

# Attachment B: Environmental Constraints Planning and Field Development Protocol Petroleum Lease 94



**Westside Corporation Pty Ltd** 

DOCUMENT TYPE MANAGEMENT PLAN

**Environmental Constraints Planning** 

and Field Development Protocol

**Petroleum Lease 94** 

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# Definitions

Term	Definition			
Constraints planning	Process in which constraints are identified. Implemented for quality assurance			
process	purposes to ensure all relevant environmental constraints are considered as			
	early in the infrastructure siting process as possible			
Constraint Area	This Protocol defines limits on the disturbance of threatened flora and			
	fauna in Section 3.1 – 'maximum disturbance limits'.			
	A High Constraint Area is an area that has high value habitats and may			
	include MNES species that <b>do not have</b> a maximum disturbance limits. (In			
	practice this is because the habitat cannot be disturbed)			
	A Moderate Constraint Area is an area that has high value habitats and may			
	include MNES species that have a maximum disturbance limits (with the			
	exception of Koala and Squatter pigeon dispersal habitat).			
	A <b>Low Constraint Area</b> is land not already listed in the above categories (in			
	practice this would be because there is no threatened flora or fauna/habitat			
	thereof, in the area.)			
Constraints maps	Created and updated by the Technical Officer, the maps will assist in initial			
constraints maps	environmental desktop constraints analysis for proposed infrastructure			
	locations. Information includes (as required):			
	Aerial imagery;			
	Flood plains;			
	Elevation data (Lidar and/or contours);			
	Ecological and watercourse/wetland constraints;			
	Areas of Regional Planning interest (e.g. Strategic Cropping Land);			
	Existing infrastructure;			
	Native title;			
	Cultural heritage;			
	Sensitive receptors; and			
	Landholder status.			
Essential Petroleum	Activities including well pads, pipelines, access track to access pipelines and			
Activities	wellpads.			
Fauna spotter-catcher	A fauna spotter-catcher is a trained individual whose job it is to spot and			
	identify fauna, and if required catch fauna. They will often be contracted to			



	work alongside construction workers to ensure fauna is kept safe when habitat is being disturbed.			
Koala dispersal tree	Recognised as a plant of any genera that has a tree diameter that is equal to or greater than 10 cm when measured at 1.3 m above the ground (referred as >10 cm DBH) within areas of koala dispersal habitat.			
Linear infrastructure	Infrastructure including (but not limited to) gas and water gathering lines, low- and high-pressure gas and water pipelines, roads and tracks, power lines and other service lines.			
Low impact petroleum activity	Low impact petroleum activities means petroleum activities which do not result in the clearing of native vegetation, earthworks or excavation work that cause either, a significant disruption to the soil profile or permanent damage to vegetation that cannot be easily rehabilitated immediately after the activity is completed.  Examples of such activities include but are not necessarily limited to:  Chipholes  Coreholes  Geophysical surveys  Seismic surveys  Soil surveys  Cadastral surveys  Ecology surveys  Installation of environmental monitoring equipment (including surface			
Mistletoe	Perennial flowering plants, usually woody and shrubby or vine-like, which grow as parasites attached to the branches of trees and shrubs.			
MNES	Matter of National Environmental Significance under the <i>Environment Protection and Biodiversity Protection Act 1999</i> (Cth).  Does not include TECs or threatened species that become listed under the <i>Environment Protection and Biodiversity Protection Act 1999</i> after the date of the Minister's Controlled Action determination for the Project (i.e. 30 June 2022).			
MSES	Matter of State Environmental Significance under the <i>Environmental Offset Act 2014</i> (Qld).  Does not include species that become listed as threatened, near threatened or special least concern under the <i>Nature Conservation Act 1999</i> (Qld) after the granting of a relevant Environmental Authority.			



Significant disturbance	Defined in Schedule 12 of the Environmental Protection Regulation 2019
(to land)	(Qld) as land that has been disturbed and human intervention is needed to
	rehabilitate it to a condition required under the relevant environmental
	authority, or to the condition it was in immediately before the disturbance.
No-go area	A No-go area is an area that cannot be disturbed because of the cultural
	heritage value, or because it is a protected area such as a national park or
	marine park.
PL94	PL94 references Petroleum Lease '94'. The boundaries of exploration and
	production permits including petroleum leases is derived from the State
	mines permit data sets, which are maintained by the Department of
	Resources, Queensland. PL94 is a approximate 5 by 39 kilometre
	designation of land surrounding Moura to the north, east and south.
PL94 Development area	The area within PL94 (exclusive of the land contained within Mining Lease
	Nos. 5593, 5599, 5604, 5630, 5644, 5650, 5656 and 5657, as designated in
	the PL94 permit) that is proposed for development and is the subject of this
	Constraints Planning and Field Development Protocol.
Project Area	The same extent represented by the PL94 Development area.
Site Scout	A site scout is a survey effort to confirm the presence and accuracy of
	existing listed constraints, and to identify any potential new constraints not
	previously identified during desktop assessments. It is a multi-disciplined
	team that includes a suitably qualified ecologist amongst other disciplines
	and normally including landholders, the group travels across the site looking
	to confirm siting locations and disturbance areas.



# 1. Introduction

Westside Corporation Pty Limited (Westside) operates Petroleum Lease (PL) 94, referred to as the Meridian Seam Gas Fields. PL94 is held 51% by Westside entities (Westside CSG A Pty Ltd and Westside CSG D Pty Ltd) in a joint venture with Mitsui E&P Australia Pty Ltd (MEPAU) who holds 49%. The current Environmental Authority (EA) for PL94 is a site-specific Environmental Authority, Chapter 5A petroleum activity Permit Number: EPPG00783713. The EA for PL94 approves the development of 600 wells as well as ancillary facilities for the operation of the CSG field. At the time of updating this plan, the Project was in the process of gaining approval under the Commonwealth *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act).

# 1.1 Purpose

The PL94 development area (the Project) is subject to multiple constraints that are assessed and considered to plan for the appropriate locations of wells and associated infrastructure over the life of the project. The final development footprint cannot be defined at this time, so to maintain flexibility and minimise impacts to sensitive receptors and environments, Westside employs a gated process for its field development planning to identify, avoid, manage and minimise impacts to constraints. This Environmental Constraints Planning and Field Development Protocol (the Protocol) describes the process Westside undertakes to site infrastructure within the Project Area specifically in consideration of:

- Matters of National Environmental Significance (MNES) under the EPBC Act for threatened species and communities and migratory species; and
- Avoidance, minimisation, mitigation, rehabilitation and offset of disturbed MNES.

The Protocol acknowledges Australia's environmental obligations, landowner constraints, the nature of the resource, engineering/constructability, and cultural heritage constraints in addition to MNES constraints. The Protocol will be applied throughout the life of the Project and will ensure gas field development takes place in accordance with the outlined maximum MNES disturbance limits (Section 3.1), and commitments outlined in supporting documentation including the Significant Species Management Plan (SSMP), Environmental Management Plan (EMP), Underground Water Impact Report (UWIR), and MNES Ecology Assessment (submitted as part of the application for approval under the EPBC Act).

# 1.2 Legislative Requirements

The EPBC Act provides the legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities, and heritage places – defined as MNES. Two MNES matters are relevant to Project Area including:

- Listed threatened species and communities (sections 18 & 18A of the EPBC Act).
- Listed migratory species (section 20 & 20A of the EPBC Act).

All references to MNES or MNES values through this Protocol refer to EPBC Act listed threatened species and threatened communities as well as listed migratory species collectively.



# 1.3 Scope

The scope of this Protocol applies to all PL94 petroleum activities that require a disturbance to land or aquatic environments. The activities include (but are not limited to):

- Well lease pads;
- Linear infrastructure (pipelines, flowlines, powerlines, and access tracks);
- Compression facilities;
- Dams and water management facilities;
- Camps;
- Seismic surveys; and
- Ancillary infrastructure and activities associated with the above.

The Protocol takes into consideration both direct and indirect impacts that the proposed infrastructure may have on the MNES. The MNES that are explicitly considered in this protocol are the threatened communities and species that have a likelihood of occurrence of 'known', 'high' and 'moderate' (refer Appendix A). It should be noted that as part of the site scouts that occur prior to any significant disturbance, the suitable qualified ecologist will assess the proposed disturbance area for all MNES values and if threatened communities or species that are not included in Appendix A are identified, then an update of this Protocol will occur to include the additional community or species identified.

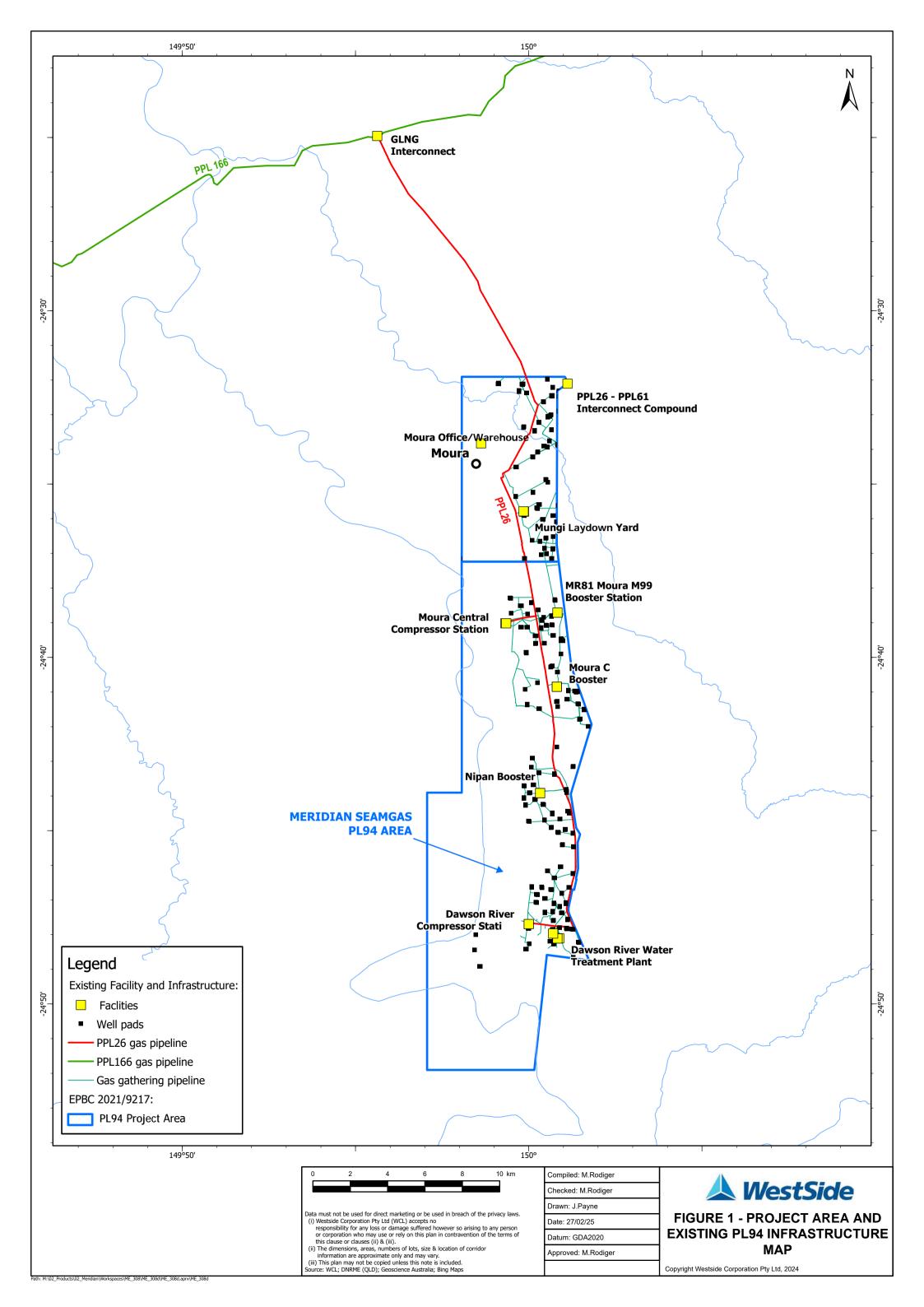


## 2. Location

The Project is located in the Moura-Theodore district of the Banana Shire, Queensland. The area consists of the fields of Dawson River, Nipan, Moura, Moura Central, and Mungi. The field development occurs as 'pods' within an area extending approximately 45km north to south and up to 10km east to west. Located in the vicinity of and near the township of Moura, the Project lies between the western boundary of various Anglo Coal mining leases (MLs) and the Dawson River. Access to the well fields utilises public roads and associated secondary roads which provide access to local properties.

Figure 1 shows the Project location.

It is noted that the Project Area that will be relevant to the Project's Commonwealth approval will be the area designated in the permit for PL94. This area (the Project Area) is exclusive of land contained within Mining Lease (numbers 5593, 5599, 5604, 5630, 5644, 5640, 5656 and 5657) areas located in the east.





## 3. MNES

Westside has undertaken numerous field surveys across multiple seasons and in representative locations to identify ecological values that are known and potentially supported within the Project Area including MNES. The likelihood of occurrence assessment included in the Project's MNES Assessment identified three threatened ecological communities, three threatened flora species, twelve threatened fauna species, and eight migratory fauna species as 'known to occur', 'highly likely to occur', or 'moderately likely to occur'. The assessment considered predicted significant species and community distribution mapping, field survey findings, publicly available records and State mapping when making the likelihood determination.

The three threatened ecological communities (all listed Endangered under the EPBC Act) that are known or highly likely to occur include:

- Brigalow (Acacia harpophylla dominant and co-dominant) known to occur;
- Coolibah Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions – known to occur; and
- Poplar Box Grassy Woodland on Alluvial Plains highly likely to occur.

Three threatened flora species are known to occur:

- Xerothamnella herbacea (Endangered);
- Solanum dissectum (Endangered); and
- Solanum johnsonianum (Endangered).

No additional threatened flora species were considered moderately or highly likely to occur.

Twelve threatened fauna species are identified as being known to occur, highly likely to occur and moderately likely to occur:

- Denisonia maculata Ornamental snake (Vulnerable) known to occur;
- Elseya albagula White-throated snapping turtle (Critically Endangered) highly likely to occur;
- Rheodytes leukops Fitzroy River turtle (Endangered) highly likely to occur;
- Geophaps scripta Squatter pigeon (Vulnerable) moderately likely to occur;
- Petauroides volans Greater glider (Endangered) highly likely to occur;
- Petaurus australis australis Yellow bellied glider (Vulnerable) moderately likely to occur;
- Phascolarctos cinereus Koala (Endangered) highly likely to occur;
- Grantiella picta Painted honeyeater (Vulnerable) moderately likely to occur;
- Hirundapus caudacutus White-throated needletail (Vulnerable and Migratory) moderately likely to occur;
- Rostratula australis Australian painted snipe (Endangered) moderately likely to occur;
- Egernia rugosa Yakka skink (Vulnerable) moderately likely to occur; and
- Adclarkia dawsonensis Boggomoss snail (Critically Endangered) moderately likely to occur.

Historical records in conjunction with the field surveys have identified eight migratory species as being known to occur, highly likely to occur and moderately likely to occur, being:

• Apus pacificus - Fork-tailed swift – highly likely to occur.



- Myiagra cyanoleuca Satin flycatcher moderately likely to occur.
- Rhipidura rufifrons Rufous fantail highly likely to occur.
- Actitis hypoleucos Common sandpiper highly likely to occur.
- Calidris acuminata Sharp-tailed sandpiper moderately likely to occur.
- Gallinago hardwickii Latham's snipe highly likely to occur.
- Hydroprogne caspia Caspian tern known to occur.
- Plegadis falcinellus Glossy ibis known to occur.

### 3.1 Maximum Disturbance Limits

All MNES value species and communities are taken into account during the constraints planning process. Based on habitat assessment and mapping, maximum disturbance limits for each of the MNES that have been developed for the Project area. Where a limit of 0.0 Ha is identified, no direct impacts (e.g. habitat clearance) on that value are permissible.

**Table 1 PL94 Maximum Disturbance Limits** 

MNES	EPBC Status	Habitat Category	Total potential habitat in project area (ha)	Direct habitat impacts	Maximum direct impact (ha)	Percent direct impact
TEC						
Brigalow	E	-	988.8	Yes	0.9	0.09%
Coolibah	Е	-	105.1	No	0	-
Poplar Box	E	-	705.0	No	0	-
Threatened flora						
Xerothamnella herbacea¹	E	-	1,076.8	Yes	1.0	0.09%
Solanum dissectum¹	E	-	1,076.8	Yes	1.0	0.09%
Solanum johnsonianum¹	E	-	1,076.8	Yes	1.0	0.09%
Threatened birds			_			
Painted honeyeater (Grantiella picta)	V	Foraging and dispersal	2,555.4	Yes	6.9	0.27%
Australian painted snipe (Rostratula australis)	E	Seasonal breeding, foraging and dispersal	1,354.7	Yes	6.0	0.44%
White-throated needletail (Hirundapus caudacutus) <sup>2</sup>	V	Foraging and dispersal	21,002.1	No	-	-
Squatter pigeon	V	Breeding	1,577.2	Yes	1.0	0.06%
(Geophaps scripta scripta)		Foraging	44.6	Yes	1.0	2.2%
		Dispersal	3,055.0	Yes	40.0	1.3%
Threatened Fauna	Threatened Fauna					
Ornamental snake (Denisonia maculate)	V	Suitable	4,849.2	Yes	16.0	0.33%



Koala	E	Climate refugia	948.6	No	0	-
(Phascolarctos cinereus)		Breeding and foraging	801.0	Yes	2.0	0.25%
		Shelter	800.3	Yes	6.9	0.86%
		Dispersal	16,297.0	Yes	400	2.45%
Greater glider (southern and central)	E	Denning	1,187.1	No	0.0	-
(Petauroides volans)		Foraging and dispersal <sup>3</sup>	_3		2.0	-
Yellow-bellied glider ( <i>Petaurus australis</i> australis)	V	Breeding, foraging and dispersal	1,039.4	No	0	-
White-throated snapping turtle (Elseya albagula)	CE	Breeding, foraging and dispersal	523.9	No	0	-
Fitzroy River turtle (Rheodytes leukops)	E	Breeding, foraging and dispersal	523.9	No	0	-
Yakka skink ( <i>Egernia rugosa</i> )	V	Breeding, foraging and dispersal	2,205.9	No	0	-
Boggomoss snail (Adclarkia dawsonensis)	CE	Breeding, foraging and dispersal	159.0	No	0	-

<sup>1 –</sup> Maximum disturbance limit is for the potential habitat for the species. Confirmed individuals and the 5m exclusion zone around the species are no-go zones and cannot be disturbed.

# 4. Environmental Management Principles

# 4.1 Hierarchy of Principles

Westside follows a hierarchy of environmental management principles for the location of planned petroleum activities:

- Avoidance avoid direct and indirect adverse environmental impacts to MNES values.
- Minimisation minimise direct and indirect adverse environmental impacts to MNES values where disturbance to MNES cannot reasonably and practically be avoided.
- Mitigation mitigation and management measures for both direct and indirect impacts to MNES values for the Project in accordance with the Significant Species Management Plan
- Rehabilitation actively rehabilitate all disturbed areas in accordance with the PL94
   Environmental Authority and Rehabilitation Management Plan
- Offset (only where required) provide suitable offsets for areas of impact that result in significant residual impact to MNES.

#### 4.1.1 Avoidance

Proposed petroleum infrastructure locations will avoid significant impacts on MNES values by utilising the following measures:

<sup>2 -</sup> The white-throated needletail (*Hirundapus caudacutus*) is a non-breeding migrant to Australia and is mostly aerial, foraging on the wing and moving with weather systems. Based on the species ecology, no maximum direct impact limit has been applied.

<sup>3 -</sup> This habitat category was unable to be accurately mapped for the purposes of gaining approval under the EPBC Act with the data available at the time. A conservative approach to the mapping was utilised that considered all identified habitat within the Project Area potentially suitable for denning purposes, although it is noted many of the areas identified as denning are most likely foraging and dispersal only. All areas proposed for clearing will still be subject to assessment (field scout) by a suitably qualified ecologist who will assess habitat suitability in consideration of tree DBH and height (>30 cm DBH and >10 m height).



- Redesigning the proposed petroleum infrastructure
- Relocating the proposed petroleum infrastructure
- Utilising areas of existing significant disturbance
- Utilising pad drilling with horizontal wells

#### 4.1.2 Minimisation

Disturbances will be minimised within habitats with broad habitat extents (eg. squatter pigeon and migratory species). Minimisation of disturbance will include the following measures:

- Pipeline right of ways widths no greater than 18 meters through these areas
- Multi-well pads with horizontal wells utilised to minimise disturbances (maximum 2.5 hectares)
- Non-linear infrastructure excluded from watercourses
- Utilise areas of existing significant disturbances.
- Micro-siting of project infrastructure to minimise impacts to local habitat features of importance to MNES species including:
  - Koala dispersal trees (highest priority)
  - o Brigalow belt locally important and ancillary koala trees within areas of koala breeding and foraging habitat to be cleared
  - o Within squatter pigeon (southern) dispersal habitat, mature trees that may provide shelter from aerial predators
  - o Within greater glider (southern and central) foraging and dispersal habitat to be cleared, the tallest trees present within the assessed area
  - o Trees containing mistletoe (from geneus Amyema)

#### 4.1.3 Mitigation

Where avoidance cannot be achieved Westside will undertake both minimisation and mitigation measures to reduce both direct and indirect impacts to MNES and other environmental values. Mitigation measures are set out in Table 3.

#### 4.1.4 Rehabilitation

All disturbances will be rehabilitated in accordance with the PL94 Rehabilitation Management Plan and the rehabilitation conditions set out in the PL94 Environmental Authority. the time frame for rehabilitation works to be undertaken is determined by the type of infrastructure that is built.

#### **4.1.5** Offset

Where significant residual impacts to MNES have been identified (as assessed by a Suitably Qualified Ecologist), the impact will be offset in accordance with the approved Offset Area Management Plan.



# 5. Constraint Planning

Constraints planning includes the use of Westside's latest GIS mapping layers for sensitive receptors in the area which includes residential properties, commercial properties, waterways, wetlands, potential habitat, MNES, Matters of State Environmental Significance (MSES) and roads.

Table 2 below provides a summary of permitted development that will be applied to assessed constraints. Using the constraints planning categories Westside has developed an indicative constraints map for PL94 (Figure 2). As future field surveys are undertaken (as described in section 6.2) as part of site scouts, this mapping will change to incorporate ground-truthed data.

These categories are further defined in the sections below.

**Table 2 Constraints Categories** 

Constraint Category	Low Impact Petroleum Activity	Essential Petroleum Activities	All Petroleum Activities
Example of activities	Survey with no significant disturbance	Well pad, pipeline, access track to access pipeline / wellpad	Well pad, camps, water treatment facilities, gas compression facilities, laydown yards, dams
No-Go Area	No	No	No
High Constraint Area	Yes	No	No
Moderate Constraint Area	Yes	Yes	No
Low Constraint Area	Yes	Yes	Yes

#### **5.1.1** No-Go Area

There are a number of areas throughout the Project which are deemed No-Go areas. These include:

- Township of Moura.
- Areas that have been identified as No-Go due to Cultural Heritage exclusion/conservation zones.
- Confirmed individuals of *Xerothamnella herbacea*, *Solanum dissectum*, *Solanum johnsonianum* and the surrounding 5 m exclusion zone.
- Confirmed Boggomoss snail habitat.

There are no National Parks, State Parks, Marine Parks or Conservation Parks within the Project.

#### Avoidance and mitigation measures:

- All petroleum activities are prohibited within No-Go areas.
- Identified individuals of *Xerothamnella herbacea*, *Solanum dissectum*, *Solanum johnsonianum* will have a No-Go zone cordoned off by flagged or barricaded including a 5 m exclusion zone.



- Project activities that utilise chemicals, fuels and other pollutants will be carefully
  planned with locations selected to avoid 'no-go' areas and areas of high constraints to
  minimise the potential for contamination.
- Any directional drilling works will be planned and controlled to ensure there are no impacts on no-go constraint areas.

## 5.1.2 High Constraint Area

A High Constraint area is an area that has high value habitats and includes MNES species that do not have a maximum disturbance limit in section 3.1 of this Protocol. High constraint areas apply to:

- Confirmed Coolibah Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions TEC
- Confirmed Poplar Box Grassy Woodland on Alluvial Plains TEC
- Confirmed Koala climate refugia habitat
- Confirmed Greater glider (southern and central) denning habitat
- Confirmed Yellow-bellied glider (south-eastern) denning, foraging and dispersal habitat
- Confirmed Yakka skink breeding and foraging habitat
- Confirmed Fitzroy River turtle and White-throated snapping turtle breeding and foraging habitat
- Potential Boggomoss snail habitat.

#### **Avoidance and mitigation measures:**

- Only low impact petroleum activities<sup>1</sup> that do not include significant ground disturbance are approved in these areas, such as observational surveys.
- Prior to site entry, all relevant site personnel including contractors will be appropriately
  trained and made aware of the sensitive receptors that may be present in the work area,
  including proximity to MNES values, via pre-start/toolbox talks and site inductions.
- Equipment and vehicles will have appropriate weed hygiene declarations prior to arriving on site.
- Project activities that utilise chemicals, fuels and other pollutants will be carefully
  planned with locations selected to avoid 'no-go' areas and areas of high constraints to
  minimise the potential for contamination.

means authorised resource activities which do not result in the clearing of native vegetation, cause disruption to soil profiles through earthworks or excavation or result in significant disturbance to land which cannot be rehabilitated immediately using hand tools after the activity is completed.

Examples of such activities include but are not necessarily limited to soil surveys (excluding test pits), topographic surveys, cadastral surveys and ecological surveys, may include installation of monitoring equipment provided that it is within the meaning of low impact and traversing land by car or foot via existing access tracks or routes or in such a way that does not result in permanent damage to vegetation

<sup>&</sup>lt;sup>1</sup> low impact petroleum activity



• Any directional drilling works will be planned and controlled to ensure there are no impacts on no-go constraint areas.

#### **5.1.3** Moderate Constraint Area

#### A Moderate Constraint area is an area that contains:

- MNES habitat that has a maximum disturbance limit in section 3.1 of this Protocol, with the exception of Koala and Squatter Pigeon dispersal habitat (being 400ha and 40 ha respectively, of previously cleared land).
- Watercourses and wetlands (not otherwise identified as a high constraint area like the Dawson River).

#### Avoidance and mitigation measures:

- Westside's standard practice is to co-locate any planned infrastructure with existing
  infrastructure such as fences, farm or access tracks, or other pipeline infrastructure in
  order to reduce disturbance impacts to MNES.
- Where impacts are identified, Project infrastructure that is linear (i.e. gathering lines, tracks etc) should be sited in a way that impacts patch edges only. Where this is not achievable, within linear patches and particularly those on drainage lines, the siting should dissect the patch at a perpendicular angle and preferably intersect at the patches narrowest part to minimise clearing.
- Where potential impacts are identified, right of way (RoW) widths will be reduced to 8 m, or the smallest width possible for safe construction.
- To ensure patch viability and functionality is maintained at current levels, the siting of Project infrastructure (including wells, gathering infrastructure, tracks and other ancillary infrastructure) within or adjacent to moderate constraint areas must also adhere to the following rules:
  - Patches that are 0.5 ha or less must be completely avoided by the Project (no direct impacts permitted).
  - Patches that are 1.0 ha or less must not be dissected in a way that creates two or more new patches.
  - Direct impacts must not reduce the patch size to less than 0.5 ha OR isolate the patch by more than 50 m to the nearest patch (unless already isolated by more than 50 m).
  - o Patches >1.0 ha must not be dissected in a way that creates one patch <0.5 ha.
- Where clearing is proposed within a greater glider (southern and central) habitat corridor, as defined in the MNES habitat criteria, site scout data collected by a qualified ecologist will be used to understand how much wider existing gaps can be made. Clearing required for construction of the Project will not create gaps in the habitat corridor that are too great for the species to glide across based on known glide ratios (i.e. turn the corridor into two isolated patches or corridors, thereby reducing habitat connectivity within the Project Area). Refer Appendix A Habitat Descriptions for full definition, as well as the following clarification:
  - Foraging and dispersal habitat (individual patch or corridor) must occur within gliding distance (calculated based on known glide angle (40°) and tree height, or



100 m if not able to calculate accurately) of denning habitat, given the species' reliance on hollow-bearing trees to shelter during the day.

- Upgrade existing access tracks opposed to creating new access tracks. Existing farms
  tracks will be utilised and/or upgraded as a preference over creating new access tracks
  required for the Project.
- Full sized well pads to be avoided in moderate constraint areas, however, if a small
  portion of well pad needs to occur within, a 'minimal disturbance' approach will be
  utilised (i.e. topsoil strip for purpose of site levelling, but avoidance of importation of fill
  or significant compaction)
- A fauna spotter-catcher will be present during all clearing activities in all areas containing MNES habitat.
- Exclusion zones will be demarcated around vegetation comprising MNES habitat to be protected to avoid unauthorised disturbance and access. This will be done with fencing and/or signage as necessary.
- Westside's standard practice is to utilise low constraint areas (i.e. areas of existing disturbance such as cleared paddocks not containing gilgais) foremost to site infrastructure in order to reduce disturbance impacts to MNES.
- Reinstatement of pipeline trenches will occur as soon as practically possible after disturbance, with a maximum open trench to be 1km, to reduce the risk of fauna entrapment, or impacts from erosion & sediment loss.
- Erosion and sediment control devices will be implemented in accordance with IECA Best Practice Erosion and Sediment Control documents during construction to minimise the risk of potential sedimentation to sensitive receptors including areas of MNES habitat.
- Construction of linear infrastructure requiring a watercourse crossing will be undertaken
  in accordance with the Accepted development requirements for operational work that is
  constructing or raising waterway barrier works under the Fisheries Act 1994 and Planning
  Act 2016
- Prior to site entry, all relevant site personnel including contractors will be appropriately trained and made aware of the sensitive receptors that are, or may be present in the work area, including proximity to MNES values, via pre-start/toolbox talks and site inductions.
- Equipment and vehicles will have appropriate weed hygiene declarations prior to arriving on site
- Significant residual impacts will be offset in accordance with regulatory requirements.

## **5.1.4** Low Constraint Area

A Low Constraint area are all other areas of PL94 not defined in other constraint area categories. This includes both Koala and Squatter pigeon dispersal habitat (maximum disturbance limits being 400 ha and 40 ha respectively). Of the 400 ha disturbance limit for koala dispersal habitat, 1% (or 4 ha) may comprise koala dispersal trees measured by canopy cover.

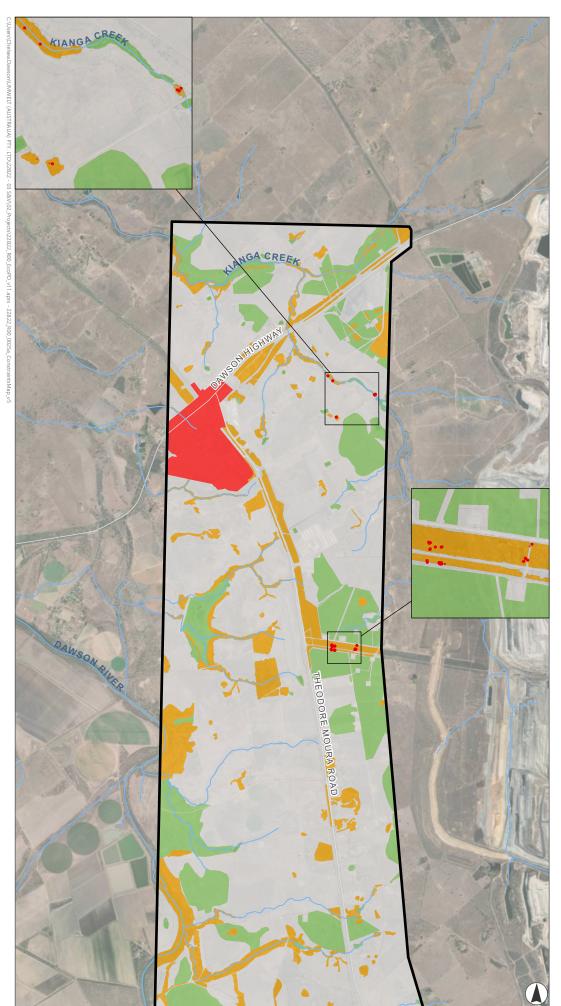
Avoidance and mitigation measures:



- Maximum disturbance limits in this protocol apply
- Assessment and protocol as outlined in section 4 of this protocol apply
- As standard practice areas of low constraint (including areas of significant existing disturbance such as existing tracks, rehabbed RoWs and well pad areas) will be utilised foremost to site infrastructure in order to reduce disturbance impacts to MNES.

During the site scouts, the presence and extent (measured by canopy cover) of koala dispersal trees (recognised as a plant of any genera that has a tree diameter that is equal to or greater than 10 cm when measured at 1.3 m above the ground (referred as >10 cm DBH)) within areas of koala dispersal habitat with be assessed as part of habitat verification and mapping. This data will be used to provide guidance on micro-siting and inform the site-specific determination of impacts to dispersal habitat (including area of dispersal tree cover loss predicted). The subsequent site scout ecology report will detail the findings and include an assessment of predicted residual changes to koala dispersal capacity as a result of the Project, relative to the baseline. No functional loss of koala dispersal habitat will be permitted.



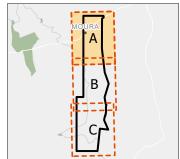


## FIGURE 2

# **Indicative Constraint** Mapping

## Legend Watercourse Roads Project Area Constraints No-Go Areas High Moderate

Low







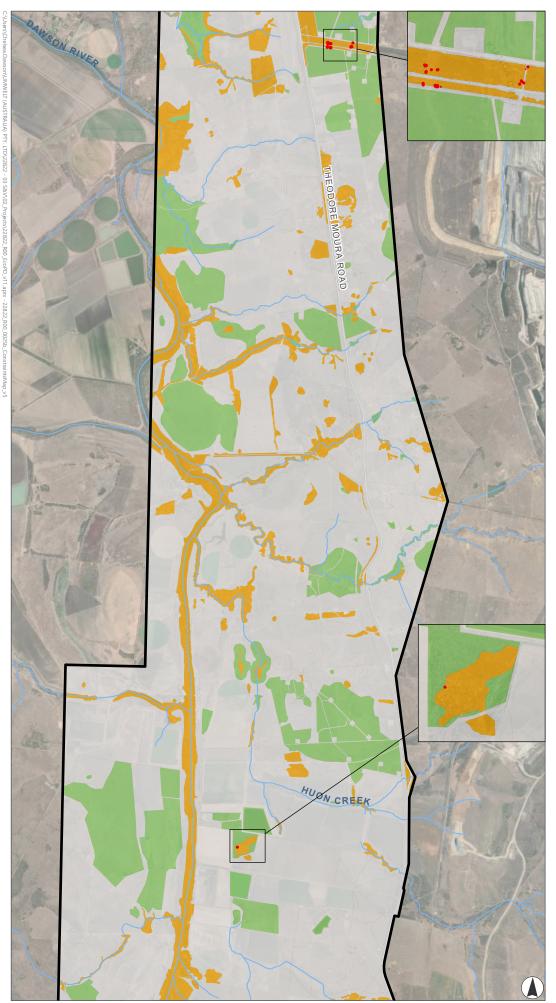
Scale 1:80,000 at A4 GDA 1994 MGA Zone 55

GDA 1994 MGA ZONE 55

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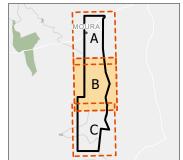




## FIGURE 2

# **Indicative Constraint** Mapping









Scale 1:80,000 at A4 GDA 1994 MGA Zone 55

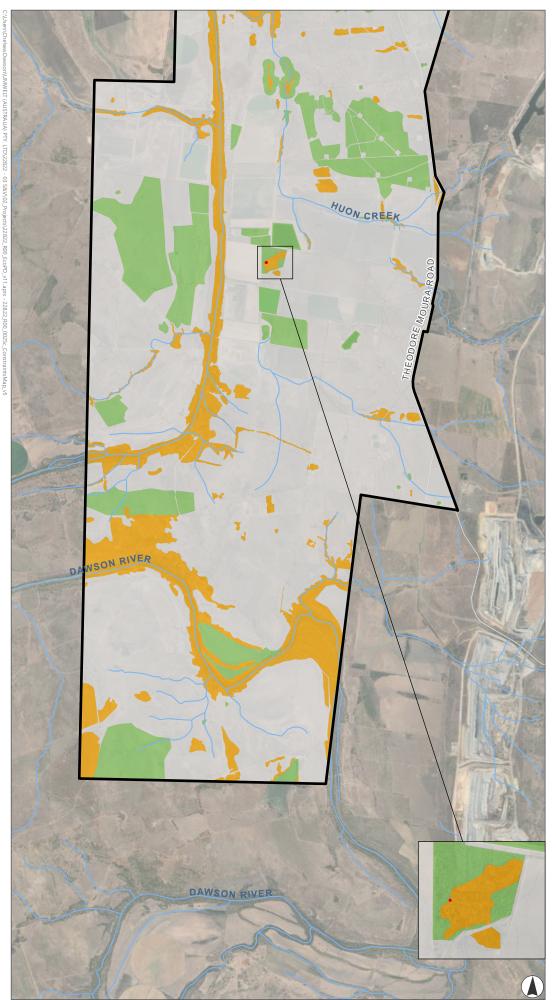
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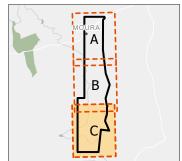


## FIGURE 2

# **Indicative Constraint** Mapping



Low







Scale 1:80,000 at A4 GDA 1994 MGA Zone 55

GDA 1994 MGA ZONE 55

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# 6. Implementation of Protocol

The Protocol commences when the Westside Project Execution Process is activated by a concept or proposed project. Figure 3 provides an overview of the Westside Project Execution Process. This process provides a thorough assessment of all the relevant constraints, risks, and opportunities from the inception of a project to the execution of the project. MNES are included as one of the constraints and risks assessed in the Westside Project Execution Process.

This Environmental Constraints Planning and Field Development Protocol forms an integral part of the entire project execution process. The Propose, Assess, Develop and Execute phases are described further in sections 6.1 to 6.4.

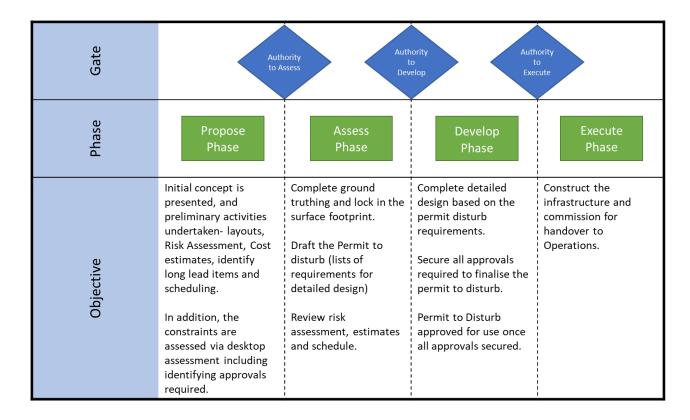


Figure 3 – High-level gated process (Westside Project Execution Process)

# **6.1** Propose Phase

At the Propose Phase of a project, a constraints analysis is completed utilising GIS mapping layers identifying all the constraints from a desktop perspective. Westside's MNES habitat mapping includes potential habitat for all MNES identified as Known, Likely, or Potentially occurring within the Project area. The mapping was developed by applying the ecological field validation data and LiDAR results to habitat definitions that were formulated for each of the relevant MNES. This included but was not limited to, the Department's Species Profile and Threats Database (SPRAT) (DAWE, 2021), conservation advice, and recovery plans.



The Propose Phase includes a review of:

- Westside's latest GIS mapping layers for sensitive receptors in the area which includes residential properties, commercial properties, waterways, wetlands, potential habitat, MNES, and roads;
- Co-development opportunities;
- Pre-disturbed opportunities (these are areas of existing significant disturbance, which
  include but are not limited to existing access tracks, areas where former infrastructure
  was located, existing RoW areas (opportunities for co-location of infrastructure), areas
  cleared for former laydowns and former well pads);
- Regulatory approvals and permits
- Slope and constructability;
- Access to the site;
- Latest LiDAR imagery;
- Queensland State Regional Ecosystem mapping;
- Landowner infrastructure, land use and property management; and
- Resource targets (Westside utilises lateral drilling techniques to improve the resource extraction this technique also minimises the surface disturbance areas and allows for the avoidance of areas of environmental value including MNES).

# 6.2 Assess Phase

Once the potential location has been confirmed via a desktop analysis during the Propose Phase, the Project then moves into the Assess Phase. A site scout is organised to ground-truth the proposed infrastructure location (plus a 30 m buffer) from the Propose Phase. The proposed infrastructure location is defined as the maximum spatial extent of Project-related work including equipment laydowns, vegetation clearing and other ground disturbance.

The site scout includes a team of multiple disciplines including construction, surveyor, environment (which always includes a suitably qualified ecologist), cultural heritage, and land access. The site scout often includes the land holder who identifies on-ground constraints and confirms preferred location. This team undertakes a detailed inspection of the proposed area to determine if all of the Propose Phase constraints have been accounted for and identifies if any constraints not identified during the Propose Phase exist.

If the site scout data identifies additional ground-truthed constraints not identified in the Propose Phase then a refinement of the locations is undertaken, generally, these constraints are identified during the scout which allows the scout team to assess several alternative locations that are then subject to a new Propose Phase desktop assessment. The information collected from the scouting (survey data, ecological reports, cultural heritage information, etc.) is then used to confirm the locations identified in the Propose Phase.

Data collected from the site scout is uploaded into Westside's GIS system and used to update the constraints mapping with the latest ground-truthed data. The siting of the infrastructure may be



revised based on the information collected. Westside's MNES mapping is updated to include any new relevant information collected during the site scout.

## **6.2.1** Ecology Site Scout Requirements

Ecological assessments are undertaken during the Assess Phase before the Develop and Execute phases to confirm the presence and extent of MNES including TECs, threatened flora and fauna habitat and quantify the potential impacts. Another key component of the ecology field survey scout is to determine if measures outlined in Table 3, relevant to the Develop and Execute phases of the Project, can be feasibly implemented. The results of these ecological assessments are thus integral to determining the final location of Project petroleum activities.

The suitably qualified ecologist/s on the site scout will design a field survey based on information obtained during the desktop assessment and in accordance with the relevant Commonwealth and State guidelines. The ecological assessment that forms part of the site scout will map and identify MNES habitat in accordance with habitat rules provided in Appendix A. Survey methods will include:

- Ground-truthing of Regional Ecosystems (REs) (remnant and High Value Regrowth (HVR))
  in accordance with the Methodology for Survey and Mapping of Regional Ecosystems and
  Vegetation Communities in Queensland (version 7.0) (Neldner, et al., 2023) using a
  combination of tertiary and quaternary level vegetation assessments.
- Identification of Threatened Ecological Communities (TECs) in accordance with approved conservation advice from the Threatened Species Scientific Committee for each TEC.
- Species-specific habitat assessments to determine the presence and extent of habitat (as
  defined in Appendix A) and key habitat resources that should be considered for micrositing purposes and habitat functionality considerations.
- Searches for direct and indirect of signs of Endangered, Vulnerable, or Near Threatened flora and fauna listed under the *Nature Conservation Act 1992* (NC Act) and/or threatened or migratory species listed under the EPBC Act.
- Searches for potential active animal breeding places.
- Identification of areas of disturbance by type and severity.
- Baseline biosecurity surveys to record the presence and general abundance of pest plant species, including:
  - Prohibited and/or Restricted Matter under the Biosecurity Act 2014 (Schedules 1 and 2):
  - Weeds of National Significance (WoNS) as described by the National Weeds Strategy; and
  - Other species which are known to be environmental or agricultural weeds, and which may be described in relevant local government pest management plan(s).

Survey methods are described in further detail in Appendix B, including habitat functionality considerations for koala and painted honeyeater.



# **6.3** Develop Phase

Once the Assess phase is completed all of the ground-truthed constraints data collected is then incorporated into the Westside GIS system. This data is utilised to complete the detailed design and to produce the Westside Permit to Disturb (see Appendix C), ensuring that the siting of infrastructure avoids or minimises the impacts on MNES and other environmental values and complies with relevant approval conditions.

## 6.4 Execute Phase

During the Execute phase any activities that requires the clearing of woody vegetation or any breeding and foraging MNES habitat areas will be overseen by a suitably qualified Fauna spotter catcher. The actual extent of disturbance and impacts to MNES will be recorded with surveyed disturbance areas added to the cumulative disturbance totals to be compared to the maximum disturbance limits. The disturbance areas will be added into Westside's GIS to allow tracking of the cumulative disturbance against the maximum disturbance limits within the next project assess phase. Section 7 details the environmental constraints reporting.



## **Table 3 PL94 Constraints and Mitigations Measures**

MNES	Approach	Additional Mitigation and Management Measures
Identified and potent	ial TECs	
Brigalow (Acacia harpophylla dominant and codominant)  Coolibah – Black box woodlands of the Darling Riverine Plains and the Brigalow Belt South Region  Poplar Box Grassy Woodland on Alluvial Plains TEC	Avoidance of Direct Impacts  Site scout surveys will be undertaken to confirm the absence of these TECs from the PL94 Development Area.  Direct disturbance to Brigalow TECs for the project is limited to the maximum disturbance limits in Table 1.  No direct impacts to Coolibah TEC or Poplar Box Woodland TEC will be permissible at any time throughout the life of the Project.  Coolibah TECs and Poplar Box Woodland TECs are identified as 'no-go' areas.  Minimise Indirect Impacts  Development will avoid disturbance to areas directly adjacent to TECs as standard practice.  Minimise Indirect Impacts  Locations of prior significant disturbance will be utilised  Rehabilitate disturbances	<ul> <li>Mitigation &amp; Management Measures for Indirect Impacts</li> <li>TECs within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. The presence and extent of TECs within 30 m of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence wi be assumed if such findings are supported by the MNES mapping (i.e. potential TEC mapped).</li> <li>Direct impacts to Brigalow TEC will occur on the edges of patches only, and/or utilise existing gaps and breaks. No patches will be dissected, however where existing gaps are already present these may be widened, provided cumulative maximum disturbance limits for the TEC are adhered to.</li> <li>No stockpiling of construction materials including excavated soil will occur in areas identified as TEC.</li> <li>Clearing works will maintain a vegetation 'exclusion zone' of 5 m or more around areas of TEC to ensure suitable micro-climatic conditions are maintained and weed incursion risks are reduced.</li> <li>The extent of Project-related construction work (including equipment laydown and other non-clearing activities) proposed to occu within 5 m of a confirmed or potential TEC will be demarcated using flagging tape, barricade webbing or similar, to avoid accidental clearing outside the approved disturbance area.</li> <li>Confirmed and potential TEC areas adjacent to Project construction activities will be inspected by a suitably qualified ecologist price to commencement and at completion of works, in accordance with the methods outlined in the Project SSMP (MSG-GN00-HS-PLN 005).</li> <li>All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest and weed species.</li> <li>If la</li></ul>
Identified Threatened	l flora species	
Xerothamnella herbacea Solanum dissectum	Avoidance of Direct Impacts     Site scout surveys will be undertaken for populations of threatened flora species and Project infrastructure will avoid disturbance to identified populations.	<ul> <li>Threatened flora individuals/populations and habitat within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. The presence and extent of threatened flora populations and habitat within 30 m of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence will be assumed if such findings are supported by the MNES mapping (i.e. potential habitat mapped).</li> </ul>
Solanum johnsonianum	<ul> <li>No direct disturbance to confirmed threatened flora species is proposed for the project.</li> <li>Direct disturbance to Solanum dissectum, Solanum johnsonianum, Xerothamnella herbacea habitat are as per limits in Table 1.</li> </ul>	<ul> <li>No direct impacts to any threatened flora plants listed under the EPBC Act will be permissible at any time throughout the life of the Project. Areas known to support threatened flora listed under the EPBC Act adjacent to Project construction activities will be monitored by a suitably qualified ecologist in accordance with the frequency and method provided in the Project SSMP (MSG-GN00-HS-PLN-005).</li> <li>Where a plant is identified to potentially be a species' listed under the EPBC Act, but formal identification cannot be made at the time, the plants will be assumed to be the threatened species and managed accordingly until proper identification occur.</li> <li>Direct impacts to potential habitat for the relevant threatened flora species (i.e. meets the habitat definition but did not contain any individuals or populations) are only permitted to a cumulative maximum disturbance limit of 1.0 ha. Direct impacts to potential threatened flora habitat will be avoided to the maximum extent possible.</li> </ul>



Approach	Additional Mitigation and Management Measures
	<ul> <li>The extent of Project-related construction work (including equipment laydown and other non-clearing activities) proposed to occur within 5 m of threatened flora habitat will be demarcated using flagging tape, barricade webbing or similar, to avoid accidental clearing outside the approved disturbance area.</li> </ul>
	<ul> <li>The siting of Project infrastructure will aim to minimise fragmentation of potential habitat as much as possible (i.e. clear edges rather than dissect patches) to maintain core patch and population viability.</li> </ul>
	No stockpiling of construction materials including excavated soil will occur in areas identified as threatened flora habitat.
	<ul> <li>A vegetation 'exclusion zone' of 5 m will be established around identified locations of threatened flora species to ensure suitable micro-climatic conditions are maintained and weed incursion risks are reduced. The known threatened flora location, inclusive of the exclusion zone, will be considered a 'no-go' zone to mitigate any occurrence of accidental damage or death as a result of trampling etc. Given the very small size of the plants (forbs) and root system characteristics (Xerothamnella herbacea able to root at the nodes that contact the soil while both Solanum spp. rhizomatous and may benefit from some disturbance), a 5 m exclusion zone is considered sufficient.</li> </ul>
	<ul> <li>Patches confirmed to contain threatened flora individuals/populations and associated 'no-go' zones, adjacent to Project construction activities will be inspected by a suitably qualified ecologist prior to commencement and at completion of works, to ensure no unintentional indirect impacts have occurred in accordance with the methods outlined in the Project SSMP (MSG-GN00- HS-PLN-005).</li> </ul>
	<ul> <li>In the unlikely event that threatened flora plant listed under the EPBC Act is damaged, removed or killed as a result of Project activities, DCCEEW will be notified within a maximum period of 2 business days.</li> </ul>
	<ul> <li>All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest and weed species within areas of habitat.</li> </ul>
	<ul> <li>If landholder seed mix is not requested, rehabilitation works in areas adjacent to threatened flora habitat will prioritise the use of native species, to reduce increased incursion of weed species and/or exotic grass species (i.e. buffel grass) within the area.</li> <li>Rehabilitation will be undertaken in accordance with the Westside Rehabilitation Management Plan (WCL-0000-HS-PLN-011).</li> </ul>
fauna species	
Avoidance of Direct Impacts     Direct impacts to ornamental snake suitable habitat are permitted only to a cumulative maximum disturbance limit of 16.0 ha. Direct impacts to potential ornamental snake habitat will be avoided to the maximum extent possible.     Suitable habitat for ornamental snake has been identified as 'moderate constraint' areas.     Disturbance to suitable habitat for ornamental will not cause the fragmentation of important habitat.  Minimise Impacts     Locations of prior significant	<ul> <li>Mitigation &amp; Management Measures for Indirect Impacts</li> <li>Ornamental snake individuals and habitat within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. The presence and extent of ornamental snake habitat within 30 m of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence will be assumed if such findings are supported by the MNES mapping (i.e. potential habitat mapped).</li> <li>Where clearing is proposed for ornamental snake suitable habitat, a fauna spotter-catcher must be present. The fauna spotter-catcher will attempt to relocate any ornamental snake individuals that may occur within areas of suitable habitat to be cleared to nearby areas of suitable habitat. This will be done by:         <ul> <li>Searching for individuals via spotlighting surveys at night. This could be completed the night before works are planned, or at any time within three months of clearing works if conditions are suitable i.e. following rain</li> <li>Searching for individuals immediately prior to clearing within surface microhabitat such as fallen timber and deep litter piles.</li> <li>Any ornamental snakes captured will be relocated at least 100 m away. The chances of relocated ornamental snake/s returning to areas of habitat to be cleared are considered low as radio tracking studies completed by Veary (2011) indicate that the species moves only short distances during late summer and winter, and even</li> </ul> </li> </ul>
	fauna species  Avoidance of Direct Impacts  Direct impacts to ornamental snake suitable habitat are permitted only to a cumulative maximum disturbance limit of 16.0 ha. Direct impacts to potential ornamental snake habitat will be avoided to the maximum extent possible.  Suitable habitat for ornamental snake has been identified as 'moderate constraint' areas.  Disturbance to suitable habitat for ornamental will not cause the fragmentation of important habitat.  Minimise Impacts



MNES	Approach	Additional Mitigation and Management Measures
	Rehabilitate disturbances	<ul> <li>Where clearing is proposed within or adjacent ornamental snake suitable habitat, active erosion and sediment control measures will be implemented to mitigate potential habitat degradation.</li> <li>The period of time that trenches and other excavations are open will be minimised, particularly in areas where the species has been recorded and in mapped suitable habitat.</li> <li>Surface water pipeline design will consider the dispersal requirements of the ornamental snake and be preferentially collocated with access tracks (new or existing) to minimise creating barriers to movement. Where the pipeline is not raised off the ground, egress points that allow ornamental snakes to safely move over or under the pipelines, will be installed (minimum frequency of 1 egress point per 100 m of pipeline).</li> <li>To minimise the chances of collision, in known ornamental snake occurrence areas within the Project Area, speed limits will be reduced to 40 km/hr or less and signage will be installed that indicates species presence.</li> <li>Larger, discrete surface microhabitat features such as fallen timber and surface rocks will be relocated to adjacent areas of undisturbed habitat prior to clearing, where safe and practical. As described in Section 8.2.1 of the MNES Assessment Report, the fauna spotter-catcher will identify these items prior to clearing and relocation will be supported by machinery as required.</li> <li>If an ornamental snake is killed as a result of Project activities, DCCEEW will be notified within a maximum period of 2 business days.</li> <li>All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest and weed species</li> </ul>
Identified Migratory	Species	within areas of habitat.
Glossy ibis Caspian tern	Avoidance of Direct Impacts  Avoidance of disturbance to waterbody habitat (e.g. wetlands) for these species  Minimise impacts  Rehabilitate disturbances	<ul> <li>Mitigation &amp; Management Measures for Indirect Impacts</li> <li>Implementation of pest, weed, and disease/hygiene management measures to minimise the potential for introduction or spread of invasive species or diseases, including compliance with obligations under the QLD Biosecurity Act 2014.</li> <li>Fuel and chemical storage in accordance with Australian Standards.</li> <li>Erosion and sediment controls.</li> <li>Rehabilitation of all significantly disturbed land in accordance with the PL94 EA and Rehabilitation Plan. Rehabilitation includes the use of native groundcover species when there is no specific landholder requested seed mix.</li> <li>Beneficial use of produced water in accordance with the water quality limits under the PL 94 EA and beneficial use approvals under the Waste Reduction and Recycling Act 2011 (e.g. ANZECC water quality limits for irrigation).</li> <li>Implementation of pest, weed, and disease/hygiene management measures to minimise the potential for introduction or spread of invasive species or diseases, including compliance with obligations under the QLD Biosecurity Act 2014.</li> <li>Prohibition of keeping domestic animals (e.g. dogs or cats) within the PL94 Development Area and surrounds by personnel employed for the Project.</li> </ul>
Koala	<ul> <li>Avoidance of Direct Impacts</li> <li>No direct impacts to koala habitat categorised as climate refugia will be permissible at any time throughout the life of the Project.</li> <li>Direct impacts to koala breeding and foraging habitat are permitted only to a cumulative maximum disturbance limit of 2.0 ha. Direct impacts to koala shelter habitat and dispersal habitat are permitted</li> </ul>	<ul> <li>Mitigation &amp; Management Measures for Indirect Impacts</li> <li>Koala individuals and habitat within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. The presence and extent of koala habitat (breeding and foraging) within 30 m of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence will be assumed if such findings are supported by the MNES mapping (i.e. potential habitat mapped).</li> <li>During the site scouts, the presence and extent (measured by canopy cover) of koala dispersal trees (recognised as a plant of any genera that has a tree diameter that is equal to or greater than 10 cm when measured at 1.3 m above the ground (referred as &gt;10 cm DBH) within areas of koala dispersal habitat) will be assessed as part of habitat verification and mapping. This data will be used</li> </ul>



MNES	Approach	Additional Mitigation and Management Measures
	only to a cumulative maximum disturbance limit of 6.9 ha and 400.0 ha respectively. Of the 400 ha limit for dispersal habitat, 1% (or 4 ha) may comprise koala dispersal trees measured by canopy cover.	to provide guidance on micro-siting and inform the site-specific determination of impacts to dispersal habitat (including area of dispersal tree cover loss predicted). The subsequent site scout ecology report will detail the findings and include an assessment of predicted residual changes to koala dispersal capacity as a result of the Project, relative to the baseline. No functional loss of koal dispersal habitat will be permitted.  • As the majority of the Project Area is mapped as koala dispersal habitat, impacts on the species are largely unavoidable. Siting of infrastructure will preferentially retain breeding and foraging habitat over shelter and dispersal habitat.  • The micro-siting of Project infrastructure within areas of koala dispersal habitat proposed for clearing will prioritise the retention of koala dispersal trees (highest priority) followed by any native woody vegetation.  • Within areas of koala breeding and foraging habitat to be cleared, micro-siting will aim to maximise the retention of Brigalow Belt Locally important koala trees, as defined in A review of koala habitat assessment criteria and methods (Youngentob, Marsh and Skewes, 2021).  • Within areas of koala shelter habitat to be cleared, micro-siting will aim to maximise the retention of Brigalow Belt ancillary koala trees, as defined in A review of koala habitat assessment criteria and methods (Youngentob, Marsh and Skewes, 2021).  • Clearing must be carried out in a way that ensures any koala present have time to move out of the clearing site without human intervention.  • Where clearing is proposed for areas of koala habitat (breeding and foraging and shelter habitat categories), a fauna spotter-catcher must be present. Prior to vegetation clearing commencing, the fauna spotter-catcher will include canopy searches for koalas. If a koala is located during clearing activities:
		<ul> <li>The individual must not be forcibly relocated.</li> <li>Any tree which houses a koala as well as any tree with a crown that overlaps that tree will not be cleared until the koala vacates the tree on its own volition.</li> <li>Allow a clearing buffer surrounding the tree, equal to the height of the tree or deemed suitable by the fauna spotter-catcher.</li> <li>Any injured koala (and fauna in general) should be transported to a vet or recognised wildlife carer.</li> <li>Requirements for koalas subject to handling to be examined and if suspected of Chlamydia infection will be taken to a predesignated veterinarian/wildlife care facility for treatment prior to release.</li> <li>To reduce the potential for direct mortality, all vehicles and pedestrians will remain within designated access tracks in areas of koala habitat.</li> <li>To minimise the chances of collision, in known koala occurrence areas, speed limits (in private areas) will be reduced to 40 km/hr or less and signage will be installed that indicates species presence. It is noted that the species is currently considered a potential occurrence and is not known to the Project Area.</li> <li>If a koala is sighted within the Project Area, the details of this observation will be communicated via the daily toolbox and on notices in the common areas of the site office in order to increase vigilance in the area and compliance with enforced speed limits.</li> <li>In the unlikely event that a koala is killed as a result of Project activities, DCCEEW will be notified within a maximum period of 2 business days.</li> <li>All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest and weed species within areas of habitat.</li> </ul>
Greater glider (southern and centra	Avoidance of Direct Impacts	When clearing greater glider (southern and central) foraging and dispersal habitat, micro-siting will aim to retain the tallest trees



MNES	Approach	Additional Mitigation and Management Measures
	<ul> <li>No direct impacts to greater glider denning habitat (maximum disturbance limit of 0.0 ha).</li> <li>Direct impacts to greater glider foraging and dispersal habitat are permitted to a cumulative maximum disturbance limit of 2.0 ha.</li> <li>Minimise Impacts</li> <li>Rehabilitate disturbances</li> </ul>	<ul> <li>present within the assessed area, to ensure availability of gliding launch points is retained.</li> <li>During the site scouts, ecologists will assess tree height and size relative to known glide angle to determine if an area meets the habitat definition and how habitat exists functionally in the landscape (i.e. as an isolated patch or as a habitat corridor). This data will also be used to determine if proposed infrastructure siting is in accordance with the below measure that specifies that clearing must not create gaps within a habitat corridor that are impassable.</li> <li>Where clearing is proposed within a greater glider (southern and central) habitat corridor, as defined in the MNES habitat criteria, site scout data collected by a qualified ecologist will be used to understand how much wider existing gaps can be made. Clearing required for construction of the Project will not create gaps in the habitat corridor that are too great for the species to glide across based on known glide ratios (i.e. turn the corridor into two isolated patches or corridors, thereby reducing habitat connectivity within the Project Area). Refer Appendix A Habitat Descriptions, for full definition, as well as the following clarification:         <ul> <li>Foraging and dispersal habitat (individual patch or corridor) must occur within gliding distance (calculated based on known glide angle (40°) and tree height, or 100 m if not able to calculate accurately) of denning habitat, given the species' reliance on hollow-bearing trees to shelter during the day.</li> </ul> </li> </ul>
Squatter pigeon  Australian painted snipe	<ul> <li>Avoidance of Direct Impacts</li> <li>Direct impacts to squatter pigeon         (southern) breeding habitat and foraging         habitat are permitted only to a cumulative         maximum disturbance limit of 1.0 ha.         Direct impacts to squatter pigeon         (southern) dispersal habitat are permitted         only to a cumulative maximum disturbance         limit of 40.0 ha. Direct impacts to potential         squatter pigeon (southern) habitat will be         avoided to the maximum extent possible.</li> <li>Direct impacts to Australian painted snipe         seasonal breeding, foraging and dispersal         habitat are permitted only to a cumulative         maximum disturbance limit of 6.0 ha.         Direct impacts to potential Australian         painted snipe habitat will be avoided to the         maximum extent possible.</li> <li>Where clearing is proposed within         squatter pigeon (southern) dispersal         habitat, micro-siting efforts will aim         to retain mature trees that may         provide shelter from aerial         predators.</li> <li>Avoidance of disturbance to         breeding and foraging habitat for         the Australian painted snipe.         Minimise Impacts</li> <li>Minimise Impacts</li> <li>Minimising disturbance within other         habitat for these species</li> </ul>	<ul> <li>Mitigation &amp; Management Measures for Indirect Impacts</li> <li>Squatter pigeon (southern) and Australian painted snipe individuals, nests and habitat within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. Nest locations should be recorded and mapped. The presence and extent of squatter pigeon (southern) and Australian painted snipe habitat within 30 m of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence will be assumed if such findings are supported by the MNES mapping (i.e. potential habitat mapped).</li> <li>Where clearing is proposed for areas of squatter pigeon (southern) or Australian painted snipe habitat (all utilisation categories), a fauna spotter-catcher must be present.</li> <li>Immediately prior to clearing any squatter pigeon (southern) or Australian painted snipe habitat, the fauna spotter-catcher will complete flushing transects to encourage the movement of individuals out of the impact area.</li> <li>As both the squatter pigeon (southern) and Australian painted snipe nests on the ground and is at high risk of direct mortality, potential nests should also be searched for by the fauna spotter-catcher immediately prior to clearing potential habitat, with any located demarcated.</li> <li>If a squatter pigeon (southern) nest is located and the area is not already identified as breeding habitat, work will temporarily cease. The Protocol will identify the next steps, including but not limited to, re-categorised the area as breeding habitat and determining if predicted impact areas are within the cumulative disturbance limits for squatter pigeon (southern) breeding habitat.</li> <li>If direct disturbance to a squatter pigeon (southern) or Australian painted snipe nest is required, this will be managed under an approved DESI SMP (high-risk)</li></ul>



MNES	Approach	Additional Mitigation and Management Measures
	Rehabilitate disturbances	is noted that both species are currently considered a potential occurrence and are not known to the Project Area.
		• In the unlikely event that a squatter pigeon (southern) or Australian painted snipe is killed as a result of Project activities, DCCEEW will be notified within a maximum period of 2 business days.
		• Clearing in and around potential squatter pigeon (southern) and Australian painted snipe water sources (i.e. farm dams and wetlands) will be preferentially avoided. Where clearing is proposed within or adjacent to Australian painted snipe habitat or a squatter pigeon (southern) water source, active erosion and sediment control measures will be implemented to mitigate potential habitat degradation.
		Water extraction activities at any potentially suitable water source for squatter pigeon (southern) or Australian painted snipe will be strictly controlled and monitored to ensure the continuation of the resource. Per waterbody, a single access point will be utilised for water extraction to minimise areas of disturbance and allow potentially occurring individuals to avoid the same area during construction.
		All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest and weed species within areas of habitat
Painted honeyeater	Avoidance of Direct Impacts  Direct impacts to painted honeyeater habitat are permitted only to a cumulative maximum disturbance limit of 6.9 ha.  Direct impacts to potential painted honeyeater habitat will be avoided to the maximum extent possible.  Minimise Impacts  Rehabilitate disturbances	Mitigation & Management Measures for Indirect Impacts
		<ul> <li>Painted honeyeater individuals and habitat within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. Trees or shrubs supporting abundant mistletoe or nest locations should be recorded (including mistletoe genus) and mapped. The presence and extent of painted honeyeater habitat within 200 m1 of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence will be assumed if such findings are supported by the MNES mapping (i.e. potential habitat mapped).</li> </ul>
		• During the site scouts, the diversity and abundance of mistletoe within areas of suitable habitat must be assessed and mapped. This data will inform the assessment by site scouts, regarding the impacts to foraging and dispersal habitat, and specifically any potential changes in habitat functionality. No loss of habitat functionality per patch will be permitted, as determined by a suitably qualified ecologist. This can be measured by:
		<ul> <li>Reduction in relative abundance: A loss of habitat functionality may occur in areas assessed using relative abundance, where there is a change in mistletoe abundance from rare to absent. Depending on the context, a reduction from abundant mistletoe to occasional mistletoe may not impact functionality.</li> </ul>
		<ul> <li>Reduction in individual plants with mistletoe: In areas assessed where individual plants have been mapped, any reduction &gt;10% may impact functionality.</li> </ul>
		• Within areas of painted honeyeater foraging and dispersal habitat that are proposed for clearing, micro-siting will preferentially retain trees containing the species preferred mistletoe, which are from the genus <i>Amyema</i> .
		Where clearing is proposed for areas of painted honeyeater habitat, a fauna spotter-catcher must be present.
		• Immediately prior to clearing any painted honeyeater habitat, the fauna spotter-catcher will complete canopy searches to identify any foraging individuals. The movements of any identified individuals should be monitored during the completion of clearing works to ensure they relocate of their own volition.
		In the unlikely event that a painted honeyeater is killed as a result of Project activities, DCCEEW will be notified within a maximum period of 2 business days.



MNES	Approach	Additional Mitigation and Management Measures
		All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest.
Vallandaliadalidan	Augideure of Divert Investor	Mitigation & Management Measures for Indirect Impacts
Yellow-bellied glider (south-eastern) Yakka skink	<ul> <li>Avoidance of Direct Impacts</li> <li>No direct disturbance to habitat is proposed for the Project.</li> <li>Minimise Impacts</li> <li>Minimising disturbance within areas adjacent.</li> <li>Rehabilitate disturbances in areas adjacent.</li> </ul>	<ul> <li>Threatened fauna individuals and habitat within the proposed infrastructure location will be identified and mapped by a suitably qualified ecologist during the site scouts completed as part of the Assess Project execution phase. The presence and extent of threatened fauna habitat within 30 m of the infrastructure location should also be assessed during the site scouts. Where this cannot be completed (i.e. land access restrictions), presence will be assumed if such findings are supported by the MNES mapping (i.e. potential habitat mapped).</li> </ul>
Boggomoss snail		<ul> <li>All areas of potential habitat (excluding Boggomoss snail) will be designated a high constraint area (i.e. only incidental surveys with no ground disturbance permitted) and no direct impacts as a result of the Project will occur (i.e. disturbance limit of 0.0 ha).</li> </ul>
Fitzroy River turtle		Boggomoss snail habitat that is confirmed via a site scout will become a no-go constraint area, to minimise mortality risks including accidental trampling.
Thereby haver earlie		<ul> <li>In the unlikely event that a fauna species listed threatened under the EPBC Act is killed as a result of Project activities,</li> <li>DCCEEW will be notified within a maximum period of 2 business days.</li> </ul>
White-throated snapping turtle		<ul> <li>All requirements within the Westside Weed Management Procedure (WCL-0000-HS-PRC-034) and Biosecurity Management Plan (WCL-0000-HS-PLN-010-010) will be implemented to minimise the introduction and spread of pest and weed species within areas of habitat.</li> </ul>
		<ul> <li>Measures outlined in the Westside Noise Management Plan (WCL-0000-HS-PLN-009), Erosion and Sediment Control Procedure (WCL-0000-HS-PRC-029) and Weed Management Procedure (WCL-0000-HS-PRC-034) will be implemented to minimise indirect impacts to the species.</li> </ul>
		<ul> <li>Project activities in areas adjacent that utilise chemicals, fuels and other pollutants will be carefully planned for and follow strict industry-standard protocols. Specific consideration will be given to the potential for contamination. Contingencies will be in place to ensure any accidental release or spill is immediately detected and managed, with corrective actions taken immediately. Measures relating to chemicals, fuels and other pollutants outlined in the EMP will be implemented to ensure potential indirect impacts on the species and its habitat are managed effectively.</li> </ul>
Potential migratory fo	uuna species	



MNES	Approach	Additional Mitigation and Management Measures
Migratory species Fork-tailed swift Satin Flycatcher Rufous fantail Common sandpiper Sharp-tailed sandpiper Latham's snipe	<ul> <li>Minimise Impacts</li> <li>Additional ecological assessments to identify the presence of these species.</li> <li>Minimise impacts</li> <li>Rehabilitate disturbances</li> </ul>	<ul> <li>Mitigation &amp; Management Measures for Indirect Impacts</li> <li>Implementation of pest, weed, and disease/hygiene management measures to minimise the potential for introduction or spread of invasive species or diseases, including compliance with obligations under the QLD Biosecurity Act 2014.</li> <li>Fuel and chemical storage in accordance with Australian Standards.</li> <li>Erosion and sediment controls.</li> <li>Rehabilitation of all significantly disturbed land in accordance with the PL94 EA and Rehabilitation Plan. Rehabilitation includes the use of native groundcover species when there is no specific landholder requested seed mix.</li> <li>Beneficial use of produced water in accordance with the water quality limits under the PL 94 EA and beneficial use approvals under the Waste Reduction and Recycling Act 2011 (e.g. ANZECC water quality limits for irrigation).</li> <li>Implementation of pest, weed, and disease/hygiene management measures to minimise the potential for introduction or spread of invasive species or diseases, including compliance with obligations under the QLD Biosecurity Act 2014.</li> <li>Prohibition of keeping domestic animals (e.g. dogs or cats) within the PL94 Development Area and surrounds by personnel employed for the Project.</li> </ul>



# 7. Environmental Constraints Reporting

The Westside 'Permit to Disturb' (PTD), documents the 'Assess Phase" process. This process includes an assessment and review of all constraints which are relevant to the proposed works. The assessment and review of the environmental constraints are a significant part of the PTD process and document, which from an environmental perspective of the proposed works. The PTD formally documents:

- How the proposed infrastructure complies with relevant environmental approval conditions.
- Site-specific or construction related environmental considerations.
- Any clearing that contributes to a disturbance limit for any MNES values.

The PTD includes all the relevant information to construct the infrastructure compliantly. The PTD is issued to all relevant internal stakeholders and contractors prior to any significant land disturbance activities being undertaken. A copy of Westside's PTD template is included in Appendix A.

Any direct and indirect disturbance to MNES values from Project activities will be documented with an annual report prepared and submitted to the Department of Climate Change, Energy, the Environment and Water (DCCEEW), that will include:

- Description and location of the works undertaken
- Records to demonstrate compliance with legislative conditions
- Description of the disturbance area and it's pre-disturbance values
- Extent of vegetation clearing completed and how such areas relate to maximum disturbance limits for the relevant MNES values.

Westside will notify the DCCEEW of any changes and subsequent updates to the "No-Go" or "High" constraint categories in the constraints mapping shown in Figure 2, based on the site surveys (undertaken in accordance with applicable guidelines), 10 business days prior to any clearance activities. If changes are made to the moderate constraint category shown in Figure 2, based on the site surveys (undertaken in accordance with applicable guidelines), this will be reported in an annual compliance report.

Disturbance information will be regularly updated in the Westside GIS to allow accurate tracking of the cumulative disturbance against the maximum disturbance limits set in section 3.1.



# 8. Abbreviations

Abbreviation	
CSG	Coal Seam Gas
DES	Department of Environment and Science
EA	Environmental Authority
EMP	Environmental Management Plan
EPBC Act	Environment Protection and Biodiversity Conservation Act 1999
На	Hectares
HVR	High Value Regrowth
ML	Mining Lease
MNES	Matters of National Environmental Significance
MSES	Matters of State Environmental Significance
NC Act	Nature Conservation Act (1992)
PL	Petroleum Lease
PMST	Protected Matters Search Tool
RE	Regional Ecosystem
RoW	Right of Way
SPRAT	Species Profile and Threats Database
TEC	Threatened Ecological Community
The Project	PL94 development area
UWIR	Underground Water Impact Report
WoNS	Weeds of National Significance



# APPENDIX A HABITAT DESCRIPTIONS



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes			
Brigalow (Acacia harpophylla dominant and co-	Brigalow ( <i>Acacia harpophylla</i> dominant and co-dominant) ecological community (Brigalow TEC)						
The Brigalow ecological community is characterised by the presence of Brigalow (Acacia harpophylla) as one of the three most abundant tree species. Brigalow is usually either dominant in the tree layer or codominant with other species such as Casuarina cristata (Belah), other species of Acacia, or species of Eucalyptus. The ecological community has a considerable range of vegetation structure and composition united by a suite of species that tend to occur on acidic and salty clay soils.	-	Approved Conservation Advice for the Brigalow (Acacia harpophylla dominant and co- dominant) ecological community (Department of the Environment, 2013a).	The listed ecological community is limited to patches that meet the key diagnostic characteristics and condition thresholds outlined in the Conservation Advice (Department of the Environment, 2013a).	As described in the communities Approved Conservation Advice (Department of the Environment, 2013a), there are several additional considerations (Section 1.7.5, pg 7) that should be taken into account when applying the key diagnostic characteristics and condition thresholds. Judgement of whether an EPBC-protected ecological community is present at a particular site should focus on how an area meets the description, particularly the key diagnostic characteristics for the national ecological community. Areas that contain existing infrastructure are not part of the listed ecological community.			
Coolibah – Black Box Woodlands of the Darling	Riverine Plain	s and the Brigalow Belt So	outh Bioregions (Coolibah Ti	EC)			
The Coolibah ecological community represents occurrences of one type of semi-arid to humid subtropical woodland where <i>Eucalyptus coolabah</i> subsp. <i>coolabah</i> (Coolibah) and/or <i>Eucalyptus largiflorens</i> (Black Box) are the dominant canopy species and where the understorey tends to be grassy.	-	Commonwealth Listing Advice on Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions (Threatened Species Scientific Committee, 2011).	The listed ecological community is limited to patches that meet the description, key diagnostic characteristics and the condition thresholds outlined in the Commonwealth Listing Advice (Threatened Species Scientific Committee, 2011).	As described in the communities Listing Advice (Threatened Species Scientific Committee, 2011), there are several additional considerations (pg 9) that should be taken into account when applying the condition thresholds.			
Poplar Box Grassy Woodland on Alluvial Plains (	Poplar Box TI	C)					
The Poplar Box ecological community is typically a grassy woodland with a canopy	-	Conservation Advice (including listing	The listed ecological community is limited to	As described in the communities Conservation Advice (Threatened Species Scientific Committee,			



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
dominated by <i>Eucalyptus populnea</i> and understorey mostly of grasses and other herbs. The ecological community mostly occurs in gently undulating to flat landscapes and occasionally on gentle slopes on a wide range of soil types of alluvial and depositional origin.		advice) for the Poplar Box Grassy Woodland on Alluvial Plains (Department of the Environment and Energy, 2019).	patches that meet the key diagnostic characteristics and condition thresholds outlined in the Conservation Advice (Department of the Environment and Energy, 2019).	2011), the additional factors noted in Section 3.2.3 (pg 19) and critical areas noted in Section 3.3 (pg 16) also should be taken into consideration.
Xerothamnella herbacea				
Open forests and woodland habitats where brigalow ( <i>Acacia harpophylla</i> ) dominates or codominates on heavy soils. Often in leaf litter and is associated with gilgais.	Suitable habitat	Approved Conservation Advice for Xerothamnella herbacea (Department of the Environment Water Heritage and the Arts, 2008b).	-	Habitat requirements are supported by known records of the species across its distribution.
Any patch of vegetation confirmed via field survey to contain the species.	Known habitat			
Solanum dissectum				
Open forests and woodland habitat where brigalow ( <i>Acacia harpophylla</i> ) and/ or lapunyah ( <i>Eucalyptus thozetiana</i> ) characterise the dominant vegetation types on solodic clay soils.	Suitable habitat	Conservation Advice Solanum dissectum (Threatened Species Scientific Committee,	-	Habitat requirements are supported by known records of the species across its distribution.
Any patch of vegetation confirmed via field survey to contain the species.	Known habitat	2016b).		
Solanum johnsonianum				
Open forest and woodland habitats where brigalow ( <i>Acacia harpophylla</i> ) dominates or codominates on heavy cracking clay soils. Other associated species include lapunyah ( <i>Eucalyptus thozetiana</i> ) with and understory of wilga ( <i>Geijera parviflora</i> ).	Suitable habitat	Conservation Advice Solanum johnsonianum (Threatened Species Scientific Committee, 2016d).	-	Habitat requirements are supported by known records of the species across its distribution.
Any patch of vegetation confirmed via field survey to contain the species.	Known habitat			



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
Ornamental snake ( <i>Denisonia maculata</i> )				
Vegetation, generally comprising woodlands and open forests but also non-remnant areas associated with 'moist areas' (gilgai and depressions, undulating claypans, lake margins, wetlands and floodplains) that support key refuge microhabitat (i.e. network of soil cracks including deep cracks). Also includes fringing riparian vegetation along watercourses where substitute refuge microhabitat is supported (ground timber and exposed roots). Vegetation functionally connected to moist areas or watercourses that have low-levels, absent or 'impacted' refuge microhabitat may also be suitable if the areas provide temporary foraging opportunities (i.e. support frog habitat) and/or facilitate movement to other areas of suitable habitat.	Suitable habitat	Approved Conservation Advice for Denisonia maculata (Ornamental Snake) (Threatened Species Scientific Committee, 2014a) and Denisonia maculata in Species Profile and Threats Database (SPRAT) (Department of the Environment, 2025).	as environments that generally support ponds of surface water for extended periods. During the dry season, the presence of wetland indicator species may be used to make this assessment. Impacted microhabitat includes soil cracks that are compromised by high levels of exotic vegetation incursion (i.e. high biomass grass incursion or weed species) or cattle grazing activities (which would compact soil cracks and breakdown timber). Movement of individuals is not facilitated if	The ornamental snake can be found on floodplains, undulating clay pans and along the margins of swamps, lakes and watercourses. It also occurs on adjoining areas of elevated ground and has been recorded in woodlands and open woodlands of coolabah, poplar box, and brigalow, and in fringing vegetation along watercourses (WWF-Australia/QMDC, 2008 in Threatened Species Scientific Committee, 2014a). They feed almost exclusively on frogs (Threatened Species Scientific Committee, 2014a) and therefore only persist in areas that support habitat for frogs too. As described on the species SPRAT profile (2025), ornamental snakes are nocturnally active, sheltering during the day under fallen timber, rocks, bark and in deep soil cracks. The species is probably active year round with the exception of the cooler months, with peak activity likely to be early summer through to the wet season. During dry times the snake can remain inactive in suitable shelter sites for months (Agnew 2010 pers. comm.; DSEWPaC 2011m; Shine 1983). The species is ground-dwelling and not known to utilise trees at any time.
Vegetation that is not associated with or connected to 'moist areas' (gilgai and depressions, undulating claypans, lake margins, wetlands and floodplains). Frog habitat is not supported, and area does not facilitate movement to other areas of suitable habitat. This includes vegetation that has been subject to recent land use change or earthworks (i.e. cropping, tilling or ploughing).	Not habitat			



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
Eucalypt forests or woodlands on alluvial associated with permanent water features (dams, wetlands and/or watercourses) that are resilient to drying conditions, likely to provide a cooler refuge during periods of bushfire and heatwaves.	Climate refugia	Conservation Advice for Phascolarctos cinereus (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory (Department of Agriculture Water and the Environment, 2022c) and A review of koala habitat assessment criteria and methods (Youngentob, Marsh and Skewes, 2021).	Brigalow Belt Locally important koala tree species as listed in Table 3, pg 42, of Youngentob, Marsh and Skewes (2021). Brigalow Belt Ancillary habitat tree species as listed in Table 4, pg 43, of Youngentob, Marsh and Skewes (2021).	Koalas may survive in refuge areas where microclimates such as deep gullies, caves, cliffs or dense vegetation provide refuge from heat, and perennial water results in leaf-water content remaining high (Runge et al. 2021a in Department of Agriculture Water and the Environment, 2022b). Surface water availability may be an important ancillary habitat element of refugia (Youngentob, Marsh and Skewes, 2021).
Any forest or woodland that contains Brigalow Belt 'locally important koala trees' (LIKTs, as described by Youngentob, Marsh and Skewes, (2021)) that is not climate refugia.	Breeding and foraging			Koalas are tree-dwelling, obligate folivores (leaf eaters) with a highly specialised diet. The koala's diet is defined by the availability and palatability of a limited variety of <i>Eucalyptus</i> , <i>Corymbia</i> and <i>Angophora</i> species (Department of Agriculture Water and the Environment, 2022c). Koala browsing preferences show regional differences which are influenced by the chemical profiles and water content of different target food leaves. In the Youngentob, Marsh and Skewes (2021) document, region-specific, locally important koala tree species that can be used as a starting point to determine whether an area could be habitat for the EPBC Act-listed koala, are identified.
Any forest or woodland community which does not contain LIKTs and may or may not contain Brigalow Belt 'ancillary habitat trees' (as described by Youngentob, Marsh and Skewes, (2021)).	Shelter			Research suggests that koalas may seek out certain trees, including non-eucalypts, for specific thermal properties that provide shade or offer cooler or warmer surface temperatures to help the koala thermoregulate (Ellis et al. 2010 and Briscoe et al. 2014 in Youngentob, Marsh and Skewes, 2021). Patches of native forest or woodland can act as stepping stones and provide a corridor of connectivity between larger habitat patches (Youngentob, Marsh and Skewes, 2021). In describing ancillary habitat trees, Youngentob, Marsh and Skewes (2021) state "[a]lthough, these



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
				species do not constitute habitat in the absence of LIKT, they are thought to make an important and potentially necessary contribution to koala habitat in many regions. For this reason, we have also included a separate table for each KMB (region) that includes ancillary habitat trees that are unlikely to be preferred browse trees, but are likely to make important contributions to koala habitat based on documented koala use in peerreviewed literature, SEPP (SEPP 2021), and/or direct feedback (Appendix A)".
Vegetation that provides a safe intervening ground for the species to move across the landscape (i.e. free from impediments), particularly to and from areas of potential breeding and foraging habitat. This includes non-remnant shrublands and grasslands, which generally support sporadic small stands of trees and/or individual paddock trees. Excludes areas containing infrastructure, active mining areas, cropping, farm dams and other water bodies as well as areas that are physically inaccessible (e.g. exclusion fencing is present).	Dispersal		Impediment is defined as a natural or artificial landscape feature that interferes with the safe movement of koalas across a landscape, such as roadways (Youngentob, Marsh and Skewes, 2021). When defining a patch of dispersal habitat, the immediate area/s comprising the impediment should be excluded.	Scattered trees can provide essential shelter and food to help koalas move more safely for longer distances across the landscape during dispersal. Walking on the ground is how koalas typically travel between trees, so the ground itself forms an essential component of koala habitat, without which movement between trees would be hindered or impossible (Youngentob, Marsh and Skewes, 2021). The safety or hostility of this matrix also contributes to the overall quality of habitat (Department of Agriculture Water and the Environment, 2022d).
Painted honeyeater (Grantiella picta)	1			
Woodlands, forests and riparian woodlands dominated by species from the genera <i>Eucalyptus, Acacia, Melaleuca, Casuarina</i> and/or <i>Callitris</i> , that support mistletoe.	Foraging and dispersal	Conservation Advice Grantiella picta painted honeyeater (Threatened Species Scientific Committee, 2015b) and National Recovery Plan for the Painted Honeyeater	-	The greatest concentrations and almost all records of painted honeyeater breeding come from south of 26°S, on inland slopes of the Great Dividing Range between the Grampians, Victoria and Roma, Queensland (Higgins et al. 2001 in Department of Agriculture, Water and the Environment, 2021). The Project Area occurs between 24°30′ degrees and 24°40′ degrees. As



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
		(Grantiella picta) (Department of Agriculture, Water and the Environment, 2021).		such, all areas of potential habitat that are subsequently confirmed to contain mistletoe are considered suitable for foraging and dispersal purposes only.
Squatter pigeon (southern) (Geophaps scripta so	cripta)			
Any remnant or regrowth open-forest to sparse, open-woodland or scrub dominated by <i>Eucalyptus, Corymbia, Acacia</i> or <i>Callitris</i> species, on sandy, gravelly or loamy soils with patchy perennial tussock grasses or a mix of perennial tussock grasses and low shrubs and forbs (including but not limited to areas mapped as Queensland land zones 3, 5 or 7) and within 1 km of a permanent or seasonal water source with gently sloping banks.  Any remnant or regrowth open-forest to sparse, open-woodland or scrub dominated by <i>Eucalyptus, Corymbia, Acacia</i> or <i>Callitris</i> species, on sandy, gravelly or loamy soils with patchy perennial tussock grasses or a mix of perennial tussock grasses and low shrubs and forbs (including but not limited to areas mapped as Queensland land zones 3, 5 or 7) and within 3 km of a permanent or seasonal water source with gently sloping banks.	Breeding	Conservation Advice Geophaps scripta scripta squatter pigeon (southern) (Threatened Species Scientific Committee, 2015a) and Geophaps scripta scripta in Species Profile and Threats Database (SPRAT) (Department of the Environment, 2025).	Water sources include farm dams, lacustrine wetlands and watercourses with a stream order of 2 or higher.	The subspecies' SPRAT (2025) profile states:  Soil landscapes are good indicators of where natural, foraging and breeding habitats for the subspecies occur (Squatter Pigeon Workshop 2011). Well-draining, gravelly, sandy or loamy soils support the open-forest to woodland communities with patchy, tussock-grassy understories that support the subspecies' foraging and breeding requirements.  Breeding habitat and foraging habitat occurs within 1 km and 3 km of a suitable waterbody respectively (Squatter Pigeon Workshop 2011).  The Squatter Pigeon (southern) is known to access suitable waterbodies to drink on a daily basis. The subspecies prefers to drink where there is gently sloping, bare ground on which to approach and stand at the water's
Any forest or woodland occurring between patches of breeding or foraging habitat that facilitates movement between patches of breeding habitat, foraging habitat and/or water sources, and areas of cleared land with scattered trees less than 100 m wide linking areas of suitable breeding and/or foraging habitat.	Dispersal			which to approach and stand at the water's edge.  Where scattered trees still occur, and the distance of cleared land between remnant trees or patches of habitat does not exceed 100 m, individuals may be found foraging in, or moving across modified or degraded



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes		
				environments (Squatter Pigeon Workshop 2011).		
Greater glider (southern and central) ( <i>Petauroides volans</i> )						
Eucalypt forests and woodlands (patches or corridors ≥3 ha) that support potential hollowbearing trees, comprising habitat or potential habitat regional ecosystems (REs), OR REs dominated or co-dominated by the primary associated canopy species (listed below) as per Eyre, Smith, et al. (2022). Eucalypt forests and woodlands that support potential hollow bearing trees but do not align with an RE (i.e. non-remnant communities) may also comprise habitat where dominated by Corymbia intermedia, Corymbia citriodora, Eucalyptus tereticornis, Eucalyptus portuensis, Eucalyptus moluccana and/or Eucalyptus crebra.	Denning	Conservation Advice for Petauroides volans (greater glider (southern and central)) (Department of Climate Change, Energy, the Environment and Water, 2022a) and the Guide to greater glider habitat in Queensland (Eyre, Smith, et al., 2022).	Potential hollow-bearing trees refers to both live and dead trees of any genera that are ≥30 cm DBH (Department of Climate Change, Energy, the Environment and Water, 2022a).  Habitat and potential habitat REs are those determined by (Eyre, Smith, et al., 2022).  A corridor refers to a series of habitat patches	The greater glider (southern and central) is largely restricted to eucalypt forests and woodlands of eastern Australia (Department of Climate Change, Energy, the Environment and Water, 2022a). The Guide to greater glider habitat in Queensland (Eyre, Smith, et al., 2022) provides a detailed assessment of the species' habitat requirements in Qld specifically, based on quantitative and qualitative data including expert opinion. As detailed in the guide, habitat and potential habitat was categorised using the Qld RE framework. From this, six tree species were identified as dominant or co-dominant species to the majority of greater glider habitat.		
Eucalypt forests and woodlands (patches or corridors ≥3 ha) with a canopy height >10 m that do not support potential hollow-bearing trees, comprising habitat or potential habitat regional ecosystems (REs), OR REs dominated or co-dominated by the primary associated canopy species (listed below) as per Eyre, Smith, et al. (2022). Eucalypt forests and woodlands that do not align with an RE (i.e. non-remnant communities) may also comprise habitat where dominated by <i>Corymbia intermedia</i> , <i>Corymbia citriodora</i> , <i>Eucalyptus tereticornis</i> , <i>Eucalyptus portuensis</i> , <i>Eucalyptus moluccana</i> and/or <i>Eucalyptus crebra</i> .  Foraging and dispersal habitat (individual patch or corridor) must occur within gliding distance (calculated based on known glide angle and	Foraging and dispersal		(any combination of 'denning' and 'foraging and dispersal' patches) that are separated by distances the species is capable of gliding across, based on its glide angle (40°) and the height of the vegetation. In determining if a corridor is present, potential habitat outside of the Project Area must be considered. Where these areas cannot be field validated, the	They use gliding locomotion to move between trees and are dependent on tree cover for movement through their home ranges. Wakefield (1970) states that the glide angle for this species is approximately 40° based on extensive field observations. The species is known to be very clumsy when moving along the ground and highly vulnerable to terrestrial predators (Fleay 1947), suggesting there is a strong preference to land on a tree trunk. Noting this, the glide angle and other factors (such as the fact that launch points are unlikely to be the very top of the tree), low woodlands (i.e. canopy 10 m or less) do not facilitate movement.  During the day the species shelters in tree hollows, with a particular preference for large hollows (diameter >10 cm) in large, old trees.  Multiple dens are used by an individual. Tree		



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
tree height, or 100 m if not able to calculate accurately) of denning habitat, given the species' reliance on hollow-bearing trees to shelter during the day.			precautionary principle should apply.	hollows can be difficult to detect in ground-based surveys. The presence of trees with diameter at breast height >30 cm can be used as a proxy measure for tree hollows used by greater gliders in Queensland (Eyre et al. 2021 in Department of Climate Change, Energy, the Environment and Water, 2022a).  Patch size is likely to influence greater glider occupancy of habitat. Simulations suggest that habitat patches as small as 3 ha can contribute to the persistence of greater gliders, depending on the characteristics of landscape context (McCarthy and Lindenmayer 1999 in Eyre et al., 2022). Individual home ranges are typically relatively small (1–4 ha) but may reach up to 11 ha in hollow-limited environments (Smith et al. 2007). Greater gliders have been found in habitat patches <10 ha in some fragmented and remnant forest patches in the southern part of their geographic range (Pope et al. 2004; Lindenmayer 2002), but may require larger habitat patches in Queensland (Eyre 2006). As such, a minimum patch/corridor size of 3 ha has been considered appropriate given field survey data indicates the majority of the Project Area is a hollow-limited environment (the only exception being the Dawson River riparian zone).
Yellow-bellied glider (south-eastern) (Petaurus	australis aust	ralis)	1	
Floristically diverse, mature eucalypt woodlands and forests dominated by smoothbarks or half-barks, comprising patches or corridors ≥50 ha, that may support (now or in the future) large hollow-bearing trees.	Denning, foraging and dispersal	Conservation Advice for Petaurus australis australis (yellow-bellied glider (south-eastern)) (Department of Agriculture Water and	A corridor refers to a series of patches that are separated by distances the subspecies is capable of gliding across, based on it's glide ratio (2:1) and the	The subspecies has specific habitat requirements and occupies a large and exclusive home range of approximately 50-65 ha. Due to these large home ranges, large areas of forests are required to maintain subpopulation viability (Department of Agriculture Water and the Environment, 2022a). The subspecies has very low dispersal capabilities



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
		the Environment, 2022a).	height of the vegetation. In determining if a corridor is present, potential habitat outside of the Project Area must be considered. Where these areas cannot be field validated, the precautionary principle should apply.	over spaces larger than its gliding distance.  Management should be informed by average gliding performance (25.2 m), and it is suggested a glide ratio (horizontal distance/height dropped) of 2.0 should be used to estimate gliding distance (Goldingay 2014 in Department of Agriculture Water and the Environment, 2022a). There is no evidence that indicates the subspecies may utilise other vegetation communities or habitat types for any part of their life-cycle including dispersal.  Smooth-barked eucalypts are important due to the range of foraging substrates (and therefore food resources) they provide. They also require some level of floristic diversity to provide a yearround food supply, and they are unlikely to persist in forests dominated by only one or two tree species (Kavanagh 1987a in Department of Agriculture Water and the Environment, 2022a). During the day, they shelter in hollows found in large, old trees, usually more than one metre in diameter (Kambouris et al. 2013).
White-throated snapping turtle (Elseya albagula	) and Fitzroy	River turtle (Rheodytes le	ukops)	
Permanent waters of rivers and streams with deep pools that may be permanently or periodically inter-connected by shallow riffles.	Breeding and foraging	Conservation Advice Elseya albagula White- throated snapping turtle (Threatened Species Scientific Committee, 2014b), National Recovery Plan for the White Throated Snapping Turtle (Department of Agriculture, Water and the Environment, 2020) and Conservation	-	Though both species are apparently capable of moving across relatively short distances of dry riverine habitat at least in seasonally favourable conditions (e.g. during rainy weather), neither species is known to use ephemeral, non-flowing lacustrine habitat such as swamps and billabongs, or farm dams (Hamann et al. 2007 and Limpus et al. 2011a in GHD, 2016).



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
		Advice for Rheodytes leukops (Fitzroy River turtle) (Department of Climate Change Energy the Environment and Water, 2024a).		
White-throated needletail (Hirundapus caudacu	tus)			
Includes a range of habitats, although more often over wooded areas, where it is almost exclusively aerial.	Foraging and dispersal	Conservation Advice Hirundapus caudacutus White-throated Needletail (Threatened Species Scientific Committee, 2019) and Draft referral guideline for 14 birds listed as migratory species under the EPBC Act (Department of the Environment, 2015).	-	The species does not breed in Australia. Although they occur over most types of habitat, they are recorded most often above wooded areas, including open forest and rainforest, and may also fly below the canopy between trees or in clearings (Higgins 1999 in Threatened Species Scientific Committee, 2019).
Australian painted snipe (Rostratula australis)				
Shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. They also use other 'moist areas' such as inundated or waterlogged grasslands (including those that support gilgai), saltmarsh, dams, rice crops, sewage farms and bore drains. Dominant vegetation in occupied wetlands may include one of more of these elements: grass (e.g. canegrass <i>Eragrostis australasica</i> ), sedge, and nardoo ( <i>Marsilea</i> ), in sward or tussock form; clumps of rushes or reeds; samphire dwarf shrubland; and open-shrubland of lignum ( <i>Duma</i> spp.), river cooba (belalie) <i>Acacia stenophylla</i> .	Seasonal breeding, foraging and dispersal	Approved Conservation Advice for Rostratula australis (Australian painted snipe) (Department of Sustainability Environment Water Population and Communities, 2013) and National Recovery Plan for the Australian Painted Snipe (Rostratula australis) (Department of Climate Change, Energy, the	Moist areas are defined as environments that generally support ponds of surface water for extended periods. During the dry season, the presence of wetland indicator species may be used to make this assessment.	Due to the highly secretive behaviour and concealing habitats commonly used, the specific habitat requirements of the Australian Painted Snipe are much less well known than for most other Australian waterbirds (Department of Climate Change, Energy, the Environment and Water, 2022b). The Australian Painted Snipe generally inhabits shallow terrestrial freshwater (occasionally brackish) wetlands, including temporary and permanent lakes, swamps and claypans. It can use modified habitats that are flooded, such as low-lying woodlands converted to grazing pasture, rice farms, sewage farms, dams, bores and irrigation schemes (Marchant and Higgins 1993 in Department of Climate Change,



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
		Environment and Water, 2022b).		Energy, the Environment and Water, 2022b). Nest records are all, or nearly all, from or near small islands in freshwater wetlands, with a combination of very shallow water, exposed mud, dense low cover and sometimes some tall dense cover (Rogers et al. 2005 in (Department of Climate Change, Energy, the Environment and Water, 2022b).
Yakka skink (Egernia rugosa)				
Dry sclerophyll forests, woodlands and scrub that support suitable refuge microhabitat including but not limited to, large hollow logs, cavities or burrows under large fallen trees, tree stumps, logs, stick-raked piles, large rocks and rock piles, dense ground-covering vegetation, and deeply eroded gullies, rabbit warrens, tunnels and sinkholes.	Breeding and foraging	Approved Conservation Advice for Egernia rugosa (Yakka Skink) (Department of the Environment, 2014) and Draft Referral guidelines for the nationally listed	-	Colonies of presumably related individuals share a system of burrows dug under or between partly buried rocks or logs (especially very large logs, if available), into old root tracts or at the base of large trees or stumps (QMDC 2008 in Department of Sustainability, Environment, Water, 2011). They may also utilise old rabbit warrens, deep gullies and tunnel erosion and sinkholes. Burrows around
Any patch of potential breeding and foraging habitat (as described above) that has been subject to field assessment (effort appropriate to site size and inclusive of targeted yakka skink search transects / diurnal searches) and determined to not contain any potential burrows or latrine sites.	Not habitat	Brigalow Belt reptiles (Department of Climate Change, Energy, the Environment and Water, 2023a).	Latrine sites refer to communal defection sites. Should there be any uncertainty, photo vouchers including burrows (macro and microhabitat) and latrine sites, should be forwarded to the Queensland museum for positive identification and databasing of the record (Department of Sustainability, Environment, Water, 2011).	artificial structures such as under sheds, loading ramps and stick-raked piles are also common.  Ehmann (1992) and Wilson and Knowles (1987) report that the yakka skink, like several related species, has communal defecation sites near permanent burrows. They are extremely secretive and seldom venture far from shelter sites, where they retreat to at the first sign of disturbance (Department of the Environment, 2014). Searching for burrow systems and communal defecation sites is the most reliable method of detection.  Given the yakka skink's longevity (up to 20 years), low fecundity (2-5 years to sexual maturity), high site-fidelity, and that populations are highly fragmented, this species may be prone to



Habitat Definition	Utilisation	Primary Reference/s	Key Criteria / Terms	Explanatory Notes
				Change, Energy, the Environment and Water, 2023a).
Boggomoss snail (Adclarkia dawsonensis)				
Riparian woodlands and forest, monospecific stands of Carnarvon fan palm <i>Livistona nitida</i> , open forest fringing ephemeral wetlands on the Dawson River floodplain and artesian mound springs, that support microhabitat including partially buried logs in moist conditions and accumulated leaf litter (including palm fronds) AND occur within the species predicted distribution.  Riparian/floodplain woodlands and forests must comprise a 'suitable regional ecosystem (RE)'.	Breeding and foraging	Recovery plan for the boggomoss snail Adclarkia dawsonensis (Department of Environment and Heritage Protection, 2017) and Adclarkia dawsonensis in Species Profile and Threats Database (SPRAT) (Department of the Environment, 2025b). There is no approved Conservation Advice for this species.	The species predicted distribution extent is based on the DCCEEW Species of National Significance (SNES) dataset (2024). Distributions are conservative as they have been generalised to a 1 km grid resolution (0.01°) (or ~10km for species classed as sensitive by respective States and Territories). Suitable REs (SPRAT, 2025) include: 11.3.3, 11.3.4, 11.3.25, 11.3.27, 11.3.36.	The Boggomoss snail's geographic distribution is precarious for the survival of the species and is very restricted. The species is only known from two sites on the Dawson River in south-eastern Queensland. The likelihood of Boggomoss Snails occurring elsewhere is low, as most of the suitable habitat in the area has been surveyed without any other evidence of occurrence of the snail being located (Threatened Species Scientific Committee, 2003).  The species SPRAT profile (2025) states that within the broad habitat types the species has been found in five REs as described under the Queensland Vegetation Management Framework, including RE 11.3.3, 11.3.4, 11.3.25, 11.3.27, 11.3.36. The boggomoss snail microhabitat has a critical requirement for deep, moist litter and fallen timber which provides food, shelter and egg-laying sites.



#### **APPENDIX B**

#### SITE SCOUT ECOLOGY ASSESSMENT METHODOLOGY



The purpose of this Ecological Assessment Methodology is to define the ecology survey methods to be applied prior to the commencement of any clearing or other works. These surveys are referred to in this report as site scout.

The area subject to ecological assessment as part of the site scout will include the proposed infrastructure location plus a 30 m buffer. The proposed infrastructure location is defined as the maximum spatial extent of Project-related work including equipment laydowns, vegetation clearing and other ground disturbance.

#### 1.0 Vegetation Community Assessment

Baseline assessments of the vegetation communities, including ground-truthed regional ecosystem (GTRE) mapping and threatened ecological community surveys, have been conducted to an acceptable level of detail. Acceptable survey effort has been applied to classify and map habitat areas for known, likely, and potentially occurring species and communities. The MNES habitat mapping includes potential habitat for all MNES identified as Known, Likely, or Potentially occurring within the Project area and is sufficiently detailed and supported by sufficient coverage of sampling points, however there is the potential for vegetation and ecological communities to change over the course of the Project.

The site scouts will be completed as part of the Assess Phase which is done prior to disturbances in the Project Area. Site scouts are done to reassess the vegetation, ecological communities and habitat present at the time of disturbance. The following sections detail the site scout methodology that will be implemented for the Project.

#### Regional Ecosystem Assessment

All vegetation within and immediately surrounding each proposed infrastructure footprint will be assessed, including the extent, classification and extent of ground-truth vegetation communities in accordance with the Methodology for surveying and mapping regional ecosystems and vegetation communities in Queensland, version 7.0 (Nelder et al. 2023). Where necessary, this will include tertiary and quaternary vegetation assessments, however it is likely that quaternary assessments will suffice in most situations, due to the assessments previously undertaken.

Quaternary site assessments will be necessary to verify Regional Ecosystems (REs) and previous vegetation mapping and confirm dominant characteristic species. During quaternary site assessments, the following information will be recorded (Neldner et al. 2023):

- Location;
- Dominant species present;
- Condition status (i.e., remnant, high-value regrowth, regrowth, non-remnant);
- Other notes, which may include land zone, structural codes, ecologically dominant layer (EDL) height, EDL cover, description of extent; and
- Time-encoded digital photographs will be taken as a reference.

Tertiary site assessments will be undertaken where Quaternary site assessments find that the vegetation present is indicative of a different RE to that which is currently mapped or remnant vegetation or High Value Regrowth is present where this is not currently mapped. Tertiary site assessments will be undertaken within a 10 m x 50 m quadrat, recording the following information (Neldner et al. 2023):



- Location
- Vegetation structure, mean height and percentage cover for each structural layer;
- Species composition of woody species, individual woody species cover by layer and basal area measure of abundance (of woody stems using the Bitterlich stick method);
- Species composition of the dominant or conspicuous species in the ground layer;
- Aspect and slope;
- Soil type;
- Landform;
- Disturbance type and severity;
- RE and remnant status; and
- Time-encoded digital photographs will be taken as a reference

Condition status for woody vegetation will be evaluated using the definitions of remnant vegetation under the Queensland *Vegetation Management Act 1999* (VM Act):

- Remnant: woody vegetation that has not been cleared or vegetation that has been cleared but where the dominant canopy has greater than 70 % of the height and greater than 50 % of the cover relative to the undisturbed height and cover of that stratum and is dominated by species characteristic of the vegetation's undisturbed canopy.
- High-value regrowth (HVR): areas previously cleared or disturbed (e.g. by wildfire) over
   15 years ago and containing woody vegetation floristically and structurally consistent with the RE but typically less than 70 % of the height and less than 50 % density of the RE.
- Regrowth or non-remnant: areas previously cleared or otherwise significantly disturbed.

#### Threatened Ecological Community (TEC) Assessments

Threatened Ecological Community assessments will be undertaken to confirm the presence and condition of TECs identified as known or potential to occur in the Project Area, namely:

- Brigalow (Acacia harpophylla dominant and co-dominant) Endangered;
- Coolibah (Black box woodlands of the Darling Riverine Plains and the Brigalow Belt South Region) – Endangered; and
- Poplar Box Grassy Woodland on Alluvial Plains Endangered.

Assessments will explicitly consider guidance outlined in:

- Approved Conservation Advice for the Brigalow (Acacia harpophylla dominant and codominant) ecological community (Department of the Environment, 2013).
- Commonwealth Listing Advice on Coolibah Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions (Threatened Species Scientific Committee, 2011).
- Conservation Advice (including listing advice) for the Poplar Box Grassy Woodland on Alluvial Plains (Department of the Environment and Energy, 2019).

The results of the vegetation community verification will assist with determining whether or not an analogous RE is present as well as the assessment against the community description and other condition thresholds.



#### **Targeted Threatened Flora Surveys**

Searches for flora species listed threatened under the NC Act or EPBC Act will be completed in areas of potential habitat. These surveys shall be conducted by a suitably qualified person using the random meander method, as detailed by Cropper (1993). All threatened flora species and the locations of all individuals will be recorded, and specimens collected of any unknown individuals, or if the species needs to be further confirmed by the Queensland Herbarium.

Where a threatened flora species is detected, a population survey shall be undertaken to determine the extent and density of the population.

#### Fauna Habitat Assessment

Fauna habitat baseline assessments have been conducted across the Project Area from 2019 to 2024 to enable known, likely and potentially present MNES to be identified and a comprehensive Project impact assessment has been completed (Umwelt 2025).

Future site scouts will undertake habitat assessments to characterise the presence, extent and value of habitat for known and potentially occurring MNES (see Appendix A). Habitat assessments should follow guidance outlined by Eyre et al. (2022), and record information on the location, landform, vegetation structure, regional ecosystem, and disturbance characteristics of sites in a standardised manner. The presence and abundance of microhabitat is also critical and may be a determining factor in determining potential utilisation of an area, in terms of breeding, shelter, roosting, foraging and dispersal.

Data collected as part of the habitat assessments will be used to map MNES habitat based on the habitat definitions outlined in Appendix A. Micro-habitat features that must be recorded include:

- Potential hollow-bearing trees;
- Brigalow Belt locally important koala food trees and ancillary trees;
- Koala dispersal trees;
- Hollow logs and log piles;
- Gilgai;
- Soil cracks / cracking clay;
- Native grass tussocks or the approximate cover of native species in the ground layer;
- Mistletoes;
- Potential animal breeding places such as nests;
- Potential yakka skink burrows and communal defecation sites; and
- Watercourses, wetlands and dams (including proximity).

Any other significant habitat features, or values present, such as dense leaf litter, decorticating bark, coarse woody debris, dense grass/shrub shelter, seeding grass cover, fruiting plants, nectar and pollen producing plants and arboreal termitaria, should also be recorded where it helps characterise habitat.

#### Habitat Functionality Assessment Considerations

As described in Table 3, vegetation clearing required for the Project must not impact on habitat functionality for the koala or painted honeyeater. In order to assess the risks of habitat function loss, the following must be completed.



- In areas of koala dispersal habitat to be cleared, koala dispersal trees must have their GPS location recorded and the area of canopy cover provided per tree calculated.
- In areas of painted honeyeater foraging and dispersal habitat, mistletoe presence and abundance may be mapped one of two ways, depending on the context:
  - Individual plants supporting mistletoe recorded via GPS location (appropriate for smaller survey areas), OR
  - Patches of vegetation supporting different relative abundances of mistletoe (appropriate for larger survey areas.

For koala, no loss of habitat functionality will be achieved if:

- Of the 400 ha limit for dispersal habitat, 1% (or 4 ha) comprises 'koala dispersal trees' (see Definitions) measured by canopy cover; and,
- the 4 ha of 'koala dispersal trees' impacted is not confined to one proposed infrastructure location.

For painted honeyeater, no loss of habitat functionality will be achieved if:

- Per proposed infrastructure location, there is no significant change in mistletoe abundance. While
  examples of how this could be quantitatively assessed are provided below, it is noted that a
  qualitative assessment by a suitably qualified ecologist that is sufficiently justified would also be
  adequate.
  - In areas assessed using relative abundance, a change in mistletoe abundance from rare to absent would be considered significant. Depending on the context, a reduction from abundant mistletoe to occasional mistletoe may not be significant.
  - In areas assessed where individual plants have been mapped, any reduction >10% is significant.

#### 3.0 Active Threatened Fauna Surveys

Active fauna surveys of threatened fauna species will be conducted where suitable potential habitat is identified. If any sedentary and limited mobility fauna species is recorded outside of its mapped potential habitat, additional surveys will be undertaken where habitat aligns with the habitat in which the new record was found to occur. These areas of new habitat will be added to the species habitat mapping and used to update the constraint layers. Habitat mapping rules will also be reviewed and updated.

Active searches will be completed when disturbance is proposed within 30 m of suitable habitat. The active searches will be in accordance with relevant survey guidelines in effect at the time of the survey or other equivalent survey methodology taking into account the fact that no known, likely or potential species will be considered absent due to non-detection (i.e. all known, likely and potentially present MNES fauna will be assumed to be present). All suitable habitat will be avoided and infrastructure siting and mitigation measures will be designed to minimise the risk of indirect impacts. The active fauna surveys will include the methods detailed in the table below.

Should an unexpected threatened species that was a listed MNES threatened species at the time of the decision on the referral (30 June 2022) be identified during the pre-clearance surveys, Westside's Constraints Protocol and its commitments equally apply.



Method	Target Fauna	Description
Active searches	Birds, mammals, reptiles, amphibians and invertebrates	Active searches will be conducted by scanning trees, the ground and habitat features; overturning rocks, logs and other woody debris; searching under peeling bark; raking leaf litter and soil at the base of trees; and flushing birds from dense shrubs and groundcover. Care shall be taken to minimise disturbance to individuals and habitat features at all times.
Targeted active search	Yakka skink	Random meanders where searches for burrow systems and communal defecation sites are undertaken. Searching microhabitats, such as carefully turning woody debris, rocks and artificial debris, raking the soil surface or leaf litter beneath trees and looking beneath peeling bark for reptiles or their sloughs.  Survey over a minimum of 1.5 person hours per hectare for habitats of average complexity, ideally over 3 days.
Scat and sign searches	Birds, mammals, reptiles and invertebrates	Searches for signs, including tracks, scratch marks, scats, dens, nests, bones, fur, feathers, burrows, latrine sites, basking sites, foraging diggings, signs of feeding (including orts (chewed sheoak cones) and Yellow-bellied Glider feeding scars), and dead snail shells.
Diurnal bird surveys	Birds	Area searches or transects, recording sightings and calls.
Incidental observations	Birds, mammals, reptiles, amphibians and invertebrates	All fauna observed incidentally within and in close proximity to the proposed disturbance footprint will be recorded.

Although it may not occur as explicitly as part of a site scout, a suitably qualified ecologist or fauna spotter catcher will also be required to complete targeted searches for ornamental snake individuals in areas of ornamental snake habitat to be cleared. This will be done by:

- Searching for individuals via spotlighting surveys at night. This could be completed the night before works are planned, or at any time within three months of clearing works if conditions are suitable i.e. following rain.
- Searching for individuals immediately prior to clearing within surface microhabitat such as fallen timber and deep litter piles.

Any snakes captured will be relocated at least 100 m away. The chances of relocated ornamental snake/s returning to areas of habitat to be cleared are considered low as radio tracking studies completed by Veary, (2011) indicate that the species moves only short distances during late summer and winter, and even shorter distances in summer. The species was tracked by Veary (2011) and found to move a total of 54 m from the point of release during a 5-month period.



#### **REFERENCES**

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#### **APPENDIX C**



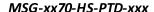
#### PURPOSE

The Permit to Disturb provides a definition of final layout and planned activities. It is used to:

- Provide the land access team with the scope to approach a landholder with and determine compensation;
- Provide the cultural heritage team with areas requiring CH assessment and clearance via site survey;
- · Provide the environmental team with an assessment of potential impacts and actions required;
- Provide the engineering team with construction rights-of-way, workspace and well pad areas for design; and
- Provide assurance that locations for planned activities have been reviewed/cleared/agreed by the relevant stakeholders.

The sign off provided on this Permit to Disturb is important because changes after this point are either difficult, time consuming or in some cases not possible.

or in some cases not possible.			
LICENSE (PL)		AREA ID	Greater Meridian
PTD ID		FIELD NAME	
PROJECT	Greater Meridian Development	'PROPERTY', LOT	
EA NUMBER		LANDHOLDER	
PTD VALID FROM	Click or tap to enter a date.	PTD EXPIRY DATE	Click or tap to enter a date.
WORKSCOPE	Wells, pads, access and gathering	<u>.                                    </u>	
SPECIAL CONDITIONS	Do Special/Specific Conditions ap	ply to this Permit?	No
AUTHORISED SCOPE	<ul> <li>Well pads, including exc</li> <li>Drilling of Coal Seam Ga</li> <li>Installation of gas and w</li> <li>Installation of electrical boards, pillar boxes and</li> <li>Installation of well pad gas and water gathering wellsite tanks, well head linstallation of above grovents, Low Point Drains</li> <li>Additional construction</li> <li>Access tracks, including</li> </ul>	<ul> <li>Drilling of Coal Seam Gas wells</li> <li>Installation of gas and water gathering pipelines</li> <li>Installation of electrical cabling and associated infrastructure including distribution boards, pillar boxes and junction boxes along the rights-of-way</li> <li>Installation of well pad facilities including power generation and distribution to wells, gas and water gathering pipelines, production chemical storage and distribution, wellsite tanks, well head metering and control equipment</li> <li>Installation of above ground infrastructure including Isolation Valves, High Point Vents, Low Point Drains and electrical infrastructure as required</li> <li>Additional construction workspace for the installation of infrastructure</li> </ul>	
NON-STANDARD SCOPE	Stimulation of coal sear	_	
(POTENTIAL AND ACTUAL)	<ul> <li>Flaring and venting of g</li> </ul>	as during well testing, commis	sioning and maintenance
OUT OF SCOPE OR ON HOLD			
PROPERTY ACCESS	Access for the purpose of constru	uction and operations is via:	
	<ul> <li>The existing access poin</li> </ul>	nt to lot 'x' opposite Emergenc	y Escort Point 'x' on 'x' Road
EMERGENCY ESCORT POINT	Emergency Escort Point 'x'		





# PERMIT TO DISTURB MSG-xx70-HS-PTD-xxx

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#### 1. Non-Standard Construction and Commissioning Impact

TYPE OF IMPACT	DESCRIPTION OF CONSTRUCTION – TECHNIQUE AND COMMISSIONING ACTIVITIES
Drilling	It is assumed that standard drilling techniques will be used, and noise Alternative agreements have been agreed (if
	required) to meet the modelled impacts for that scenario. Additional Alternative Arrangements may be required if
	alternative drilling technique is used.
Drilling	Drilling within the property is not limited to a single rig per well.
	Civils, drilling, completions and connections may be undertaken in multiple campaigns through the term of
	the Permit to Disturb, up to the expiry date of the underlying tenement.
Well Pads, Access and Gathering	The proposed well pads, access and gathering locations have been selected to reduce impacts on landholder and
	existing vegetation
	Refer to Appendix A for Constraints Workshop and Appendix C for Post Survey Reports
	Construction team to liaise directly with WCL permitting team for all works including works around existing
	infrastructure



#### 2. Permits Required Before Commencement

PERMIT	RESPONSIBLE	EFFECTIVE	EXPIRY
<u>Licence Amendment</u>			
Required if pipeline crosses tenement boundaries	Access & Approvals		
EA Amendment	Environment	N/A	N/A
Not applicable			
Protected plant clearing exemption notification	Environment	N/A	N/A
Not applicable			
Protected plant clearing permit	Environment	N/A	N/A
Not applicable			
Regional Interest Development Approval			
Required prior to commencement of all works within Priority Living Area	Access & Approvals		
Strategic cropping area		N/A	N/A
The proposed activities will not have a significant impact on the strategic	Access & Approvals		
cropping area and is exempt from the RPI Act 2014 under section 22 provided a			
CCA can be agreed without going through Land Court.			
<u>Cultural Heritage approval</u>	Access & Approvals		N/A
<ul> <li>Required before commencement of construction activities for:</li> </ul>			
O XXX			
Land access request			
Required before Cultural Heritage scouting	Land Access		
Required before commencement of construction activities	Construction		
Required before commencement of drilling	Drilling & Completions		
Surface Rights (Co-Development Area)			
Required before commencement of any activity	Access & Approvals		
Co-Development Area – Anglo Coal			
Activity Notice: Required prior to commencement of all works within Co-	Access & Approvals		
Development Area			



Permit to Disturb: Required prior to commencement of all works within Co-	Access & Approvals		
Development Area			
<ul> <li>Excavation Permit: Required prior to commencement of all ground penetrating activities.</li> </ul>	Access & Approvals		
Leasee communication: Communication required prior to undertaking	Access & Approvals		
activities or as outlined in Issued for Use Permit to Disturb document	7,00000 0,7,00000		
Banana Shire Council			
Required for the upgrade of the entrance to 'lot' at Escort Point 'x'  TMD Crossing Powerit	N/A	N/A	NI/A
TMR Crossing Permit	IN/A	IN/A	N/A
Not Applicable for scope of works	N. / A	21/2	D1/A
Queensland Rail Crossing Permit	N/A	N/A	N/A
Not Applicable for scope of works			
Sunwater Crossing Permit	N/A	N/A	N/A
Not Applicable for scope of works			
GLNG pipeline crossing permit	N/A	N/A	N/A
Not Applicable for scope of works			
Self-Crossing permit	Construction	Required for	each issue of a
<ul> <li>Required for all crossings of existing services</li> </ul>		new excava	tion permit issued
		under West	side's common
		permit to wo	ork system.
Road use permit	N/A	N/A	N/A
Not applicable for scope of works			
Waterway barrier works permit	Development	N/A	N/A
<ul> <li>The Proposed Works include 'x' x crossing (gathering) in a location(s) of "x' impact" classification waterways under the under the Fisheries Act 1994 and the Planning Act 2016</li> </ul>			
<ul> <li>Adherence to the requirements of the publication "Accepted development requirements for operational work that is constructing or raising waterway barrier works" applies.</li> </ul>			



This includes pre-works and post-works notifications emailed to <u>accepteddevelopment@daf.qld.gov.au</u> prior to, but not more than 20 business days in advance of the works.			
Conduct and Compensation Agreement	Access & Approvals		
Required prior to commencement of works on 'xxx'			
Noise Alternative Agreements	Access & Approvals	N/A	N/A
Required prior to commencement of drilling activities on 'xxx'			
Third party asset owners	Construction		
DBYD to confirm all external asset owners in works area			



#### 3. Conditions MUST Be Closed Out Prior to PTD Issued for Use

RAISED BY	ISSUE	ACTION OWNER	CLOSED OUT
Development	Conduct and Compensation Agreement/s (or other land access agreement/s):  • 'lot', "Property"	Access & Approvals	No
Development	Noise contour assessment predicts that one or more sensitive receptors on the following properties will be impacted during the drilling and completion of the wells covered by this PTD and may require a noise Alternative Arrangement:  • 'lot', "property name", occupier of 'property name'  • 'lot', "property name", occupier of 'property name'	Access & Approvals	No
Development	Prior to engineering design, maximum depth of ground penetrating activities conducted by the landholder to be established. May introduce revision to minimum depth of cover in areas.	Access & Approvals	No
Development	Cultural Heritage assessment required for:  • 'Scope'	Access & Approvals	No
Development	Engineering design for all infrastructure Issued for Construction (IFC)  • 'Scope'	Construction	No
Environment	If any new well (inclusive of lateral) is within 2km of any landowner bore, a baseline survey must be undertaken in accordance with UWIR requirements for PL1048 & PL1049.	Environment	No



#### 4. PTD Conditions for Implementation Pre-Construction

RAISED BY	CONDITIONAL APPROVAL DESCRIPTION	ACTION OWNER	FUNCTIONAL GROUP COMMENTS
	Non-Standard Conditions		
Access &	The standard procedure for "Mix-Bury-Cover" of drill cuttings is not authorised for the following		
Approvals	proposed pad within intensive cropping paddocks:		
	FieldName1 Wells: TAG_WHxxx, TAG_WHxxx		
	FieldName2 Wells: TAG_WHxxx, TAG_WHxxx		
	This material is to be removed from site.		
	Standard Conditions		
Development	DBYD to be completed prior to commencement of work / issue of permit for all ground penetrating	Construction	
	activities		
Development	Overhead power lines and their proximity to the proposed disturbance area and traversing routes MUST be thoroughly assessed and incorporated into the Permit to Work conditions:  • Visual indicators to be placed to clearly show the presence and height of overhead power lines where vehicles and equipment travel.  • If required, Ergon should be engaged to raise powerlines permanently or during construction or rig movements	Construction	
Environment	The standard method for "Mix-Bury-Cover" of drill cuttings is authorised for the following proposed pads:  • 'x' Pad  Method as follows;  • the base of the subsoil and residual solid mixture must be separated from the groundwater table by at least one metre of a continuous layer of impermeable subsoil material (kw=10–8m/s) or subsoil with a clay content of greater than 20 percent	Construction	



	<ul> <li>the residual solids are mixed with subsoil in the sump and cover</li> <li>the subsoil and residual solids are mixed at least three parts subsoil to one part waste (v/v)</li> <li>a minimum of one metre of clean subsoil must be placed over the subsoil and residual solids mixture</li> <li>topsoil is replaced.</li> </ul>		
Environment	Restricted Matters (weeds) Category 3 identified on site and to be managed:  Common Name (Scientific name);  Common Name (Scientific name); and  Common Name (Scientific name);  Noted in ecological survey report:  Velvety Tree Pear (Opuntia tomentosa);  Common Prickly Pear (Opuntia stricta);  Tiger Pear (Opuntia aurantiaca);  Mother-of-millions (Bryophyllum delagoense);  Parthenium (Parthenium hysterophorus)  Giant Rat's Tail Grass (Sporobolus pyramidalis & Sporobolus natalensis)	Construction	
Environment	Gilgai (Melon Holes) have been identified in areas adjacent to the construction activities.  Any melon holes within the disturbance area have been determined to be of low or no habitat value. If within the permitted area:  • Avoid disturbance of melon holes wherever practicable  • Dewatering of melon holes, if required, to be discharged to neighbouring melon holes, outside the construction area  • Visually inspect melon holes prior to disturbance for the presence of fauna	Construction	
Environment	Habitat features identified to be managed include:  • Potential fauna habitat [IF IDENTIFIED AND CLARIFYING NOTES]  • Avoid clearing these [FEATURES] where possible  Protected species that may occur include:		



	No protected species observed during survey		
	• [SUITABLE HABITAT IDENTIFIED]		
	• [INDICATIVE HABITAT FOR SPECIES X, Y, Z]		
	• [MANAGEMENT OR MITIGATION CONDITIONS]		
	Vegetation within approved work area that must be protected includes:		
	[FEATURES SPECIFICALLY IDENTIFIED BY LAND REPORT/LANDHOLDER REQUEST]		
	[FEATURES SPECIFICALLY IDENTIFIED BY ENVIRONMENTAL REPORTS]		
	The protection of trees to be retained during construction shall comply with the		
	requirements of AS 4970-2009 Protection of Trees on Development Sites		
Environment	High risk erosion areas identified to be managed include:		
	[FEATURES SPECIFICALLY IDENTIFIED BY SURVEY REPORTS ENV/CON/LAND]		
Environment	[NUMBER] x watercourse [CROSSING/CROSSINGS] [HAS/HAVE] been identified that may require		
	DAFF pre and post work notifications and/or development approval noting:		
	Notification is dependent on work type and duration to complete		
	Crossings Identified:		
	[CROSSING ID] crossing of [WATERWAY IDENTIFIER /DESCRIPTION]		
Environment	Construction works have been identified to occur within the buffer zones of a wetland, lake, spring or watercourse, therefore:		
	Notification to DES is required if the works in the buffer zone will exceed 10 business days		
Development	Notice of Intention to Drill is required to be lodged electronically with the DNRME at least 10	Drilling &	
	business days prior to the commencement of drilling of each well.	Completions	
Development	Entry Notices are required to be issued to all landholders at least 10 business days prior to the	Access &	
	commencement of drilling, wherein the trajectory of a lateral or deviated well is designed to drill	Approvals	
	under the lot.		
	Notifications specific to this scope include:		
	Entry Notice for the lateral drilling under 'lot', "Property"		



o 'well'		
o weii		



#### 5. Conditions For Implementation <u>During Construction</u>

RAISED BY	CONDITIONAL APPROVAL DESCRIPTION	RESPONSIBLE			
	Non-Standard Conditions				
	Nil applicable to this scope				
	Standard Conditions				
Access & Approvals	<ul> <li>Parking of vehicles or other equipment is only permitted inside the PTD area.</li> <li>All vehicles must have Westside issued vehicle identification</li> <li>Speed Limit – 40km/h or drive to the prevailing conditions (slower than 40)</li> <li>Ensure all staff/contractors inducted and aware of Land Access Golden Rules.</li> <li>Biosecurity obligations in the 'Land Access Code' applies.</li> <li>All vehicles, plant and equipment must be washed down prior to the commencement of the work campaign when entering the Meridian Fields and carry a valid wash down certificate issued by the Land Access Coordinator (or proxy)</li> </ul>	Construction Drilling & Completions Operations			
Access & Approvals	If any suspected Cultural Heritage artefacts are found, stop work immediately and notify the Land Access Coordinator.	Construction			
Environment	The following events must be reported to the Operations Manager & HSE Manager	Construction			
Operations	upon occurrence or discovery:	Drilling & Completions			
	any unauthorised disturbance to land	Operations			
	potential or actual loss of well integrity				
	• unauthorised releases of any volume of prescribed contaminants to waters (in				
	essence means any substance including CSG water)				
	All spills, of any nature, are to be reported to the Operations Manager. The				
	below listed spills require further investigation and potentially regulatory				
	reporting by the HSE team on investigation:				
	o unauthorised releases of volumes of contaminants, in any mixture, to				
	land greater than:				
	<ul><li>200 L of hydrocarbons; or</li></ul>				



Environment	<ul> <li>200 L of stimulation additives; or</li> <li>500 L of stimulation fluids; or</li> <li>1,000 L of brine; or</li> <li>5,000 L of untreated coal seam gas water; or</li> <li>5,000 L of raw sewage; or</li> <li>10,000 L of treated sewage effluent.</li> <li>Any hydrocarbon spills are to be responded to and reported to Westside immediately.</li> </ul>	Construction Drilling & Completions
	Hydrocarbon spills must be controlled and contained on site	Operations
Access & Approvals Environment Operations	<ul> <li>No rubbish is to remain on site at the conclusion of any works program on the Land</li> <li>Green waste (i.e. cleared trees and shrubs) may be used onsite for either rehabilitation or sediment and erosion control, or both</li> <li>Cleared vegetation should be stockpiled separately to the topsoil so that it can be managed appropriately during rehabilitation</li> </ul>	Construction Drilling & Completions Operations
Environment	<ul> <li>Soil Management:</li> <li>Topsoil (approx. 150mm) should be stripped from undisturbed areas and stockpiled for use during rehabilitation. (Depth of topsoil removed will vary from site to site depending on soil type, ground conditions etc).</li> <li>Topsoil is to be stored either in designated areas in stockpiles no more than 1.5m in height or windrowed to the side of the cleared area.</li> <li>Stockpiles are to be free draining designed to limit sediment erosion.</li> <li>Where subsoil must be removed this should be stockpiled separately from the initial topsoil so that both layers can be returned in the correct sequence:</li> <li>Topsoil will need to be stripped down to 150 mm followed by further stripping of remaining subsoil material.</li> <li>Both soil horizons are to be stockpiled separately and backfilled in the same order they were excavated.</li> </ul>	Construction



	Construction coordinator (with support from Environment as required) to follow Westside Erosion and Sediment Control Procedure (WCL-0000-HS-PRC-0029) and IEAC best practice guidelines	
Environment	<ul> <li>Water Management:         <ul> <li>No contaminated water run-off is to enter any clean water drains, dams or nearby watercourses.</li> <li>Ensure that sediment aFnd erosion structures are installed to prevent sediment runoff during storm events (as per Erosion and Sediment Control Procedure (WCL-0000-HS-PRC-0029)</li> <li>No water (or any other substance) from the installation activities is to be drained or dumped in natural drainage lines</li> </ul> </li> </ul>	Construction Drilling & Completions Operations
Access & Approvals	<ul> <li>Gates should be left as found.</li> <li>Where the gathering or powerlines cross a fence, the fence is permitted to be cut for the installation of the infrastructure then repaired to as new standard         <ul> <li>Cut in a single location only at crossing point</li> <li>Ensure tension is held on the fence line adjacent to the crossing point, and appropriate stays installed to support post at the new tension point.</li> <li>Any open fence line must be made stockproof during the construction period, outside construction works (e.g. overnight, weather interruptions etc)</li> <li>Works should be planned to minimise the time that the fence is open (i.e. cut, install, repair in single day).</li> <li>Notice to be provided to Land Access prior to any activity to change existing Landholder fence configuration. Landholder notification may be required.</li> <li>Grids installed as per post-survey plan to comply with MSG-0000-EN-GA-286 LIGHT COMMERCIAL GRID ASSEMBLY</li></ul></li></ul>	Construction Operations



Environment	Production water may be used for dust suppression on access tracks provided that	Construction
	WestSide comply with the conditions in the End of Waste Code - Associated Water	
	(including CSG water) (ENEW07547018) and the following criteria are met:	
	<ul> <li>the amount applied on access tracks does not exceed the amount required to effectively suppress dust; and</li> <li>the application:         <ul> <li>does not cause on-site ponding or runoff;</li> <li>is directly applied to the area being dust suppressed;</li> <li>does not harm vegetation surrounding the area being dust suppressed; and</li> <li>does not cause visible salting.</li> </ul> </li> </ul>	



#### 6. Conditions For Implementation <u>Post Construction</u> (e.g., Operations, Maintenance, Rehabilitation)

RAISED BY	CONDITIONAL APPROVAL DESCRIPTION	RESPONSIBLE		
Non-Standard Conditions				
	Standard Conditions			
GIS	<ul> <li>As-Built Survey Data</li> <li>As Constructed Survey data to be submitted to         GISTaskRequests@Westsidecorporation.com in accordance with (Procedure)</li> </ul>	Construction Drilling & Completions		
Environment	Reinstatement  Pad reinstatement must commence within 3 months of the drilling of the last well on the pad and completed within 9 months of the drilling of the last well on the pad  The reinstatement must reduce the pad to the operational footprint including:  Completion of the mix-bury-cover of all sumps  Reduction of hardstand, with material removed from the well pad, to the operational footprint  Reinstate subsoil and topsoil to the areas of the well pad no longer required  Disturbed areas will be ripped and re-seeded with Westside Grass Seed Mix  Storage of sufficient topsoil for the future rehabilitation of the operational footprint of the well pad  Lease area to be fenced off until there is good grass growth following rehab. Once growth is established, fencing can be reduced to wellsite area only.  Rehabilitation  Implement the Rehabilitation Plan (WCL-0000-HS-PLN-011) as soon as practicable.	Construction		



Environment	Production water may be used for dust suppression on access tracks provided that	Operations
	Westside comply with the conditions in the End of Waste Code - Associated Water	
	(including CSG water) (ENEW07547018) and the following criteria are met:	
	<ul> <li>the amount applied on access tracks does not exceed the amount required to effectively suppress dust; and</li> </ul>	
	the application:	
	o does not cause on-site ponding or runoff;	
	o is directly applied to the area being dust suppressed;	
	o does not harm vegetation surrounding the area being dust suppressed;	
	and does not cause visible salting.	



#### APPENDIX A | CONSTRAINTS WORKSHOP



#### APPENDIX B | PTD MAP SUITE

Post Survey Landholder Map		
Infrastructure Map		
Ecological Constraints Map		
Cultural Heritage Constraints Map		



#### APPENDIX C | POST SURVEY REPORTS



#### APPENDIX D | PREDISTURBANCE PHOTOS

Property	'Property'	
Remarks	'location'	



#### APPENDIX E | FUNCTIONAL SIGN OFF

Functional Area	Name	Position	Approval Response	Approval Date
Land Access	Nimandra Gunasekera	Access & Approvals Manager		
Permits & Tenures	Nimandra Gunasekera	Access & Approvals Manager		
Cultural Heritage	Nimandra Gunasekera	Access & Approvals Manager		
Construction	Patrick O'Hanlon	[Acting] Capital Projects Manager		
Drilling & Completions	Daniel Huff- Hannon	Drilling & Completions Manager		
Geoscience	Mike Martin	Geoscience Manager		
Production	lan Meynink	General Manager - Development		
Operations	Colin Palmblad	Moura Operations Superintendent		
Engineering	Jacob Moon	Maint. Rel. & Eng. Manager		
Environment	Mark Rodiger	Snr. Environmental Advisor		



#### APPENDIX F | ACCESS CONDITIONS SIGN OFF

#### All Persons Involved in the Disturbance activities

must read access conditions and sign on the below

NAME	SIGNATURE	DATE