance, and Disturbance and destruction of sites and materials of Non-Aboriginal heritage significance
Heritage Performance Objectives and Standards	> To develop, use and manage new and existing access roads and work areas to avoid identified heritage sensitivities > No incursions or impacts to identified sites of heritage significance > Management of heritage finds in accordance with Unexpected Finds Protocol > To maintain approved access roads during construction.to control and contain movements of project plant, vehicles and personnel to approved access and work areas, and > To rehabilitate temporary construction access tracks and sites in accordance with landowner requirements and as agreed with statutory authorities, Third Parties and Stakeholders.
Measurement Criteria	> Zero incursions or impacts to known sites of heritage significance > Compliance with Unexpected finds contingency measures > Completion of pre-construction photo records, and > Layout plans demonstrate how new access roads and work areas and laydowns will avoid heritage sensitivities identified in pre-construction surveys, studies and reports.

No	Management Measure
1.	Nacap is responsible for Heritage management during construction and ensuring compliance with all applicable legislation for the protection of Heritage. The preferred management approach for known heritage sites is avoidance. The process for avoidance will be achieved as follows: > Set out all infrastructure to ensure all known sites are avoided with sufficient buffer to enable the implementation adequate delineation and protection from all aspects of the works > Preparation of a Heritage Control Map where required that will detail the location of all known heritage sites and required protective measures and details of specific buffer distances to demonstrate avoidance > Ongoing review, update and communication of changes to the Heritage Control Map upon detection of new sites of significance > Development of a Project culture in which the importance of heritage values is recognised and respected > Identification, protection and establishment of separation buffers for known heritage sites during works set out and establishment, and > Heritage sites and materials including human remains that are discovered as unexpected finds during construction will be managed in accordance with the unexpected finds protocol presented in Appendix E of the Soil and Water Management Plan GAS-599-PA-EV-007.
2.	All construction personnel and subcontractors are required to undertake a Project Heritage induction which will incorporate information on Heritage management specific to the project and field of operations and shall include the following: > Legislation and penalties for the protection of Heritage > Roles and Responsibilities for Heritage management > Information on the location of existing known and potential Aboriginal and Non-Aboriginal Heritage and extent of protective measures including buffers (Heritage Control Plan) > Information on types of Aboriginal and Non-Aboriginal heritage materials that have potential to be uncovered in the project area and field of operations > Avoidance strategies and Heritage management measures > Protocols for responding to unexpected finds of Aboriginal and Non-Aboriginal heritage sites, including skeletal material > Incident reporting and record keeping, and > A register attendance at all inductions will be maintained.
3.	Nacap will take all reasonable steps to ensure that Project personnel act and conduct themselves in a manner that is not offensive, intimidating or disrespectful and/or prejudicial to representatives of Aboriginal Parties.
4.	All construction personnel and subcontractors will participate in Safe Work Method Statement (SWMS) development that will include information on heritage sensitivities and specific management measures for specific construction activities.
5.	The Heritage Control Plan with locations of all previously recorded AHIMS items within the Project activity area is to be located at site notice board(s) and attached to the authority to commence construction (Pre Commencement Form 2). The Heritage Control Plan will also be communicated at daily pre-starts and weekly toolboxes as required or when works are planned in proximity to known sites.
6.	Prior to project works the Project Manager or delegate shall: > Verify all sites of known or potential heritage significance > Ensure completion of delineation and establishment of the approved work areas and No Go Zones etc. using flagging/markers/fencing and signage > Ensure notification of specific access or approval conditions, heritage sensitivities and all identified Heritage No Go Zones and other significant information is contained in the authority to commence works (Form 2), and > Ensure establishment of photo points and capture pre-disturbance photo records of all known heritage sites.
7.	The approved disturbance area established as the final layout as submitted to the Secretary and /or site boundaries, approved accesses and heritage "No Go" zones will be surveyed and clearly marked on-ground or through the use of tape or barrier fencing and signposting to define the works area and prevent the inadvertent disturbance or access to unauthorised areas beyond the approved boundaries. Surveys and peg-out will be based on digital data as per the Project final layout survey and AHIMS data.

12.0 HERITAGE MANAGEMENT	
8.	Make use of existing disturbance for project layout as far as practicable, including access routes and other ancillary workspaces; negotiate with third parties for use of existing disturbed areas where necessary.
9.	All construction activities will be confined to the established and delineated approved works area and construction access tracks / roads.
10.	All vehicles, plant and personnel shall travel and remain on approved access tracks and approved work areas at all times. All materials shall be stored within approved works areas and be prevented from overhanging or entering the boundaries of works areas and heritage "No Go" zones.
11.	During construction works, implement any additional protective measures as required to ensure the specific works activities, plant equipment, personnel, materials or construction waste including excavation materials and spoil do not encroach, enter or overhang known heritage sites or new sites that have been identified during the performance of works.
12.	In the event of a heritage unexpected find (including skeletal remains) during works, cease the work activity in proximity to the find immediately and notify the Supervisor who will refer to the Heritage Unexpected finds protocol.
13.	During construction works the following matters will constitute a heritage incident: > Non-compliance with the heritage management requirements of this environmental management measure > Any damage to known heritage sites and/or heritage items, and > Any incursion into a known heritage site including access within any new sites that are identified and delineated during works.
14.	Incidents as described above are to be immediately reported to the Project Manager for immediate notification to PKPP to ensure compliance and reporting requirements in accordance with CoA requiring notification to DPE in writing to compliance@planning.nsw.gov.au

Incident Management	Incidents associated with Heritage will be managed in accordance with Section 7.1 of the CEMP.
Complaints Management	Complaints associated with Heritage will be managed in accordance with Section 2.5 of the CEMP.
Inspections and Monitoring	The Nacap LECH Manager or delegate shall coordinate inspections and monitoring of works during construction activities to check and record compliances with this management measure. Inspections and Monitoring will include: > Weekly review of all known heritage sites to ensure all management measures are effective and compliant, and > Review of active works to ensure works are conducted in compliance with this management measure.
Record Keeping	> Site Inspection Records > Heritage Site Status Register > Incident Reports > Incident Register, and > Consultation Log.
Reporting	Monthly Reporting includes information on relevant heritage data, summary and includes the reporting of any incidents and non-conformance.

APPENDIX H ENVIRONMENTAL LINE LIST

KP Start	KP Finish	Constraint Type	Description of Environmental Sensitivity
1.514	1.514	Watercourse	Gurungaty Waterway
2.994	3.215	Vegetation	Bluescope Plantings
4.890	4.890	Aboriginal heritage	Isolated Find 52-2-3618
5.729	5.729	Watercourse	Allans Creek
6.245	6.492	Vegetation	PCT 1232 Swamp Oak floodplain swamp forest
6.860	7.600	Vegetation	Urban native/exotics
7.745	8.515	Vegetation	Woolybutt-White Stringybark-Forest Redgum
8.600	8.740	Vegetation / Fauna Habitat	Woolybutt-White Stringybark-Forest Redgum
8.740	8.920	Land Use	RE2 Public Recreation
8.765	8.800	Vegetation	Woolybutt-White Stringybark-Forest Redgum
8.854	8.900	Vegetation	PCT 1232 Swamp Oak floodplain swamp forest
9.752	9.772	Land Use	RE2 Public Recreation
9.845	9.875	Vegetation	PCT 838 Forest Red Gum- Thin Leaved Stringybark
10.418	10.418	Watercourse	Minor Watercourse
10.689	11.328	Land Use	RE2 Public Recreation
10.800	10.819	Vegetation	PCT 838 Forest Red Gum- Thin Leaved Stringybark
11.345	11.373	Vegetation	PCT 838 Forest Red Gum- Thin Leaved Stringybark
11.378	11.388	Vegetation	PCT 838 Forest Red Gum- Thin Leaved Stringybark

APPENDIX I COMMUNITY AND STAKEHOLDER COMMUNICATION PROTOCOL

COMMUNITY AND STAKEHOLDER COMMUNICATIONS PROTOCOL	
Purpose	The Purpose of this Community and Stakeholder Communications Protocol is to: > Summarise and support the objectives of Nacap's Lands and Stakeholder Management Plan (GAS-599-PA-LM-003) > Provide guidance with regard to ongoing communication with landholders and external stakeholders conducted by AIE and Jemena and as outlined in Section 2.3 of this CEMP throughout the project construction life cycle > Define roles and responsibilities of key personnel in regard to community and stakeholder management during construction > Provide a structured and documented approach to ensure compliance with Land Access and Stakeholder Agreements, the relevant public authority permits and approvals > Provide mechanisms for recording dealings with community and stakeholders throughout the construction process, and > Provide a communication and management process which minimises the impacts of construction on individual stakeholders which in turn maximises the potential of the Project to confine the impacts of disturbance.
Roles and Responsibilities	**AIE and Jemena will be responsible for maintaining primary contact with landholders and external stakeholders.** In terms of implementation of this Communications and Stakeholder Communications Protocol during construction, the Nacap Project Manager is responsible for the following: > Providing adequate, competent and experienced personnel for the effective management and delivery of Community and Stakeholder and Third Party commitments and obligations > In conjunction with the Lands Environment and Cultural Heritage (LECH) Manager and or delegate, ensure that the required access agreements and authorisations including Third Party permits or similar are secured in a timely manner > In conjunction with the Construction Superintendent, develop construction processes that minimise the impacts of construction on individual stakeholders and the wider community > Develop a Project culture in which the importance of Community and Stakeholders is recognised and respected > Assist AIE and Jemena in community consultation as required, and > Provide accurate information to AIE and Jemena representatives including forewarning of matters that may have negative impact on the Community, Jemena and AIE reputation. The Nacap LECH Manager (and or delegate) is responsible for the following: > Provide support to ongoing communication with landholders and external stakeholders conducted by AIE and Jemena and as outlined in Section 2.3 of this CEMP > Provide support to guide the implementation of this Protocol and associated commitments > Ensure all efforts are made to establish a relationship of trust and openness with Community and Stakeholders > Provide and support a structured and documented approach to ensure compliance with Access and Third-Party Agreements, and all relevant public authority permits and approvals > Ensure that all commitments outlined in Access and Third-Party Agreements, permits and approvals are communicated across construction disciplines and implemented > Support AIE and Jemena to manage Community and Stakeholder notifications, agreements, contacts, records and correspondence > Support AIE and Jemena to manage liaison with public authorities regarding applicable permits and approvals > Provide regular updates and reports of community liaison progress and issues to AIE and Jemena Representatives, including any variations / discrepancies in relation to agreed commitments, and > Promptly report all complaints and other community and stakeholder matters to the Project Manager and the relevant AIE and Jemena Representative. Supervisors are directly responsible for: > The implementation of commitments contained in this Protocol, and > Reporting of hazards and incidents and implementing any rectification measures.

COMMUNITY AND STAKEHOLDER COMMUNICATIONS PROTOCOL	
Community and Stakeholder Engagement and Management	Effective Community and Stakeholder management is essential to the success of the Project and to Jemena and AIE ongoing operations within and in proximity to the project area. The Project is to be constructed on private and public land parcels, to which Jemena and AIE has arranged land access via a range of Third-Party Agreements. In making the agreements for access to land, Jemena and AIE has made several commitments and undertakings to landowners, occupiers, land managers and public authorities in regard to stakeholder, Third-Party and community interaction. Stakeholders and Third-Parties are defined as a person or groups of persons who are directly or indirectly affected by the Project as well as those who may have interests and influence over the outcome of the Project. They include, but are not limited to: landowners (including occupiers and /or land managers), mining companies, tenement holders, community members, community groups, local and regional bodies, and local / state / federal government representatives. Following handover meeting from Jemena and AIE, the contractor will undertake all day-to-day interactions with landowners, occupiers, land managers and public authorities during the Project's construction. Interactions with landowners will be guided by, and consistent with, the Landowner and Third-Party Agreement previously agreed by Jemena and AIE. Interactions with public authorities will be guided by the permits and approvals previously put in place by Jemena and AIE, or as subsequently negotiated by the contractor. The contractor shall be the first point of contact for all landowners, stakeholders, Third-Parties and community groups during the construction phase, with appropriate matters being referred to or discussed with Jemena and AIE. The contractor will also work closely with the relevant Jemena and AIE representatives in achieving the Project objectives.
Landowner and Stakeholder Notification	The contractor will provide the relevant AIE and Jemena Representative with the required advance notification for the proposed commencement of works – in accordance with requirements of Landowners, Third-Party access agreements and ancillary works permits. Project notification to landowners and stakeholders will be provided along with follow up phone contact by the contractors LECH delegate when arranging meetings. Any notification periods prior to the commencement of works, or prior to certain activities, that are specified in individual access agreements will be observed when notifying the landowners/authorities concerned.
During Construction	During construction, ongoing liaison will occur with community and stakeholders in order to resolve any issues arising from construction works. Ongoing communication will be conducted in accordance with Section 2.3 of this CEMP. Ongoing liaison will also ensure community and stakeholders are up to date with Project progress, work crew cycle breaks, timing of upcoming works and to assist in maintaining the Project's relationship with the community and stakeholders.

COMMUNITY AND STAKEHOLDER COMMUNICATIONS PROTOCOL	
Complaints Management	If, during performance of the Works, a Property Owner, Government Authority, community member or other stakeholder communicates with the contractor (whether orally or in written form) with regards to concerns, complaints, objections or claims (communication) in respect of the Works (including the manner in which the Works are being performed, the timing of the Works and any Reinstatement Works, the contractor shall progress in accord with the following: > Within 4 hours of receiving the formal communication, the contractor will inform the relevant AIE and or Jemena representative that it has received a formal communication > Within 24 hours of receiving the formal communication, the contractor will give Notice to PKPP Representative that it has received formal communication, describing the general nature of the communication > Within 24 hours of PKPP receiving formal communication from the Contractor, PPKP and the Contractor will meet to discuss and agree how to respond to the Communication (including the form and content of any such response) what action or work will be considered to be carried out in response to the Communication (including the general details of any such action or response) which party is responsible for undertaking any response, action or work, and the time by which any response, action or work will be undertaken, and The proposed and agreed actions from any subsequent meeting be recorded. > Both PKPP and the contractor must undertake the response, actions or works determined and agreed as being their responsibility within the time frames agreed at the meeting referred to in step 3, and > If PKPP and the contractor is unable to agree on the matters in step 3 when they meet, then PKPP shall make a determination as to how to proceed in response to the communication. The Contractor shall comply with that determination. <u>Complaints will also be entered into the Project Complaints Management System</u>. In this regard the complaints process will be as follows: > the initial response (being the first contact made with the complainant after the complaint is received) for a written or verbal complaint should be provided to the complainant as soon as practicable, and normally within five business days > where feasible, complaints are targeted to be resolved within 30 days of being received. Any complaint not resolved within 30 days of being received will be referred to the relevant member of PKPP senior management, and > once resolution of a complaint has been determined, the complainant will be advised of the decision made in relation to the complaint and any further remedies (e.g. referral of asset related matters to the National Wind Farm Commissioner for facilitation/conciliation) available to the complainant if they are not satisfied with the outcome. It should be noted that the vast majority of day-to-day issues raised verbally by community and stakeholders that relate to inconveniences arising from construction activities will be able to be resolved by discussion with the LECH Manager / or Project Manager or representative.
Complaints Contact Details	Refer to Section 2.3 and 2.5 of the CEMP.
Media Protocol	If any Project Personnel have any contact with a media representative, they will: > Respond in a polite and courteous manner, and > Inform the media representative that they are not the authorised spokesperson and provide contact details of the PKPP Project spokesperson or media contact.

APPENDIX J ENVIRONMENTAL INSPECTION REPORT

Port Kembla Pipeline Project

Environmental Inspection Report

Location		Date:	/ /2021

Environmental Inspection Completed By:			
Name		Position:	
Access and Approvals		**Yes/No/NA**	**CAR Required Record over the page**
Have all vehicles, plant and equipment been weed hygiene inspected and have coloured wash down stickers?			
Is the works area being managed as per the property specific requirements?			
Are access tracks established and clearly identified?			
Are access tracks being maintained appropriately including dust suppression?			
Is public access restricted and sign posted?			
Is access confined only to approved access tracks?			
Are all vehicles parked appropriately?			
No Go Zones			
Are exclusion zones surveyed and established where required?			
Exclusion zone fencing and flagging where installed is in good condition / working order and secure?			
Flora Management			
Is Pre-Clearance survey and flagging completed to prevent Unauthorised disturbance?			
All flagged trees have been retained?			
Vegetation adjacent to approved clearance area is intact with no Unauthorised damage?			
Relevant species management measures where applicable are being implemented?			
Weed, pest and disease management measures where applicable are being implemented?			
Fauna Management			
Fauna inspections, observations and interactions relevant to the activity have been completed and recorded?			
Are there adequate breaks in stockpiles and material storage for fauna movement?			
Are there adequate measures for refuge and escape from entrapment?			
Works near Stakeholders and Third Parties			
Works are being conducted in normal working hours?			
The work area is free of unusual odours?			
Noise management of the work complies with the CEMP?			
Dust management of the work complies with the CEMP?			
Works are progressing without complaint from sensitive receptors or other stakeholders?			
Waste Management			
Is the site free of litter?			
Relevant waste bins on site? Are waste bins covered appropriately?			
Waste stream being managed including waste tracking where applicable?			
Waste removed or stored in accordance with CEMP or stakeholder requirements?			
Construction Management			
Construction works areas are within surveyed limits?			
Has clearing been minimised as far as practicable while maintaining appropriate standards of safety including watercourse crossings?			
Timber/vegetation is stockpiled appropriately and out of drainage lines?			
Confirmed topsoil removal to specified depth?			
Topsoil is stockpiled clear of vegetation, infrastructure and drainage lines?			
Topsoil grading does not cross property boundaries and is clear of drainage lines?			
Topsoil windrows have breaks for fauna and access as required?			
Topsoil is free of vehicular use or other disturbance?			
Topsoil is free of spoil contamination?			
CROW Water Management			
No evidence of pooling or scouring on/off the CROW?			
No evidence of salinity on the CROW from dust suppression?			

Port Kembla Pipeline Project

Environmental Inspection Report

Erosion and Sediment Control		
Are Erosion and sediment controls adequate and consistent with site plan (if required)?		
Are ESC installations intact and in no need of maintenance?		
Hazardous Materials		
Spill kits are on site? And have been replenished if recently used?		
Works areas are free of contamination?		
Hazardous materials are adequately stored and bunded?		
Bunds are free of contaminants and maintain sufficient freeboard to contain spills/rainfall?		
If static site, is the SDS Register up to date?		
Refueling grate/spill tray are used where practical?		
Plant and Equipment		
Fuel/chemicals and small plant is bunded?		
Plant and Equipment free of oil or fuel leaks?		
Fuel, oil and hydraulic lines and fittings in good condition? – No wear, cracks fraying etc. observed where practicable?		

Observation/Corrective Action – Close Out:		
Action	**Responsibility**	**Date Completed**
Comments		

Name:		**Position:**	**Date:** / /2021
Signed:			

PART C

Document	Title
GAS-599-PA-EV-004	NOISE MANAGEMENT PLAN
GAS-599-PA-EV-005	AIR QUALITY MANAGEMENT PLAN
GAS-599-PA-EV-006	BIODIVERSITY MANAGEMENT PLAN
GAS-599-PA-EV-007	SOIL AND WATER MANAGEMENT PLAN
GAS-599-PA-CN-002	TRAFFIC MANAGEMENT PLAN
GAS-599-PA-EV-008	WASTE MANAGEMENT PLAN