Maitland Lateral Environment Plan

Public Summary

Revision: 1

Date: 22 March 2024

Document Revision History

Rev	Date	Revision Description
1	March 2024	Public Summary for Maitland Environmental Plan (E-PLN-024) Revision 3

Table of Contents

1. INTRODUCTION 1

1.1. Background 1
1.2. Proponent 1
1.3. Objectives 2
1.4. Scope 2
1.5. Schedule 2
1.6. Location 3

2. ENVIRONMENTAL MANAGEMENT FRAMEWORK 4

2.1. Policy 4
2.2. Structure and Responsibility 4
2.3. Legislation 6
2.4. Project Approvals 10

3. EXISTING ENVIRONMENT 11

3.1. Climate 11
3.2. Geology 12
3.3. Flora 13
3.4. Fauna 14
3.5. Hydrology and Hydrogeology 16
3.6. Acid Sulphate Soils 16
3.7. Community 17
3.8. Cultural Heritage 18

4. ACTIVITY DESCRIPTION 20

4.1. Pipeline 21
4.2. Facilities 22
4.3. SCADA and Communications System 23
4.4. Accommodation and Facilities 23
4.5. Vegetation Maintenance 23
4.6. Civil Works 23
4.7. Ancillary Works 23
4.8. Project Schedule 24

5. ENVIRONMENTAL RISK IDENTIFICATION AND ASSESSMENT 25

6. IMPLEMENTATION STRATEGY 27

7. ENVIRONMENTAL MANAGEMENT SYSTEM 29

7.1. Consultation 29

8. DECOMMISSIONING AND REHABILITATION 33

9. CHEMICAL DISCLOSURE 34

10. REFERENCES 35

List of Tables

Table 1-1: Instrument Holder and Operator 1

Table 2-1: Key Environmental Responsibilities 4

Table 2-2: Associated Environmental Legislation and Other Requirements 6

Table 4-1: Operational Pipeline Details 21

Table 7-1: Stakeholder Consultation progressed to date 30

List of Figures

Figure 1-1: Overview Map of Maitland Lateral 3

Figure 3-1: Mean maximum and minimum temperature (Karratha Airport) 11

Figure 3-2: Major river and saline coastal plains near Maitland Lateral 16

Figure 3-3: Acid sulphate soil location with respect to Maitland Lateral 17

Figure 3-4: Nearby town and pastoral station 18

Figure 3-5: Maitland Lateral registered heritage sites 19

Figure 5-1: AS/NZS ISO 31000:2018 Risk Management Process 26

1. INTRODUCTION

1.1. Background

In 2016, EDL LNG (WA) Pty Ltd (EDL) (a subsidiary of Energy Developments Limited) requested, through their shared ownership by DUET (an ASX listed company), that DDG Operations Pty Limited (DDG) be the nominated operator of the Maitland Lateral Pipeline under Pipeline Licence 74. The Maitland Lateral Pipeline is a 3.3 km pipeline located in the Maitland Industrial estate 30km south-west of Karratha and was constructed in 2006. In 2020 EDL submitted in April 2016 a change in the Nomination of Operator to the Department of Mines and Petroleum for DDG to take on the Operator requirements for the Maitland Lateral Pipeline. It was initially proposed that the Maitland Lateral Pipeline fit under the DBNGP Operations Environment Plan but, in consultation with the Department of Mines and Petroleum, it was determined that the Maitland Lateral Pipeline would require a stand-alone Operations Environment Plan.

The Petroleum Pipeline (Environment) Regulations 2012 require the development and implementation of an Environment Plan (EP) to the satisfaction of the Department of Mines, Industry Regulation and Safety (DMIRS). The Maitland Lateral Pipeline Operations Environment Plan (EP) has been prepared to satisfy this requirement.

In 2020, DDG advised DMIRS of a change in name to AGI Operations Pty Limited.

1.2. Proponent

EDL LNG (WA) Pty Ltd (EDL) is the instrument holder of PL 74 for the Maitland Lateral Pipeline and has nominated AGI Operations Pty Limited (AGIO) as the Nominated Operator.

AGIO is part of the Australian Gas Infrastructure Group (AGIG) which also includes the Dampier to Bunbury Natural Gas Pipeline (DBNGP). AGIO relies on the services of DBNGP (WA) Nominees Pty Limited (DBP), the owner of the DBNGP, for the provision of labour and equipment to undertake its business. In this regard AGIO adopts all AGIG and DBP policies and procedures across the operation of its business.

Table 1-1: Instrument Holder and Operator

Facility	Instrument Holder	Operator	Licence
Maitland Lateral Pipeline including inlet and outlet (meter) stations	EDL LNG (WA) Pty Ltd 92 064 437 789	AGI Operations Pty Limited 76 166 900 170	PL74

Public enquiries regarding the Maitland Lateral may be directed to AGIO via:

Attn: Head of Land Management

PO Box Z5267

Perth, St Georges Terrace WA 6831

Telephone: +61 8 9223 4300

land.management@agig.com.au

1.3. Objectives

The objectives of this Operations EP are to identify and assess environmental aspects associated with operations of the Maitland Lateral and establish suitable controls so as to eliminate or minimise these risks to a level that is low, negligible or reduced to as low as is reasonably practical (ALARP). Additionally, the EP aims to establish performance objectives, standards and measurement criteria for the ongoing monitoring of environmental performance.

Ultimately, this EP is intended as both a legally binding regulatory document and a practical tool for implementation in the management of environmental risk during operation of Maitland Lateral.

This EP has been developed in accordance with the draft Guideline for the Development of Petroleum, Geothermal and Pipeline Environment Plans in WA (DEMIRS, July 2021).

1.4. Scope

The scope of this EP includes all activities associated with operation and maintenance of the Maitland Lateral Pipeline. This EP does not include decommissioning and rehabilitation of Maitland Lateral as decommissioning will be undertaken by the asset owner, i.e. EDL LNG (WA) Pty Ltd.

The Maitland Lateral Pipeline EP should be read in conjunction with the following other key management documents:

- AGIO Safety Case (DDG-PL071-Z-PLN-001-01); and
- DBP Emergency Response Plan (TEB-003-0021-01).
-

1.5. Schedule

PL74 is currently operational.

1.6. Location

The Maitland Lateral Pipeline is situated in the north west of Western Australia at a location generally west south west of Karratha near KP30 of the DBNGP at the below approximate coordinates:

- Long/Lat: Longitude 116°40'05" Latitude -20°48'23"

The pipeline connects the Dampier to Bunbury Natural Gas Pipeline (DBNGP) to the EDL Maitland Supagas LNG plant.

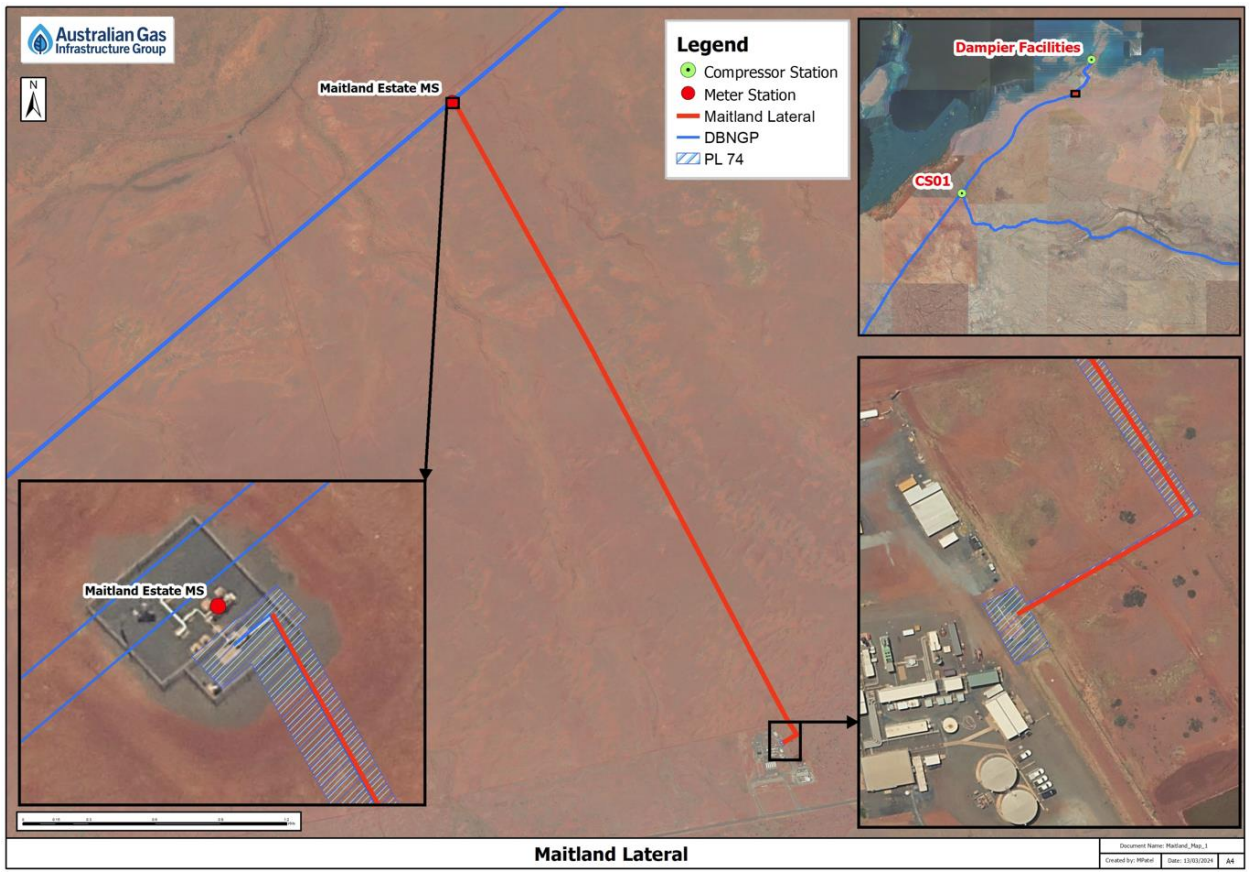

Figure 1-1: Overview Map of Maitland Lateral

2. ENVIRONMENTAL MANAGEMENT FRAMEWORK

2.1. Policy

AGIO adopts all AGIG and DBP policies and procedures across the operation of its business.

AGIG has a corporate culture based around Environmental, Social and Governance (ESG) excellence driven by a vision to protect people and the environment. Central to this, is the AGIG Environmental Policy, which is signed and endorsed by its CEO and supported by an annual ESG report.

The AGIG Environmental Policy is reviewed annually, or when there is a significant change to the organisation or its activities, to ensure that the policy remains comprehensive and current. Employees are consulted during the review process through a number of mechanisms, including HSE Committees.

2.2. Structure and Responsibility

All staff are responsible for the environmental performance of their activities and for reporting any environmental hazards and incidents. Environmental responsibilities for staff and contractors are contained within position descriptions, relevant procedures, and work instructions. Overarching environmental roles are described in Table 2-1 below and specific environmental responsibilities are addressed in Section 6.

Table 2-1: Key Environmental Responsibilities

Position Title	Environmental Responsibilities
Executive Management Team	• Hold overall responsibility for environmental management; • Review, understand, approve and support implementation of the EP; and • Ensure adequate resources are provided for the implementation of the EP.
Executive General Manager Transmission Asset Management (EGM TAM)	• Ensure that environmental obligations are embedded into design, systems and processes for satisfying compliance and due diligence requirements; • Ensure that proposed project additions and alterations obtain all necessary environmental approvals; and • Coordinate emergency response in accordance with the DBP Emergency Response Procedure (TEB-003-0021-01).

Position Title	Environmental Responsibilities
Executive General Manager, Transmission Operations (EGM TO)	• Ensure that environmental obligations are embedded into AGIO's systems and processes for satisfying compliance and due diligence requirements; • Ensure maintenance personnel are adequately trained to carry out their environmental duties; • Facilitate the implementation of this plan in relation to field maintenance activities; • Ensure the requirements of the Master Obligations Register (including modifications and updates) are communicated to the managers as appropriate; • Ensure incident reporting protocols are communicated and adhered to; • Respond to environmental incidents as required; and • Remediation of contaminated sites.
Executive General Manager, Commercial	• Ensure environmental obligations are embedded into the operation and dispatching of the facility and pipeline capacity; • Control Room Operators are adequately trained to carry out emergency and everyday operations to minimise environmental impacts; • Manage and coordinate the emergency response from the control room in support of the ERP and CMT; and • Drive fuel efficiency within operations with a focus on fuel gas minimisation of compressors including blowdown minimisation.
Superintendents Managers Head's of: • Facilities • Mainline • Transmission Engineering • Asset Strategy • Asset Performance • Planning and Supply	• Ensure personnel training plans reflect the environmental duties and the training is carried out; • Ensure this plan is embedded in the asset management tool (Maximo); • Review and understand the Master Obligations Register (including modifications and updates) and that these are reflected in work instructions relative to activities; • Ensure incident reporting protocols are followed and that the maintenance personnel report Events/Hazards and near misses; and • Respond to environmental incidents as required.
Manager, Environment	• Monitor implementation of and compliance with this operations EP and environmental risk assessment recommendations; • Facilitate and monitor EP reviews; • Review audit reports and monitor completion of required corrective actions; • Report significant environmental non-compliances with EP and legislation internally to the AGIG Executive Management Team and externally to regulatory authorities, as required; • Ensure all environmental obligations are added to the Master Obligations Register and are kept current in that register; and • Identify changes during operation and update the EP to address and manage any new environmental risks.
Head of Land Management	• Liaise with landholders, traditional owners, community representatives, contractors, councils, planning and local government authorities as well as utilities and infrastructure owners on land management and environmental matters as required; and • Ensure environmental aspects are included in the Asset Management Plan and associated job activities are implemented.
Training and Development Manager	• Facilitate the maintenance, implementation and ongoing improvement of training and induction programs.

Position Title	Environmental Responsibilities
Project Manager	• Manage any minor projects or works required including pigging or dig-ups; • Oversight of environmental inspections and obligations; • Report all project related environmental hazards and incidents; • Provide project related environmental data; and • Implement and review the effectiveness of environmental controls.
All Personnel	• Read, understand and implement the control measures detailed within Section 6 of this plan and the related Oil Spill Contingency Plan (OSCP); • Report all observed non-compliances to a supervisor; • Report all observed incidents, hazards and near misses; • Continually seek to identify areas for improvement of environmental management; and • Conduct HSE inspections as required across the plant.

2.3. Legislation

Key environmental legislation and other requirements that may apply to Maitland Lateral are presented in Table 2-2 below.

Table 2-2: Associated Environmental Legislation and Other Requirements

Commonwealth Legislation	
Aboriginal and Torres Strait Islanders Heritage Protection Act 1984	An Act to ensure the protection of Cultural Heritage which requires that any new development in previously undisturbed areas is reviewed to assess potential heritage impacts and ensure appropriate approvals are in place prior to commencing works. Any modifications or enhancements (projects) include a heritage impact assessment. Awareness of the requirements under this Act and the State Act ensure knowledge of assessment requirements and identification of heritage artefacts.
Environmental Protection and Biodiversity Conservation Act 1999	An Act to identify and ensure the protection of Matters of National Environmental Significance (MNES). Approval requirements are set out for any new developments either undertaken on Commonwealth Land or considered to have potential to impact upon MNES. There are no MNES identified in relation to Maitland Lateral.

Commonwealth Legislation	
	This Act requires the monitoring and if required, reporting of greenhouse gas and energy production / consumption. This is completed annually and relates to fugitive gas use and transport energy.
Native Title Act 1993	An Act to ensure Native Title holders' rights are protected throughout development within proclaimed areas. Any modifications or enhancements (projects) include a heritage impact assessment.
Western Australian Legislation and Associated Regulations	
Aboriginal Heritage Act 1972	All sites of Aboriginal archaeology are protected and will require pre-clearance survey and permit if materials are to be disturbed. Declared heritage places are protected and will need to be avoided or consent obtained if site is to be disturbed. Any modifications or enhancements (projects) include a heritage impact assessment as well as ensuring personnel are aware of their requirements to protect any heritage identified. There are known Aboriginal heritage areas identified during the pre-construction heritage surveys and these areas have been documented and physically demarcated.
Biodiversity Conservation Act 2016	Supersedes Wildlife Conservation Act and requires management of impacts to threatened species, ecological communities and conservation reserves. Includes requirements under regulations for licensing to take or impact native flora and fauna. In some locations, vegetation maintenance activities can impact on rare flora or Threatened Ecological Communities (TEC).
Biodiversity Conservation Regulations 2018	Fauna licensing for any fauna handling along the pipeline route or in the compounds. Additionally includes the threatened flora and communities licensing requirements for impacts to conservation significant species. Maitland Lateral maintains a Fauna Licence as set out in Section 2.4 and Section 3.1 in conjunction with wider DBNGP licence.
Biosecurity and Agriculture Management Act 2007	Includes obligations for the management of declared weeds within WA and the need for the identification and management of weed species. Declared weeds such as mesquite occur on Karratha Station and require management and landholder consultation for best management practices to ensure minimisation of risk of spread.
Bushfires Act 1954	Sets out requirements for fire protection matters including firebreaks around compounds and fire ban controls. Total Fire Ban exemptions and conditions for work have been built into hot works and other fire prevention controls. Recent updates to the regulations also include no hot works during catastrophic fire rating days and this is discussed in Section 6.4.
Environmental Protection Act 1986	Act to ensure the protection of the Environment. Includes requirements for referral of projects, licensing of scheduled activities and obligation to prevent pollution and minimise impacts to the environment. This includes the reporting of any pollution.

Environmental Protection Regulations 1987	Regulations (including sub regulations) in terms of the management of noise, clearing of native vegetation, controlled wastes, unauthorised discharges and litter is managed on site. Main interaction is the Clearing Permit used for activities to ensure safe pipeline operations and included in Section 2.4 and 6.2. Management of noise and discharge of wastes is also required under this Act to ensure no negative impacts to receptors.
Environmental Protection Regulations (Abrasive Blasting) 1988	Management of environmental risks relating to abrasive blasting activities including noise, dust and waste management. Abrasive blasting may occur occasionally during operations but normally within compound areas or confined to small localised areas during pipeline coating repairs.
Environmental Protection Regulations (Clearing of Native Vegetation) 2004	Regulations specific to the clearing of native vegetation and includes potential exemptions under Petroleum related legislation and activities. Permits for clearing are currently held for the project as part of the wider DBNGP approval.
Environmental Protection Regulations (Noise) 1997	Controls in relation to noise levels at environmental receptors. Includes management of activities that could breach levels including timing of activity, duration, notification to stakeholders and noise monitoring. There are no specific close (within 5 km) sensitive receptors to the location.
Dangerous Goods Safety Act 2004	The transport, handling and storage of dangerous goods will need to conform to the requirements of the Act. This includes contractor's delivering and removing hydrocarbons from site. This also includes training requirements for certain personnel as well as storage and segregation requirements.
Petroleum Pipelines Act 1969	Manages the pipeline license area for operations and includes pipeline safety and Safety Case obligations and the obligation to minimise environmental impacts.
Petroleum Pipelines (Environment) Regulations 2012	Sets out specific requirements including the development and approval of the EP and the need to manage environmental impacts.
Rights in Water and Irrigation Act 1914	Requirements for management of impacts to water bodies including surface and ground water. There are no specific approvals required for normal operations on the project.
International Conventions	
Convention on Biological Diversity	International agreement which obliges the Australian Government to have policies and procedures to protect biodiversity and plan for biological outcomes.
Migratory Birds - China	International agreement to provide an important mechanism for pursuing conservation outcomes for migratory bird species with China. Refer to Section 3.4.
Migratory Birds - Japan	International agreement to provide an important mechanism for pursuing conservation outcomes for migratory bird species with Japan. Refer to Section 3.4.
Migratory Birds – Republic of Korea	International agreement to provide an important mechanism for pursuing conservation outcomes for migratory bird species with the Republic of Korea. Refer to Section 3.4.

Standards	
AS2885 Pipelines – Gas and Liquid Petroleum	Pipeline design requirements as well as specific to line of sight clearing requirements (vegetation maintenance) and pigging requirements.
AS1940:2017 The storage and handling of flammable and combustible liquids	Ensure the bunding of hydrocarbons on site is managed according to this standard. Noting that Maitland Lateral does not have any bulk storage of chemicals or hydrocarbons.
AS1697:2005 Installation and maintenance of steel pipe gas systems	Installation and maintenance of steel pipe systems including design criteria to ensure containment.
AS3780:2008 The storage and handling of corrosive substances	There is no permanent storage facility at Maitland Lateral. Any minor storage and handling of corrosives on site will meet this standard.
AS2507:1998 The storage and handling of pesticides	There is no permanent storage facility at Maitland Lateral. Any minor/ temporary storage and handling of pesticides and herbicides will meet this standard. This includes minor weed spraying onsite.
Codes and Guidelines	
Australian Pipeline and Gas Association (APGA) Code of Environmental Practice	Code for the implementation of environmental controls during construction and operations of pipelines.
Australian Dangerous Goods Code	Code that defines what is a Dangerous Good and requirements for the transport, storage and handling applicable to chemicals utilised for this operation.
Australian and New Zealand Guidelines for Fresh and Marine Water Quality (2000) ANZECC.	Guideline that provides values for water discharge levels to the environment under the National Water Quality Strategy. See Section 6.8.
Guideline – Treatment and Management of soil and water in ASS landscapes (DWER, 2015)	Department of Water and Environmental Regulation (DWER) Guideline in relation to management and treatment of Acid Sulphate Soils (ASS). The Maitland Lateral may intersect with areas of ASS and may conduct excavation activities in these areas periodically. See Section 6.1.
Identification and investigation of acid sulphate soils and acidic landscapes (DEC, 2013)	Guidelines that sets out the requirements for assessing ASS presence, likelihood of impacts and triggers for treatment. This links to the above Guideline in developing an ASS Management Plan. See Section 6.1.

2.4. Project Approvals

Clearing for line of sight (vegetation maintenance) as required under AS2885 may be required, though not in the near future due to existing vegetation being low lying. This activity fits under the existing clearing permit (CPS4241) for the DBNGP and associated laterals for operational clearing.

No waterway crossings are present, so no Beds or Banks permits are required. No water abstraction is undertaken for the project.

3. EXISTING ENVIRONMENT

The objective of this section is to provide a description of the existing natural, social and cultural environment that may be affected by the operation at Maitland.

3.1. Climate

The Maitland Lateral Pipeline is located within the City of Karratha in the Pilbara region, which is an arid sub-tropical zone with low rainfall, high evaporation and day temperatures, which vary from warm in the winter to very hot in the summer.

BOM (2024) climate data indicates that monthly mean maximum temperatures in the Pilbara Region range from 26.5°C in July to 36.2°C in March (Figure 3-1). Inland areas experience a hot, dry summer and a mild winter. Most rainfall occurs in summer, with occasional cyclonic activity. Average annual rainfall is 294.6 mm, ranging from a monthly average of 0.4 mm in October to 76.4 mm in February. There is substantial year-to-year variation in rainfall, both locally and regionally.

The coastal area between Port Hedland and Exmouth Gulf is the most cyclone prone area of Australia and the Lateral is situated near the centre of this zone. Cyclone activity is most common between November and April. The region is prone to multiple lightning strikes a year.

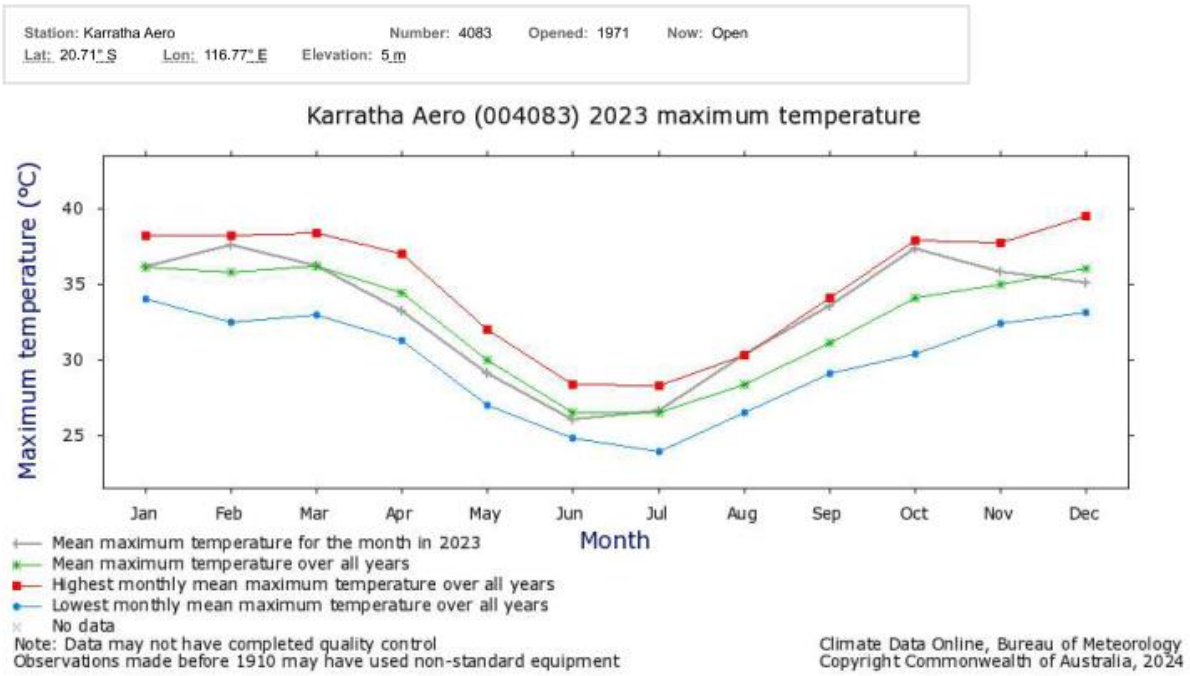

Figure 3-1: Mean maximum and minimum temperature (Karratha Airport)

Mean evaporation figures are very high, often exceeding 300 mm/month in summer and varying between 150 and 200 mm/month during winter. Humidity is relatively high

with mean monthly relative humidity (9am) being approximately 39% in August ranging to 64% in February.

The summer season is characterised by prolonged dry periods created by anti-cyclonic activities to the south. Thunderstorms may develop as a result of convectional activity, with tropical cyclones occurring regularly in the area. Tropical cyclones often produce large amounts of rainfall, which may cause widespread flooding and the temporary isolation of regional population centres (BOM 2024).

The region experiences on average two cyclones per year, with the 'cyclone season' extending from December to April. Cyclones typically approach from the north east and either remain offshore or turn southwards to cross the mainland coast between Dampier and the North West Cape.

3.2. Geology

The Maitland Lateral is located within Pilbara Bio-Region (Beard, 1975). The bioregion can be divided into three geographic sub regions – Plateaus and Tablelands, Coastal Plain, Transitional Zone. The Maitland Lateral exists within the Coastal Plain which is broad, low-lying, and slopes gently seawards and is traversed by a number of north flowing rivers. It has formed on alluvium and is fringed on the northern boundary by tidal and salt flats, mangrove communities, sand shoals and sand dunes. Sediments include clay, sand, silt and calcrete. The soils in this region include red clays, cracking clays, red duplex soils. The red duplex soils are highly susceptible to wind erosion when protective vegetation is removed.

The Bayton 1:50 000 Urban Geology sheet indicates that shallow sub surface conditions beneath the pipeline easement consist of sands overlying a generally granitic substratum.

A Geotechnical Investigation was conducted along the pipeline easement in April 2004. Ground conditions encountered at the sixteen test pit locations along the pipeline easement generally comprised very stiff to hard clayey silt and silty clay to depths of between 1.2m and 1.75m. These materials were generally underlaid by fine to coarse gravel or clayey silty gravel. Refusal was experienced in this gravelly material in two locations at 2.45m. High strength granite was encountered underlying the gravel, with refusal experienced on this rock in four of the sixteen test pits, at depths ranging from 1.25m to 2.1m.

No free groundwater was encountered in any of the test pits during the geotechnical investigation.

Based on published corrosivity index for soils according to resistivity, the soil resistivity levels measured during the geotechnical investigation indicates that the soil is severely to very severely corrosive to a depth of 4 m along the pipeline easement.

Seismic tremors are occasionally felt in the area; however, no serious earthquakes have occurred, and there are no known active faults in the region. The seismic zone is as per AS 1170 Structural design actions Part 4.

3.3. Flora

The vegetation that occurs in proximity to the Maitland Lateral belongs to the Pilbara Bioregion (Beard, 1975). The vegetation of the bioregion is dominated by hummock grasslands, acacia forests and woodlands. Smaller areas of acacia shrublands, tussock grasslands, chenopod, and samphire shrublands, salt marshes, mangroves and eucalypt woodland along water courses also occur (LAWA 2001).

The area around the Maitland Lateral has been extensively degraded through stock grazing and trampling. The conservation value of the area is low.

The Maitland Lateral alignment passes through the following botanical regions:

- Abydos Plain - the western portion of the Abydos Plain, through which the DBNGP passes, is dominated by mixed grass plains of Spinifex (Triodia pungens) and Plains Grass (Eragrostis xerophila) and a scattered shrub steppe of Acacia species, including A. xiphophylla, A. pyrifolia, inaequilatera and A. translucens (Payne & Tille 1992).
- Chichester Plateau - the vegetation on this plateau is dominated by an Acacia pyrifolia – Triodia pungens shrubland on the plateau surface with a Eucalypts brevifolia – Triodia wiseana tree steppe and Acacia pryifolia – Triodia pungens shrubland on the dissected margins. The Bloodwood Corymbia dichromophlioa occurs on drainage lines.
- Onslow Coastal Plain - the coastal plains are dominated by an acacia shrub steppe or savanna. Between the Fortescue and Robe Rivers, the plains are dominated by grasslands which become a savanna of eucalypts and grasses near the drainage lines. South of the Robe River a mixed acacia shrub steppe dominates, while south-west of the Cane River numerous clay pans are scattered throughout a Snakewood (Acacia xiphophylla) and acacia shrub steppe with an understorey of spinifex (Dames & Moore 2000).
- Transitional zone – this zone is dominated by an Acacia pyrifolia – Triodia shrubland with several Spinifex grasses present including T. pungens, T. wiseana, T. longiceps, T. angusta and T. secunda (Payne & Tille 1992).

The north end of the Maitland Lateral potentially intersects with the listed area of a Priority Ecological Community (Priority 3); the Horseflat Land System of the Roebourne Plains. No other Declared Rare Flora (DRF), Environmentally Sensitive Areas (ESA) or other significant flora/vegetation related aspects occur within or adjacent to the easement of the lateral. A desktop review and field survey was completed in 2015 by Mattiske Consulting to review the Horseflat Land System and other Threatened Ecological Communities (TEC) located between KP0 and KP85 of the DBNGP.

The Horseflat Land System of the Roebourne Plains (Priority 3) are extensive, weakly gilgaied clay plains dominated by tussock grasslands on mostly alluvial non-gilgaied, red clay loams or heavy clay loams. Perennial tussock grasses include Eragrostis xerophila (Roebourne Plains grass) and other Eragrostis spp., Eriachne spp. and Dichanthium spp. The community also supports a suite of annual grasses including Sorghum spp. and rare Astrebela spp. The community extends from Cape Preston to Balla surrounding the towns of Karratha and Roebourne.

It was noted in the environmental risk assessment surveys of the DBNGP (Mattiske, 2014) that the intersect of the Horseflat Land System of the Roebourne Plain with the Maitland Lateral was not representative of the system and the boundary was arbitrary and located further away from the Maitland Lateral. The system was found to be extensive after KP 38 which is located past the Maitland Lateral (at KP30) along the DBNGP and as such the extent to which this Priority Ecological Communities (PEC) would be impacted by operations on the Maitland Lateral is very low.

Introduced species known to be in the bioregion (Dames & Moore 2000) include:

- Mesquite (Prosopis pallida);
- Buffel grass (Cenchrus ciliaris) – particularly along rivers;
- Ruby Dock (Acetusa vesicaria);
- Kapok (Aerva javanica);
- Mexican Poppy (Argemone mexicana and A. ochroleuca); and
- Parkinsonia (Parkinsonia aculeuta).

Of these Mesquite and Parkinsonia are Declared Plants under the Biosecurity and Agriculture Management Act 2007.

3.4. Fauna

A Bancroft and Bamford (2006) conducted a Level 1 fauna survey of the DBNGP pipeline corridor in accordance with EPA Position Statement No. 3 (Bancroft and Bamford 2006). A total of 51 species of conservation significance were identified as potentially occurring within the Pastoral region of the DBNGP corridor of which Maitland

Lateral forms a part. (i.e. Pilbara, Carnarvon, Gascoyne, Yalgoo and a portion of the Geraldton Sandplains). These species are presented below:

- Gilled Slender Blue-tongue
- Fortescue Grunter
- Western Spiny-tailed Skink
- Lerista lineata
- Woma
- Lerista planiventralis maryani
- Pilbara Olive Python
- Lerista yuna
- Carpet Python
- Grey Falcon
- Malleefowl
- Australian Bustard
- Great Egret
- Bush Stone-curlew
- Glossy Ibis
- Barking Owl
- White-bellied Sea-Eagle
- Thick-billed Grasswren
- Peregrine Falcon
- Rufous Fieldwren
- Little Curlew
- Slender-billed Thornbill
- Common Greenshank
- White-browed Babbler
- Wood Sandpiper
- Crested Bellbird
- Common sandpiper
- Spectacled Hare-wallaby
- Red-necked Stint
- Tammar
- Sharp-tailed Sandpiper
- Ghost Bat
- Curlew Sandpiper
- Short-tailed Mouse
- Oriental Plover
- Western Pebble-mound Mouse
- Oriental Pratincole
- Caspian Tern
- White-winged Black Tern
- Carnaby's Cockatoo
- Major Mitchell's Cockatoo
- Night Parrot
- Fork-tailed Swift
- Rainbow Bee-eater
- Star Finch
- Barn Swallow
- Mulgara
- Northern Quoll
- Bilby
- Black-footed Rock-wallaby
- Orange Leaf-nosed Bat

While one mammal of conservation significance, the Orange Leaf-Nosed Bat, and ten protected migratory shorebirds have been recorded within a 50 kilometre radius of the pipeline, the pipeline route has no topographical or vegetation features likely to attract this or any other significant fauna species.

3.5. Hydrology and Hydrogeology

The Maitland River is located approximately 7km west of the Maitland Lateral (see Figure 3-2). Minor tributaries/ drainage lines do exist along the Maitland Lateral but do not require additional management. No beds and banks or riparian vegetation has been identified along the Maitland Lateral route. The Maitland Industrial Estate is potentially subject to flooding from high sea storm surges, flooding from the Maitland River and surface runoff from the ranges to the south of the Estate.

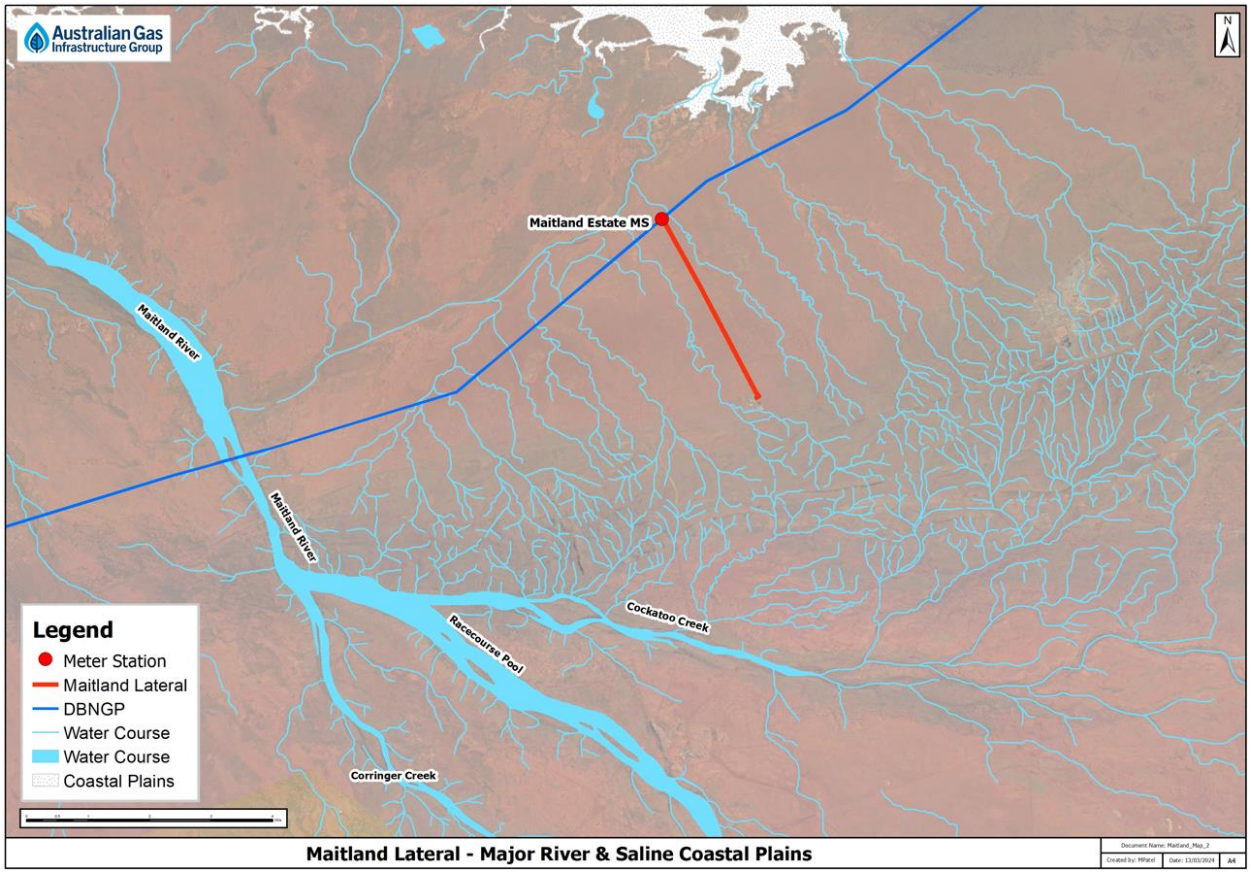

Figure 3-2: Major river and saline coastal plains near Maitland Lateral

3.6. Acid Sulphate Soils

The Maitland Lateral is located adjacent to some moderate-low risk Acid Sulphate Soils which his depicted as yellow hatched area in Figure 3-3 based on information available on GIS. While excavations are not predicted and trenching is not normally required as part of operations all excavations shall consider the risk of potential acid sulphate soils (PASS) as part of a risk assessment when conducting the activity. DCVG dig ups (approximately 10m x 4m) may occur based on Cathodic Protection (CP) survey results but these would be conducted on a 5 – 10 yearly basis only and PASS would be assessed at each specific location.

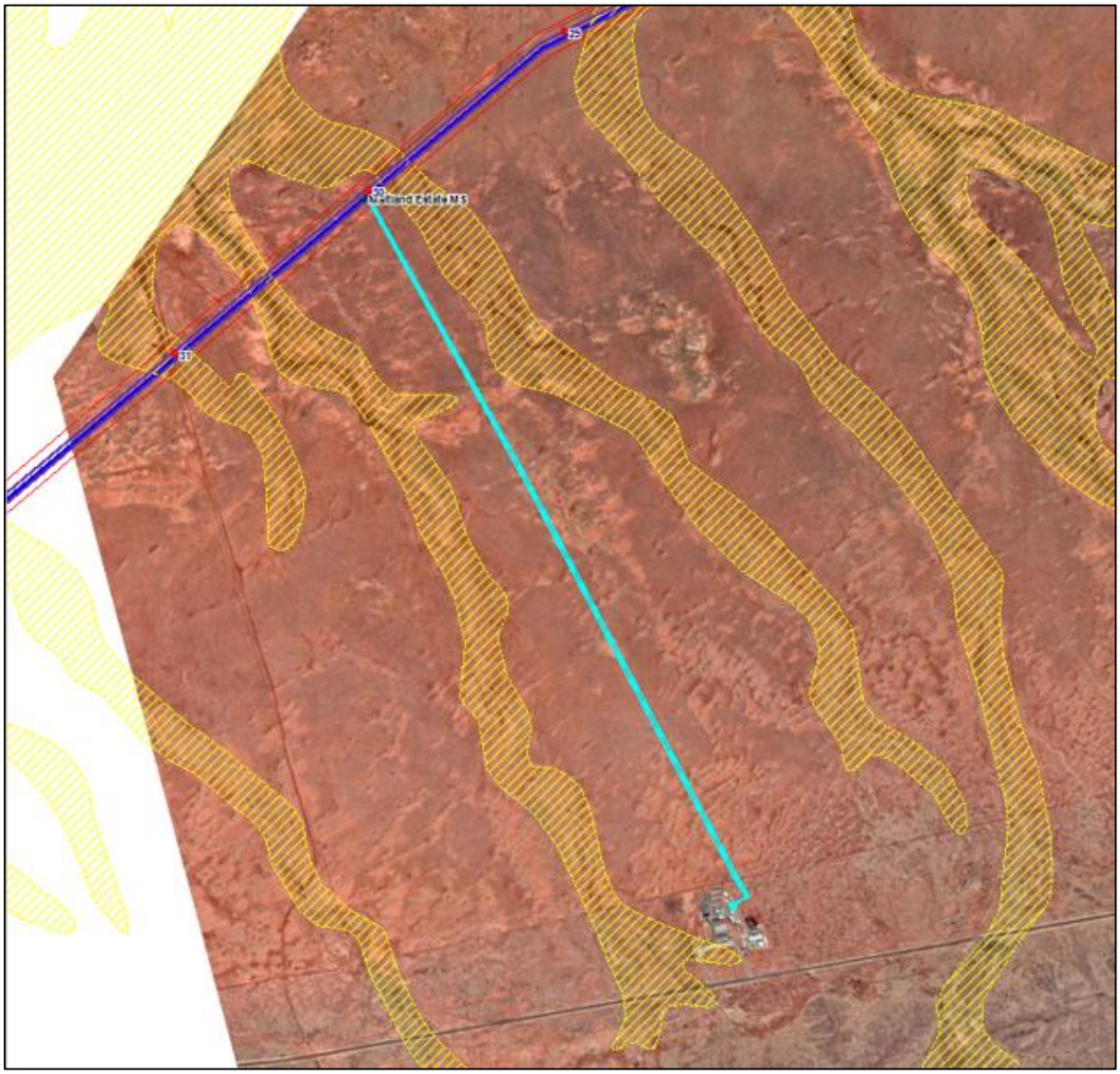

Figure 3-3: Acid sulphate soil location with respect to Maitland Lateral

3.7. Community

Maitland Lateral Pipeline is part of the City of Karratha Local Government Area (see Figure 3-4), which spans approximately 15,882 km2 and has a population of approximately 17,013 (ABS, 2024). The main industries in the city are mining (iron ore and gas extraction), salt production, and cattle and sheep grazing, with some fishing and tourism.

Maitland Lateral Pipeline falls within the Maitland Industrial Estate. The 3.3 kilometre pipeline connecting the Maitland LNG Facility to the DBNGP at Maitland Estate Meter Station is not close to any known sensitive receptors. The closest sensitive receptors are the Maitland River tributaries (3.9km) (see Figure 3-2), natural salt lakes (2.5km) and man made salt mining at 7.4kms. The Gap Ridge Industrial Estate is approximately 10kms from the pipeline.

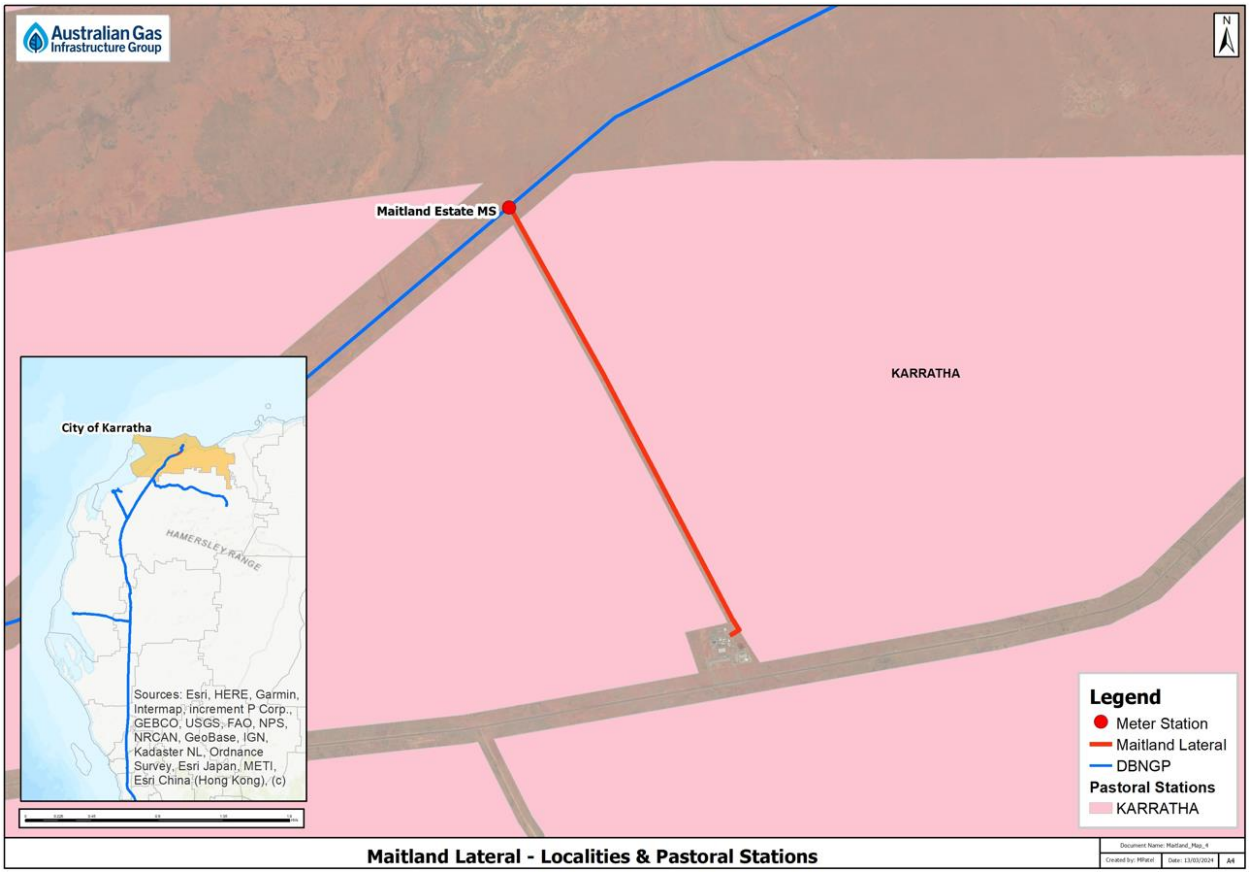

Figure 3-4: Nearby town and pastoral station

3.8. Cultural Heritage

The project area is located within the Yaburara Mardudhunera claim, who have asserted Native Title interests and Aboriginal heritage knowledge of the area. Murujuga Aboriginal Corporation comprises the three contracting parties which are referred to in the Burrup and Maitland Industrial Estates Agreement:

- the Ngarluma-Yindjibarndi Contracting Group;
- the Yaburara Mardudhunera Contracting Group; and
- the Wong-Goo-Tt-Oo Contracting Group.

These three groups have signed the Burrup and Maitland Industrial Estates Agreement with the State Government on 1 November 2002. All discussions and consultations with the Yaburara Mardudhunera People have been undertaken by EDL as the owner of the pipeline.

There are known aboriginal heritage areas (see Figure 3-5) identified during the pre-construction heritage surveys in the vicinity of the pipeline; these areas have been documented and physically demarcated in the field to avoid impact. No pipeline operational activities require access to these areas.

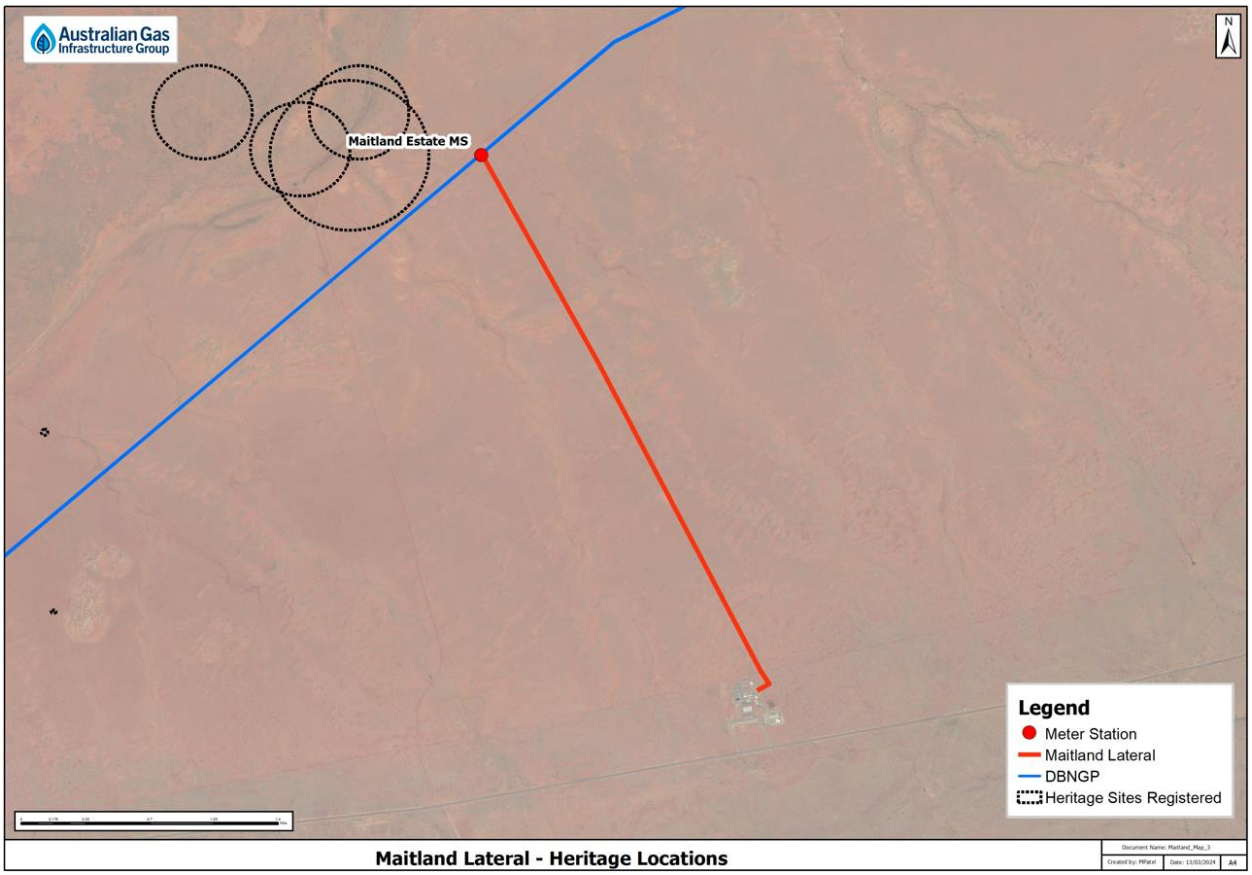

Figure 3-5: Maitland Lateral registered heritage sites

4. ACTIVITY DESCRIPTION

The Maitland Lateral Pipeline transports natural gas from the DBNGP owned by DBP, to the Maitland LNG Facility owned and operated by EDL. Gas deliveries will be 12 TJ/day at a minimum inlet pressure of 6,500kPa (and in excess of 23.9 TJ/day at a maximum inlet pressure of 9,800kPa). The Maitland Lateral Pipeline consists of:

- An inlet and launcher station with a remotely operable shutdown valve and provisions for connection of a pig launcher, located adjacent to the DBNGP Maitland Estate Meter Station;
- 3.3km buried DN150 API 5L X65 pipeline with sacrificial anode cathodic protection system;
- Receiver station with remotely operable shutdown valve and provisions for connection of a pig receiver, located in vicinity to the Maitland LNG Facility; and
- Supervisory Control and Data Acquisition (SCADA) system for remote monitoring and control from EDL Maitland LNG Facility Control Room.

The Lateral, operating at 8.0MPa will contain an inventory of approximately 7,350 standard m^3 or 275GJ of natural gas. This equates to a mass of approximately 5,650kg. The pipeline operates 24 hours a day, 365 days a year. Operation of the pipeline is effected via remote monitoring and control from the EDL Maitland LNG Facility control room, which is located approximately 60m from the Receiver Station. The Maitland LNG Facility control room has control of the shutdown valves at both Inlet and Launcher Station and Receiver Station. These valves can also be manually operated on site. The Pipeline is managed by AGIO through an asset management strategy that ensures asset risks and associated controls are factored into the management of the asset (e.g. inspection, testing, monitoring and maintenance) and by proving a framework for monitoring the effectiveness of controls. This strategy is executed through the Asset Management Plan (PL74-Z-PLNB-001-01) which gives rise to defining actions required to keep the Lateral in an acceptable condition, including inspection, maintenance, and testing.

The primary activities that may be undertaken as part of site management and infrastructure maintenance include:

- Access and Land Use;
- Pipeline Corridor Access;
- Non-intrusive survey and inspection associated with proposed future works;
- Civil and vegetation maintenance activities;
- Pipeline operation and maintenance; and
- Minor earthworks.

Pipeline maintenance is broken into two categories: preventative maintenance and reactive maintenance. Preventative maintenance comprises surveillance, monitoring and inspection activities that do not require modifications or repair of the pipeline and associated infrastructure. Preventative maintenance does not require excavation or any activity which is likely to cause significant damage to the environment.

Reactive maintenance includes activities undertaken in response to a fault, inspection or audit findings or other damage to the pipeline or supporting infrastructure. Through intelligent pigging, aerial surveillance and other monitoring and inspection, AGIO may become aware of a section of pipeline that requires a visual inspection and possibly repair. Reactive maintenance may result in controlled releases of gas in the pipeline to atmosphere, such as line purging for valve maintenance, or may require small excavations in the ROW to expose the pipeline such as DCVG dig ups.

4.1. Pipeline

The Maitland Lateral Pipeline transports natural gas from the DBNGP owned by DBP, to the Maitland LNG Facility owned and operated by EDL. Gas deliveries will be 12 TJ/day at a minimum inlet pressure of 6,500kPa and a maximum of 23.9 TJ/day at inlet pressure of 9,800kPa.

The details of the Maitland gas lateral pipeline are tabulated in Table 4-1 below.

Table 4-1: Operational Pipeline Details

Length	3,339.152m
Nominal Wall Thickness	6.4mm
Joint Type	Butt Welded
Design Capacity	12TJ/day at minimum inlet pressure
Pipeline Corrosion Allowance	Nil
Pipe Steel Grade	API 5L Grade X65
Critical Defect Length	175mm
Measurement Length	140m
Design Life	25 years
Maximum Design Temperature	60°C
Minimum Design Temperature	0°C
MAOP	9.8MPa
Minimum Inlet Pressure	6.5MPa
Fluid	Conveyed Natural Gas

Line Pack	7,350 standard m3 or 275GJ (at 8.9MPa)
Crossings	One seasonal watercourse crossing
Pressure of Flow Control	Nil
Safety and Emergency Shutdown	Remote Shutdown Valves for the Maitland Gas Lateral are located at the launcher station and at the receiver station.
Telemetry/ SCADA	Data telemetered locally o the Maitland LNG Facility control room.
Pigging Facilities	Facilities to allow connection of pigging vessels a inlet station and outlet station of pipeline.
Cathodic Protection	Sacrificial anode
Pipeline Route Marking	Double sided inter-visible signs at maximum spacing of 200m
Mainline Valves	Nil
Future Offtakes	Nil

4.2. Facilities

4.2.1 Inlet and Launcher Station

The facilities include:

- Tie-in to the outlet of DBNGP Maitland Estate Meter Station;
- A remotely operable shutdown valve with a pressure equalisation bypass system. Power gas for the operation of the valve is supplied via a pressure regulating panel;
- Pig launcher assembly for connection of a pig launcher barrel;
- SCADA communications and radio communication link to EDL Maitland LNG Facility;
- Solar panels for site power; and
- Sacrificial anode system.

4.2.2 Receiver Station

The Station comprises:

- Pig receiving assembly to allow connection of a pig receiver barrel;
- A remotely operable shutdown valve with a pressure equalisation bypass system. Power gas for the operation of the valve is supplied via a pressure regulating panel;
- Pig launcher assembly for connection of a pig launcher barrel;
- SCADA communications and cable communication link to EDL Maitland LNG Facility; and
- 24VDC power from EDL Maitland LNG Facility.

4.3. SCADA and Communications System

A Remote Terminal Unit (RTU) is installed in at the Inlet and Launcher Station, which provide the following functions:

- Remote and local operational control of the actuated shutdown valves; and
- Monitor miscellaneous pressures, temperatures, valve positions and site status.

Communication to the Maitland LNG Facility control room is via a radio link and the site local area network. Full visibility of pipeline instruments and valve status indications is retained at the Maitland LNG Facility control room, which also has sole remote control over the shutdown valves.

4.4. Accommodation and Facilities

The Maitland Lateral Pipeline is accessible by road with 4WD vehicle. Maintenance or other required work will be performed by travelling to site, mainly from Karratha or from DBNGP Compressor Station 1. No accommodation occurs onsite. There are no amenities onsite and all wastes are removed at the time of the activity.

4.5. Vegetation Maintenance

As required under AS2885.3, the Maitland Lateral undergoes frequent vegetation management to ensure Line of Sight (LOS) between pipeline signs and access to pipeline corridors is maintained. This process is undertaken in accordance with statutory clearing approvals and managed internally under an internal permit process, referred to as an Authorisation to Clear Vegetation (ACV). The ACV process conducts a pre-clearing review of the specific area to be cleared, reviews environmental aspects in the area (i.e., DRF, ESAs, TEC's) and a review of the clearing process to be used. The ACV establishes any specific controls (i.e., hand clearing only) in areas of particular value and provides information on these aspects to the field team. The ACV also enables the tracking of clearing volumes (area), dates completed and location to assist in the reporting process.

4.6. Civil Works

Civils works include the maintenance of the access track including grading, repairs, erosion controls and ensuring safe access.

Other civil works include fire breaks, weed management, erosion control management and maintenance, fencing maintenance and potentially pipeline dig-ups and minor excavations for cabling may occur during the period.

4.7. Ancillary Works

Aerial Surveillance, Cathodic Protection inspections, communications works, and other ongoing support activities will continue as set out in the Asset Management Plan (AMP-

PL74-Z-PLN-001). Project works include any dig-ups for pipe inspection, pigging, replacement or upgrades to equipment and painting. These are generally short duration (less than 1 week) and include a specific scope.

4.8. Project Schedule

The Maitland Lateral is an operating asset and no specific project works are scheduled. Preventative maintenance activities such as pressure, flow and temperature controls, cathodic protection, verification testing, and inspections shall all be carried out as per the Asset Management Plan (AMP-PL74-Z-PLN-001). These activities are all of low environmental risk.

Pigging activities are as required under AS2885 Pipelines - Gas and Liquid Petroleum, which is currently once every 10 years.

5. ENVIRONMENTAL RISK IDENTIFICATION AND ASSESSMENT

AGIO ensures the effective management of risk across its business through implementation of the AGIG Risk Management Policy. The AGIG Risk Management Policy makes a commitment to ensure that:

- Systems are in place to identify (as far as reasonably practicable) risks faced by the business;
- The impact of identified risks is understood;
- Risk treatment owners are nominated to manage the identified risks; and
- Assurance is provided on the effectiveness of the risk management system and risk controls.

To identify, understand and manage all environmental sources of risk and consequent impacts associated with the operational of the Maitland Lateral, a comprehensive Environmental Risk Assessment (ERA) was completed in 2017. A review of the ERA was completed in 2017 and a desktop review in November 2022 and February 2024. The ERA including the review consisted of a multidisciplinary team of in house personnel including the Manager, Environment and followed a structured process which sought to:

- Outline key operational activities;
- Identify any changes from previous activities or risk profile;
- Identify, analyse and evaluate associated hazards and corresponding environmental impacts;
- Review existing controls and if required develop additional controls; and
- Systematically assess the residual associated environmental risk.

This approach is in line with the AS/NZS ISO 31000:2018 process summarised by Figure 5-1.

The ERA methodology employed a desktop review process which completed the below key steps:

- Definition of the objectives and scope (Maitland Lateral operations in next five years)
- Identification of activities involved in operation and maintenance of the assets; and
- Reviewing existing or identifying new hazards and their causes.
- Assessment of the risk associated with the identified hazards including:
- Determination of worst case credible consequences;

- Identification of the existing safeguards (management control and mitigation systems and procedures);
- Determination of the likelihood of the consequence occurring; and
- Categorization of the risk utilising the AGIG Qualitative Risk Analysis Matrix.

Review and development of control measures (where deemed appropriate) to address the risks deemed unacceptable or not ALARP. Consideration of not just the proposed risk control action but also the accountability, resource requirements, timing, performance measures, monitoring and reporting requirements.

- Evaluation of the residual risk as per the methodology outlined in Step 4.

Documentation of all findings to inform this EP (Section 6 risk assessment tables).

- Where risks are negligible or low, these risks are considered acceptable.

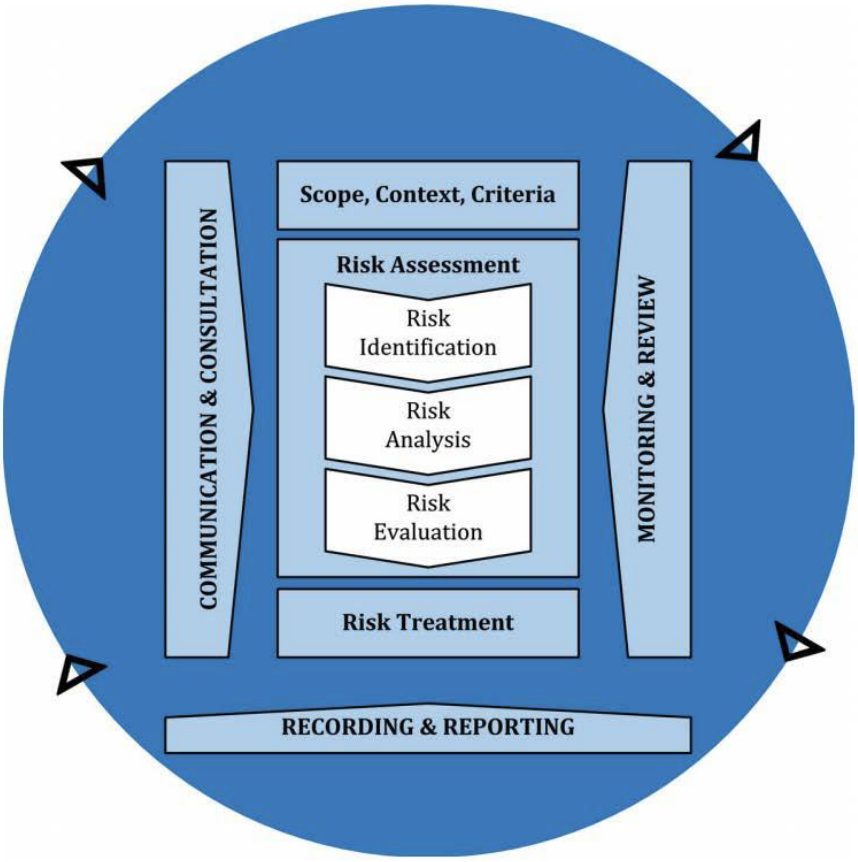

Figure 5-1: AS/NZS ISO 31000:2018 Risk Management Process

6. IMPLEMENTATION STRATEGY

The Environment Plan sets out hazards and associated impacts identified during the ERA. These are listed with a summary of controls to manage and minimise these impacts.

Within each hazard sub group, each group of impacts and risks has been addressed with an objective to:

- Define the environmental performance objectives that will be required to be achieved in order to ensure environmental protection
- Define the environmental performance standards that relate to the quality of the performance
- Define the measurement criteria for determining whether the objectives and standards have been met for the activity

Specific control measures have been developed to direct, review and manage activities so that environmental impacts and risks are continually being reduced to ALARP. Each control measure has been assigned a role within the organisation to be responsible for its implementation with a summary of these controls outlined below.

- Soils and Sediment
    - Erosion management
    - Native Vegetation Clearing procedure conditions
    - Acid sulphate soil (ASS) management (limited interaction with any identified ASS sites onsite)
- Flora
    - Native Vegetaiton Clearing procedures
    - Clearing Permit and approval conditions
- Weeds and Pathogens
    - Targeted and frequent weed management
    - Declared weeds management in conjunction with pastoral leasees
    - Clean on Entry procedure
    - Stick to existing tracks
- Bushfire
    - Management of hot works and potential fire risk under Permits
    - Management of flammable material build up
    - Firebreaks and management of ignition sources
    - Prohibited items in hazardous areas
    - Hot Works procedure conditions including compliance with bushfire regulations
- Fauna
    - Trench management
    - Fauna controls including egress and fences
    - Fauna handling training

    - Frequest inspections
    - Waste management (lidded bins, frequent servicing)
- Cultural Heritage
    - Consultuation with Traditional Owners
    - Surveys for planned disturbance areas
    - Registered sites reviews (GIS)
- Land Users
    - Minimum annual consultation on activities and planned interactions
    - Local council communication and consultation (especially in relation to road closures)
- Dust and Air Emissions
    - Minimise dust generated through activities
    - Stabilise stockpiles including dust suppression
    - Minimise emissions through design and efficient operations
    - Monitor ongoing emissions
- Noise
    - As per approval conditions
    - Minimise noise during operations
- Surface and Ground Water
    - Abstraction under licensed approval conditions only
    - Management of evaporation pond (dual lined with leak detection)
    - Management of chemicals (as per below) to avoid contamination
- Hazardous Materials Storage and Handling
    - Bunded areas for liquid storage
    - Capture or removal of contaminated material (i.e. soil)
    - Minimise chemical storage onsite
- Waste
    - Frequent servicing and provision of bins
    - Waste segregation
    - Labelled (all) and lidded (general and co-mingled)

7. ENVIRONMENTAL MANAGEMENT SYSTEM

This chapter describes the documented systems and processes of the Environmental Management System (EMS) used for the safe operational of the Maitland Lateral. AGIO adopt all AGIG and DBP policies and procedures across the operation of its business. Implementation of AGIG's EMS ensures that hazards are identified and assessed to eliminate or minimise the risk to the environment to a level that is As Low As Reasonably Practical (ALARP) throughout operation of the Maitland Lateral.

AGIO will notify DEMIRS of the commencement and cessation of activities within one week of these events occurring.

7.1. Consultation

AGIO is committed to ongoing consultation with all stakeholders that will be impacted from Maitland Lateral operations. The purpose of consultation is to:

- Keep key stakeholders up to date status of operations;
- Obtain appropriate input into the ongoing improvement of activities;
- Ensure timely response to landholder issues; and
- Maintain dialogue with regulatory authorities.

The consultation conducted to date with key stakeholders is outlined in Table 7-6. Stakeholders are identified through mutual interest in the land (i.e., landholder, Traditional Owner Group) regulatory capability (i.e., local government) and other identified interest if relevant. Landowner lists is provided by Landgate on a monthly basis and AGIG will identify changes to landowner, if applicable.

Table 7-1: Stakeholder Consultation progressed to date

Stakeholder	Date of Consultation	Items to be discussed/proposed to be discussed	Outcomes
Department of Environment, Mines, Industry Regulation and Safety (DEMIRS)	Annual Reports	• Annual Environment Reports (AER) • Monthly Incident Reporting • Quarterly Emissions Reports	• Annual Report provides compliance information to DMIRS. • Incident reporting including if required any investigations and learning as well as related actions. • Includes any emissions and wastes.
	August 2023 – Feb 2024 (monthly)	• EP revision	• Monthly consultation on progress and approach to the revision of the Environment Plan.
City of Karratha	As required	Combined consultation as part of DBNGP operation	Maitland Industrial Estate outcomes and planning
EDL LNG (WA) Pty Ltd Instrument Holder and SupaGas	Ongoing	• Daily notification of gas use nominations • Gas supply program • Shutdowns • Preventative maintenance tasks	Ongoing operation of the pipeline and facilities
	Jan 2024	• Fauna and flora survey • Revision of EP	No issues raised.
	13 September 2023	Annual Landowner Visit to discuss pipeline, facility, restricted work and approval process.	No issues.
	18 November 2022	Annual Landowner visit to discuss restricted work in the corridor and our compound, the BYD process and pipeline safety.	AGIG to confirm if there is any planned maintenance or work that could potentially disrupt the operations of EDL.
	8 November 2021	Annual Landowner visit. Gate on fence line and surveillance were discussed.	No issues raised.

Stakeholder	Date of Consultation	Items to be discussed/proposed to be discussed	Outcomes
	14 December 2020	Annual Landowner visit. No issues raised in relation to Maitland Lateral.	AGIG to request Karratha Station contact EDL.
	17 August 2020	Emergency Exercise conducted to test crisis response for DBP and EDL.	Exercise Zebra document generated.
	14 November 2019	Annual Landowner Visit, discussed relationship between EDL and AGIG	AGIG to provide contact details for Karratha Station to EDL.
	27 November 2018	Annual Landowner Visit	AGIG to provide EDL with aerial images of EDL plant to be used for inductions. Staff informed that they are to report to control room before going to ROW or skid.
	14 November 2017	Annual Landowner Visit to discuss sub-lease to SupaGas	No issues to report.
	8 September 2016	Annual Landowner Visit	Met site personnel and looked at CP and Comms equipment on site.
Traditional Owner Group	Ongoing (as per DBNGP)	Combined consultation as part of DBNGP operation	PNI project work (Burrup Peninsula) DBNGP operations – ongoing
Woodside Energy Ltd	22 March 2023	Email notification that Woodside contractor personnel conducting fauna surveys in the Maitland area in April.	AGIG notified EDL of Woodside survey.
	3 March 2023	Woodside provided a letter to notify AGIG of its proposal to develop a Woodside Solar Facility, including large scale photovoltaic farm and	No issues.

Stakeholder	Date of Consultation	Items to be discussed/proposed to be discussed	Outcomes
		battery storage, approximately 15km southwest of Karratha.	

8. DECOMMISSIONING AND REHABILITATION

The scope of this EP does not include decommissioning and subsequent rehabilitation requirements. AGIG does not own the pipeline. EDL as the owner of the pipeline is responsible for the decommissioning and rehabilitation post decommissioning. Short term rehabilitation/ reinstatement works that form part of maintenance and operations activities are covered under Section 6.

9. CHEMICAL DISCLOSURE

This EP recognises that there are no downhole chemicals that require disclosure.

10. REFERENCES

Australian Bureau of Statistics (ABS) (2024) Census Community Profiles http://www.censusdata.abs.gov.au Accessed 09/02/2024

ANZECC (2000) Australian and New Zealand guidelines for fresh and marine waters. Australian and New Zealand Environment and Conservation Council, Canberra 2000

Bancroft, W. & Bamford, M. J. (2006) Fauna Values of Stage 5 of the Dampier to Bunbury Naturalgas Pipeline (DBNGP) Unpublished report prepared for Strategen, June 2006

Beard JS (1975) Vegetation Survey of Western Australia, 1:1 000 000 Series, Sheets 5 – Pilbara, Map and Explanatory Notes, University of Western Australia Press, Nedlands

Bureau of Meteorology (BOM) (2024) Weather and Climate Data URL: http://www.bom.gov.au/climate/data/ Accessed 09/02/2024

Dames & Moore (2000) Dampier to Bunbury Natural Gas Pipeline Corridor Expansion Section 16(E) Strategic Environmental Review. Report prepared for Gas Pipeline Sale Engineering Committee WA.

Department of the Environment (2013), Australia's bioregions – maps [Online], Australian Government, Available from http://www.environment.gov.au/topics/land/nrs/science-maps- anddata/ibra/australias-bioregions-maps

Land and Water Australia (LAWA) (2001) Australian Native Vegetation Assessment – 2001. Commonwealth of Australia

Mattiske Consulting Pty Ltd (Mattiske) (2014), Environmental Risk Assessment for Northern Section Dampier Facilities to CS6. Unpublished report for DBNGP, Perth 2014

Payne A.L and Tille P.J. (1992) An inventory and condition survey of the Roebourne Plains and surrounds, Western Australia. WA Department of Agriculture Technical Bulletin No.83. Edited by D.A.W Johnston and L.J Snel