



NORTHERN GOLDFIELDS INTERCONNECT PIPELINE EPA ENVIRONMENTAL REFERRAL

Supporting Document











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Appendix 1 – Northern Goldfields Interconnect Pipeline Project Detailed Flora and Vegetation Assessment (Focused Vision Consulting, 2020)

Appendix 2 – Northern Goldfields Interconnect Pipeline Fauna Assessment (Kingfisher, 2020)

Appendix 3 – EPBC Protected Matters Search (DAWE, 2020)



EXECUTIVE SUMMARY

Introduction

APA Northern Goldfields Interconnect Pty Ltd (the Proponent) proposes to construct and operate the Northern Goldfields Interconnect (NGI) pipeline; a new buried pipeline approximately 580 km in length commencing at Ambania, located approximately 50 km east of Geraldton, connecting into the existing Goldfields Gas Pipeline at approximately 40 km south of Leinster. The proposal also includes associated aboveground facilities located sparsely along the route of the pipeline.

This Supporting Document has been prepared to support the formal referral of the NGI pipeline project (this Proposal) to the Western Australian Environmental Protection Authority (EPA) under section 38 (Part IV) of the *WA Environmental Protection Act 1986*.

This Document details the components of this Proposal, including a preliminary environmental impact assessment and description of proposed environmental management strategies for preliminary key environmental factors.

The NGI Proposal at a Glance

- A significant portion of the Proposal has been preferentially aligned with third party existing and proposed infrastructure corridors (Dampier to Bunbury Natural Gas Pipeline easement and Geraldton North Eastern Goldfields Infrastructure Corridor), which was subject to prior Government strategic review. This was an important prerequisite for ensuring maximum alignment and compatibility with existing and prior land uses.
- The Proponent has applied leading industry practice in route options analysis and refinement of the alignment to apply 'avoidance' measures for key values and sensitivities, as part of the mitigation hierarchy.
- Comprehensive stakeholder engagement has been undertaken in relation to the proposal, across a range of stakeholders including landholders, with particular focus on culturally respectful engagement with Traditional Owners and representative bodies.
- APA considers impacts from the Proposal can be effectively mitigated and managed to meet EPA's objectives and certainty in outcomes, and will be fully assessed and regulated through the established regulatory process administered by the Department of Mines, Industry Regulation and Safety (DMIRS) consistent with inter-agency Memorandum of Understanding arrangements.

Proposal

Table ES-1 provides a high-level summary of the Proposal and proponent. **Table ES-2** details the location and extent of physical and operational elements of the Proposal.

The development envelope is equivalent to the Pipeline Licence, which APA has submitted to DMIRS on 2 December 2020. The Proposal has an indicative disturbance



footprint of up to approximately 2,268 ha, within the overall development envelope of approximately 12,404 ha.

A detailed route selection process has been undertaken to inform the final alignment and took into account a range of considerations, including:

- Preferential alignment with third party existing and proposed infrastructure corridors (Dampier to Bunbury Natural Gas Pipeline easement and Geraldton North Eastern Goldfields Infrastructure Corridor);
- Environmental values, such as Threatened and Priority flora, fauna and ecological communities, lands managed by the Department of Biodiversity, Conservation and Attractions and environmentally sensitive areas;
- Aboriginal heritage values, particularly Registered sites; and
- The interests of stakeholders such as landholders, Traditional Owners (including Native Title Determined Claims and Registered Claims), tenement holders and other interested parties.

The underlying principles for the selection of the pipeline route are to achieve the best environmental outcome and optimise the alignment through using pre-existing approved corridors.

Table ES-1: Summary of the Proposal

Summary of the Proposal	
Proposal title	Northern Goldfields Interconnect Pipeline
Proponent name	APA Northern Goldfields Interconnect Pty Ltd (part of APA Group)
Short description	The Proposal is to construct and operate a new 580 km long buried 300 mm diameter gas pipeline between Ambania and the existing GGP. The Proposal also includes supporting aboveground facilities, including a compressor station at Ambania and other supporting infrastructure.

Table ES-2: Key Proposal Characteristics

Element	Location	Proposed Extent
Infrastructure		
Buried gas pipeline	Linear infrastructure extending the length of the development envelope.	Clearing or disturbance within the development envelope of up to approximately 2,286 ha, comprised of approximately: <ul style="list-style-type: none"> ▪ 1,934 ha of native vegetation; and ▪ 353 ha of cleared land/pasture. Within this, the aboveground facilities will require the following:
Aboveground facilities, including: <ul style="list-style-type: none"> ▪ Rosewick offtake; 	Located at various locations along the pipeline. The location of the Yoweragabbie Scraper Station will have suitable land available for the future option of the installation of	



Element	Location	Proposed Extent
<ul style="list-style-type: none"> ▪ Ambania compressor station; ▪ Yoweragabbie scraper station; ▪ Mainline valve stations; ▪ Wildara delivery station; and ▪ Weebo Inlet Station 	<p>an adjoining compressor station.</p>	<ul style="list-style-type: none"> ▪ Rosewick offtake – disturbance of up to 0.1 ha; ▪ Ambania compressor station – disturbance of up to 4.1 ha; ▪ Yoweragabbie scraper station – disturbance of up to 1.1 ha (inclusive of allowance for a future compressor); ▪ Mainline valve stations – total disturbance of up to 0.6 ha; ▪ Wildara delivery station – disturbance of up to 0.5 ha; and ▪ Weebo inlet station– disturbance of up to 0.1 ha.
Construction and Support Facilities		
<p>Construction right of way (CROW), construction turn-around and passing bays and work areas, e.g. for underboring (i.e. horizontal directional drilling)</p>	<p>Located adjacent to the pipeline during construction.</p>	<p>Clearing or disturbance within the development envelope of up to approximately 1,850 ha. Generally a 30 m wide corridor with extra areas for turnarounds and work areas.</p>
<p>Pipeline laydown areas and construction facilities, including construction camps with mobile offices and ablutions, and equipment laydown areas</p>	<p>Where practicable, the pipeline laydown areas and temporary construction areas will be located in areas of existing disturbance.</p> <p>Up to six construction camps are proposed to support the Proposal. The construction camps will be located within the development envelope or broader surrounds. In those circumstances where the camps are located external to the development envelope, they will be in existing cleared areas.</p> <p>The mobile offices and equipment laydown areas</p>	<p>Clearing or disturbance within the development envelope of up to 395 ha.</p> <p>Up to six construction camps may be required, each with associated offices, ablutions and laydown areas.</p> <p>Up to approximately eight turkey nests may be required for the Proposal. Each turkey nest is anticipated to be approximately 110 m x 90 m.</p>



Element	Location	Proposed Extent
	will be situated within the construction camps.	
Turkey nests	Located adjacent to the pipeline during construction.	
Construction access points/tracks	The access points/tracks will provide access to the CROW. Construction access will preferentially use existing tracks, where possible. Existing tracks may require improvement works, including widening, to facilitate access of larger vehicles (trucks) and machinery/equipment.	Clearing or disturbance of up to 42 ha may be cleared for construction access.
Groundwater bore(s)	If required, a groundwater bore would be within the vicinity of the Ambania compressor station. Any other additional groundwater bores, if required along the NGI pipeline, will be identified by the construction Contractor and subject to a water licence (refer to Section 2.6.6).	The groundwater bore would be constructed in an existing cleared area on agreement with the landholder. No clearing of remnant native vegetation is anticipated.
Operational Elements		
Operation of the constructed NGI pipeline and associated above ground facilities		APA will operate the pipeline system in accordance with regulatory and APA standards, and standard management and maintenance practices.



Element	Location	Proposed Extent
Operations right of way (ROW)	Located adjacent to the as-built NGI pipeline centreline	The operational area for the pipeline will generally require a 4 m wide access track located adjacent the pipeline warning markers and a mulched/cleared section over the buried pipeline. The access track will be maintained as a ROW along the NGI pipeline to provide access for operational site maintenance, including servicing, equipment and integrity checks and general site maintenance. The ROW will be located within the Pipeline Licence area. The establishment of the operational ROW will be limited in the western section of the pipeline (between approximately KP0 to KP80) to minimise the alignment's intersection with agricultural properties. It is anticipated that the operational ROW will have a disturbance area of approximately 200 ha.

Environmental Factors

APA has identified the following key environmental factors for the Proposal:

- Flora and Vegetation;
- Terrestrial Fauna; and
- Social Surroundings.

A summary of the assessment of these environmental factors, including the key mitigation measures and the predicted outcome, is provided in **Table ES-3**.

Key avoidance measures have been proactively identified and committed by the project, such that the top 'avoidance' tier of the mitigation hierarchy has been implemented to the maximum extent possible, to provide a lower net impact through design and refinement. This is demonstrated in **Figure ES-1**.

Table ES-3: Summary of Assessment of Preliminary Key Environmental Factors

Aspect	Description
Flora and Vegetation	
EPA objective	To protect flora and vegetation so that biological diversity and ecological integrity are maintained



Aspect	Description
Policy and guidance	<ul style="list-style-type: none"> ▪ <i>Biodiversity Conservation Act 2016</i> (BC Act); ▪ Environmental Factor Guideline: Flora and Vegetation (EPA, 2016a); ▪ Technical Guidance: Flora and Vegetation Surveys for Environmental Impact Assessment (EPA, 2016b); ▪ Environmental Protection Bulletin 20 – Protection of naturally vegetated areas through planning and development (EPA, 2013); and ▪ Environmental Protection (Clearing of Native Vegetation) Regulations 2004.
Potential impacts	<p>Direct</p> <ul style="list-style-type: none"> ▪ Clearing of approximately 1,934 ha of native vegetation within an approximately 12,404 ha development envelope; ▪ Some clearing will be undertaken in three regional vegetation complexes that have < 30% of their pre-European extent remaining. However, clearing associated with the Proposal will not significantly further reduce the extent of these associations as it represents < 0.1% of their current extents; ▪ Clearing of a single Priority 3 individual of <i>Petrophile ?pauciflora</i>; ▪ No Threatened flora will be cleared, specifically <i>Eucalyptus beardiana</i>; and ▪ Clearing of approximately 0.74 ha of the Eucalypt Woodlands of the Western Australian Wheatbelt TEC/PEC, which represents approximately 0.1% of the mapped extent in the local area. <p>Indirect</p> <ul style="list-style-type: none"> ▪ Fragmentation of native vegetation; ▪ Introduction and/or spread of weeds to surrounding vegetation; ▪ Smothering of vegetation by dust generated from the construction of the Proposal; ▪ Changes to vegetation community structure and composition (including flora) through altered hydrology (i.e. surface water drainage); and ▪ Damage or loss of surrounding vegetation through accidental bushfires.
Mitigation	<p>Avoid</p> <ul style="list-style-type: none"> ▪ Baseline flora and vegetation survey completed in the early design phase of the Proposal to characterise the receiving environment values and inform route selection. ▪ No direct clearing of the Threatened <i>Eucalyptus beardiana</i> in the vicinity of KP36.5 through the use of HDD construction methods, as opposed to the standard open trench. ▪ The refinement of the pipeline alignment has avoided the Eucalypt Woodlands TEC/PEC to the maximum extent possible. To further



Aspect	Description
	<p>minimise impact, the CROW has been narrowed to the minimum practicable working area (15 m) and HDD construction methods will be used where the alignment intersects the widest patch of the TEC/PEC (approximately KP86).</p> <ul style="list-style-type: none"> ▪ The indicative disturbance footprint has been refined to avoid and minimise clearing of Priority flora. ▪ No clearing of vegetation within the Ex Barnong Station, which is proposed by DBCA to be listed as a National Park. ▪ The NGI pipeline will be buried so as to not impede surface water or sheet flows of the area. The aboveground facility footprints will be minimised to that required for operations. <p>Minimise and Mitigate</p> <ul style="list-style-type: none"> ▪ Clearing of vegetation will be minimised. ▪ Pipeline laydown areas and construction facilities will be co-located and preferentially located in areas with limited vegetation or pre-existing disturbed areas. ▪ The construction boundary will be clearly delineated to prevent encroachment of construction. ▪ Access points to the CROW constructed along existing tracks to the maximum extent practicable. ▪ Access for vehicles and equipment will be restricted to designated roads/tracks and cleared areas. ▪ A Hygiene Management Plan will be developed and implemented for the project to ensure that weeds are not introduced or spread to adjacent vegetation. ▪ A CEP will be submitted and accepted by DMIRS prior to the commencement of construction. The CEP will include a suite of management and mitigation measures that will address all environmental aspects and potential risks/impacts associated with the project. ▪ Dust suppression will be utilised along the CROW as required. ▪ All machinery and vehicles undertaking clearing activities will be have fire extinguishers. ▪ A Hot Work Permit system will be implemented by APA for live welding works. ▪ The project will be undertaken in accordance with the requirements of the total fire ban exceptions, under the Bush Fires Regulations 1954.

Aspect	Description
	<p>Rehabilitate</p> <ul style="list-style-type: none"> ▪ A Rehabilitation Plan will be developed and implemented to guide the reinstatement and regeneration of temporary construction areas. ▪ Construction corridor rehabilitated as soon as practicable following pipeline installation to stabilise disturbed soils and restore resistance to erosion.
Outcomes	<p>After the mitigation hierarchy has been applied, including avoidance and minimisation impacts to key flora and vegetation values and rehabilitation, APA considers that the Proposal can be managed to meet the EPA's objective for Flora and Vegetation. The proposed loss of flora and vegetation associated with the Proposal is not expected to affect biological diversity and ecological integrity at a local or regional scale.</p>
Terrestrial Fauna	
EPA objective	<p>To protect terrestrial fauna so that biological diversity and ecological integrity are maintained</p>
Policy and guidance	<ul style="list-style-type: none"> ▪ BC Act; ▪ Environmental Factor Guideline: Terrestrial Fauna (EPA, 2016c); ▪ Technical Guidance: Sampling Methods for Terrestrial Vertebrate Fauna (EPA, 2020b); and ▪ Technical Guidance: Sampling of Short Range Endemic Invertebrate Fauna (EPA, 2016d).
Potential impacts	<p>Direct</p> <ul style="list-style-type: none"> ▪ Clearing of approximately 1,934 ha of fauna habitat within an approximately 12,404 ha development envelope; ▪ Clearing of a single inactive Malleefowl mound; ▪ No clearing of identified Brush-tailed Mulgara burrows; and ▪ Injury, mortality or displacement of conservation significant fauna. <p>Indirect</p> <ul style="list-style-type: none"> ▪ Fragmentation of fauna habitat; ▪ Disturbance to native fauna from dust, light overspill and noise; ▪ Increased competition or predation by introduced species; and ▪ Accidental bushfires.
Mitigation	<p>Avoid</p> <ul style="list-style-type: none"> ▪ Baseline fauna survey completed in the early design phase of the Proposal to characterise the receiving environment values and inform route selection.



Aspect	Description
	<ul style="list-style-type: none"> ▪ Avoid removal of large, mature canopy trees as far as practical. ▪ The indicative disturbance footprint has been refined to avoid disturbance to conservation significant fauna, particularly inactive Malleefowl mounds and Brush-tailed Mulgara burrows. ▪ The refinement of the pipeline alignment has avoided fauna habitats that support (or have the potential to support) conservation significant fauna, specifically granite outcrops, breakaways and banded ironstone ridges. ▪ Vehicle speed limits will be established, signed and enforced along the construction right of way. ▪ Construction will be predominately undertaken during daylight hours only. <p>Minimise and Mitigate</p> <ul style="list-style-type: none"> ▪ Clearing of vegetation (which represents fauna habitat) will be minimised. ▪ Pipeline laydown areas and construction facilities (e.g. construction camps, mobile offices and ablutions, equipment laydown areas, and turkey nests) will be co-located and preferentially located in areas with limited vegetation or pre-existing disturbed areas. ▪ The construction boundary will be clearly delineated to prevent encroachment of construction. ▪ Access points to the CROW constructed along existing roads and tracks where possible. ▪ Targeted pre-clearance surveys for Malleefowl mounds and Brush-tailed Mulgara burrows will be undertaken prior to clearing to validate the active use of the areas in which these species were recorded. ▪ Prior to conducting clearing, known locations of Malleefowl mounds and Brush-tailed Mulgara burrow outside the indicative disturbance footprint but within the development envelope will be fenced or flagged to prevent disturbance to these features. ▪ Gaps will be left in the pipeline trench every 1 km or less with ramps at approximately 45 degrees providing fauna egress points, to allow fauna to escape. ▪ Fauna shelters (e.g. hessian bags) placed a minimum of approximately every 50 m in open trench. ▪ Trench inspections completely daily (morning and evening), and fauna retrieval and release, by licensed handlers meeting training requirements of DBCA. ▪ Trench backfilled (to at least cover pipe) as soon as practicable after pipe laying to reduce the time the pipeline trench remains open. ▪ Dust suppression will be utilised along the construction right of way as required.



Aspect	Description
	<ul style="list-style-type: none"> ▪ Project induction to communicate that native or introduced fauna are not to be fed by site personnel. ▪ Food wastes will be stored in bins with lids closed and disposed of at a licenced waste facility/landfill. <p>Rehabilitate</p> <ul style="list-style-type: none"> ▪ A Rehabilitation Plan will be developed and implemented to guide the reinstatement and regeneration of temporary construction areas.
Outcomes	<p>After the mitigation hierarchy has been applied, including avoidance and minimisation impacts to key fauna values and rehabilitation, APA considers that the Proposal can be managed to meet the EPA's objective for Terrestrial Fauna. The proposed loss of fauna habitat associated with the Proposal is not expected to affect biological diversity and ecological integrity at a local or regional scale.</p>
Social Surroundings	
EPA objective	To protect social surroundings from significant harm
Policy and guidance	<ul style="list-style-type: none"> ▪ Environmental Factor Guideline: Social Surroundings (EPA, 2016e); ▪ <i>Aboriginal Heritage Act 1972 (AHA)</i> (WA; currently under revision); ▪ <i>Heritage Act 2018</i>; ▪ <i>Native Title Act 1993</i> (Commonwealth); ▪ Aboriginal Heritage – Due Diligence Guidelines (Version 3.0) (DPLH and Department of the Premier and Cabinet, 2013); and ▪ Environmental Protection (Noise) Regulations 1997.
Potential impacts	<p>Direct</p> <ul style="list-style-type: none"> ▪ Only one historic heritage site will be affected by the Proposal; the Rabbit Proof Fence No 2. Avoidance of this site is not feasible as the fence runs north-south for approximately 1,165 km; ▪ Two Registered Aboriginal Heritage Sites have the potential to be affected through implementation of the Proposal; and ▪ Noise emissions impacting on sensitive receptors from localised blasting during construction of the NGI pipeline, and operation of the Ambania compressor station. <p>Indirect</p> <ul style="list-style-type: none"> ▪ Indirect impacts from the implementation of the Proposal on social surrounds are anticipated to be limited or negligible.

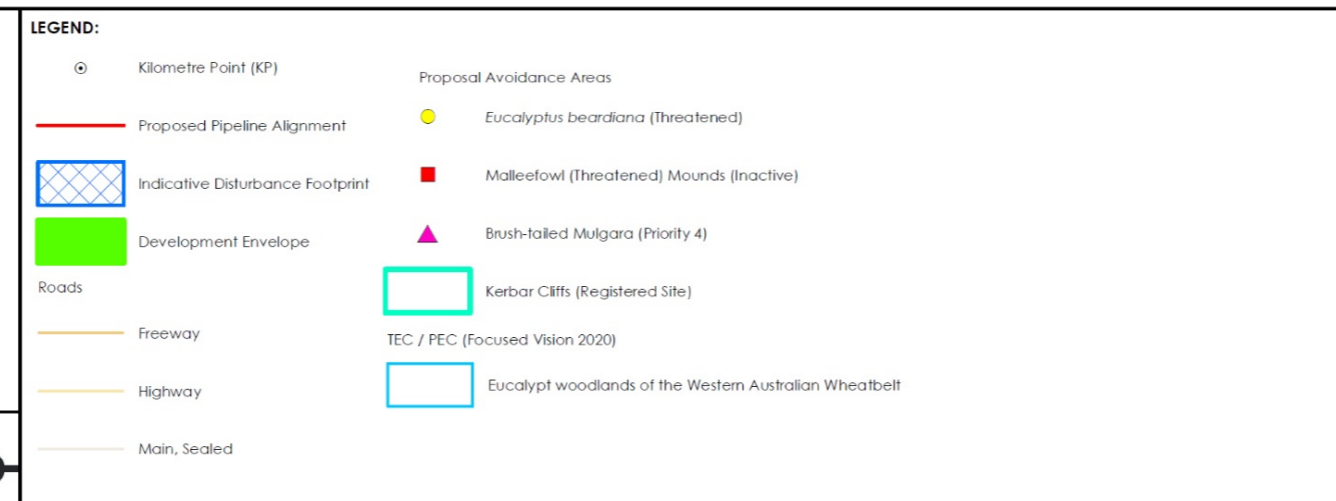
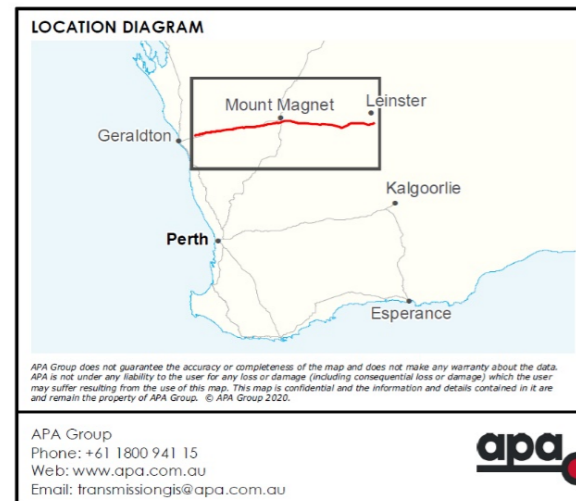
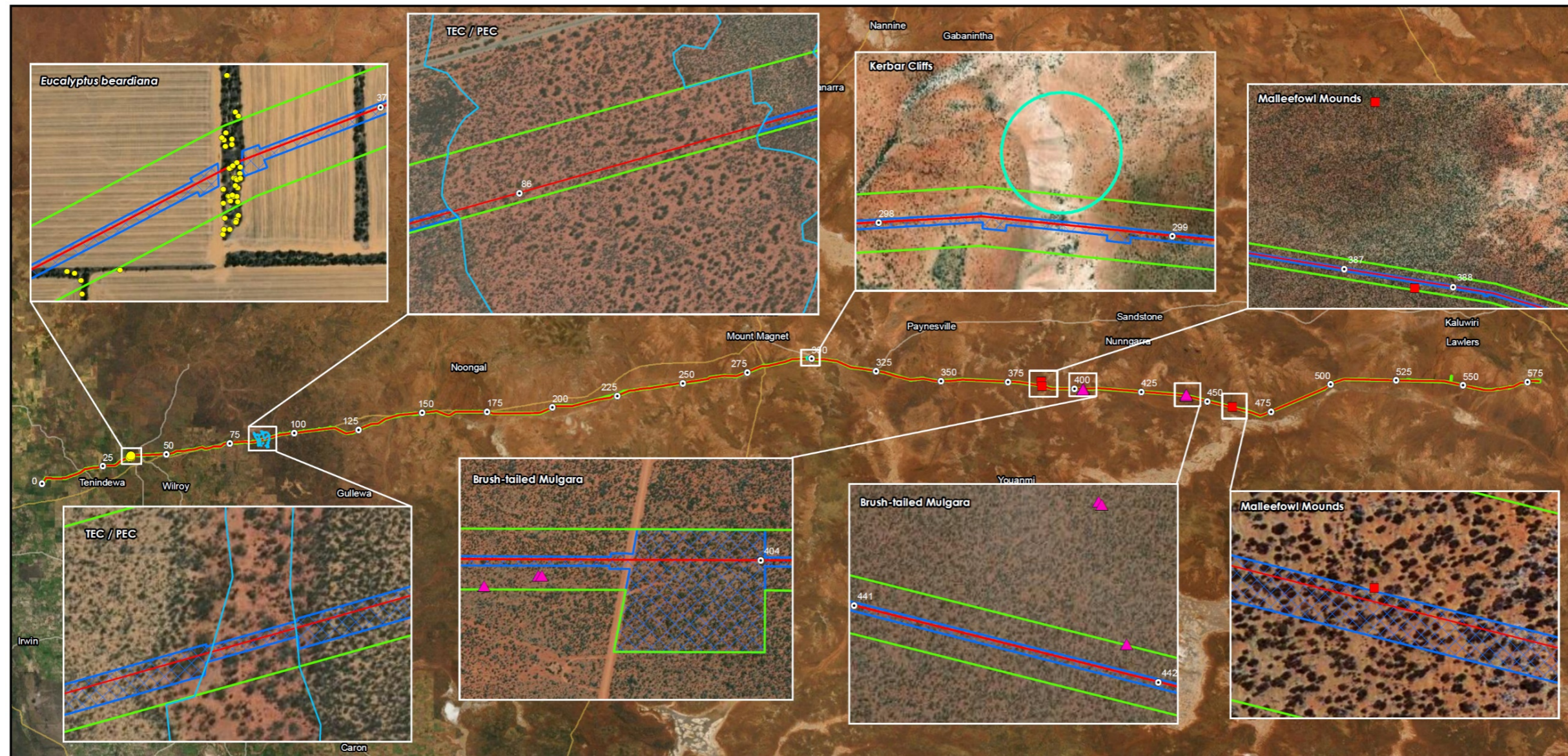


Aspect	Description
Mitigation	<p>Avoid</p> <ul style="list-style-type: none"> ▪ Avoid disturbance of historic heritage sites unless appropriate approval has been provided and consultation has been undertaken. ▪ Completion of a route selection process that considers and seeks to avoid disturbance of Aboriginal heritage sites where practicable. ▪ The pipeline alignment has been deviated to avoid intersection with the Kerbar Cliffs Registered Site, in the vicinity of KP298.5. ▪ Aboriginal heritage sites, particularly Registered Sites, will be avoided to the extent possible. ▪ Blasting will be avoided to the maximum extent possible or minimised in the vicinity of Kerbar Cliffs. ▪ Compliance with the Environmental Protection (Noise) Regulations 1997. ▪ The noise assessment identified that additional noise mitigation measures for the Ambania compressor station are not considered necessary based on the proposed design and location. ▪ Controlled blasting will be only be undertaken where conventional excavation, rock hammering or trenching equipment is ineffective. ▪ The refinement of the pipeline alignment has sought to avoid granite outcrops, breakaways and banded ironstone ridges. <p>Minimise and Mitigate</p> <ul style="list-style-type: none"> ▪ Impacts to historic heritage values will be minimised through the implementation of a CEP. ▪ HDD methods will be used to install the pipeline near the Kerbar Cliffs Registered site, where practicable (subject to the outcomes of the geotechnical survey), to avoid the potential for indirect impacts. ▪ Physical barriers (e.g. temporary fencing) or flagging will be used to delineate the Aboriginal heritage sites in close proximity to construction works. ▪ The outcomes and recommendations of the Aboriginal heritage surveys and consultations with the Traditional Owners will inform the refinement of the Proposal. ▪ Recommendations from the Aboriginal heritage surveys will be considered and implemented where practicable, noting constructability constraints. ▪ Impacts on Aboriginal heritage sites will be minimised and managed through the implementation of a CEP and Cultural Heritage Management Plan(s) that will be developed in consultation with the respective Traditional Owner groups. ▪ Appropriate consent under Section 18 of the AHA (or current legislation at the time) will be obtained prior to disturbance of any Registered



Aspect	Description
	<p>Sites. The preparation and submission of any Section 18 applications (or applicable contemporary requirements at the time) will be prepared in consultation with the Traditional Owners.</p> <ul style="list-style-type: none"> ▪ APA will continue to consult with the Traditional Owners and the Representative Bodies on the Proposal throughout the planning phase of the project and throughout construction. ▪ A Blasting Management Plan will be developed and implemented for the project. ▪ APA will continue to consult with the relevant landholder(s) and other third-parties (e.g. utilities, Main Roads Western Australia, Shires), where relevant, prior to undertaking any blasting.
Outcomes	<p>Following the implementation of the mitigation hierarchy and with ongoing consultation with key stakeholders applied, APA considers that the Proposal can be managed to meet the EPA’s objective for Social Surroundings.</p> <p>Detailed Aboriginal heritage surveys will be undertaken with the relevant Traditional Owner groups. The outcomes and recommendations of the surveys and consultations with the Traditional Owners will inform the refinement of the Proposal. Aboriginal heritage sites, particularly Registered Sites, will seek to be avoided to the extent possible.</p>

APA considers impacts from the Proposal can be effectively mitigated and managed to ensure limited residual impacts on matters protected under the State and Commonwealth legislation, and will be fully assessed and regulated through the established regulatory process administered by DMIRS consistent with inter-agency Memorandum of Understanding arrangements (EPA and Department of Mines and Petroleum, 2016).



PROJECT: Northern Goldfields Interconnect

TITLE: Proposal Avoidance Areas

SUBTITLE:

DATE: 11/01/2021

DATA SOURCE:
KPs, Proposed Alignment, Development Envelope: APA Group.
Towns, Roads: Landgate.
Fauna Records: Kingfisher & Focused Vision.
Kerbar Cliffs: DPLH, TEC / PEC: Focused Vision.

DOCUMENT NUMBER: 560-MAP-L-7849

Revision	Description	Drawn	Checked/QC	Approved	DATE
0.3	Revision	SP			11/01/21
0.2	Revision	SP	KM		3/12/20
0.1	Draft	SP	KM		30/11/20

SCALE: 1:1,650,000 @ A3

GDA2020

Figure ES-1: Proposal Avoidance Areas



ACRONYMS AND ABBREVIATIONS

AHIS	Aboriginal Heritage Inquiry System
ANZSIC	Australian and New Zealand Standard Industrial Classification
APA	APA Group
API	American Petroleum Institute
AS	Australian Standard
ASS	Acid sulfate soils
AS/NZ	Australian and New Zealand Standard
BGL	Below ground level
BLAC	Badimia Land Aboriginal Corporation
BoM	Bureau of Meteorology
BIF	Banded Ironstone Formation
BYAC	Bundi Yamatji Aboriginal Corporation
CEP	Construction Environment Plan
CER	Clean Energy Regulator
CO ₂ -e	Carbon dioxide equivalence
CROW	Construction right of way
DAWE	Department of Agriculture, Water and Environment
DBCA	Department of Biodiversity, Conservation and Attractions
DBNGP	Dampier to Bunbury Natural Gas Pipeline
DBP Act	<i>Dampier Bunbury Natural Gas Pipeline Act 1997</i>
DMIRS	Department of Mines, Industry Regulation and Safety
DMP	Department of Mines and Petroleum
DoEE	Department of the Environment and Energy (now DAWE)
DPIRD	Department of Primary Industries and Regional Development
DPLH	Department of Planning, Lands and Heritage
EP Act	<i>Environmental Protection Act 1986</i>
EPBC Act	<i>Environment Protection and Biodiversity Conservation Act 1999</i>
EPA	Environmental Protection Authority
GEDC	Goldfields Esperance Development Commission
GGP	Goldfields Gas Pipeline
GHG	Greenhouse gas emissions



GNEGIC	Geraldton North Eastern Goldfields Infrastructure Corridor
HDD	Horizontal direction drilling
JTSI	Department of Jobs, Tourism, Science and Innovation
KL	Kilolitres
KP	Kilometre Point
MIJ	Monolithic Isolation Joints
MLV	Mainline Valve
MNES	Matters of National Environmental Significance
MoU	Memorandum of Understanding
MPa	Megapascals
Mt	Million tonnes
MWDC	Midwest Development Commission
MWP	Mid West Pipeline
NGER	National greenhouse and energy reporting
NGER Act	<i>National Greenhouse and Energy Reporting Act 2007</i>
NGI	Northern Goldfields Interconnect
N/A	Not applicable
ROW	Right of way
SCADA	Supervisory Control And Data Acquisition
SRE	Short-range endemic
t	Tonnes
TCFD	Taskforce on Climate-related Financial Disclosures
WA	Western Australia
YMAC	Yamatji Marlpa Aboriginal Corporation



1. INTRODUCTION

The Proposal involves construction and operation of the Northern Goldfields Interconnect (NGI) pipeline; a new buried pipeline approximately 580 km in length commencing at Ambania, located approximately 50 km east of Geraldton, connecting into the existing Goldfields Gas Pipeline (GGP) at approximately 40 km south of Leinster. The NGI pipeline project will initially include compression (achieved through a new compressor station) at the start of the pipeline, with associated aboveground facilities sparsely located along the route of the pipeline. The location of the NGI pipeline project is shown in **Figure 1-1**.

1.1 Purpose and Scope

APA is referring the NGI pipeline proposal (the Proposal) to the Western Australian (WA) Environmental Protection Authority (EPA) for assessment under Section 38 of the *Environmental Protection Act 1986* (EP Act).

The purpose of this Environmental Referral Supporting Document is to provide the EPA with a detailed understanding of the Proposal characteristics and activities, the receiving environment, the potential environmental impacts (specifically for the identified key environmental factors), and proposed mitigation and management measures.

The Supporting Document outlines the pipeline route options analysis and refinements that have been made to account for key values and stakeholder interests. The pipeline alignment has been subject to a comprehensive and iterative refinement process to avoid and minimise potential impacts to as many key values along the alignment as possible. This includes the evaluation of practicable options to avoid Threatened flora and fauna, Threatened ecological communities, Aboriginal heritage sites and accommodate landholder values, such as remnant vegetation and separation distances to existing infrastructure (e.g. homesteads). The underlying principles for the selection of the pipeline route are to achieve the best environmental outcome and optimise the alignment through using pre-existing approved corridors and existing roads/tracks.

The Supporting Document also provides a summary of stakeholder consultation associated with the Proposal, which has helped to inform the evaluation and refinement of the pipeline alignment. This document has been prepared in accordance with the EPA's Instructions on how to prepare an Environmental Review Document (EPA, 2020a), to complement the referral submitted in accordance with EPA instructions.

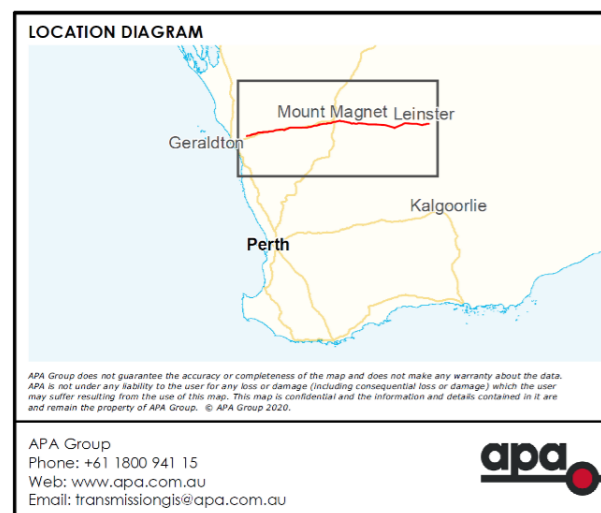
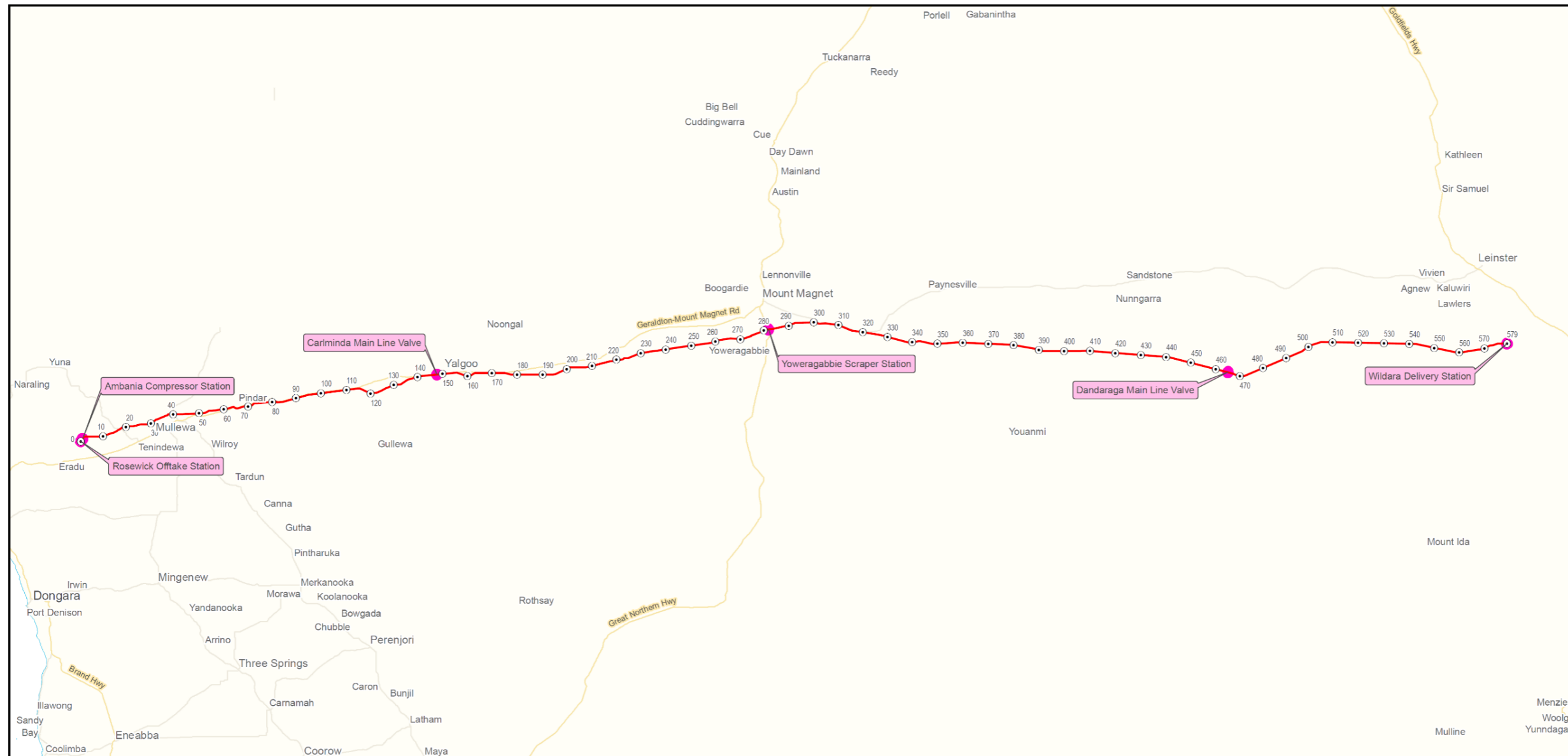
1.2 Proponent

The details of the Proponent and the key contact for this Proposal are provided in **Table 1-1**.



Table 1-1: Proponent Details

Proponent	APA Northern Goldfields Interconnect Pty Ltd (part of APA Group) ABN: 33 646 298 142 Address: Level 25, 580 George Street, Sydney NSW 2000
Key Contact	Snyman van Straaten Manager Access and Approvals: West Eastpoint Plaza, Level 5/233 Adelaide Terrace, Perth WA 6000 Telephone: 6189 4300 Email: snyman.vanstraaten@apa.com.au



PROJECT: Northern Goldfields Interconnect
TITLE: Proposal Location
SUBTITLE:
DATE: 25/11/2020
DATA SOURCE:
 Alignment, KP's, Facilities: APA Group
 Coastline, Roads, Towns: LGATE

DOCUMENT NUMBER: 560-MAP-L-7830

Revision	Description	Drawn	Checked/GC	Approved	DATE
1.0	Issued for Use	AZ			25/11/20
0.1	Draft	AZ			19/11/20

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Figure 1-1: Proposal Location



1.3 Environmental Impact Assessment Process

The key legislative requirements relating to this Proposal include assessment under Part IV of the EP Act (**Section 1.3.1**) and consideration of Commonwealth protected Matters of National Environmental Significance (MNES) under the *Environment Protection and Biodiversity Conservation Act 1999* (EPBC Act, **Section 1.3.2**).

APA considers that all impacts are manageable, and will be fully assessed by the Department of Mines, Industry Regulation and Safety (DMIRS) under the Petroleum Pipelines (Environment) Regulations, as an established regulatory process. DMIRS is the responsible agency for administering the *Petroleum Pipelines Act 1969*, which is the key Act that defines the requirements for management and operation of licensed pipelines and associated infrastructure within WA.

With due consideration of the existing regulatory process for DMIRS approval for licensed pipelines, and taking into account the information to guide an assessment of significance based on cross-referral triggers, it is expected that the environmental impact assessment process for this Proposal will involve:

- Referral under Section 38(1) of the EP Act with the intent that the Proposal will be Assessment on Referral Information; and
- Referral under the EPBC Act with the intent that the Action will be determined to be a 'Not Controlled Action'.

APA considers impacts from the Proposal can be effectively mitigated and managed to ensure limited residual impacts on conservation significant species protected under the State and Commonwealth legislation, and will be fully assessed and regulated through the established regulatory process administered by DMIRS consistent with inter-agency Memorandum of Understanding (MoU) arrangements (EPA and Department of Mines and Petroleum (DMP), 2016).

Other key approvals and legislation of relevance are outlined in **Section 1.3.3**.

1.3.1 Environmental Protection Act 1986

The EP Act, administered by the EPA, is the key legislative framework for the protection of environment values in Western Australia (WA). The EP Act provides for "*the prevention, control and abatement of pollution and environmental harm, for the conservation, preservation, protection, enhancement and management of the environment and for matters incidental to or connected with the foregoing*". The EPA administers the EPA Act in accordance with the *Environmental Impact Assessment (Part IV Divisions 1 and 2) Administrative Procedures 2016*.

In the context of this referral, the MoU between the EPA and DMIRS (formerly DMP) is of relevance, where the objective is to take account of the State Government's focus on improving assessment and approvals for major projects, including mineral, petroleum and geothermal proposals, by:

- Removing overlap and duplication; and
- Supporting a clear and consistent risk-based approach in Environmental Impact Assessment processes (EPA and DMP, 2016).



1.3.2 Environment Protection and Biodiversity Conservation Act 1999

Approval from the Commonwealth under the EPBC Act is required for a proposed action that may significantly impact on MNES. The Proponent considers that the implementation of the Proposal has potential to impact on the following MNES:

- Listed Threatened species and communities; and
- Listed Migratory Species.

As a result, the Proponent intends to refer the Proposal to the Department of Agriculture, Water and Environment (DAWE) for assessment under the EPBC Act. Further details on MNES that may occur within the Proposal are provided in **Section 6**. The Proponent considers that the Proposal will not have a significant impact on MNES, and is manageable under existing regulatory processes.

1.3.3 Other Approvals and Legislation

Several other regulatory approvals will be required prior to the implementation of the Proposal. These are summarised in **Table 1-2**. Of particular relevance is the environmental assessment and regulation of the NGI Project by DMIRS under the Petroleum Pipelines (Environment) Regulations, as an established regulatory process, which includes the requirement for comprehensive Environment Plans. The Environment Plan must include (DMIRS, 2016):

- Description of relevant legislation and other requirements;
- A comprehensive description of the activity (including rehabilitation and decommissioning);
- A description of the existing environment (biological, heritage and socio-economic) that may be affected by the activity (from both planned and unplanned events);
- Identification of environmental impacts and risks;
- Mitigation measures to ensure that impacts and risks are minimised to as low as reasonably practicable;
- Definition of clear environmental performance objectives, standards and measurement criteria for all environmental impacts and risks associated with the activity;
- An implementation strategy (including detail on systems, practices and procedures, roles and responsibilities, oil spill contingency plan, reporting etc.) to ensure that the environmental performance objectives, measurement criteria are met;
- Monitoring, auditing, recording and reporting arrangements; and
- Stakeholder engagement.



Table 1-2: Other Regulatory Approvals Required

Proposed Activities	Type of Approval	Regulatory Agency	Legislation Regulating the Activity
Construction and operation of the NGI pipeline and aboveground facilities	Pipeline licence and pipeline licence variation	DMIRS	<i>Petroleum Pipelines Act 1969</i>
	Environment Plan	DMIRS	<i>Petroleum Pipelines Act 1969 and Petroleum Pipelines (Environment) Regulations 2012</i>
	Blasting Management Plan	Department of Water and Environmental Regulation (DWER)	Environmental Protection (Noise) Regulations 1997
	Safety Case	DMIRS	<i>Petroleum Pipelines (Management of Safety of Pipeline Operations) Regulations 2010</i>
Clearing of native vegetation	Native vegetation clearing permit <i>(only if not formally assessed by the EPA)</i>	DMIRS	Part V of the EP Act
Disturbance of an Aboriginal heritage site(s)	Section 18	Department of Planning, Lands and Heritage (DPLH)	<i>Aboriginal Heritage Act 1972</i>
Access to and use of groundwater – potentially required to provide a construction water supply, for hydrotesting of the NGI pipeline or in support of the aboveground facility operations (compressor station)	Licence to construct a well (26D) and Licence to abstract water (5C)	DWER	<i>Rights in Water and Irrigation Act 1914 (RIWI Act)</i>

Proposed Activities	Type of Approval	Regulatory Agency	Legislation Regulating the Activity
Disturbance of watercourse bed or banks in a proclaimed surface water area	Bed and banks permit (where required)	DWER	RIWI Act
Establishment of temporary construction camps	Development application and/or Building Act permits	Local Shire(s)	Local Planning Policy, <i>Planning and Development Act 2005</i> and <i>Building Act 2011</i>
Construction access tenure	Section 34 Access Rights, Section 91 Licence and/or Easements (Section 16)	DPLH / DMIRS	<i>Dampier Bunbury Natural Gas Pipeline Act 1997</i> (Section 34) <i>Land Administration Act 1997</i> (Section 91) <i>Petroleum Pipelines Act 1969</i> (Section 16)
Operational tenure	Section 34 Access Rights and Easements (Section 16)	DMIRS	<i>Dampier Bunbury Natural Gas Pipeline Act 1997</i> (Section 34) and <i>Petroleum Pipelines Act 1969</i>

1.3.3.1 Land Tenure

The land tenure rights that the Proponent is intending to secure for the Proposal are summarised in **Table 1-2**. The Proposal will require an easement for the NGI pipeline and associated aboveground facilities, and a freehold lot to accommodate the proposed compressor station. The pipeline and compressor station will be licenced under a new licence pursuant to the *Petroleum Pipelines Act 1969*.

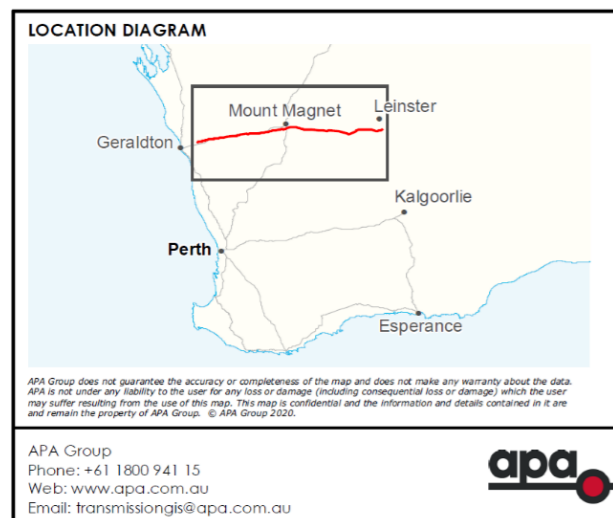
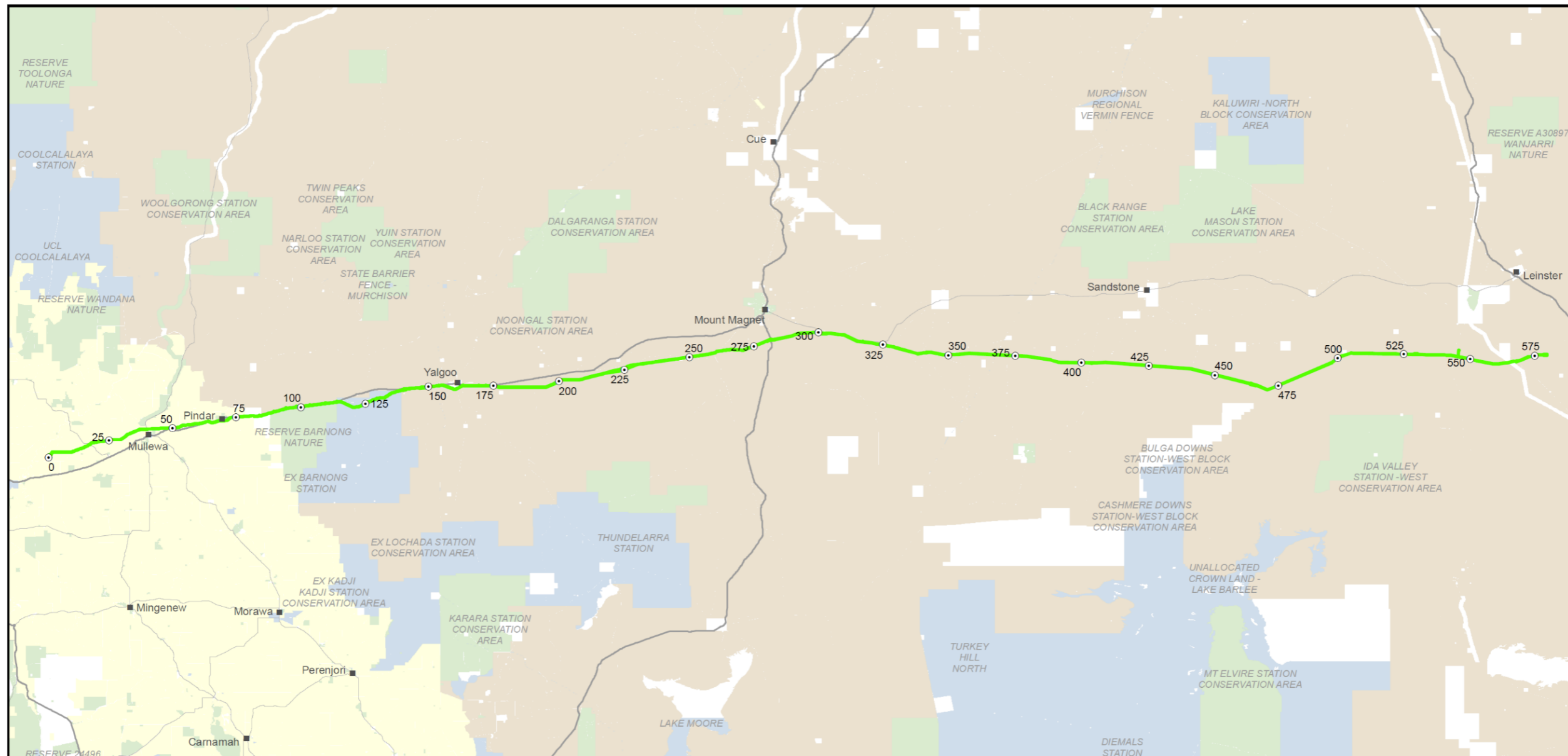
The Proponent will be applying for tenure for the construction and operation of the Proposal on three types of land tenure: Rural Freehold Land, Crown Land – Reserve 48372 and Crown Land (pastoral leases, managed and un-managed reserves, unallocated Crown Land, road reserves and other interests, such as mining tenements) (**Figure 1-2**).

Included within the Rural Freehold Land is the Dampier to Bunbury Natural Gas Pipeline (DBNGP) corridor, which is subject to the *Dampier Bunbury Natural Gas Pipeline Act 1997* (DBP Act). The Act is administered by the DBNGP Land Access Minister and DPLH. The DBNGP Land Access Minister may confer rights pursuant to Section 34 of the DBP Act to own, operate and maintain high pressure gas pipelines within the DBNGP corridor. The intent of the corridor is to allow for a potential future lateral from the existing DBNGP. The Proponent proposes to utilise the DBNGP corridor to the extent possible (**Figure 1-1**). The DBNGP corridor comprises a 50 m wide easement.



Tenure for an infrastructure corridor was established on Crown Land in 2005 for the purpose of the State Geraldton North Eastern Goldfields Infrastructure Corridor (GNEGIC) (**Figure 1-1**) and is managed by DPLH. The GNEGIC was proposed by the (then) Department of Resources Development on behalf of the Gas Pipeline Sale Steering Committee. The GNEGIC was defined as an infrastructure corridor to connect the Geraldton/Oakajee Industrial Estate to the Northern Goldfields. Specifically, the concept proposal was to establish the GNEGIC between Compressor Station 7 on the DBNGP and the Goldfields Highway north of Leonora. The GNEGIC was subject to the EPA strategic advice under Section 16(e) of the EP Act 1986 (EPA, 2003). In broad terms, the EPA concluded that, on the basis of the information available at the time of the strategic proposal, there are no constraints that would preclude the use of the proposed corridor for the construction of future infrastructure.

The Proponent notes the EPA Bulletin 1106, which contains the EPA's strategic advice, proposed a number of commitments for implementation by future Proponents intending to construct new infrastructure within the GNEGIC. The intent of these commitments is to mitigate potential environmental impacts, however, the EPA acknowledged that the implementation of these may need to be varied to apply to specific proposals (EPA, 2003). While advice given under Section 16(e) does not allow for the setting of environmental conditions or for legally binding commitments, APA will take the commitments into consideration and implement the Proposal in a manner that is consistent with the intent of the commitments, as relevant to the Proposal.



LEGEND:

- Kilometre Point (KP)
- National / State Highway
- Main Road
- Development Envelope
- Agricultural (and other) Properties
- Pastoral
- Reserve
- Rural
- Crown Land / Other Purposes

PROJECT: Northern Goldfields Interconnect

TITLE: Land Use within the Proposal

SUBTITLE:

DATE: 12/01/2021

DATA SOURCE:
KPs, Development Envelope: APA Group.
Agricultural (and other) Properties: DPIRD.
Towns, Roads: Landgate.

DOCUMENT NUMBER: 560-MAP-L-7856

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0.2	Revision	SP			12/01/21
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Figure 1-2: Land Uses Relevant to the Proposal