



mitsui E&P
Australia

Waitsia Gas Project Stage 2 - Environmental Management Plan

August 2019
Revision 0
P-WGP2-048

TABLE OF CONTENTS

1.0	SCOPE, CONTEXT AND RATIONALE	6
1.1	Background	6
1.2	Proposal Summary	6
1.3	Key Environmental Factors and Impacts	10
1.4	Condition Requirements	12
1.5	Rationale and Approach	12
2.0	OVERARCHING ENVIRONMENTAL MANAGEMENT	18
2.1	Existing Management Systems	18
2.2	Roles and Responsibilities	18
2.3	Key Regulatory Framework	21
3.0	ENVIRONMENTAL MANAGEMENT PLAN APPROACH	24
4.0	ADAPTIVE MANAGEMENT	39
4.1	Overview	39
4.2	Environmental Monitoring and Corrective Actions	39
4.3	Audits	39
4.4	EMP Review	39
5.0	STAKEHOLDER CONSULTATION	40
5.1	Stakeholder Management	40
5.2	Key Stakeholder Groups	40
5.3	Summary of Consultation Undertaken During Preparation of the EMP	40
5.4	Proposed Ongoing Stakeholder Consultation	40

LIST OF FIGURES

Figure 1-1	Waitsia Gas Project – Stage 2 Development Envelope	8
Figure 1-2	Key Proposal Components	9
Figure 2-1:	Indicative Construction Team	19
Figure 2-2:	Indicative Operations Team	20

LIST OF TABLES

Table 1-1:	Key Environmental Factors and Impacts	10
Table 1-2:	Key Previous Studies and Surveys	13
Table 2-1	Key Regulatory Framework	21

Table 3-3: Environmental management approach for Terrestrial Environmental Quality..... 27

Table 3-4: Environmental management approach for Terrestrial Fauna..... 29

Table 3-5: Environmental management approach for Inland Waters 32

Table 3-6: Environmental management approach for Air Quality 35

Table 3-7: Environmental management approach for Social Surroundings..... 37

Abbreviations and terms

Terms / Abbreviation	Definition
AHD	Australian Height Datum
ASS	Acid Sulfate Soil
CEMP	Construction Environmental Management Plan
Clearing envelope	The area of native vegetation that is present within the Proposal area
CO	Carbon monoxide
CO ₂	Carbon dioxide
Co ₂ -e	Carbon dioxide equivalent
DBCA	Department of Biodiversity, Conservation and Attractions
DBNGP	Dampier Bunbury Natural Gas Pipeline
DMIRS	Department of Mines, Industry Regulation and Safety
DoEE	Commonwealth Department of the Environment and Energy
DPLH	Department of Planning Lands and Heritage
DWER	Department of Water and Environmental Regulation
EMP	Environmental Management Plan
EMS	Environmental Management System
EP Act	<i>Environmental Protection Act 1986</i>
EPA	Environmental Planning Authority
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPs	Environmental Plans
Flowline	Pipes that carry raw oil or gas products from the wells to a processing facility.
General Vegetation Area	A subset of the clearing envelope that that comprises vegetation in poor condition
GLCs	Ground level concentrations
ha	Hectares
HSEMS	Health Safety and Environment Management System
IBRA	Interim Biogeographic Regionalisation for Australia
IBSA	Index of Biodiversity Surveys for Assessments
km	Kilometres
m	metres
MEPAU	Mitsui E&P Australia Group

Terms / Abbreviation	Definition
	AWE Perth Pty Limited is the legal entity, operator of the relevant Production Licences (L1 and L2), the proponent for the Proposal and operates under the Mitsui E&P Australia (MEPAU) brand.
MGSF	Mondarra Gas Storage Facility
mm	Millimetres
NGER	National Greenhouse and Energy Reporting
NOx	Nitrogen oxide
NPI	National Pollutant Inventory
PFW	Produced Formation Water
Pipeline	Pipes that carry processed oil or gas products from a processing facility to market.
SOx	Sulphur oxide
SWL	Standing Water Levels
The Plant	Waitsia Gas Plant (proposed)
The Proposal	The Waitsia Gas Project Stage 2
The Site	The Proposal location within the existing Waitsia Gas field located approximately 16 km south-east of Dongara, in the Shire of Irwin, Western Australia and shown on Figure 1-1
TJ	Terajoule
VSAs	Vegetation and Substrate Associations
WA	Western Australia
Waitsia-03 Area Vegetation	A subset of the clearing envelope that that comprises vegetation in good condition
Waitsia Gas Field	The known gas field resource subject to the existing and proposed operations
Waitsia Gas Project Stage 2	The Proposal as described Section 1.2
WC Act	<i>Wildlife Conservation Act</i>
XPF	Xyris Production Facility

1.0 SCOPE, CONTEXT AND RATIONALE

1.1 Background

The proponent is AWE Perth Pty Ltd (AWE).

AWE is a wholly owned subsidiary of AWE Pty Ltd. Mitsui E&P Australia Pty Ltd and AWE Pty Ltd are wholly owned subsidiaries of Mitsui & Co. Ltd. Combined they form the unified brand Mitsui E&P Australia Group (MEPAU). MEPAU has a Perth based operations office and an active gas production site in the Mid West region of Western Australia, the XPF.

Lattice Energy Resources (Perth Basin) Pty Limited (owned by Beach Energy Ltd), is a Waitsia Joint Venture partner on Production Licences L1 and L2.

This Environmental Management Plan (EMP) has been prepared by MEPAU for the construction and operation of the Waitsia Gas Project Stage 2. The EMP has been developed in alignment with the Environmental Planning Authority (EPA) *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans* (April 2018).

This section includes a summary of the proposal including its key features, information on the key environmental factors relevant to the Proposal, the management approach that will be undertaken and the rationale for the approach.

1.2 Proposal Summary

MEPAU is proposing to construct and operate the Waitsia Gas Plant (the Plant) and related infrastructure, collectively known as Waitsia Gas Project Stage 2 (the Proposal), in an agricultural area with extensive existing gas field development located approximately 16 km south-east of Dongara, in the Shire of Irwin, Western Australia (WA) (the Site).

The Proposal generally involves:

- Construction of a gas plant with a maximum capacity of 250 terajoule (TJ) per day;
- The operation of five existing wells;
- The drilling of up to an additional 6 wells¹; and
- A gathering system comprising flowlines and hubs to convey the extracted gas to the Plant and the gas distribution network.

Figure 1-1 shows the development envelope for the Proposal. Figure 1-2 shows the key Proposal components. Further details are provided below.

1.2.1 Waitsia Gas Plant

Gas extracted from the wells will be conveyed to centrally located gas gathering stations, or hubs, then directed via two flowlines to the proposed Plant for processing prior to being exported from the gas plant to the nearby Dampier Bunbury Natural Gas Pipeline (DBNGP).

The Plant will use the same standard components as those used for processing Waitsia Stage 1 gas from the existing XPF. These would comprise the following components:

¹ Another stage of Waitsia gas field development could include drilling of up to another eight (8) wells, resulting in an expected 19 wells in total over the life of the Waitsia gas field. Any additional wells are separate to this Proposal and will be subject to separate approvals.

- Slug catcher and inlet separation as the gas enters the plant;
- Mercury removal equipment should it be required;
- Gas refining to remove carbon dioxide (also known as 'sweetening'), water content and hydrocarbon dew-point control to meet the DBNGP pipeline quality gas specification;
- Water content and hydrocarbon dew-point control;
- Export compression and metering;
- Produced water treatment; and
- Support utilities.

The Plant will be operated 24 hours a day and 365 days a year, except for maintenance shutdowns.

1.2.2 Gathering System

The Gathering System comprises the flowlines that convey the gas from underground wells to the gas hubs and various items of above-ground infrastructure.

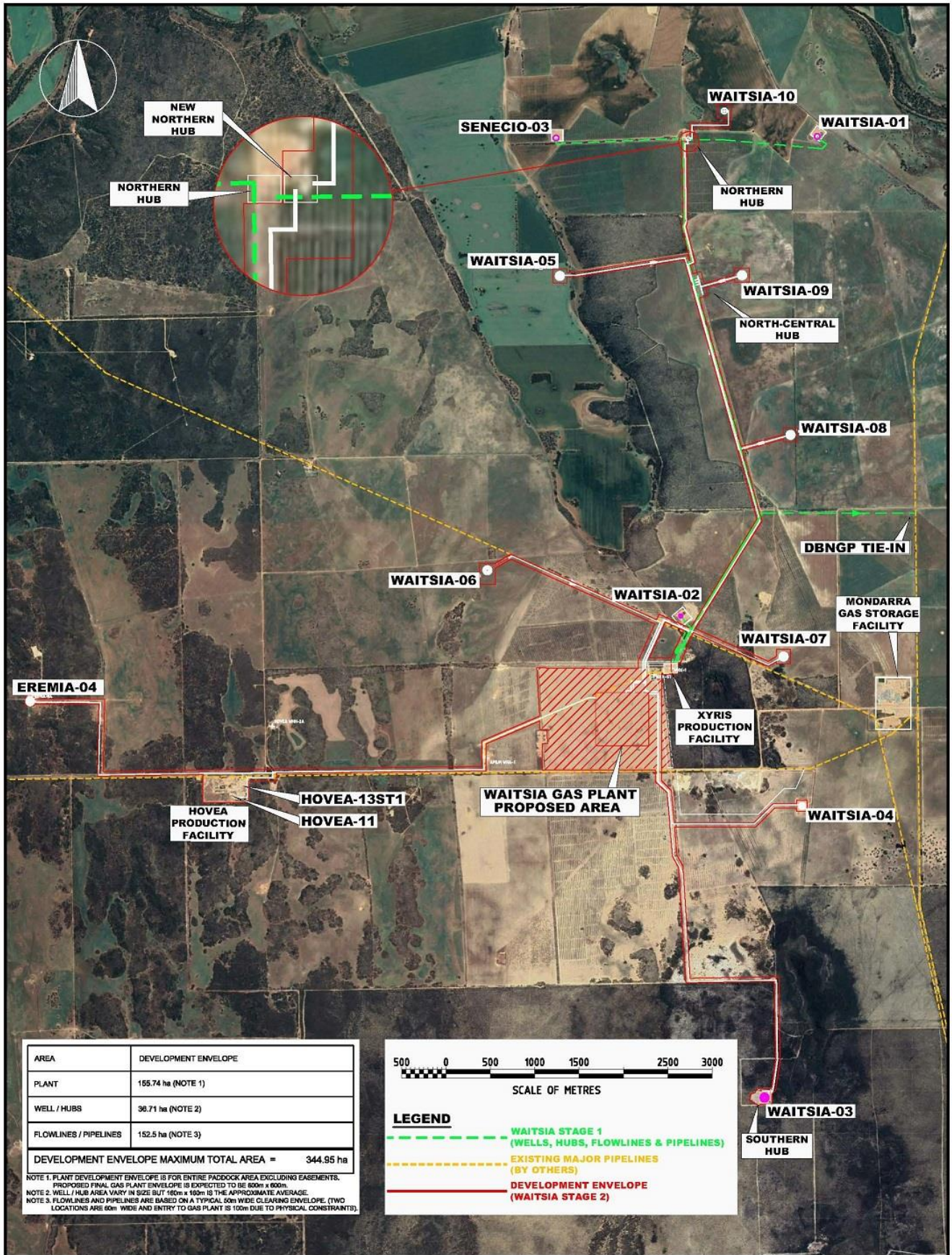
1.2.3 Wells

Currently, two existing wells are operating, with extracted gas from these wells being transmitted to the existing XPF Processing Plant. Three existing wells will be brought on stream as part of the Proposal, with the drilling of up to six additional wells.

1.2.4 Supporting Utilities

The following supporting utilities will be required for the Proposal:

- Fuel gas system;
- Power generation facilities;
- An instrument air system;
- Flare system;
- Fire water system;
- Utility water system;
- Water treatment package; and
- Diesel system.



WAT-SK-113-01

Figure 1-1 Waitsia Gas Project – Stage 2 Development Envelope

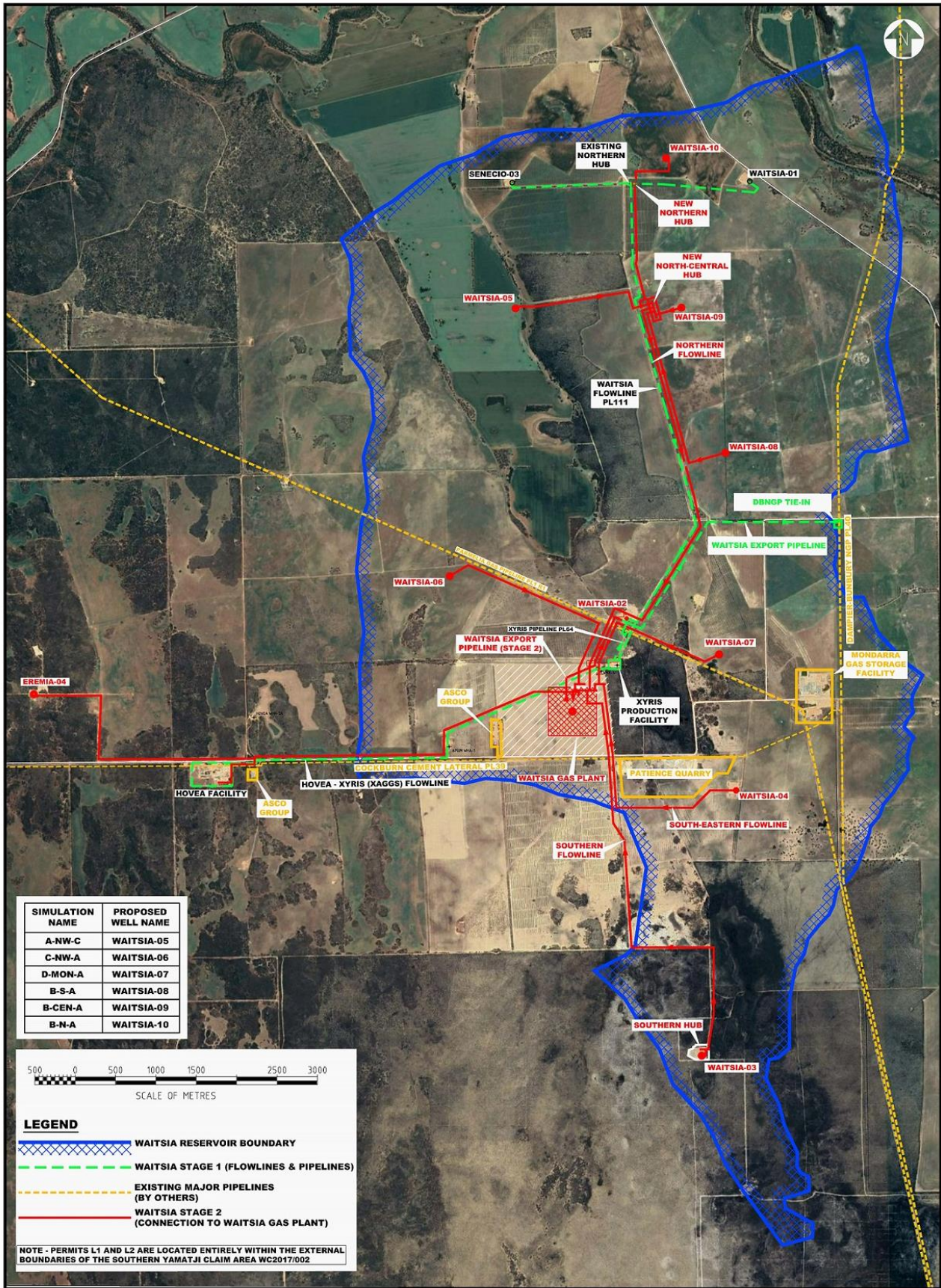


Figure 1-2 Key Proposal Components

1.3 Key Environmental Factors and Impacts

The key environmental factors relevant to the Proposal are outlined in Table 1-1 and are based upon the assessment provided in the EPA Referral Report.

Table 1-1: Key Environmental Factors and Impacts

Key Factor	Environmental Values	Key Potential Impacts	Predicted Outcome
Flora and Vegetation	<ul style="list-style-type: none"> No conservation significant species or communities are present. 15 priority taxa known to be present within the region. Five priority taxa are known to be present within the clearing envelope. Four introduced flora taxa are known to be present within the Proposal Area No known dieback presence in the Proposal Area 	<ul style="list-style-type: none"> Direct loss of vegetation and flora Introduction or spread of non-indigenous species (weed / pathogens), and Accidental clearing of areas outside of the Proposal Development Envelope. 	<ul style="list-style-type: none"> Clearing 17 ha of native vegetation comprising: <ul style="list-style-type: none"> ~3 ha in good condition ~14 ha of remnant degraded vegetation in poor condition Clearing of priority listed taxa that is known to have a widespread distribution
Terrestrial Environmental Quality	<ul style="list-style-type: none"> Site surveys indicate soil is comprised of yellow quartz sand 	<ul style="list-style-type: none"> Erosion or scouring from reduction in soil stability during civil works, Impairment of soil drainage due to construction of engineered hardstands, and Contamination of soils due to spill events 	<ul style="list-style-type: none"> No impacts to terrestrial environmental quality arising from construction or operation activities.
Terrestrial Fauna	<ul style="list-style-type: none"> A single conservation significant species identified as being present within the Proposal area - Carnaby's Black Cockatoo (<i>Calyptorhynchus latirostris</i>) No breeding or roosting habitat present for this species 	<ul style="list-style-type: none"> Death or displacement of native fauna species Habitat fragmentation 	<ul style="list-style-type: none"> No impacts to Carnaby's Cockatoo breeding / roosting habitat, Clearing of 3 ha of native vegetation in good condition that is suitable habitat to support Carnaby Cockatoo foraging Clearing of 17 ha of vegetation (in varying

Key Factor	Environmental Values	Key Potential Impacts	Predicted Outcome
	<ul style="list-style-type: none"> Foraging habitat for this species present within the proposal area 		<p>condition) that may result in fauna strike</p> <ul style="list-style-type: none"> Temporary localised disturbance to local fauna populations arising from dust, light and noise generation during the construction phase.
Inland Waters	<ul style="list-style-type: none"> The closest surface water body is Ejaro Spring, located approximately 600 m to the east of the Proposal Area. Available data indicates that the groundwater levels in the region vary from 75 m Australian Height Datum (m AHD) to 15 m AHD 	<ul style="list-style-type: none"> Contamination of groundwater 	<ul style="list-style-type: none"> No impacts to useable groundwater No impacts to PDWSA's No impacts to Ejaro Springs
Air Quality	<ul style="list-style-type: none"> Closest sensitive receptor is 2.5 km away 	<ul style="list-style-type: none"> Reduction in air quality Generation of greenhouse gases 	<ul style="list-style-type: none"> No impacts to sensitive receptors Compliance with air quality NEPM targets Generation of greenhouse gas emissions that will represent an increase in the States emissions by 0.3%.
Social Surroundings	<ul style="list-style-type: none"> No world, Commonwealth or European heritage sites within the Proposal Area Two Aboriginal heritage sites are located within the Proposal area Closest residential building is 2.5 km away 	<ul style="list-style-type: none"> Reduction in visual amenity, Increased noise emissions, Impacts to heritage artefacts and sites, Increased traffic, and Social and Economic Impacts. 	<ul style="list-style-type: none"> Visual amenity: A change to the rural landscape that is noticeable but not intrusive. No noise emissions to sensitive receptors above 35 dB(A) Increase in traffic congestion during construction (estimated on average to equate to an additional 1.5 trips per hour).

Key Factor	Environmental Values	Key Potential Impacts	Predicted Outcome
			<ul style="list-style-type: none"> No impacts to heritage artefacts / local cultural heritage sites

1.4 Condition Requirements

As stated in Section 1.1, this EMP has been prepared for submission with the referral documents to EPA and DoEE. As yet no determination has been made by the EPA or DoEE regarding the decision to assess the Proposal or not. However, MEPAU believes that based upon the assessment of environmental impacts provided within the referral document, the Proposal will not result in a significant impact to the environment.

1.5 Rationale and Approach

1.5.1 Studies and Surveys

Table 1-2 summarises the relevant key studies and surveys available to the Proposal for each key environmental factor.

Table 1-2: Key Previous Studies and Surveys

Studies/Surveys	Key Findings
Flora and Vegetation	
<ul style="list-style-type: none"> • <i>Waitsia-04² Area Level 1 Flora and Vegetation Reconnaissance and Targeted Flora Survey</i> (Maia Environmental Consultancy, 2016) • <i>Waitsia-03 – Flowline Corridor - Flora, Vegetation and Fauna Assessment including a Level 2 Flora and Vegetation assessment along the proposed flowline route and wider area</i> (Woodman Environmental Pty Ltd, 2018) • <i>Waitsia Gas Project Stage 2 - Xyris West Remnant Vegetation</i> (Woodman Environmental, 2019) • <i>Xyris Lateral Flora and Vegetation Assessment</i> (Woodman Environmental Pty Ltd, 2018) 	<ul style="list-style-type: none"> • There are six Vegetation and Substrate Associations (VSAs) across the Waitsia area: Agricultural land, Kwongan to open banksia woodland on sand, Riparian shrub-thicket and woodland on dark peaty-sand (including wetlands such as Ejarno Spring), Eucalypt/banksia/acacia low forest on sand, York Gum Woodland on red sandy loam and Irwin River Red Gum Woodland • No riparian vegetation, declared rare flora, threatened ecological communities or priority ecological communities, as listed under the <i>Wildlife Conservation Act</i> (WC Act) or EPBC Act, have been recorded within the proposed development envelope or the abutting area • No threatened flora taxa, listed under the WC Act or the EPBC Act, are known to occur within or near the Proposal Site • Five flora taxa listed as priority flora by the Department of Biodiversity, Conservation and Attractions (DBCA) are known to have occurred within the proposed clearing area. All five taxa are known to occur outside the clearing area across relatively large ranges • Key threatening processes to fauna include degradation of habitat due to weed invasion; mortality from operations; increased interactions from feral and native species; and disturbance from dust, light and noise
Terrestrial Environmental Quality	
<ul style="list-style-type: none"> • Blacktop Consulting Engineers (Blacktop, 2017). Geotechnical and soils assessment of the site (Blacktop Consulting Engineers, 2017) 	<ul style="list-style-type: none"> • Within the Geraldton Sandplains IBRA Bioregion within the Geraldton Sandplains 3 (Lesueur Sandplain) subregion • Test pit sites found to comprise deposits of yellow quartz sand and overlying soft limestone strata at 4 m depth at two sites • Material will provide as very suitable foundation material, if soils are well compacted following the removal of topsoil organics and are protected from excessive stormwater ingress to prevent them from becoming soaked • The area is not considered to present an ASS risk • The soils at the site are susceptible to scouring from medium to high velocity overland water flow or strong winds • Drainage capacity of the Site is high due to the dominance of sands
Terrestrial Fauna	

² Note that the report title refers to initial well location name. Well location name was changed from Waitsia-04 to Waitsia-03 following the survey.

Studies/Surveys	Key Findings
<ul style="list-style-type: none"> • <i>Survey for the Western Ground Parrot <i>Pezoporus flaviventris</i> within the Dongara Site and Beekeepers Nature Reserve (Unpublished report to Tronox JV)</i> (Bamford Consulting Ecologists, 2012) • <i>Waitsia Wells, Dongara – Fauna Assessment</i> (Bamford, M.J., Everard, C. and Chuk, K., 2015) • <i>AWE Waitsia-03; Significance of site for Black Cockatoos</i> (Bamford, M.J., 2016) • <i>Fauna Assessment of Waitsia-03 access track and pipeline with regarding to clearing principles detailed in schedule 5, (WA) Environmental Protection Act 1986</i> (Bamford Consulting Ecologists, 2018) • <i>Waitsia-03 – Flowline Corridor - Flora, Vegetation and Fauna Assessment</i> (Woodman Environmental Pty Ltd, 2018) • Bamford Consulting Ecologists, (2019). Fauna Assessment for Additional Clearing in the Waitsia Project Area. 	<ul style="list-style-type: none"> • The fauna assemblage of the area is considered intact and relatively diverse, representative of the general region • Medium-sized mammal fauna and minor components of other fauna groups are lacking • Bamford 2016 identified mixed banksia shrubland as potential foraging habitat for the Carnaby’s Black Cockatoo (listed as Endangered under the EPBC Act) • Bamford Consulting Ecologists 2018 identified: <ul style="list-style-type: none"> ○ The banksia shrubland within the study area was dominated by <i>Banksia attenuata</i> with variable densities of <i>Banksia elegans</i> and a thicket of <i>Banksia prionotes</i> ○ Most of the banksias had very few cones (food source) ○ No suitable breeding or roosting area was identified within the surveyed areas • There are no known populations of subterranean fauna in the area • No impacts on migratory species or breeding/nesting activity of migratory species are envisaged to occur
Inland Waters	
<ul style="list-style-type: none"> • <i>Groundwater Monitoring Event Report for AWE Ltd Irwin-01 Location</i> (GEMEC Pty Ltd, 2017) • <i>Groundwater Monitoring Event Report for AWE Ltd Waitsia-02 Location</i> (GEMEC Pty Ltd, 2017) • <i>Annual Water Monitoring Report July 2017 to June 2018</i> (AWE, 2018) • <i>Annual Water Monitoring Report July 2018 to June 2019</i> (AWE, 2019) 	<ul style="list-style-type: none"> • Standing Water Levels (SWL) for groundwater in the region vary from 75 m Australian height datum (m AHD) to 15 m AHD and the hydraulic gradient is towards the south west • Salinity in the Yarragadee aquifer is typically fresh to marginal near the surface and increases to brackish with depth • The Ejaro Spring area is underlain by the Guildford Formation suggesting that the spring discharges into a groundwater system that may be perched and is unlikely to be significantly impacted by small changes in groundwater level in the Yarragadee aquifer • Based on the data gathered to-date (since February 2009), it is concluded that no recent significant groundwater impacts have occurred as a result of operations at the DPF • PFW from DPF has generally been found to contain elevated concentrations of several analytes that exceed screening levels including: benzene, toluene, ethylbenzene, xylenes and naphthalene (BTEXN) and TRH C6-C40 fractions; several metals

Studies/Surveys	Key Findings
	<p>including aluminium, arsenic, boron, hexavalent chromium, copper, iron, manganese, molybdenum and zinc; and total Kjeldahl nitrogen (TKN), ammonia, phosphorus and phosphate. The wastewater is considered to range from brackish to saline based on its TDS values, and has generally been reported as slightly acidic</p>
Air Quality	
<ul style="list-style-type: none"> • <i>Xyris Production Facility Air Dispersion Modelling</i> (Ramboll, 2019) • <i>Waitsia Gas Project – Stage 2 – Air Dispersion Modelling</i> (Ramboll, 2019) 	<ul style="list-style-type: none"> • There is no indicative background monitoring that has been conducted in the region • Air dispersion modelling was undertaken to assess the potential air quality impacts of atmospheric emissions from the proposed Waitsia Stage 1 expansion of the XPF and concluded: <ul style="list-style-type: none"> ○ The annual average background concentrations of PM_{2.5} were already in exceedance of the guideline (obtained from Caversham monitoring station) however, given the rural nature and lack of industry in the region it is highly likely that the actual background concentrations are significantly below the monitored concentrations at Caversham ○ The annual average concentrations of PM_{2.5} from XPF and other existing sources predicted without consideration of background concentrations are only 1% of the guideline ○ Ground level concentrations (GLCs) for most compounds in isolation and cumulatively are well below the corresponding ambient air quality and workplace exposure standard criteria at the nominated receptor locations (with the exception of the scenarios that consider annual average background concentrations of PM_{2.5}) ○ When considered without potential background concentrations of pollutants, short term impacts from NO₂ were predicted to be the main pollutant of concern from the XPF and MGSF, although predicted concentrations were still well below the nominated guideline ○ Whilst emissions from the SNC have not yet been assessed, given the magnitude of emissions will be similar or less than those modelled as part of the Clough design, it is likely that predicted concentrations will be below the relevant guidelines at the nominated receptor locations • The modelling assessed several scenarios including normal operations in isolation and cumulatively with other sources in the region as well as a cumulative scenario including peak flow to the flare • The maximum operational greenhouse gas emissions from the Plant is approximately 300,000 tonnes Co₂-e per year (~0.03% of the State’s greenhouse gas emissions based on the 2013-2014

Studies/Surveys	Key Findings
	figure of 83.4 Mt). This is not a significant contribution to the State's greenhouse gas emissions total
Social Surroundings	
Aboriginal Heritage	
<ul style="list-style-type: none"> • <i>Aboriginal Heritage Survey of the Waitsia Site</i> (R and E O'Connor Pty Ltd, 2015) • <i>Report on an Archaeological Survey of AWE Waitsia Proposal</i> (John Cecchi Heritage Management Consultancy (JCHMC), 2015) • <i>Report on an archaeological assessment at the Waitsia 03 Site for AWE Limited</i> (Terra Rosa Consulting, 2017) 	<ul style="list-style-type: none"> • Two Registered Sites are located within the general district where the Proposal will be developed: DAA Site ID 5482 'Jenkins Hut Valley' and DAA Site ID 18907 'Irwin River SC04' • A recommendation common to all the background reports is that Aboriginal monitors be present on site when ground disturbance takes place in areas of remanent vegetation and in areas within 200 metres of major water sources in order to mitigate against the potential for artefacts and/ or skeletal material to be uncovered.
Noise	
<ul style="list-style-type: none"> • <i>Environmental Noise Assessment Waitsia 2 Gas Processing Facility</i> (Herring Storer Acoustics, 2019) 	<ul style="list-style-type: none"> • Assessable noise levels at the two receptors (to the south-west and east) will be below the assigned noise level of 35 dB(A) for the worst-case operating conditions for all noise sources operating at the same time, which is unlikely. It is concluded that the project will comply with the requirements of the <i>Western Australian Environmental Protection (Noise) Regulations 1997</i> at all times

1.5.2 Key Assumptions and Uncertainties

The following key assumptions and uncertainties are relevant to this EMP:

- The Proposal activities are generally consistent with those described in *Waitsia Gas Project Stage 2 Environmental Referral Supporting Report* (MEPAU 2019) following approval;
- The Proposal is not expected to be a “Controlled Action” under the EPBC Act;
- This EMP has been prepared based on the current level of knowledge of the environmental impacts of the Proposal. Any additional assessments or discoveries related to the environmental impacts of the Proposal or changes in legislation, regulations or best practice guidelines may affect the information contained in this EMP; and
- This EMP provides an indication of the proposed provisions to manage the environmental impacts associated with the Proposal. The provisions described in this EMP will be further developed and refined during preparation of subsequent approval documentation including EP Act Part V works approval and license applications along with PGER(E)R Environment Plans.

1.5.3 Management Approach

The management approach in this EMP is conservative, with the view of managing impacts during full capacity. A hierarchical approach to manage the potential impacts from the Proposal has been applied as follows:

- Avoidance: measure taken to avoid impact
- Minimisation: measures taken to reduce the duration, intensity and/or extent of impact

1.5.4 Rationale for Choice of Provisions

MEPAU has conducted a comprehensive site selection process that has been implemented to select a location for the WGP and flowline alignments that minimise environmental and social impacts to the lowest practicable extent. The iterative process has ensured that the magnitude of the impact as evaluated in the EPA referral is conservative with impacts not expected to be any higher regardless of minor changes to the Proposal as further engineering and design activities are completed.

The WGP is located on agricultural land and the land use surrounding the area is not expected to change drastically limiting the potential for significant increases in sensitive social receptors over the life of the Proposal.

Given the nature of the PGER(E)R which require MEPAU to develop an Environment Plan for each phase of the activity, any new or increased impacts due to changing land use, updated scientific information or general changes over time will be subject to reassessment by DMIRS as EP’s need to be reassessed every 5 years.

2.0 OVERARCHING ENVIRONMENTAL MANAGEMENT

2.1 Existing Management Systems

MEPAU has a corporate Health Safety and Environment (HSE) Policy which applies to all MEPAU directors, employees, consultants, contractors and sub-contractors.

The principal beliefs of the HSE Policy are:

- All accidents are preventable;
- No task is so important that the risk of injury to people is justified; and
- The impact on the environment from our activities will be minimised.

The HSE Policy states that to achieve the objective of no harm to people and the long-term protection of the environment MEPAU will:

- *Actively promote sound HSE management and a culture in which all Employees and Contractors share the HSE commitment;*
- *Require Contractors to comply with MEPAU HSE expectations;*
- *Identify hazards and unsafe behaviours associated with MEPAU operations and take all steps to reduce these to as low as reasonably possible;*
- *Comply with relevant laws and regulatory requirements;*
- *Monitor and review systems, practices and behaviours to further improve the health and safety of both Employees and Contractors;*
- *Maintain a systematic approach to HSE management and set targets for improvement; and*
- *Provide training and resources for Employees to maintain a safe work environment.*

2.2 Roles and Responsibilities

The organisational structures which will apply to the Proposal during the Construction and Operational Phases are provided in Figure 2-1 and Figure 2-2 respectively.

WGP 2 Indicative Construction Team

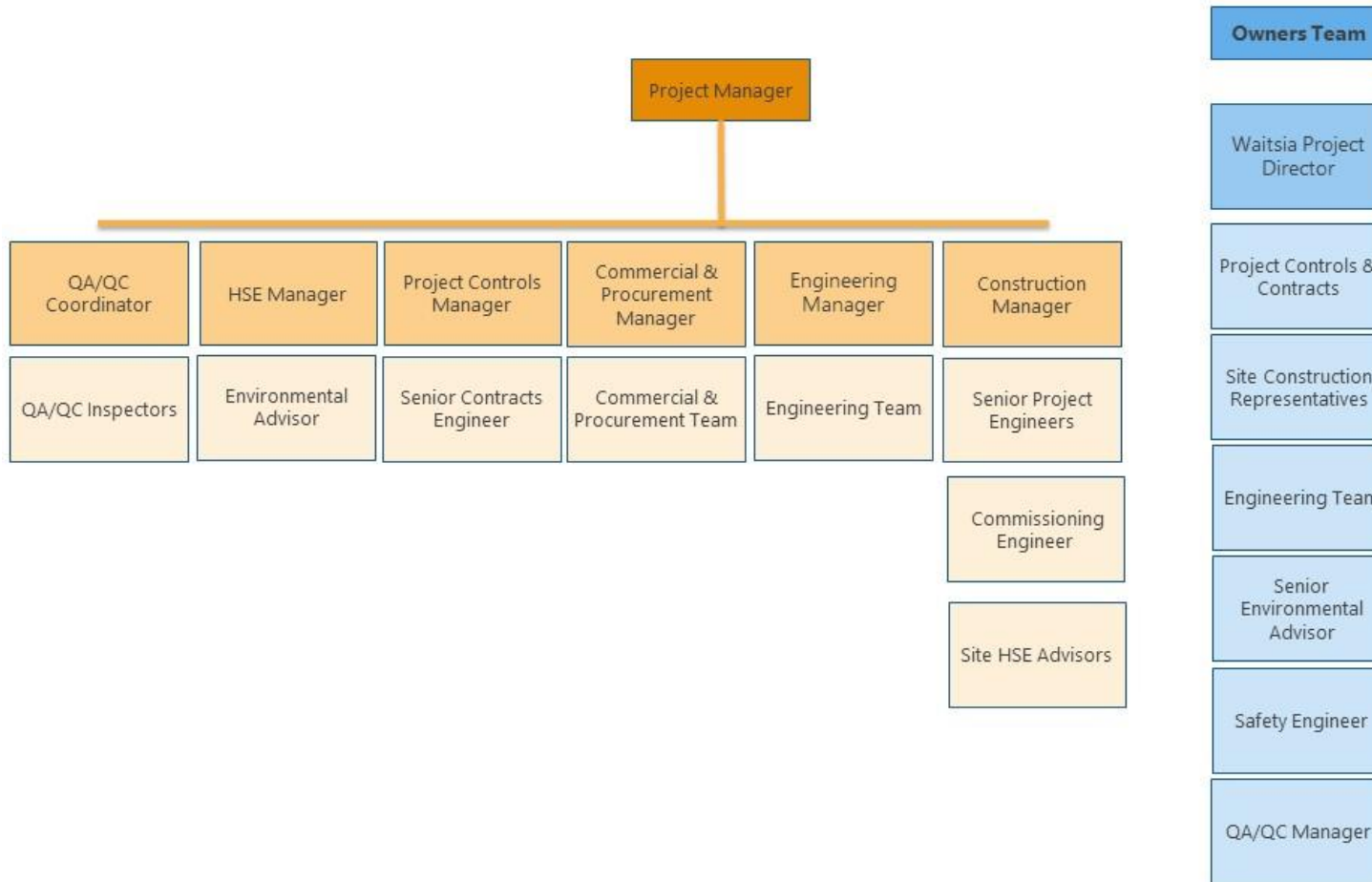


Figure 2-1: Indicative Construction Team

WGP 2 Indicative Operations Team

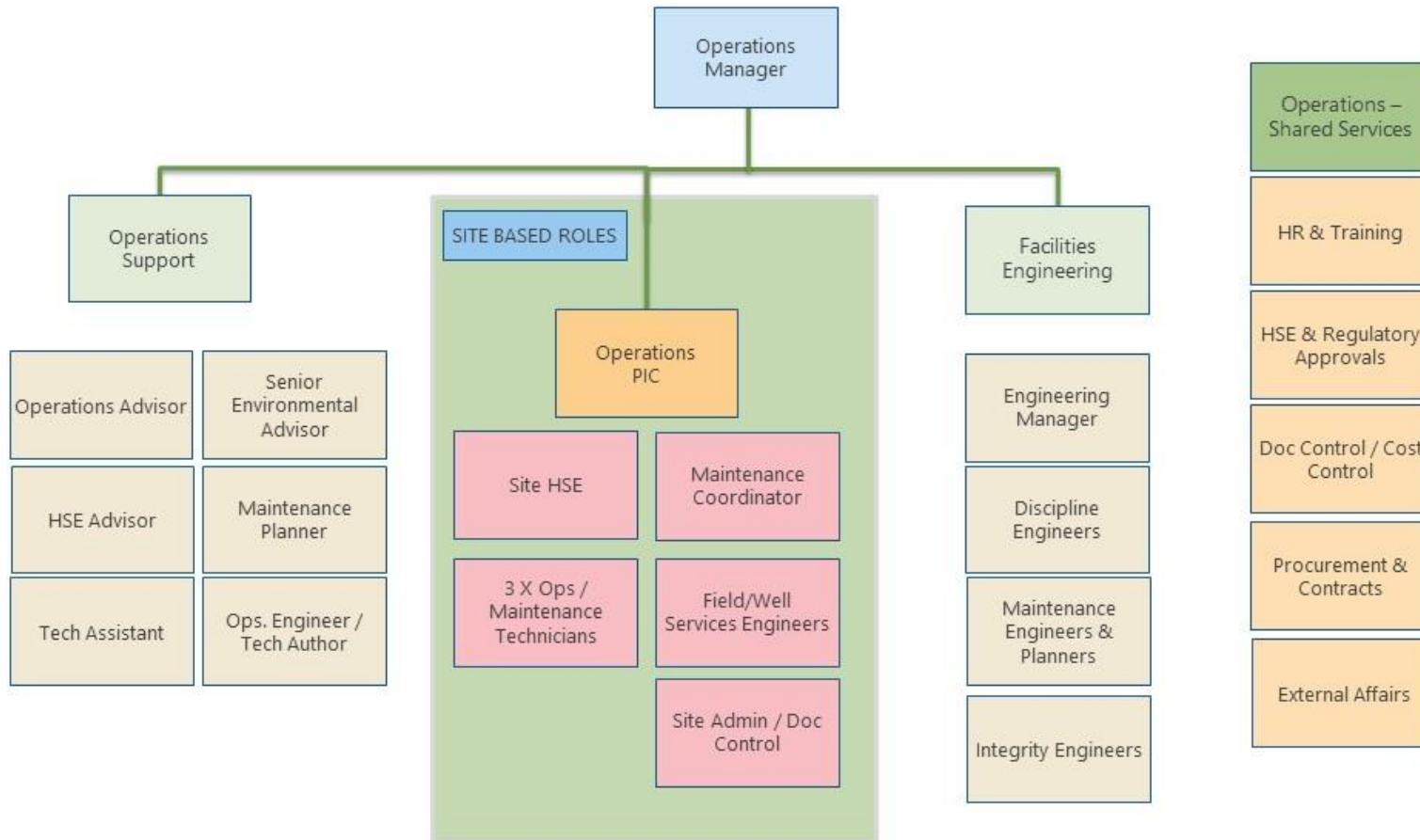


Figure 2-2: Indicative Operations Team

2.3 Key Regulatory Framework

Table 2-1 provides a summary of the various legislation and specific environmental approvals that are required to be in place for the Proposal.

Table 2-1 Key Regulatory Framework

Relevant Key Factor	Regulation	Specific Requirements
Flora and Vegetation	<ul style="list-style-type: none"> Part V of the Environmental Protection Act 1986 	<ul style="list-style-type: none"> Clearing Permit
Air Emissions Social surrounds	<ul style="list-style-type: none"> Part V of the Environmental Protection Act 1986 	<ul style="list-style-type: none"> Works Approval Licence
All Factors	<ul style="list-style-type: none"> Petroleum & Geothermal Energy Resources Act 1967 Petroleum & Geothermal Energy Resources (Management of Safety) Regulations 2010 	<ul style="list-style-type: none"> SMS / Safety Case(s)
All Factors	<ul style="list-style-type: none"> Petroleum and Geothermal Energy Resources Act 1967 Petroleum and Geothermal Energy Resources (Resource Management and Administration) Regulations 2015 	<ul style="list-style-type: none"> Well Management Plan Application to Drill
All Factors	<ul style="list-style-type: none"> Petroleum and Geothermal Energy Resources Act 1967 Petroleum Pipelines (Environment) Regulations 2012 	<ul style="list-style-type: none"> Environment(s) Oil Spill Contingency Plan(s)
All Factors	<ul style="list-style-type: none"> Petroleum and Geothermal Energy Resources Act 1967 Petroleum and Geothermal Energy Resources (Environment) Regulations 2012 	<ul style="list-style-type: none"> Environment Plan(s) Oil Spill Contingency Plan(s)

2.3.1 Communication

MEPAU will communicate and distribute environmental information to the workforce through methods that are expected to include:

- site inductions,
- toolbox meetings,
- training,
- pre-start meetings (Daily Shift Log),
- on-site notice boards,
- electronic media,
- environmental alerts and
- incident reporting and investigations.

MEPAU has engaged with government departments, local government and neighbouring industries during the design and planning stage for the Proposal and will continue this engagement process through the development and implementation of the Proposal.

2.3.2 Environmental Awareness and Training

MEPAU will ensure that all personnel, including subcontractors, are subjected to a site induction program that will include an environmental component. The site-specific induction is expected address:

- Requirements of relevant environmental management documentation;
- Significant environmental values to be protected;
- Control strategies for the management of environmental risk in day-to-day activities;
- Roles and responsibilities for implementing management, monitoring and reporting associated with the environment; and
- Applicable legislative responsibilities and requirements and the risks associated with noncompliance.

Additional training will be provided to personnel in specific roles that require specific skill sets or competencies. Records of training and inductions will be maintained by MEPAU.

2.3.3 Complaints Procedure

All environmental complaints will be recorded within by a complaints management system that will be developed and maintained by MEPAU. Complaints will be recorded by the person who receives the complaint (at the time it is received). Records to be obtained about a complaint include:

- Contact details for person making complaint;
- Approximate location that the issue was identified by complainant; and
- Date, time and issue/s that complaint relates to.

Information about how the local community can register a complaint or engage with MEPAU will be provided via appropriate methods to ensure that the community is aware of how to make a complaint.

2.3.4 Environmental Incidents and Non-compliances

All environmental incidents and 'near misses' will be recorded within an Incident Management System that will be developed and maintained by MEPAU following the requirements detailed in MEPAU, *Perth Basin Operations, Incident Reporting and Investigation Procedure*, PB-HSEPRO-006. Incidents will be recorded by the person who causes or identifies the incident.

Incident reporting and investigations will be carried out and root causes determined. Corrective actions will be implemented to address the root causes and to prevent recurrence. Where applicable, environmental incidents will be reported to the relevant government agency.

The following process will be implemented when a non-compliance occurs:

- Investigate cause and raise an incident report;
- Implement contingency actions which may include:
 - Eliminate the cause of the incident;
 - Review management provisions and the EMP;
 - Improve training and education for all personnel; and/or
 - Improve and implement increased protective measures as necessary;
- Monitor outcomes.

2.3.5 Emergency Response

MEPAU will prepare a Proposal-specific Emergency Response Plan. This Plan will detail how emergencies are responded to within the Site and outline any requirements for onsite Fire/Emergency Wardens and First Aid Officers.

All site personnel will receive the relevant level of training and participate in training drills to ensure familiarity with the Emergency Response Plan in the case of emergency situations.

The ERP will also identify the location and required level of emergency response equipment to be available (e.g. fire extinguishers, fire blankets, first aid kits etc.).

2.3.6 Reporting

MEPAU will undertake reporting in accordance with regulatory and legislative requirements. It is expected that the WGP will be required to operate in accordance with a Part V EP Act licence and the WGP and gathering system will be required to operate in accordance with a PGER(E) R Environment Plan which will require:

- Environmental and compliance performance to be reported to DWER and DMIRS annually, and
- Environmental incidents to be reported to DWER and DMIRS within various timeframes.

3.0 ENVIRONMENTAL MANAGEMENT PLAN APPROACH

As this activity is subject to further environmental approvals under other legislation, the majority of activity specific management actions will be identified and detailed in other documents for assessment and approval by either DWER or DMIRS. However, Table 3-1 to Table 3-6 section provides an indication as to the management approach that will be documented within subsequent approvals. Specifically, the following tables provide:

- A description of the key impacts and risks associated with each of the environmental factors relevant to the Proposal;
- A description of the key management outcomes or objectives and targets for each impact area; and
- An indication of the proposed environmental management plan actions associated with each potential impact/risk.

Table 3-1 Environmental management approach for flora and vegetation

EPA Objective		<i>To protect flora and vegetation so that biological diversity and ecological integrity are maintained.</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
Direct loss of vegetation and flora	Prevent impacts to conservation significant flora	Construction	MEPAU will undertake targeted flora surveys in General Vegetation areas to ensure no significant flora species will be impacted by construction	Compliance with outcomes of the EPA referral which states no significant impacts to flora and vegetation are expected.	None identified	None identified
<ul style="list-style-type: none"> Direct loss of vegetation and flora Accidental clearing of areas outside of the Proposal Development Envelope. 	Prevent clearing of vegetation and flora outside of required clearing areas	Construction	MEPAU will: <ul style="list-style-type: none"> Gain approval from DWER to clear vegetation under Part V of the EP Act Prepare a clearing protocol prior to commencement of construction Delineate the approved clearing area prior to commencement of clearing activities Make all construction personnel aware of the clearing area boundaries through the induction/ training process 	Compliance with pre-defined clearing limits and boundaries described within the Referral Document.	<ul style="list-style-type: none"> Verification prior to clearing activities that clearing limits are clearly defined Verification following clearing activities that no clearing outside of this area has occurred 	<ul style="list-style-type: none"> Any clearing undertaken outside of the clearing area will be reported as required by the EP Act Part V and PGER(E) R requirements in accordance with MEPAU's incident management procedure. Part V clearing permit annual compliance report

EPA Objective		<i>To protect flora and vegetation so that biological diversity and ecological integrity are maintained.</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
Introduction or spread of non-indigenous species (weed / pathogens)	Prevent introduction of new and/or spread of weeds into adjacent areas of previously uncleared or unimpacted native vegetation during	Construction and Operations	MEPAU will: <ul style="list-style-type: none"> • Develop a weed management protocol prior to commencement of construction • Make all personnel aware of weed management practices through the induction/training process • Implement the weed management protocol • Native seeds will be used in revegetation activities 	<ul style="list-style-type: none"> • No new declared weeds introduced into or adjacent to the Proposal area attributable to the Proposal • No new dieback infestations introduced into or adjacent to the Proposal area attributable to the Proposal 	<ul style="list-style-type: none"> • Verification that construction fill brought to site has low risk of containing weeds or pathogens • Verifications that construction vehicles comply with weed management protocol 	PGER(E) R Annual Environmental Performance Report

Table 3-2: Environmental management approach for Terrestrial Environmental Quality

EPA Objective		<i>To maintain the quality of land and soils so that environmental values are protected.</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
<ul style="list-style-type: none"> Erosion or scouring from reduction in soil stability during civil works Impairment of soil drainage due to construction of engineered hardstands 	Minimise impacts to terrestrial environmental quality arising from construction or operation activities.	Construction	MEPAU will: <ul style="list-style-type: none"> Monitor the Proposal area during construction and where erosion or scouring is evident that is attributable to the Proposal – stabilisation techniques will be applied Design surface drainage to avoid water ponding associated with impairment of soil drainage 	Erosion and drainage consistent with surrounding environment within two years post construction	Regular inspection of construction sites to identify areas of erosion, scouring or drainage impairment	PGER(E) R Annual Environmental Performance Report
Contamination of soils due to spill events	Prevent contamination to the surrounding environment from the release of hazardous materials / waste	Construction and Operations	MEPAU will: <ul style="list-style-type: none"> Develop an Environment Plan for acceptance by DMIRS (under the PGER(E)R) prior to construction activities commencing that describe spill prevention. Develop an oil spill contingency plan for acceptance by DMIRS 	<ul style="list-style-type: none"> No significant spill events attributable to the Proposal Hydrocarbons and chemicals are stored and handled in accordance with the Australian standards and other legislative requirements. 	<ul style="list-style-type: none"> Regular site inspections verify hydrocarbons and chemicals are stored and handled in accordance with the Australian standards and other legislative requirements Regular site inspections verify 	<ul style="list-style-type: none"> PGER(E) R Annual Environmental Performance Report PGER(E)R Monthly recordable report PGER(E)R Reportable incident reports

Waitsia Gas Project Stage 2 - Environmental Management Plan

EPA Objective		<i>To maintain the quality of land and soils so that environmental values are protected.</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			<p>(under the PGER(E)R) prior to construction activities commencing that describes the process for managing spill events.</p> <ul style="list-style-type: none"> • Hydrocarbons, chemicals and other hazardous substances will be stored in accordance with relevant Australian Standards and a DMIRS accepted Environment Plan • Controlled wastes will be stored and transported off-site by licenced controlled waste contractors • Record all spill events 		no unrecorded spill events have occurred	

Table 3-3: Environmental management approach for Terrestrial Fauna

EPA Objective		<i>To protect terrestrial fauna so that biological diversity and ecological integrity are maintained</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
Death or displacement of native fauna species	Minimise impacts to terrestrial fauna arising from construction or operation activities.	Construction (General and Clearing)	<p>MEPAU will:</p> <ul style="list-style-type: none"> • Use authorised personnel to remove and relocate conservation significant fauna present in the clearing area prior to clearing • Where possible, schedule staged clearing outside of the breeding period for Carnaby's Cockatoo • Not unnecessarily remove dead standing or fallen timber, and logs and other debris (except for weeds) resulting from land clearing will be placed in nearby vegetated areas to enhance the surrounding fauna habitat • Make all personnel aware of potential impacts to native fauna and advise that works are to stop immediately 	No incidents of terrestrial fauna injury or death within the Site during construction or operations	Inspection of vegetation prior to clearing to identify presence of conservation significant fauna prior to clearing.	<ul style="list-style-type: none"> • PGER(E) R Annual Environmental Performance Report • PGER(E)R Monthly recordable report

EPA Objective		<i>To protect terrestrial fauna so that biological diversity and ecological integrity are maintained</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			within the vicinity of any injured or shocked native fauna that are encountered <ul style="list-style-type: none"> Speed limits to be adhered to at all times (60km/h on designated access tracks, 30 km/h on construction tracks) 			
		Construction (flowline / pipeline trenching)	MEPAU will: <ul style="list-style-type: none"> Make all personnel aware of potential impacts to native fauna and advise that works are to stop immediately within the vicinity of any injured or shocked native fauna that are encountered Inspect open trenches for the presence of trapped fauna and remove / relocate trapped fauna by appropriately trained personnel. Construct open excavations / trenches with a permanent means 		Regular inspection of open trenches in accordance with the PGER(E)R DMIRS accepted EP	

EPA Objective		<i>To protect terrestrial fauna so that biological diversity and ecological integrity are maintained</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			of fauna egress (e.g. ramps) and refuges (shelter) at regular intervals commensurate to the level of risk			
Habitat Fragmentation	Minimise impacts to terrestrial fauna arising from construction or operation activities	Construction and Operations	MEPAU will: <ul style="list-style-type: none"> • Bury flowline/ pipelines to ensure they do not form a barrier to fauna movements • Commence rehabilitation following trenching topsoil replacement to minimise habitat fragmentation to as low as reasonably practicable. 		<ul style="list-style-type: none"> • Annual rehabilitation vegetation inspections 	<ul style="list-style-type: none"> • PGER(E) R Annual Environmental Performance Report • PGER(E)R Monthly recordable report • PGER(E)R Reportable incident reports • Part V Annual Vegetation Inspection and Rehabilitation Report

Table 3-4: Environmental management approach for Inland Waters

EPA Objective		<i>To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
Contamination of groundwater	Prevent contamination of groundwater	Construction (Drilling)	<p>MEPAU will:</p> <ul style="list-style-type: none"> Develop an Environment Plan for acceptance by DMIRS (under the PGER(E)R) prior to well construction that describe drilling fluid management and management strategies for preventing groundwater contamination. Hydrocarbons, chemicals and other hazardous substances will be stored in accordance with relevant Australian Standards and a DMIRS accepted Environment Plan Develop a water quality monitoring program in consultation with DWER to manage potential impacts to groundwater well construction. 	<p>Groundwater quality is maintained to existing conditions</p> <p>No significant spill events attributable to the Proposal</p> <p>Hydrocarbons and chemicals are stored and handled in accordance with the Australian standards and other legislative requirements.</p>	<p>Water quality monitoring will be undertaken in accordance with a DMIRS accepted EP. Specifically, the monitoring will require baseline information to be provided prior to the activity and sampling post activity.</p> <p>Water quality monitoring will be undertaken in accordance with the ANZECC guidelines and the relevant Australian Standards</p>	<ul style="list-style-type: none"> PGER(E) R Annual Environmental Performance Report PGER(E)R Monthly recordable report PGER(E)R Reportable incident reports

EPA Objective		<i>To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			<ul style="list-style-type: none"> Record all spill events 			
Contamination of groundwater	Prevent contamination of groundwater	Operations	<p>MEPAU will:</p> <ul style="list-style-type: none"> Develop an Environment Plan for acceptance by DMIRS (under the PGER(E)R) prior to operations that describe storage and management of PFW to prevent groundwater contamination. Hydrocarbons, chemicals and other hazardous substances will be stored in accordance with relevant Australian Standards and a DMIRS accepted Environment Plan Licence the WGP as a prescribed premise (under Part V of the EP Act) that details water quality monitoring requirements Develop a water quality monitoring program in 	<p>Groundwater quality is maintained to existing conditions</p> <p>No significant spill events attributable to the Proposal</p> <p>Hydrocarbons and chemicals are stored and handled in accordance with the Australian standards and other legislative requirements.</p>	Water quality monitoring will be undertaken in accordance with a DMIRS accepted EP and DWER Part V Licence.	<ul style="list-style-type: none"> PGER(E) R Annual Environmental Performance Report PGER(E)R Monthly recordable report PGER(E)R Reportable incident reports Part V Annual Audit Compliance Report

EPA Objective		<i>To maintain the hydrological regimes and quality of groundwater and surface water so that environmental values are protected</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			consultation with DWER to manage potential impacts to groundwater well construction. <ul style="list-style-type: none"> Record all spill events 			

Table 3-5: Environmental management approach for Air Quality

EPA Objective		<i>To maintain air quality and minimise emissions so that environmental values are protected</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
Reduction in air quality	Minimise impacts arising from generation of fugitive dust emissions during construction activities	Construction	MEPAU will: <ul style="list-style-type: none"> Utilise dust suppression methods such as water misting where dust generation is observed to be excessive or have the potential to result in impacts to sensitive receptors Disturbed areas will be stabilised and vegetated as soon as practicable following clearing activities. Maintain a complaints management system / procedure 	No complaints received from stakeholders regarding dust generation attributable to the construction phase	N/a	<ul style="list-style-type: none"> PGER(E) R Annual Environmental Performance Report Part V Annual Audit Compliance Report
	Ensure impacts to air quality are reduced to as low as reasonably practical	Operations	MEPAU will: <ul style="list-style-type: none"> Install standard leak detectors for hazardous area installation at the WGP 	Atmospheric emissions comply with regulatory limits	Baseline monitoring of PM2.5, PM10, NOx, NO2 and Ozone emissions to determine background air quality levels Stack emissions monitoring in accordance	<ul style="list-style-type: none"> Part V Annual Audit Compliance Report

EPA Objective		<i>To maintain air quality and minimise emissions so that environmental values are protected</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			<ul style="list-style-type: none"> Repair detected leaks as a high priority Use an incinerator to remove acid gases from the condensate. A flare system with an elevated high-pressure flare will be installed for the safe disposal of large relief gases and plant blowdown Record volumes of greenhouse gas emissions generated 		with EP Act Part V Licence	
Generation of greenhouse gases (GHG)	Minimise greenhouse gas emissions	Operations			Stack emissions monitoring in accordance with EP Act Part V Licence GHG Monitoring as per the requirements of NGER Act.	National Greenhouse and Energy Register Report

Table 3-6: Environmental management approach for Social Surroundings

EPA Objective		<i>To protect social surroundings from significant harm.</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
Reduction in visual amenity	Minimise visual impacts to the local community	Construction and Operations	MEPAU will: <ul style="list-style-type: none"> Design lighting for the Plant to be unobtrusive to the sensitive receptors nearby (i.e. downward facing) Treat exposed surfaces to minimise reflective materials 	No complaints received from stakeholders regarding reduction in visual amenity	N/a	PGER(E) R Annual Environmental Performance Report
Increased noise emissions	Ensure noise emissions comply with the <i>Environmental Protection (Noise) Regulations 1997</i>	Construction and Operations	MEPAU will: <ul style="list-style-type: none"> A community complaints procedure will be implemented for the life of the Proposal and the community will be notified of how to make a complaint 	No complaints received from stakeholders regarding noise emissions generated from the Proposal Noise emissions comply with regulatory limits	Noise monitoring may be undertaken if complaints are received to verify noise emissions associated with.	PGER(E) R Annual Environmental Performance Report
Impacts to heritage artefacts and sites	Ensure activities comply with the requirements of the <i>Aboriginal Heritage Act 1972</i>	Construction	MEPAU will: <ul style="list-style-type: none"> Develop and implement a ground disturbance / unexpected finds heritage protocol to direction actions in the unlikely event a heritage artefact 	No disturbance to heritage artefacts or culturally significant sites	Aboriginal representatives will monitor ground disturbance activities within bush land areas and within 200m of major water sources	PGER(E) R Annual Environmental Performance Report

EPA Objective		<i>To protect social surroundings from significant harm.</i>				
Impact	Proposal Objective	Proposal Stage	Management Action	Management Targets	Monitoring	Reporting
			is uncovered during construction <ul style="list-style-type: none"> Ensure Aboriginal monitors are onsite during vegetation clearing activities 			
Increased traffic	Minimise impacts to the local community from increased traffic movements during construction	Construction	MEPAU will: <ul style="list-style-type: none"> Develop and implement a traffic management plan during the construction phase of the Proposal 	No complaints received from stakeholders regarding increased traffic congestions attributable to the Proposal	None identified	PGER(E) R Annual Environmental Performance Report

4.0 ADAPTIVE MANAGEMENT

4.1 Overview

The adaptive management approach aims to reduce impacts by embedding a cycle of monitoring, reporting and implementing change (where required). The adaptive management approach involves adjusting management and mitigation measures to meet the outcomes and objectives based on what is learned from the:

- Evaluation of monitoring data;
- Review of assumptions and uncertainties;
- Re-evaluation of Proposal-related risks;
- Increase understanding of the ecological regime; and
- External changes during the life of the Proposal.

4.2 Environmental Monitoring and Corrective Actions

The environmental monitoring associated with each Key Environmental Factor is generally described in Section 1.0. Where monitoring identifies a non-conformance with various environmental approvals, then the incident will be reviewed, and corrective actions implemented. These corrective actions may include changes to equipment, processes or management measures if required. Any changes to will be updated in the relevant approval and will be communicated to site personnel.

4.3 Audits

To ensure the management measures are being adequately implemented and comply with relevant design and environmental standards, regular environmental audits will be undertaken in accordance with MEPAU, *Perth Basin Operations*, *HSE Audit Procedure*, PB-HSE-PRO-007.

As previously described this activity is subject to further environmental approvals under other legislation. The majority of activity specific management actions will be identified and detailed in other documents for assessment and approval by either DWER or DMIRS.

Consequently, auditing of relevant management actions will be undertaken in accordance with the relevant regulatory document. Results of audits including identification of nonconformances, corrective actions and how they were addressed are provided in annual Environmental Performance Reports to DMIRS and DWER.

4.4 EMP Review

As previously described this activity is subject to further environmental approvals under other legislation, and the majority of activity specific management actions will be identified and detailed in other documents for assessment and approval by either DWER or DMIRS.

Should the EPA determine that the Proposal is not required to be assessed, this EMP will only be utilized to prepare other regulatory documentation such as Part V NVCPs, works approvals, licenses and PGER(E)R EP's.

5.0 STAKEHOLDER CONSULTATION

5.1 Stakeholder Management

MEPAU has a comprehensive and well-considered stakeholder engagement plan in place for its operations in the northern Perth Basin. In accordance with this plan, MEPAU has continually engaged with key stakeholders since the initial planning phase for the drilling of Senecio-03, the Waitsia gas field discovery well, and throughout the drilling of subsequent appraisal wells (Waitsia-01, 02, 03 and 04) as well as the Waitsia Stage 1 development and the Proposal planning phase.

5.2 Key Stakeholder Groups

The key stakeholder groups identified for the Proposal include:

- Landowners (directly affected and adjacent)
- Operators (APA, Australian Gas Infrastructure Group, Patience Bulk Haulage)
- Government agencies (DMIRS, DWER, Department of Planning Lands and Heritage (DPLH), Department of Biodiversity, Conservation and Attractions (DBCA), EPA, Mid-West Development Commission)
- Joint Venture Partners (Beach Energy, Norwest Energy)
- Local business owners and service providers
- Membership organisations
 - Mid-West Chamber of Commerce and Industry
 - Australian Petroleum Production and Exploration Association
- Residents and other stakeholders
- Local shires (Irwin, Coorow, Carnamah and Geraldton)

5.3 Summary of Consultation Undertaken During Preparation of the EMP

As the majority of activity specific management actions will be identified and detailed in other documents for assessment and approval by either DWER or DMIRS targeted Stakeholder engagement has not be completed during the development of the EMP. Stakeholders who have a particular interest in the environment within and surrounding the Proposal Area will be consulted during the development of these documents. These stakeholders include those listed in Section 5.2.

5.4 Proposed Ongoing Stakeholder Consultation

MEPAU will continue to maintain effective communication with local and regional stakeholders throughout the delivery of the Proposal including:

- Briefing of elected officials, regulators and Government agencies
- Ongoing updates on the Mid West stakeholder website communicating key Proposal details, including timing.
- Individual briefings for specific landowners and community groups
- An updated stakeholder survey for 2019
- Ongoing community information exchange and activity update events

6.0 REFERENCES

- AWE, 2018. Annual Water Monitoring Report July 2017 to June 2018
- AWE, 2019. *Annual Water Monitoring Report July 2018 to June 2019*
- Bamford Consulting Ecologists. 2012. *Survey for the Western Ground Parrot *Pezoporus flaviventris* within the Dongara Project Area and Beekeepers Nature Reserve (Unpublished report to Tronox JV).*
- Bamford Consulting Ecologists. 2015. *AWE Waitsia-03; Significance of site for Black Cockatoos (Unpublished report to AWE).*
- Bamford Consulting Ecologists. 2018. *Fauna Assessment of Waitsia-03 access track and pipeline with regarding to clearing principles detailed in schedule 5, (WA) Environmental Protection Act 1986*
- Blacktop. 2017. *Geotechnical and soils assessment of the site.* (Unpublished report to MEPAU).
- EPA, 2019. *Instructions on how to prepare Environmental Protection Act 1986 Part IV Environmental Management Plans*
- GEMEC. 2018. *Surface water and Groundwater Monitoring Event Report – Waitsia 02 Location and Ejarno Spring. (Unpublished report to MEPAU).*
- JCHMC. 2015. *Report on an Archaeological Survey of AWE Waitsia Project. March 2015.* (Unpublished report to AWE).
- John Cecchi Heritage Management Consultancy (See JCHMC)
- Maia Environmental Consultancy. 2016. *Waitsia-04 Area Level 1 Flora and Vegetation Reconnaissance and Targeted Flora Survey. (Unpublished report to AWE).*
- Ramboll, 2019. *Xyris Production Facility Air Dispersion Modelling*
- Ramboll, 2019. *Waitsia Gas Project – Stage 2 – Air Dispersion Modelling*
- R and E O'Connor Pty Ltd, 2015. *Aboriginal Heritage Survey of the Waitsia Project Area, March 2015.* (Unpublished report to AWE).
- Woodman Environmental Pty Ltd. 2018a. *Waitsia-03 – Flowline Corridor - Flora, Vegetation and Fauna Assessment*
- Woodman Environmental Pty Ltd. 2018b. *Xyris Lateral Flora and Vegetation Assessment*
- Woodman Environmental Pty Ltd. 2019. *Waitsia Gas Project Stage 2 – Xyris West Vegetation Desktop Review*