

BINDULI GAS PIPELINE

Construction Environment Plan Summary

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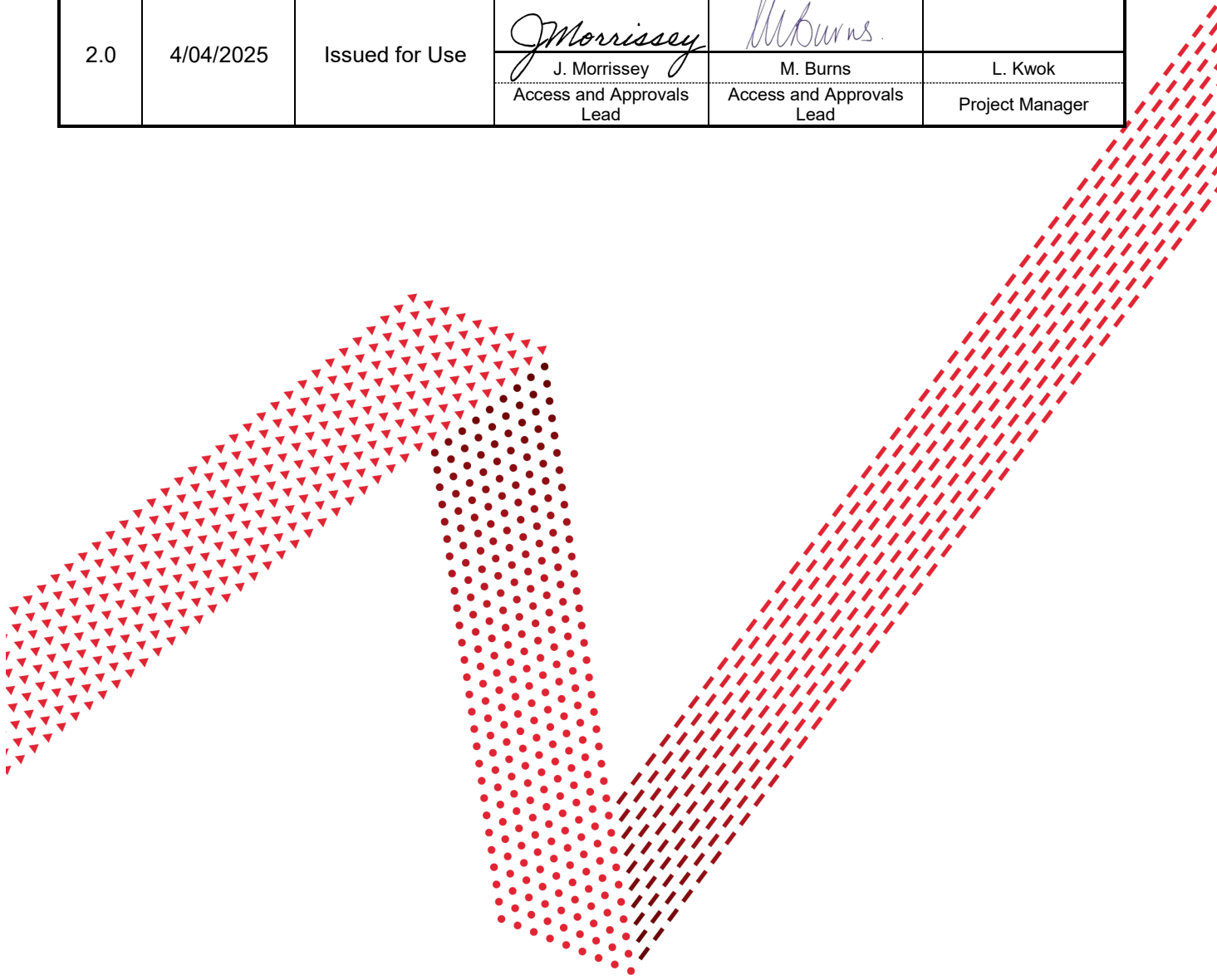


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1. Introduction

This Environment Plan (EP) Summary provides an overview of the environmental management requirements for the construction of the Binduli Gas Pipeline (Project), located in the Coolgardie Interim Biogeographic Region of Western Australia. The Project will lie within Pipeline Licence (PL) 137 area, and will connect to the Goldfields Gas Pipeline (GGP) to supply the Lynas Rare Earths processing plant. The Project will include other associated infrastructure such as extra workspace areas for construction, laydown areas and a pipeline service road for operations.

The Project will be operated by APA Operations Pty Limited (APA).

1.1 Purpose and Scope

The purpose of this EP Summary is to provide information to the general public regarding the Project environmental considerations and management requirements. This CEP Summary outlines the construction works and management defined in the Binduli Gas Pipeline Construction Environmental Management Plan (CEP) (22002-PL-HSE-0003).

The environmental management for the operational phase of the Project is excluded from the scope of this document.

1.2 Objectives

The overall environmental objectives of the CEP are to:

- Outline proposed measures to manage potential environmental impacts associated with construction of the Project.
- Facilitate approvals under the *Pipelines Petroleum Act 1969* (Pipelines Act).
- Ensure compliance with project approval, pipeline licence, and other conditions.

2. Site Description

2.1 Location

The Project area is located approximately 6 km south-west of Kalgoorlie, Western Australia. The proposed gas pipeline starts at the Goldfields Gas Pipeline at Kilometre Point 1367.27, and transverses across land owned by the Water Corporation, under Johns Road, and terminates at the proposed Lynas Kalgoorlie Rare Earths Processing Facility (located on General Lease G26/169).

The approximate pipeline coordinates are summarised in **Table 1**, and the location of the project is shown in **Figure 2-1**, including ID vertices points.

Table 1: Pipeline coordinates

ID	ZONE	EASTINGS	NORTHINGS
1	51	348938.20	6592777.69
2	51	348932.45	6592772.06
3	51	348720.00	6592595.87
4	51	348562.04	6592782.70
5	51	348088.35	6592380.80

ID	ZONE	EASTINGS	NORTHINGS
6	51	348229.25	6592214.37
7	51	348175.91	6592169.33

The pipeline will be designed for a minimum operating life of 40 years, with the surface station designed for a minimum operating life of 25 years.

APA has selected a route for the Project to, as far as practicable, avoid:

- Disruption to third party infrastructure and services, such as roads, other pipelines, or cables.
- Disturbance to places of environmental or social significance, such as Aboriginal heritage sites, or priority flora.

The pipeline will lie within PL 137 area, which occupies a corridor within freehold and crown land. APA will be the sole holder of PL 137 granted under the *Petroleum Pipelines Act 1969*.

The boundary of PL 137 forms the disturbance envelope for construction of the Project; this boundary also forms the limits of the native vegetation clearing permit (NVCP) area. All new disturbance associated with construction will be confined to this envelope. The Project will also make use of existing cleared areas and infrastructure such as third-party access roads and laydown yards where possible.

In this document the “construction right-of-way” (CROW) refers to a subsection of the pipeline envelope (the pipeline licence area) where vegetation clearing will be required for pipeline construction. APA expects the majority of the CROW to be approximately 25m wide, with the width reduced in some sections to avoid or minimise disturbance to mature trees within the Project area. The area for the Karrawang Delivery Station has been cleared by others.

The location of ancillary disturbances along the CROW, such as access roads, vehicle turnaround bays, temporary storage and laydown areas are yet to be finalised however they will be placed to utilise existing cleared or degraded areas where possible, and to avoid areas of higher environmental or social value, as far as practicable.

The construction workforce will be accommodated at commercial accommodation within the town of Kalgoorlie, as required.

Total disturbance for the project will not exceed 4.1 ha, and approximately 2.77 ha to be reinstated.

Disturbance will be temporary, with reinstatement and rehabilitation to follow closely behind construction. The only exceptions to this will be a 4 m wide access track along the pipeline corridor, which will remain for the life of the asset.

There are a number of Aboriginal groups with interests in the Project area.

- Maduwongga People (Unregister Claim WAD186/2017); and
- Marlinyu Ghoorlie People (Registered Claim WAD647/2017 from 28/03/2019).

As such, APA has a responsibility under the *Aboriginal Heritage Act 1972* to consult with the relevant Aboriginal groups prior to undertaking any land disturbance to ensure no heritage sites are disturbed without prior authority.

APA and the Marlinyu Ghoorlie People have entered into a Relationship Agreement for the Project.

The Maduwongga People have raised no issues with the Project.

BINDULI GAS PIPELINE

Construction Environment Plan Summary



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PROJECT: Bindulie Pipeline (BN)
TITLE: Location Overview
SUBTITLE: Figure 2-1
DATE: 16/05/2022

DATA SOURCE:
 Service Layer Credits: World Imagery, Mazar Coastline, Roads, Towers, Geonoma; LGATE Pipelines, KPs, Delivery Station: APA Group

LEGEND:
■ Hot Tap Location
⊙ Kilometre Point (KP)
--- BN - Proposed Alignment
— APA Existing Assets
— Karrawang Delivery Station
□ Construction Right of Way (CROM)

DOCUMENT NUMBER:
MIDA NUMBER: BN-MAP-L-0006

01	02	03	04	05	06	07
Revision	Draft	AL	XX	XX	XX	16/05/22
	Description	Drawn	Checked/QC	Approved		Date

SCALE: 1:5000 @ A3
 0 50 100 150 200
 Metres
 Coordinate System: GDA2020

LOCATION DIAGRAM
 Bindulie Pipeline Western Australia
 Coongardie Kalgoorlie
 Kambalda

All data and information shown on this map is copyright of the respective owners and is provided as a service only. It is not intended to be used for any other purpose. The accuracy of the information is not guaranteed. The information is provided as a service only and is not intended to be used for any other purpose. The accuracy of the information is not guaranteed. The information is provided as a service only and is not intended to be used for any other purpose. The accuracy of the information is not guaranteed.

Figure 2-1 Bindulie Gas Pipeline Alignment

3. Construction Activities

The Project has an estimated construction and commissioning duration of approximately 3 months, and is expected to commence May 2025.

Works associated with the Project construction are summarised in **Table 2**.

Table 2: Project Activity Summary

Activity	Description
Mobilisation	Transport of construction machinery, plant and equipment to site, establishment of laydown and site support workspaces including temporary construction camp.
Survey	The pipeline centreline, limits of the CROW and any ancillary workspaces will be surveyed and marked out ahead of ground-disturbing works.
Clear and grade	Removal of vegetation in accordance with the NVCP. Topsoil stripped to a minimum depth of 100 mm and pushed into windrows. Vegetation will be stockpiled separately.
Excavation and trenching	Excavation of trenches including those for the pipeline to the offtake station and the Karrawang Delivery Station. Trench spoil will be placed on the trench side of the construction ROW, separate to the topsoil and vegetation stockpiles from clear and grade.
Blasting	Where material cannot be removed with conventional rock breaking plan and equipment, targeted blasting may be required. Blasting will be carefully controlled, and carried out by a specialist team. Blasting is not anticipated for Project.
Horizontal Directional Drilling	If open cut trench methods are not suitable for specific crossings, horizontal directional drilling (HDD) methods will be the preferred means of trenchless construction. HDD is not anticipated for the Project.
Wet trenching	Depending on rainfall, saturated or inundated ground may be encountered, particularly in lower-lying areas. In such areas, the trench may be dug into wet ground, and allowed to flood, without dewatering.
Dewatering	In some inundated areas, dewatering methods may be used in preference to wet trench methods.
Hot Tapping	Safely drilling and welding a new fitting to allow connection of the off-take into the operating GGP, completed under the GGPS OEP.

Activity	Description
Pipe Assembly	<p>Pipe will be delivered to the CROW and laid out end-to-end alongside the trench. Individual pipe segments will be placed on raised timber skids or sandbags to protect them from damage and facilitate welding into continuous lengths (pipe strings).</p> <p>The pipeline will be bent in places to follow the pipeline route, and/or conform to the terrain.</p> <p>Pipe segments are welded into continuous lengths before being laid in the trench. Welded joints will be x-ray tested and garnet-blasted to remove surface scale and rust, and then coated with a high build epoxy (HBE) to provide a continuous external coating and prevent corrosion.</p> <p>Installation of the Cathodic Protection cables to the pipeline will be completed in advance of pipe lower-in by welding the cables to the pipeline, applying the necessary coating and then the pipe can be lowered into the trench.</p>
Pipe Lowering	<p>Once welded, the pipe strings will be placed into the trench by side-boom pipe-layers (or equivalent). Fine bedding and padding sand will be placed around the pipe to prevent any sharp objects (such as rocks in the trench spoil) from damaging the pipe coating. Bedding and padding material will be sourced from the trench spoil itself by screening, wherever possible.</p>
Backfilling	<p>Suitable stockpiled trench spoil will be returned to the trench and compacted after the pipe is lowered in. If required, clean, approved locally-sourced fill will be imported to make up any shortfall where trench spoil is deemed unsuitable for backfill.</p> <p>Topsoil removed during clear and grade will then be re-spread and contours reinstated.</p>
Construction of Permanent Above-ground Facilities	<p>Civil works including:</p> <ul style="list-style-type: none"> • Pad construction, installation of control hut and meter and filter skids, piling works and placement of concrete slabs; • Installation of underground conduits and earth cable; • Placing aggregate over the ground, to prevent vegetation regrowth, and erection of site security fencing. • Assembling equipment and lifting into position; • Installing free-standing equipment and structural steel work, interconnected piping and cable trays and gas utility lines; and • Installing electrical power distribution and control components, power and control cables between the equipment and a Remote Terminal Unit (RTU) or Control Hut.
Testing	<p>Non-destructive testing, functional testing of all manual valves, hydro-testing of pipework; hazardous area checks, earthing compliance checks and continuity point to point testing of circuits.</p>

Activity	Description
Commissioning	Pre-testing all mechanical and electrical equipment and instrumentation. Commissioning communications and control systems prior to introduction of gas. Progressive introduction of gas and commissioning each item of equipment sequentially until the whole system is capable of operating as a unit.
Demobilisation	Disassembly of any temporary infrastructure, machinery, and equipment.
Site reinstatement and Clean- up	Removal of waste and stockpiled materials, scarification of disturbed areas, replacement of topsoils over disturbed areas, redistribution of stockpiled vegetative material removed for construction.

Supporting services required for the activity include water supply, power generation and chemical storage and waste management. These aspects of the Project are summarised in the sections below.

3.1 Water Supply

Water will be mainly required for dust suppression, and hydrotesting.

It is anticipated that water for the Project will sourced from existing licenced water sources in the immediate vicinity. Any groundwater abstraction (not anticipated) will occur in accordance with relevant licence/s to take water, issued under the Rights in Water and Irrigation Act 1914.

Hydrotest water will be pumped into containers and trucked off site for disposal or reuse.

3.2 Power Generation, Fuels and Chemical Storage

Electricity will be supplied at construction areas by diesel generators.

Diesel storage for power generation and automotive use will incorporate:

- Mobile onsite fuel trailer containing no more than 5,000 L, travelling the CROW to refuel vehicles and mobile and fixed plant.
- Miscellaneous jerry cans, each up to 20 L.

Other hydrocarbon and chemical storage for the construction will incorporate:

- Engine, gearbox, hydraulic and other oil and greases, in a variety of containers, including 1,500 L intermediate bulk containers (IBCs), 200 L drums, and 20 L containers.
- Various other chemicals for construction use, including brake and radiator fluids paints, concrete retarders, formwork release agents, paints, solvents, thinners, acetone, anti-seize, cleaning agents, and others, in containers of less than 50 L.

3.3 Waste

Project wastes are expected to principally comprise:

- Inert waste, including packaging, wooden pallets, steel (e.g. pipe off-cuts), builder's rubble, formwork, waste garnet, welding rods etc., and minor quantities of waste concrete.
- Putrescible waste, predominantly food scraps.

- Small quantities of contaminated waste, including fuel, oil, and chemical containers with residual material, and coating / sand blasting wastes (including garnet, and coating residues).

Collection points for waste will be established at the laydown area. Waste will be brought back from construction areas along the CROW daily. Waste will be appropriately contained (with bins, skips, etc.) classified and segregated for collection by waste contractors licensed for the classes of waste. Putrescible wastes will be contained in bins with secure lids to so that feral animals are not encouraged to forage. Contaminated or hazardous wastes will be kept in secondary containment.

4. Existing Environment

A summary of the key values and sensitivities relevant to the Project area provided in **Table 3**.

Table 3: Summary of Values and Sensitivities Relevant to the Project

Feature	Values and Sensitivities
Soils	No known acid sulphate soils or contamination.
Hydrology and Hydrogeology	<p>No permanent or ephemeral inland waters or drainage lines within the Project area. The nearest is minor river is 700m to the south-east of the project area.</p> <p>The nearest Public Drinking Water Source Area (PDWSA) to the project area is Menzies Water Reserve, located 118.86km to the north-west.</p> <p>No potential terrestrial or aquatic GDE's within the Project area.</p>
Flora, Vegetation and Weeds	<p>No Threatened, Priority or otherwise significant flora species were recorded within the Project area.</p> <p>No Threatened, Priority or otherwise significant ecological communities were identified within the Project area.</p> <p>Two weed species were recorded within the Project area. These are <i>Centaurea melitensis</i> and <i>Carrichtera annua</i>. Neither of these weeds species are listed as a Weeds of National Significance or a Declared Pest in Western Australia.</p>
Fauna	<p>No species of conservation significance were recorded within the Project area.</p> <p>Potentially suitable habitat is present within the BIN area for the conservational significant fauna species <i>Leipoa ocellata</i> (Malleefowl), but more than occasional use of the site by Malleefowl is unlikely due to the location and nature of the site adjacent to an industrial area and adjoining busy roads. The habitat was defined as "Habitat likely marginal and unsuitable for breeding. Occasional transients only" (Botanica, 2021).</p> <p>No introduced fauna was reported during the 2021 surveys, however, it is likely that some feral fauna are present in the area.</p>
Land Use	The Project will be located within the local government area of the City of Kalgoorlie-Boulder. The Project is currently zoned for General Industry.
Aboriginal and European Heritage	<p>Aboriginal heritage surveys have been undertaken for the Project; no previously registered or newly recorded Aboriginal Ethnographic or Archaeological Sites and/or Heritage Places are located within the Project area. (Terra Rosa 2024)</p> <p>No Commonwealth or State listed historic / European heritage sites have been identified within the Project area.</p>

5. Environment Management

The implementation strategy for the Project defines key roles and responsibilities, outlines the arrangements for monitoring, review and reporting of environmental performance, and the strategy to confirm that the management/mitigation measures are implemented, maintained and effective throughout the project.

All contractors involved in the construction and commissioning of the project are expected to comply with all requirements within the CEP.

The environmental management measures required under this CEP will be implemented via the APA Safeguard System, supported by a comprehensive environmental management system including procedures, forms and guidance materials pertaining to environmental management (including a project specific Oil Spill Contingency Plan (OSCP) outlined within the CEP). Additional project specific documentation will also be developed as appropriate (e.g. Project Emergency Response Plan).

Monitoring of environmental performance will be undertaken through regular inspections by the Contractor in addition to an internal audit undertaken by APA against the requirements of the CEP during construction.

Routine reports will be submitted to the Department of Energy, of Energy, Mines, Industry Regulation and Safety (DEMIRS) Environment Branch as follows:

- A single report within twelve months of the CEP has been accepted, to demonstrate compliance for the environmental performance objective and standard in the CEP, including justification based on the measurement criteria; and
- Reporting of emissions and discharges to the environment on a three-monthly basis.

The requirements for regulatory reporting of incidents are also summarised in this section.

- Reportable: DEMIRS will be notified of any reportable incident within two hours of the first occurrence, or within two hours of becoming aware of the incident occurrence, and provided with a written report within three days.
- Recordable: A recordable incident is an event (or non-event) resulting in a non-conformance with any of the environmental performance objectives and/or standards detailed the CEP. Recordable incidents are reported by calendar month no later than 15 days following the end of the reporting period (i.e. previous month).

A risk-based approach has been adopted to manage potential threats to the environment. This process involved initial identification of environmental interactions (aspects) resulting from Project activities followed by an environmental risk assessment (ERA) workshop attended by key personnel. The ERA process involved:

- Assessment of environmental risks in terms of likelihood and consequence.
- Identification of mitigating factors and management measures to reduce environmental risks to ALARP.
- Risk ranking according to severity.

A summary of the key environmental hazards, control measures and mitigating factors identified for the Project has been provided in below. **Table 4** only provides an indication of

major hazards and controls and is not a comprehensive summary of all commitments associated with the Project.

Table 4: Key environmental hazards and control measures

Environmental Hazard	Control Measures and Mitigation Factors
Disturbance of Heritage Values	<ul style="list-style-type: none"> Heritage stakeholders consulted, and consultation with relevant stakeholders will continue during construction. Works to cease and DPLH notified immediately if suspected heritage artefacts identified. Traffic Management Plan (TMP) to address CEP requirements, including access along specific approved routes only. Inductions, toolbox talks, training, and site procedures address heritage values, including the requirement to stop work if suspected artefacts are found. Agreement and ongoing guidance from traditional owners in relation to Heritage values. Heritage monitors will be onsite during clearing works.
Loss of vegetation, habitat, biodiversity or land use from disturbance to vegetation	<ul style="list-style-type: none"> Pipeline alignment, CROW, access roads, extra workspace and other Project infrastructure laid out via internal clearing procedures to minimise clearing and use existing disturbance as far as practicable. Construction boundary clearly marked out to prevent over-clearing. Vegetation and topsoil cleared for construction and stockpiled separately in adjacent areas for use in rehabilitation. At completion of works, all disturbed areas (with exception to plant sites and a 4 m wide access track for operations) to be scarified, stockpiled topsoils re-spread, then stockpiled vegetation respread to encourage regrowth. Rehabilitation progress will be monitored as part of regular monitoring. Quantitative vegetation monitoring of the dominant vegetation types, will be undertaken after 5-years of rehabilitation of construction areas being completed to assess performance against native species diversity and cover, and bare ground targets. Inductions, toolbox talks, pre-starts, and site procedures address vegetation, including remaining within construction boundaries, and locations of Priority flora. Hazard and incident reporting to include disturbance beyond marked or approved boundaries or damage to vegetation/ habitat marked for retention; substantial incidents reported to DEMIRS.
Injury or disturbance to native fauna or stock from vehicle and mobile plant movements	<ul style="list-style-type: none"> TMP to control vehicle movements to reduce likelihood / severity of injury / disturbance to fauna, including access along approved routes only; speed limits; restrictions on night driving. IVMS in vehicles to track speed and location, for remote journeys. Established roads used for access where practicable. Night works limited, and subject to additional risk assessment including hazards to nocturnal fauna. Inductions, toolbox talks, training, and procedures address vehicle/ plant hazards to fauna, including TMP requirements; drivers to be properly licensed and trained.
Death of native fauna or stock from entrapment in pipeline trench, other excavations, or pipe strings	<ul style="list-style-type: none"> Gaps left in trench at direction changes with fauna egress points at angles of not more than 45 degrees provided. Fauna shelters (e.g. hessian bags) placed every 50 m or less in open trench. Trench inspected in the morning, within three hours of sunrise, and in the evening between 3-6 pm. During extreme temperature (35°C or above) fauna inspections will also occur at midday. Trench inspected immediately before pipe laying and backfilling; any entrapped fauna retrieved and released. Trench inspections, 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. The number of fauna handlers conducting inspections shall allow for 5km of open trench to be inspected per fauna handler per hour. Retrieved fauna released into suitable habitat near point of rescue, at appropriate (as determined by trained fauna handlers) distance from trench and bunded area, as soon as practicable, except where they need to be held for treatment (dehydration, hypothermia, etc.), or are a nocturnal species best released in the evening. Fauna unfit for release referred to qualified carers; carer contact details maintained on site; severely ill/ injured fauna to be euthanised on advice from carers or other qualified persons.

Environmental Hazard	Control Measures and Mitigation Factors
	<ul style="list-style-type: none"> • Pipe sections inspected for fauna before welding; end caps kept on pipe strings (sections of 2 or more welds) to prevent fauna entering before pipe laying.
Disturbance to native fauna from light spill	<ul style="list-style-type: none"> • Night works generally limited to hydrotesting and occasional movement of equipment along CROW. • Lighting directed to minimise spill. • Inductions, toolbox talks, training, and procedures address fauna including hazards to fauna, incident reporting, and procedures for injured fauna.
Loss or degradation of topsoil resources from earthworks, vehicle movements, wind or water erosion	<ul style="list-style-type: none"> • Topsoils stripped from construction areas and stockpiled adjacent, for use in rehabilitation. • Topsoils stockpiled away from vehicle access points, in a way that will limit the loss of topsoil through erosion. Stockpile heights limited to 2 m to minimise erosion; breaks left in stockpiles to allow surface water flows. • At completion of works, topsoils to be re-spread over disturbed areas (with exception to plant sites and a 4 m wide access track for operations), then cleared vegetation re-spread over topsoil to promote revegetation and prevent erosion. • No driving / parking permitted over soil stockpiles / windrows; signs placed to protect stockpiles/windrows. • Inductions and toolbox talks address topsoil management and preservation. • Hazard and incident reporting to include loss of or damage to topsoil resources. • Other measures to prevent water erosion as set out under “water”.
Soil erosion from inadequate drainage control on disturbed surfaces or uncontrolled release of water from hydrotesting	<ul style="list-style-type: none"> • Hazard and incident reporting to include substantial observations of erosion, poorly controlled discharge, or poorly controlled drainage on construction areas. • Flush / hydrotest water captured for re-use off-site.
Impacts to soils from unplanned exposure of contaminated materials due to trenching	<ul style="list-style-type: none"> • Hazard and incident reporting to include unexpected contamination identified during earthworks.
Impacts on land use / third parties from road / land degradation due to site access	<ul style="list-style-type: none"> • TMP to manage vehicle movements to reduce likelihood / severity of road / land damage, including access along approved routes only; speed limits (reduced in wet conditions); IVMS in vehicles to track speed and location for remote journeys. • Site assessments to determine additional controls for specific access routes (upgrade / maintenance/ repairs, specific speed limits, vehicle restrictions, etc.) • Consultation with landholders and other relevant stakeholders to determine requirements / restrictions for use of access routes including maintenance; consultation to continue for duration of works. • Access route maintenance / repairs carried out as required. • Inductions, toolbox talks and site procedures address access including approved routes, speed limits, restrictions, and driving to conditions; drivers trained and competent; pre-starts to address road conditions. • Hazard and incident reporting to include damage to roads / lands from access.
Impacts on surface water quality from release of sediment due to earthworks	<ul style="list-style-type: none"> • Cleared vegetation stockpiled away from drainage lines. • Construction corridor rehabilitated as soon as practicable to stabilise disturbed surfaces and restore resistance to erosion. • Incident reporting to include substantial observations of sediment transport, or poorly controlled drainage on construction areas.
Contamination of surface waters	<ul style="list-style-type: none"> • JHAs to consider any specific hazards to surface water in tasks involving hydrocarbon or chemical transport, storage, handling, or transfers. • Hydrocarbons and chemicals will be managed in accordance with approved procedures relating to the storage and handling of hazardous chemicals from purchase, through to load/unload, refuelling, decant, mixing and disposal. • Hazardous chemical containers, including piping systems and bund facilities shall be inspected on a regular basis to detect spills, leaks and the potential for such occurrences.

Environmental Hazard	Control Measures and Mitigation Factors
Impacts on surrounding land use, vegetation, habitats, and fauna from improper disposal of inert wastes	<ul style="list-style-type: none"> • Bins, skips and other appropriate containment with lids used for holding wastes till collection. • Wastes removed from CROW frequently (daily) and returned to collection points at main laydown. • Wastes classified and segregated, then removed by licensed waste collection contractor; industrial wastes stockpiled in designated areas. • All remaining wastes removed from site at completion of works; confirmed by practical completion / punchlist checklist. • Wastes segregated and collected for recycling where practicable. • Incident reporting to include substantial observations of uncontained / poorly contained wastes or poorly segregated waste.
Attraction / encouragement of feral pests from improper disposal of food wastes	<ul style="list-style-type: none"> • Rubbish bins with lids for putrescible waste. • All putrescible wastes (including fruit scraps/ decomposable material) brought back from CROW daily for disposal in bins at camp/laydown. • Putrescible wastes frequently removed from site by contractor for disposal at a licensed landfill. • Inductions and toolbox talks address management of food wastes, including no feeding of animals. • Incident reporting to include substantial observations of pests / improperly contained food wastes.
Pollution of soil or water, bacterial health risk, and odour from improper disposal of sewage	<ul style="list-style-type: none"> • Portable toilets / ablutions emptied and maintained by supplier weekly or as required. • Inductions and toolbox talks address use of toilets.
Contamination of soils and/or surface water from improper management of contaminated wastes and residues	<ul style="list-style-type: none"> • Contaminated wastes including empty containers with hydrocarbon or chemical residues, or contaminated materials from spills, kept in dedicated, banded containment, segregated from other wastes; empty containers managed as for full containers until removed from site, including storage and labelling. • Hydrocarbon and chemical wastes to be removed from site progressively and at completion of works, confirmed in practical completion checklist; wastes to be removed by contractor licensed for class of waste. • Incident reporting to include substantial observations of improperly segregated contaminated or hazardous wastes.
Impacts on flora, fauna, land use, and third parties from unnatural bushfire due to unguarded / uncontained source of ignition	<ul style="list-style-type: none"> • Fire response equipment maintained on site; 1000L firefighting trailers located close to higher-risk works (clear and grade; welding); fire extinguishers in or on all vehicles or mobile plant; construction equipment (grader, dozer, water truck) to be commandeered for firefighting (clearing firebreaks, pushing up bunds, wetting surfaces, etc.) where practicable and safe to do so. • All vehicles and plant parked up in designated areas when not in use; all stockpiled equipment, materials and waste stored in areas of low fire risk. • Flammable materials to be removed from areas around ignition sources, such as welding or grinding; site housekeeping to keep potentially flammable materials stored away from hot work areas or other fire hazards. • Local fire response addressed in ERP; additional services at Kalgoorlie; emergency contact details available to all Project personnel. • Permit system in place for hot works (including welding and grinding), hot tapping, and commissioning works; fire spotter in place for hot / higher fire risk works, • JHAs and pre-starts to consider fire risks; weather monitored for fire risk (hot, dry, and/or windy conditions); DFES alerts and fire bans monitored, exemptions from fire bans sought where necessary, • Hydrocarbons and flammable chemicals kept in dedicated, marked containers and storage areas, • Smoking only permitted at designated areas at laydown, and CROW; bins and “butt bags” provided for safe disposal; no open / camp fires permitted. • Construction works confined to CROW and other areas cleared of vegetation.

Environmental Hazard	Control Measures and Mitigation Factors
	<ul style="list-style-type: none"> • Inductions, toolbox talks, training, and procedures address fire hazards, fire response, and use of firefighting equipment. • Incident reporting to include any accidental fires started.
Contamination of soils by hydrocarbons or chemicals	<ul style="list-style-type: none"> • Diesel fuel will be provided on site by a mobile fuel trailer with a maximum 5000L capacity, designed to appropriate standards. • Hydrocarbons, chemicals, and other hazardous material kept in dedicated, ventilated area, away from busy construction areas and sensitive environments; all hydrocarbons; containment bunds have capacity >110% of largest container and >25% of total storage (whichever greater). • Portable bunded containers (spill pallets) used when handling hydrocarbons and chemicals. • Spill response equipment kept on site, including containment and recovery equipment; spill kits strategically located and clearly identified for easy access; light spill, spill kits replenished after use, kits kept with light vehicles and all mobile plant; substantial spill kits and drip trays kept with fuel and service trucks, driver /operator trained in use. • SDS and register kept for all hydrocarbons, chemicals and hazardous substances on site. • Inductions, toolbox talks, training, and procedures address hydrocarbon and chemical transport, storage, handling, transfers, inspections, maintenance, spill response, and waste disposal; additional training for higher-risk roles (e.g., fuel and service truck operators). • Hydrocarbon and chemical spills addressed in ERP and OSCP, including spills from transport. • JHAs to consider any tasks involving hydrocarbon or chemical transport, storage, handling, or transfers, and address associated hazards, including management of any wastes / contaminated materials. • Vehicles and fixed and mobile plant inspected before mobilisation, checked daily as part of pre-starts, and maintained according to manufacturer's specifications. • Traffic Management Plan (TMP) to control vehicle movements to reduce likelihood / severity of collision resulting in spill, including access along approved routes only; speed limits observed (10kph around equipment and working areas, or as set in TMP); IVMS in vehicles to track speed and location for remote journeys; fatigue and journey management plans to reduce risk of incident; access roads maintained to remain safe; inductions and training to address safe driving; all driving to conditions. • Contracts require compliance with CEP and TMP, including requirements for hydrocarbon and chemical transport, storage, and handling; hydrocarbon and chemical suppliers / transporters properly licensed, drivers and operators properly licensed and trained. • Weld coating applied with reasonable care to minimise overspray/ drips; plastic sheeting placed to capture overspray/ drips; substantial loss to ground recovered with shovels and material disposed of at facility licensed for class of waste; delivery hoses to be correctly rated for use; spill kits to hand in case of hose failure. • Pre-cast slabs to be used for civil works / pipeline protection; procedures / training for use of minor quantities of quickset concrete for post installation. • Hazard and incident reporting to include leaks and spills, including location, size, and nature of spill, and details of cleanup/ remediation; substantial spills reported to DEMIRS. • Other measures for management of contaminated and hazardous wastes, as set out under "wastes".
Impacts on native flora, vegetation, habitats, and land use from Introduction and/or spread of weeds	<ul style="list-style-type: none"> • Construction footprint kept as small as practicable to minimise disturbed area prone to colonisation by weeds. • Vehicles to be declared clean of soil clumps and vegetative matter before entry to site; requirement included in contracts; vehicles to be cleaned often (included in pre-start checks). • Number of vehicles travelling to and through site reduced through use of buses. • TMP to control vehicle movements, including access along approved routes only; IVMS in vehicles to track speed and location for remote journeys; movements minimised where practicable (e.g. use of crew bus/ shared vehicles). • Landholders and other relevant stakeholders consulted on weed management requirements / expectations; requirements dictated to construction contractor. • Known weed locations marked on ELLs.

Environmental Hazard	Control Measures and Mitigation Factors
	<ul style="list-style-type: none"> • Fill material to be declared clean and free of weeds, brought from local source, if practicable. • Inductions and toolbox talks address weeds, including vehicle hygiene and information on weeds known to occur in Project area.
Impacts on native flora, vegetation, habitats, and land use from Introduction and/or spread of pest animals / vermin	<ul style="list-style-type: none"> • Buildings, containers, and other structures to be declared clean and free of pests before mobilisation to site. • Buildings, containers, and other structures to be sourced locally as far as practicable. • Incident reporting to include substantial observations of pests; pests to be dealt with promptly. • Other measures for management of pest species as set out in “wastes” and “reinstatement”.
Impacts on vegetation and/or third parties from dust	<ul style="list-style-type: none"> • Water truck on site for dust suppression as required; site supervisors to direct additional dust suppression as required by conditions (hot, dry, and/or windy). • Speed limits as set out in TMP, including driving to conditions; access along approved routes and CROW only; IVMS to track vehicle locations and speeds for remote journeys; pre-starts to address road conditions; drivers trained and competent; vehicle and plant movements minimised where practicable. • Ongoing consultation with landholders/ other stakeholders for duration of works. • Inductions, toolbox talks, training, and procedures address dust, including speed restrictions, driving to conditions, and dust suppression. • Incident reporting to include unreasonable/ excessive dust generation.
Contribution to global greenhouse effect from unplanned / accidental gas release	<ul style="list-style-type: none"> • Fuel use and estimated venting volumes recorded; emissions estimated for reporting to DEMIRS, NPI, and NGER. • Vehicles and fixed and mobile plant inspected and maintained according to manufacturer’s specification to minimise emissions; daily pre-start checks and regular servicing kept up. • Inductions, toolbox talks, training, and procedures address emissions, including vehicle and plant inspections and maintenance. • Incident reporting to include unreasonable/ excessive exhaust / gas emissions.
Local air pollution and contribution to global greenhouse effect, from vehicle and plant operation, and pipeline venting / gas release	<ul style="list-style-type: none"> • Specific excavation and hot-tap procedure developed for connection onto GGP. • Commissioning risk assessment (HAZID) completed and Project commissioning plan developed to minimised risk of unplanned release during commissioning. • Valves, pipework, and connected systems tested prior to installation. • Permit system in place for working on / near live line, including JHA, isolation, and tagging. • Venting for commissioning kept to practicable minimum; surrounding landholders and other stakeholders notified before venting (if likely to be affected). • Live above-ground pipework fenced and signed according to AS2885. • Reporting DEMIRS, NPI, and NGER to include unplanned / accidental releases. • Incident reporting to include unplanned/ accidental release of gas.
Disturbance to native fauna and third parties from noise and vibration	<ul style="list-style-type: none"> • All vehicles and fixed and mobile plant equipped with noise reduction measures such as mufflers or enclosures, maintained according to manufacturer specifications. • Works generally limited to daytime hours; night works subject to site-specific risk assessment. • Venting for commissioning kept to practicable minimum; surrounding landholders and other stakeholders notified before venting (if likely to be affected). • Incident reporting to include unreasonable/ excessive noise or vibration, and any third-party complaints.
Erosion of soils, weed proliferation, and impacts to land uses due to inadequate reinstatement	<ul style="list-style-type: none"> • At completion of works, rehabilitate disturbed areas not required for operations, except where otherwise agreed with landholders: <ul style="list-style-type: none"> ○ Scarified across contours, to trap seed and water, aiding reestablishment of vegetation. ○ Evenly respread with stockpiled topsoils to a depth representative of that which was stripped. ○ Respread with stockpiled vegetation over topsoils, to encourage vegetation re-establishment (except directly over trench line and inspection track). • Rehabilitation requirements and responsibilities included in contracts and access agreements.

Environmental Hazard	Control Measures and Mitigation Factors
	<ul style="list-style-type: none"> • Practical completion checklist to include rehabilitation acceptance; 24 months contractor defects liability period. • Ongoing monitoring / inspection during operations according to OEP – aerial monthly or on ground corridor inspections annually.

6. Stakeholder Consultation

APA is committed to maintaining positive relations with all stakeholders throughout the duration of its activities. A brief summary of engagement to date is provided in **Table 5**.

Consultation with government has involved meetings with agencies to generally advise them of the Project, and discuss approval requirements (including information requirements), and timeframes. APA notes that no major issues of concern in regard to potential Project environmental impacts have been raised to date.

Liaison with land holders commenced at Project conception and is ongoing. A comprehensive line list will be generated for land holders and occupants to address concerns over land access, potential impacts, and reinstatement. Where applicable, property inspection reports will be prepared to record agreements between APA and land holders or occupants, and to ensure conditions of agreements are met.

Stakeholders will be kept aware of scheduled activities and impacts as the Project progresses. Ongoing consultation will occur for this Project via email/letters, meetings, and circulation of updates to relevant stakeholders.

Feedback from all interested parties will be encouraged and monitored during the entire Project. A register will be maintained to record actions taken to address any issues/feedback received.

Table 5: Summary of stakeholder interactions

Stakeholder	Consultation	Key Dates
Landholders		
Lynas Kalgoorlie Pty Ltd (General Purpose Lease G 26/169) and Sublease with CKB (0490941))	<p>Formal notification of the pipeline licence application.</p> <p>Request to complete land use survey form to inform design and safety management study</p> <p>Lynas has outlined the induction requirements for contractors coming to site</p> <p>Meeting held to discuss the options and way forward for APA to have access and construct the Karrawang Delivery Station</p> <p>Access Agreement for access purposes of Lot 500 during construction, and for operations and maintenance</p> <p>Regular project progress meetings</p>	<p>Various; 07-10/2021 02-12/2022 01-09/2023 05-12/2024 01-03/2025</p>
Water Corporation (WC) (Freehold Land; Lot 3010 on Deposited Plan 0706804)	<p>Formal notification of the pipeline licence application</p> <p>Request to complete land use survey form</p> <p>WC advised that there are 2 drains crossing the proposed pipeline at the boundary of the GGP easement (an above and below ground drain)</p> <p>WC requested meeting to discuss project further, including pipeline alignment across their site</p> <p>Easement Deed for access purposes during construction, and for operations and maintenance</p> <p>APA will reduce the Right of Way after construction</p> <p>Prior to any works on the Water Corp land, a Clearance to Work is required from the Operations Team Leader on site</p> <p>Notification of Contractor Site Visit</p> <p>Notification of Soil Resistivity Testing</p> <p>Notification of Hot Tap Works</p>	<p>Various; 10-12/2021 02-10/2022 01-09/2023 07-11/2024 01-03/2025</p>
Mining Tenement holders		
P 26/4611 (Pending): Frederick John Smith	<p>Formal notification of the pipeline licence application</p> <p>Request to complete land use survey form</p>	19/10/2021
Government		
DFES	Contact will be made with DFES if there is a need for an exemption on a total fire ban day.	

Stakeholder	Consultation	Key Dates
DEMIRS	<p>Review of draft technical schedule for pipeline licence</p> <p>PL 24 Variation application</p> <p>24MD Letter to Native Title Parties</p> <p>Query over new requirements under PAGEO regulations with regards to the design safety case</p> <p>Received objection letter from Marlinyu Ghoorlie People</p> <p>Ongoing meetings and emails have taken place with regards to the safety case with the Critical Risk division</p> <p>Request for parallel processing of applications</p> <p>Approval of Native Vegetation Clearing Permit</p> <p>Submission of Construction Environment Plan</p>	<p>Various;</p> <p>10-12/2021</p> <p>09-10/2022</p> <p>03-06/2023</p> <p>10-12/2024</p> <p>01-04/2025</p>
DPLH	<p>Formal notification of the pipeline licence application submitted to DEMIRS</p> <p>Advise on options for tenure of Crown Land (Lot 500 on Deposited Plan 063577)</p> <p>Advise on Aboriginal Cultural Heritage</p>	<p>19/10/2021</p> <p>03/08/2022</p> <p>25/07/2023</p>
City of Kalgoorlie-Boulder (CKB)	<p>Formal notification of the pipeline licence application.</p> <p>Informal update on the project, and discussion of options for tenure over Lot 500</p> <p>Permit requirements related to the crossing of Johns Road (open cut methodology and geotechnical investigations)</p> <p>Discussion regarding crossing of local road (Johns Road) to check if an easement is required for operations</p> <p>CKB requested meeting to discuss project further</p> <p>Request to complete land use survey form (to inform design and safety management study)</p> <p>CKB concerns over critical delays to works to widen the intersection of Great Eastern Highway</p> <p>APA has agreed to design the Binduli pipeline as to not compromise the design in the Great Eastern Highway intersection works</p> <p>CKB stated that the Binduli pipeline needs to have a minimum cover of 1.5m for the road crossing</p> <p>Permit to cross John Road issued with conditions, including for the road not to be totally closed during construction works</p>	<p>Various;</p> <p>10-11/2021</p> <p>02-11/2022</p> <p>05-10/2023</p> <p>10-12/2024</p> <p>01-02/2025</p>

Stakeholder	Consultation	Key Dates
Main Roads	<p>Introduction of the project and interactions with MRWA assets (within the southern road reserve corridor of Great Eastern Highway)</p> <p>Several meetings held to discuss use of the Great Eastern Highway road reserve for services corridors</p> <p>Main Roads requested more details of the future services and intersection details around Lots 350 and 500 to further inform its review of APA's proposal</p> <p>Pipeline route was selected based on feedback from Main Roads</p>	<p>Various; 8/07/2021 4/02/2025 6/11/2024 26/09/2023 11/09/2023</p>
Native Title / Heritage claimants		
Maduwongga People	<p>Formal notification of the pipeline licence application</p> <p>Consulation has been ongoing</p>	<p>Various; 19/10/2021 03-11/2023 06/2024</p>
Marlinyu Ghoorlie People	<p>Formal notification of the pipeline licence application</p> <p>Aboriginal Hertiage Survey conducted</p> <p>Consultation has been ongoing</p>	<p>Various; 19/10/2021 07-12/2022 02-12/2023 02-12/2024 01-04/2025</p>
Native Title Services Goldfields (GNTS)	<p>Formal notification of the pipeline licence application</p>	<p>19/10/2021</p>
Petroleum Pipeline licence holder		
Southern Cross Pipelines Pty Ltd (PL24)	<p>Notification of pipeline licence application made to DEMIRS</p> <p>Application to vary PL24</p>	<p>19/10/2021 17/02/2022</p>

7. Contact Details

The nominated person for this proposal is:

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