






**BDP.2373-PL-HSE-0002**

**BEYONDIE GAS PIPELINE**

**ENVIRONMENT PLAN SUMMARY**

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# 1. Introduction

This Environmental Plan (EP) Summary covers the operation of the Beyondie Gas Pipeline (BGP); herein referred to as 'The Pipeline'. Please refer to Table 1 for the BGP pipeline licence details.

**Table 1 Pipeline Licence Details**

Licence	Pipeline	Licensee	Activity	Nominated Operator
Pipeline Licence 117	Beyondie Gas Pipeline	Kalium Lakes Infrastructure Pty Ltd (Kalium Lakes)	-Operations -Care and Maintenance - Relinquishment of Operatorship works	APT Goldfields Pty Ltd
			-Decommissioning -Remediation / Closure / Rehabilitation	Kalium Lakes Infrastructure Pty Ltd

## 1.1 Purpose and Scope

The purpose of this EP Summary is to provide information to the public regarding environmental considerations and management requirements.

The scope of this EP Summary is limited to operational works and activities associated with the Relinquishment of Operatorship of PL 117 (in line with Scope of Work BGP.BEYO-SOW-AM-0001\_1 associated with The Pipeline).

## 1.2 Objectives

The overall environmental objectives of the EP are to:

- Minimise environmental impacts resulting from pipeline operations
- Mitigate all identified environmental risks to a level that is As Low As Reasonably Practicable (ALARP)
- Comply with all relevant legal and regulatory environmental requirements
- Minimise disturbance to surrounding landholders.

## 1.3 Corporate Environmental Policy

APA is committed to responsible environmental management and believes that all environmental aspects associated with the operation of the pipelines can be effectively managed. In addition, APA is committed to reducing all environmental risks subsequent to site based operational activities to ALARP.

All works will be conducted in accordance with the APA Corporate Health Safety and Environment (HSE) Policy.

All contractors and sub-contractors must comply with the EP. This requirement is specifically addressed within contractual arrangements. Regardless of this, APA takes full responsibility for the application and administration of the EP at all times.

## 1.4 Abbreviations

**Table 2: Abbreviations**

ALARP	As Low as Reasonably Practicable
APA	APA Group
ASS	Acid Sulfate Soils
BGP	Beyondie Gas Pipeline
CP	Cathodic protection
DBCA	Department of Biodiversity, Conservation and Attractions
DFES	Department of Fire and Emergency Services
DMIRS	Department of Mines Industry Regulation and Safety
DPLH	Department of Planning, Lands and Heritage
DWER	Department of Water and Environmental Regulation
EP	Environment Plan
ERA	Environmental Risk Assessment
ERP	Emergency Response Plan
ESA	Environmentally Sensitive Area
GGP	Goldfields Gas Pipeline
HSE	Health Safety and Environment
PTW	Permit to Work
SDS	Safety Data Sheet
TDS	Total Dissolved Salts

## 2. Facility Area and Activity Description

The BGP comprises 79.4 km of gas transmission pipeline is located approximately 160 km south east of Newman within the Shires of Wiluna and Meekatharra (Figure 1). It commences at the Goldfields Gas Pipeline (GGP) (metering offtake facility, GGP KP637.74) and includes an inlet station at the metering offtake facility, a pipeline and a delivery station near the processing plant. The pipeline has been designed to deliver an initial capacity of 2.5 terajoules per day, with potential for expansion to 5 terajoules per day.

The Gas Pipeline start point (MGA50) is Easting: 764393.0128 Northing: 7264614.9640 and the end point (MGA51) is Easting: 230747.0564 Northing: 7259961.774.

The majority of the tenements are located within Unallocated Crown Land, with the western portion of the access road and pipeline RoW on the Marymia and Kumarina pastoral stations. The following tenements overlay the BGP:

- M69/145, L52/162, L52/186, L52/187, L52/193, L69/28, L69/29, L69/38, L69/40

The BGP is located within two different determined Native Title Boundaries. The eastern portion of the Project, including Lake Sunshine, falls within the Birriburu (MNR) People Native Title Determination Area (WAD6284/1998) and has no relation to the BGP. The western portion of the BGP, inclusive of Ten Mile Lake, the access road and gas pipeline, falls within the Gingirana Native Title Determination Area (WAD6002/2003). Kalium Lakes has Native Title agreements in place with both Native Title groups on the installation of the gas pipeline included in the agreement with Gingirana.



Figure 2: Overview of Disturbance Envelope

Figure 1 Beyondie Gas Pipeline Locality Map

## 2.1 Pipeline Operations, Maintenance, Relinquishment of Operatorship

The Pipeline is operated and maintained by the GGP Central Region Team, which operates from the Leinster and Newman Maintenance Bases.

Specific pipeline operations and maintenance and relinquishment of operatorship activities to which this EP applies include:

- General equipment and facility maintenance;
- Filter changes;
- Cathodic protection surveys;
- Pipeline excavation;
- Isolation and depressurisation of the Beyondie inlet, delivery station and lateral;
- Venting;
- Pipeline pigging;
- Pipeline patrols;
- Line of sight clearing;
- Easement, facility and equipment inspections; and
- Breakdown and emergency response exercises.

Work activities carried out will be monitored and controlled as per the requirements of the Permit to Work (PTW) System. Further details are provided in the Gas Transmission Permit to Work Procedure (320-PR-HS-0005).

### 2.1.1 General Equipment & Facility Maintenance

General equipment and facility maintenance typically includes but is not limited to the following:

- Servicing and overhauls of machinery and equipment;
- Equipment inspections and testing;
- Monitoring;
- Safety inspections and follow up;
- Filter inspections and replacement;
- General housekeeping (i.e. as per safety requirements and this EP); and
- Small-scale facility works.

The above activities involve various mechanical and electrical tasks which are undertaken by appropriately qualified trades people. Regular monitoring and safety inspections are also undertaken to identify unplanned maintenance requirements as they arise.

Filter inspections are undertaken at regular intervals and filters are replaced as required. Filter replacement involves filter removal, wash down with water and transfer to a secure container for transfer to offsite disposal facilities.

Operations utilise maintenance base wash-down facilities. A wash-down register is kept and maintained as part of these activities. Water from the wash-down facilities flow into an oily water separator, which are regularly inspected. Contents are emptied by a licensed contractor and disposed of to an appropriately licensed facility, as required.

Small-scale upgrades may be required intermittently to allow for increased services or changes in pipeline requirements. Works will be restricted to the facility boundary.

General housekeeping includes numerous tasks typically associated with health, safety and / or environmental management. Specific items may include general tidying / cleaning, waste management, maintenance of firebreaks, spraying of weeds and numerous other duties.

### 2.1.2 Cathodic Protection Surveys

Cathodic protection (CP) refers to the use of electrical current to protect steel pipework against corrosion. Detailed CP surveys are undertaken annually to monitor pipeline integrity and ensure the CP system itself remains functional. Routine spot checks are conducted six monthly by accessing CP test points at approximately 5 km intervals along the pipeline and connection to a meter which measures corrosion. The CP is monitored continuously through the APA SCADA system.

### 2.1.3 Pipeline Excavation

Small-scale pipeline excavations are undertaken on an infrequent, ad-hoc basis, typically for pipeline repairs and crossing installations. Pipeline excavations are strictly controlled for safety reasons via risk assessment, work permits and procedures. The scales of excavations are generally single defect dig-ups of a few metres.

Pipeline excavations are managed through Gas Transmission Excavation Procedure (SP-APAT-101-OP-0030) and Excavation Guidelines (SP-APAT-101-OP-0034). These documents state that topsoil removed shall be kept separately from any backfill materials taken from the trench. The pipe must be covered all round with a minimum of 150 mm of clean bedding material/sieved natural backfill before any un-sieved natural backfill material can be used. After padding the trench the remaining backfill can be performed using previously excavated material. Once backfilling is complete the segregated topsoil is re-spread over the area.

Dewatering is sometimes required where the water table is present at less than a few metres from the ground surface however this is not expected on the BGP.

Prior to conducting any pipeline excavations a desktop assessment is conducted by qualified personnel to ensure relevant approvals have been obtained and risks are mitigated (e.g. acid sulfate soils) (Land Disturbance Management Form APA HSE EF 01).

During pipeline excavation and maintenance, abrasive blasting may be required. Abrasive blasting may be conducted on a very rare, ad-hoc basis (likely once every ten years, based on similar APA pipelines).

### 2.1.4 Venting

Venting of gas from the pipelines is undertaken to purge pipelines and / or facilities for maintenance or emergency response purposes. Venting for maintenance purposes under normal operating pressure could typically release approximately 10 m<sup>3</sup> of gas. Venting is managed through APA's maintenance management system (MAXIMO) in accordance with the site maintenance schedule. Due to the numerous types of filters it is not possible to accurately estimate annual venting discharges. Quantities of vented gas are captured by APA and reported in the quarterly emissions and discharges report to Department of Mines, Industry Regulation and Safety (DMIRS).

### 2.1.5 Pigging

Cleaning pigs are run between pipeline scraper stations containing pig launching and receiving facilities. This is conducted on an infrequent ad-hoc basis. Particulate matter separated from the gas stream is a common by-product of pigging (removal of which is the ultimate goal in the case of a cleaning pig run), these are caught in the pig receiver trap along with the recovered pig and contained for offsite disposal.

### 2.1.6 Right of Way Patrols

The pipeline owner has a gazetted easement registered under the *Land Administration Act 1997* which allows for legal access for maintenance, operation and emergency response.

Formal vehicle patrols are completed by Pipeline Technicians on a six monthly basis. Corridor condition inspection are conducted annually. This work is conducted from light vehicles and managed through APA's maintenance management system MAXIMO with work orders being generated for completion. The ground patrols are completed in accordance with

work instruction WI-L-20143. Any issues identified are documented and where necessary additional work orders raised for corrective action to be completed.

Patrols may identify issues such as:

- Third Party encroachment;
- Vegetation growth;
- Line of sight;
- Presence of weeds;
- Erosion, subsidence or stability issues;
- Exposed pipe; and
- Condition of signage and aerial markers.

Aerial patrols are completed monthly. The monthly aerial patrol is undertaken via a contractor and any issues / occurrences that are recorded during the flight are uploaded into X-Info directly by the contractor for APA to investigate and action. The contractors follow the Aerial Surveillance Procedure 320-PR-HEL-0001.

### 2.1.7 Site Works Associated with the Relinquishment of Operatorship

APA plans to leave the Beyondie lateral and facilities in a safe state as part of the relinquishment of operatorship. The following work execution activities (that have an environmental impact / risk) are to be carried out as part of the relinquishment of KLL assets:

- The depressurization of the gas inventory of the Beyondie inlet station, delivery station and the Beyondie lateral to OkPag. This will be conducted via Flaring. The following gas release is expected during the flaring:
  - 51.5 tonnes of CO<sub>2</sub>e released (tCO<sub>2</sub>e)
  - 1,034Nm<sup>3</sup> total gas flared to atmosphere (This is significantly less than 43,655Nm<sup>3</sup> if it was vented).
- Spool removal and storage:
  - Spool removal (positive isolation) between Beyondie Road Meter Station and the Beyondie Inlet Station (at APA and KLL pipeline licence battery limit
  - Spool removal (positive isolation) between the Beyondie delivery station and the Kalium Lakes Potash Mine and power station.
  - All open spools to be plastic wrapped or capped to minimize fauna ingress (stored at KLL facilities).

APA will notify DEMIRS once site works associated with the Relinquishment of Operatorship have been completed.

### 3. Receiving Environment

#### 3.1 Climate

The Gascoyne bioregion has an arid climate with summer rainfall in the east. Spatially averaged median (1890–2005) rainfall is 202 mm (DEWHA, 2008a). The climate of the Little Sandy Desert bioregion is also arid with summer-dominant rainfall. Spatially averaged median (1890–2005) rainfall is 178 mm (DEWHA, 2008b). The climate of south-western Little Sandy Desert has also been described as desert tropical with predominant summer rainfall (van Leeuwen, 2002).

The nearest Bureau of Meteorology (BoM) weather station with long-term data averages is Three Rivers, ~ 120 km to the south-west of the Project. Three Rivers records the highest maximum mean monthly temperature (39.3°C) in January and the lowest maximum mean annual temperature (21.0°C) in July. The lowest mean minimum temperature is recorded in July (4.8°C) and the highest in January (24.1°C). Average annual rainfall is 232.8 mm with January, February and March recording the highest monthly averages (35.5, 44.3, and 37.7 mm respectively) (BoM, 2018).

The nearest BoM weather station with current daily observations is Newman Airport (No. 7176, Latitude: 24.42°S Longitude: 119.80°E), ~ 150 km north-northwest of the BGP. Newman records the highest maximum mean monthly temperature (39.0°C) in January and the lowest maximum mean annual temperature (22.9°C) in July. The lowest mean minimum temperature is recorded in July (6.4°C) and the highest in January (24.9°C). Average annual rainfall is 327.7 mm with January, February and March recording the highest monthly averages (67.5, 71.7, and 44.0 mm respectively) (BoM, 2018).

Pan evaporation for the south-western Little Sandy Desert bioregion ranges from 16.1 mm/day in January to 4.5 mm/day in June at an annual daily average of 10.2 mm (van Leeuwen, 2002). The predominant wind direction is from the east.

The Project falls within the arid desert climate zone. Most of the strongly seasonal rainfall occurs in the period between December and June. A large percentage of the annual total precipitation occurs over short periods, associated with thunderstorm activity and cyclonic lows. Mean annual rainfall has been estimated (based on the nearest meteorological station at Three Rivers Station) at 238.4 mm, with annual evaporation much higher, at 4,100 mm (Advisian, 2017a). Evaporation maps illustrate the BSOPP is located in an area expected to experience some of the lowest humidity and highest evaporation rates in Australia (BOM, 2018).

#### 3.2 Materials Characterisation

##### 3.2.1 Soils

Soils are classified according to the WA Soil groups outlined in Schoknecht and Pathan (2013). The Project is dominated by deep sandy and sandy earth soils (BGP, road, workshop, accommodation camp, ponds and processing facilities). These soils present little risk from disturbance and provide good construction materials. The low rainfall environment, lack of defined surface drainage, and high infiltration soils provides little erosion risk.

Soil groups relevant to the BGP are listed below and shown in Figure 4:

- Loamy earth soils;
- Gravelly soils – Sandy or loamy and shallow;
- Deep sandy and sandy earth soils- red soils; and
- Texture contrast soils (sandy and loamy duplexes- red soils).

Phoenix (2018a) recorded broad soil categories as a component of the flora and vegetation survey. The access road and BGP show a range of finer textured soils including clays found in some lower landscape positions.

The BGP was assessed for PASS with results indicating the potential for acidification is expected to be very low based on:

- The site is located above the Menzies line – a line identified by Geoscience Australia south of which salt lake sediments have a tendency to be more acidic;
- The excavated trenches from the trial and the dunal areas surrounding the lakes have revealed significant calcium precipitation in the form of gypsum and calcrete (ASS neutralising);
- There has been no evidence of low pH water in lake surface water or groundwater samples, including those taken from trenches; and
- Lake water and sediment chemistry shows considerable neutralising capacity.

### 3.3 Landscape

#### 3.3.1 Geomorphology

The geology of the Beyondie Lakes system approximately 6 km to the north of Ten Mile Lake is different to the other salt lakes in the Ilgari palaeoriver, as it is generally associated with calcrete sediments, as opposed to saline soils and sand and kopi gypsum dunes. Regional geology of the area is rocks of the Sunbeam Group, consisting mostly of sedimentary sandstones, siltstones, conglomerates and shales.

#### 3.3.2 Interim Biogeographic Regionalisation of Australia

The BGP is located on the edge of Ten Mile and Sunshine Lakes which is characterised by dry salt lakes, extensive sand dunes and flat plains. The playa lakes are located in a broad, easterly trending valley, which hosts a non-perennial water course. The BGP is situated at the junction of the Augustus subregion (GAS3) of the Gascoyne bioregion and Trainor subregion (LSD2) of the Little Sandy Desert bioregion as defined by the Interim Biogeographic Regionalisation of Australia (IBRA) (Figure 3).

The Augustus subregion (GAS3) is characterised by (Desmond et al., 2001):

- Low Proterozoic sedimentary and granite ranges divided by flat broad valleys;
- Mulga woodland with *Triodia* on shallow stony loams on rises with mulga parkland on shallow earthy loams over hardpan on the plains;
- Extensive areas of alluvial deposits;
- Calcrete aquifers of the Carnegie drainage system; and
- Desert climate with bimodal rainfall.

The Trainor subregion (LSD2) is characterised by (Cowan & Kendrick, 2001):

- Red centre desert on Neoproterozoic sedimentary basement (Officer Basin);
- Red Quaternary dune fields with abrupt Proterozoic sandstone ranges of Bangemall Basin;
- Shrub steppe of acacias, *Aluta maisonneuvei* and *grevillea* over *Triodia schinzii* on sandy surfaces;
- Sparse shrub-steppe over *Triodia basedowii* on stony hills;
- Eucalypt and coolabah communities and bunch grasses on alluvial deposits and drainage lines associated with ranges; and
- Arid climate with episodic summer rainfall.

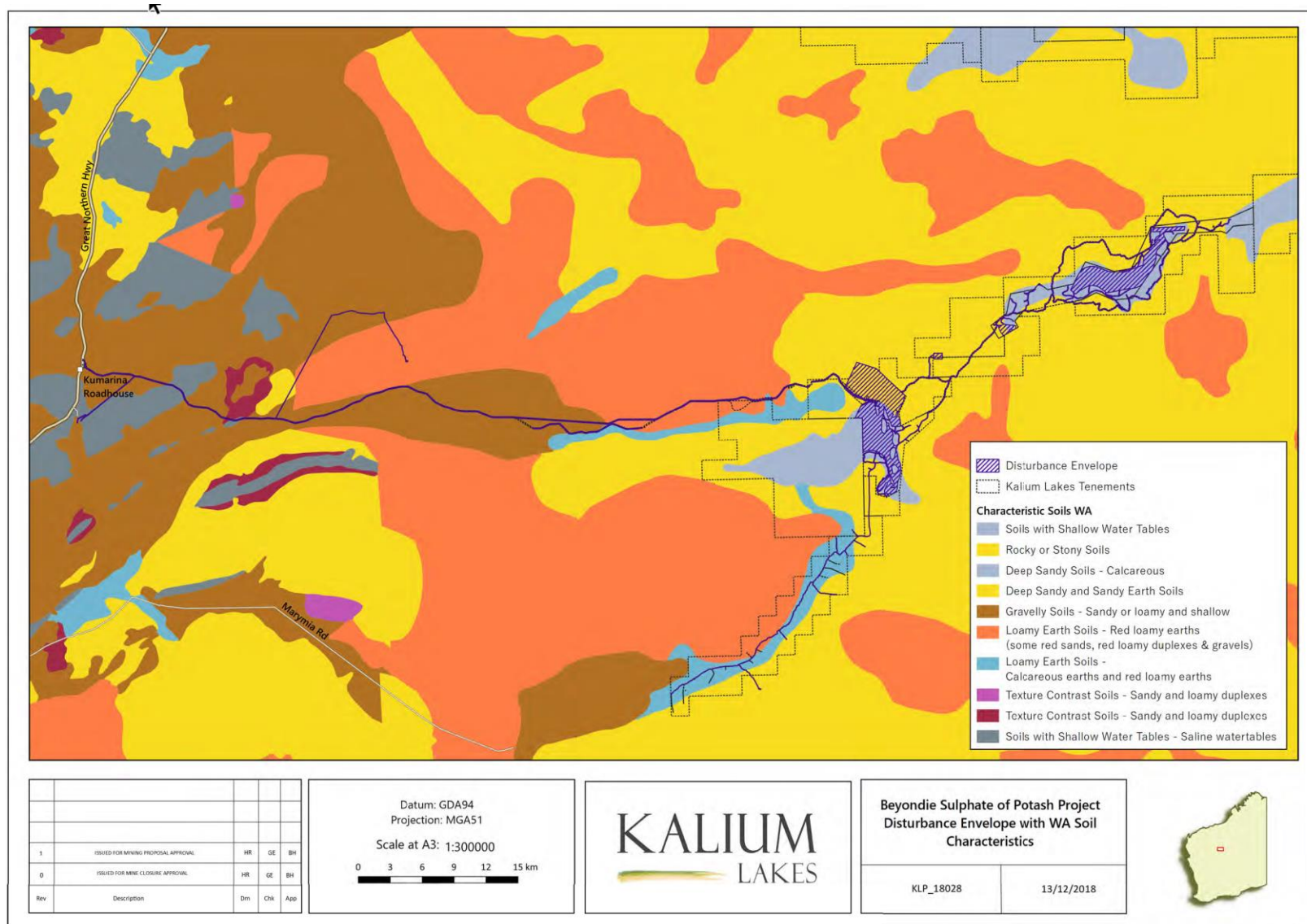
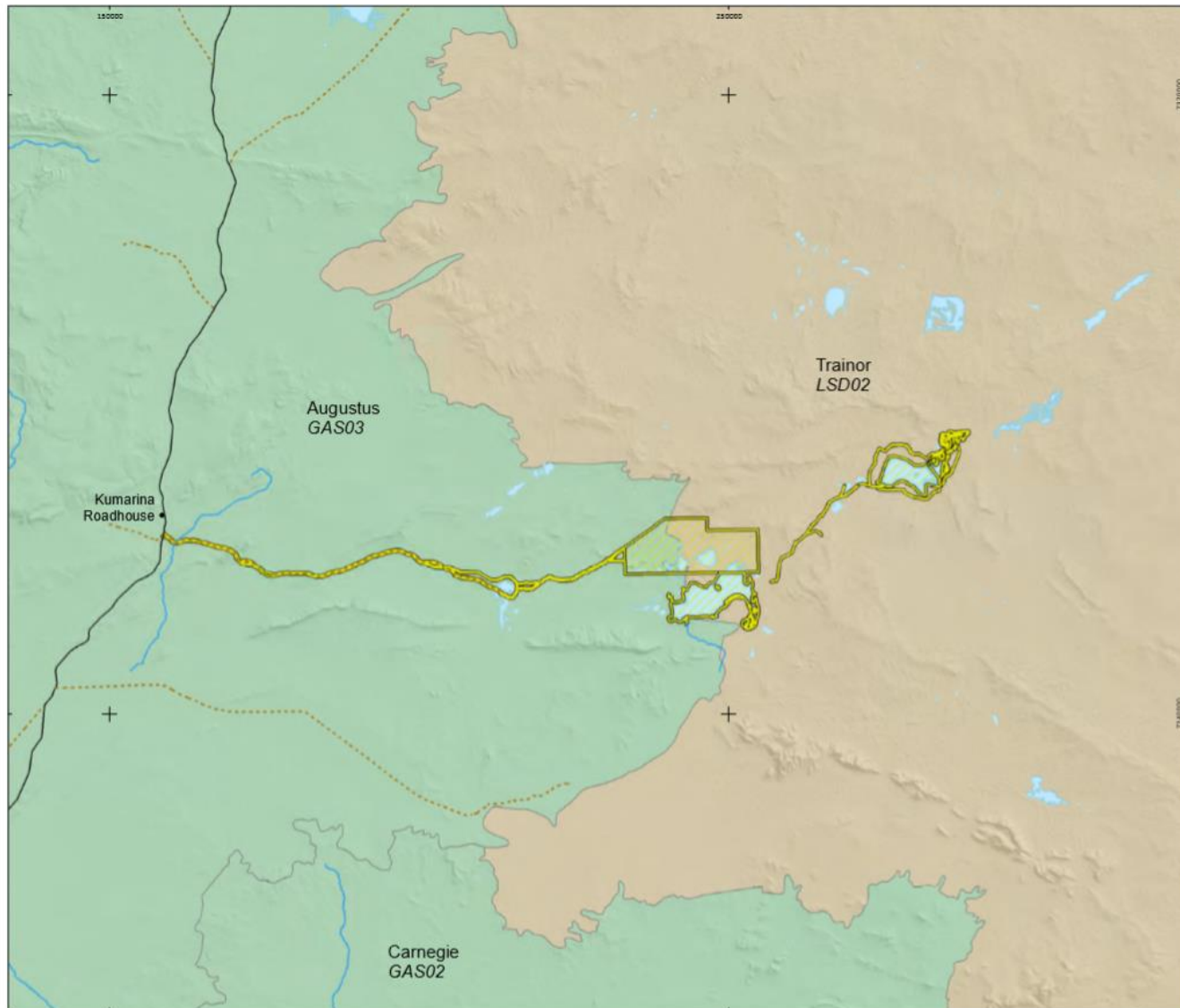
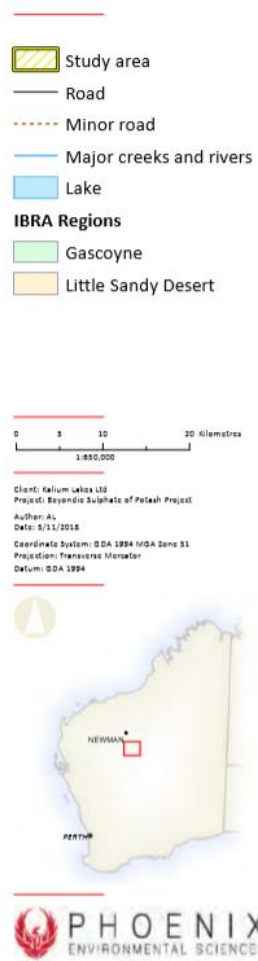


Figure 2 WA Soil Groups for the Beyondie Gas Pipeline

**Figure 3-1**  
Study area in relation to IBRA regions and subregions



**Figure 3 Project Area in Relation to IBRA regions**

### 3.3.3 Land Systems

The Department of Agriculture and Food (DAFWA) has mapped the Land Systems in the Little Sandy Desert and Gascoyne bioregions with the study area (which encompasses the BGP), traversing the following:

- AB44: Plains with a variable, but usually high, proportion of longitudinal sand dunes, and with some clay pans; scattered sandstone hills and laterite residuals are fairly common;
- Oc49: Partially dissected pediments with some low stony hills on fine-grained sedimentary rocks and basic dykes, frequently flanking areas of unit Fa8;
- BB9: Narrow plain associated with the major river systems, usually occurring upstream of unit Oc47 and characterized by frequent outcrops of calcrete (kunkar);
- BE6: Extensive flat and gently sloping plains, which sometimes have a surface cover of gravels and on which red-brown hardpan frequently outcrops;
- Bryah System: Stony plains and reticulated internal drainage flats with sparse tall acacia shrublands and low chenopod shrublands;
- SV5: Saline soils associated with salt lakes; sand and kopi gypsum dunes, and intervening plains;
- Frederick System: Hardpan wash plains with broad, reticulate mulga groves and wanderie banks supporting acacia tall shrublands with grassy understorey; and
- Jamindie System: Stony hardpan plains and rises supporting groved mulga shrublands, occasionally with spinifex understorey.

### 3.3.4 Native Vegetation and Extent

Regional vegetation mapping by Shepherd et al. (2002) identifies seven vegetation associations in the study area which encompasses the BGP. All have in excess of 90% or pre-European extent remaining and therefore have the status of Least Concern.

## 3.4 Hydrology

The Beyondie Lakes are a suite of wetlands consisting of a freshwater marsh area to the west, two circular salt playas and interconnecting channels. The BGP is located on and around Ten Mile Lake and Lake Sunshine within the Little Sandy Desert, which is characterised by dry salt lakes, extensive sand dunes and flat plains. The playa lakes are located in a broad, easterly trending valley, which hosts a remnant water course. The areas rarely flood and there is very limited drainage definition. There are no surface water management areas intersected by the Disturbance Envelope.

### 3.4.1 Surface Water

The Beyondie Lakes are located immediately north of Ten Mile Lake and are a suite of wetlands consisting of a freshwater marsh area to the west, two circular salt playas and interconnecting channels.

KLI has undertaken a number of hydrological investigations, including water quality analysis, as part of the baseline aquatic invertebrate fauna survey and waterbird census (Phoenix, 2018b), and a surface water assessment to characterise the surface water flooding regime (Advisian 2018a).

The lakes in the present landscape are a function of the low rainfall and high evaporation experienced in the region. Beyondie Lakes, Ten Mile Lake and Lake Sunshine are the western-most catchment lakes in a chain that stretches for some 220 km west to east.

No conservation reserves or other Environmentally Sensitive Areas such as Ramsar Wetlands, as defined under section 51B of the EP Act, are located within or adjacent to the BGP. The closest Ramsar Wetland is located at Eighty-mile Beach □ 500 km north of the Project.



Figure 4 Catchments Relevant to the Beyondie Gas Pipeline

Ten Mile Lake and Lake Sunshine have individual catchments that sit within the upper reaches of a much larger system (Figure 4). The combined Ten Mile and Beyondie Lakes catchment area covers an area of 3,160 km<sup>2</sup>. The ephemeral creeks associated with these catchments flow into the lake systems, however analysis of aerial imagery and topographic survey data suggests there is significant storage within the catchment areas, which limits the volume of runoff reaching the lakes. The storages are in the form of parallel dune systems and salt pans (Advisian, 2017a & 2018c).

Surface water is expected to be present on the lakes for periods of time following heavy rainfall events, however these events are rare. Approximately 60 mm of rainfall fell over a 48-hour period during a rainfall event in late January 2018. No creek flow was seen entering the lakes and surface water depth on Lake Sunshine was estimated to be less than approximately 0.1 m. (Advisian, 2018c). This supports that the surface recharge of the vadose zone (especially is habitat supporting *Tecticornia* spp.) most likely occurs via localised infiltration rather than overland flows: soils in the areas are sandy and infiltration is expected to be high. This is evident given there are very few defined drainage lines around Ten Mile Lake or Lake Sunshine.

Creepline and drainage habitat are traversed by the mine access road and BGP, however this equates to 3.0 ha, or 1.3% of this habitat type mapped in the study area. Drainage culverts ensure the mine access road is accessible in most weather conditions (the exception being heaviest flood periods), which means that the ephemeral surface water flows along this habitat will be maintained over the life of the BGP.

### 3.4.2 Groundwater

Groundwater investigations, including a preliminary water supply assessment and hydrogeological brine abstraction assessment were undertaken for the Project by Advisian (2017a & 2017b) and is summarised below. At its shallowest, groundwater is more than 4 m below the surface along the pipeline RoW and typically 7-11 m.

#### 3.4.2.1 Regional and Local Hydrogeology

The BGP is in the south-western extent of the Lake Disappointment surface water catchment area. It forms a large surface water catchment, with Lake Disappointment about 270 km north-east of the Beyondie Project. Two regional aquifer units have been identified - a palaeochannel sand aquifer and a shallow surficial aquifer - which are hydrogeologically separated by a thick clay layer. Localised shallow aquifer units comprise calcrete and alluvium aquifers.

The surficial aquifer contains saturated clay sediments, with an upper portion that contains excess 'extractable' water (approximately 10% by volume). As depth increases this extractable water decreases to 1 – 2% by volume.

Calcrete aquifers occur to the west and south of Ten Mile Lake. These aquifers generally contain fresher groundwater that becomes increasingly more saline towards Ten Mile Lake (Advisian, 2017b). The calcrete is typically thin (<10 m) and in many places is not inundated (Advisian, 2017b). Accordingly, yields are typically low.

## 3.5 Biodiversity

No conservation reserves or other Environmentally Sensitive Areas, as defined under section 51B of the EP Act, are located within or adjacent to the BGP. The Collier Range National Park is located □ 6.5 km to the west of the BGP inlet station. The majority of the vegetation in the study areas represent widespread communities and is well represented at a regional level. No Threatened Ecological Communities (TEC) were recorded or are expected within the BGP. Approximately 25.5km of the BGP falls within the 90km buffer of a Priority Ecology Community (PEC): Lee Steere Range vegetation complexes (banded ironstone formation).

Most of the vegetation in the study area was free of introduced flora; however, nine introduced species were recorded. None of the introduced species recorded are declared pests and / or Weeds of National Significance.

Five vertebrate species and two waterbirds of conservation significance have been recorded with a further 13 species considered to have potential to occur in the study area due to presence of suitable habitat.

### 3.6 Social Environment

#### 3.6.1 Socio-Economic Environment

The BGP lies mostly within the Little Sandy Desert bioregion, with only a small portion of the development envelopes within the western-most extent of the Gascoyne bioregion (Phoenix, 2018a). Overall, only 2% of the Little Sandy Desert bioregion is grazed (DEWHA, 2008a). In contrast, approximately 80% of the Gascoyne bioregion was grazed between 1992 and 2001 (DEWHA, 2008b).

The area was principally Unallocated Crown Land with one unvested Crown Reserve (No. 1 Vermin Proof Fence). Apart from camel harvesting operations and minor four-wheel-drive tourism, the larger area has been described as 'economically inconsequential' (van Leeuwen, 2002).

The BGP is overlapped by two pastoral leases being Marymia and Kumarina. These are active stations and as such cattle movements may occur. No industrial or mining operations beyond those associated with the BSOPP are present, or anticipated, in the area.

The closest town to the BGP is Newman which is more than 160 km away. Kumarina Roadhouse, which has minor short term accommodation, service station and restaurant is on the main Great Northern Highway and is  $\approx$  600 m from the BGP at its nearest point, being the inlet station.

The closest inhabited household from the BGP activities is the Kumarina homestead and is more than 4 km away.

#### 3.6.2 Cultural and Heritage Values

The BGP is located on land in which the Gingirana People have been determined to hold Native Title rights and interests. Those Native Title rights and interests comprise either the exclusive right to possession, occupation, use and enjoyment of the relevant land or a set of non-exclusive rights which include, among others, the right to maintain and protect places of significance.

In conjunction with the entry into Land Access Agreements with the Traditional Owners, Kalium Lakes has worked with the Traditional Owners to:

- Map the cultural and heritage values of the land the subject of the Project; and
- Develop comprehensive Cultural Heritage Management Plans (CHMPs) for the Project which provide:
  - A range of management strategies to avoid adverse impacts on the cultural and heritage values of the land the subject of the Project, including identified areas of cultural and heritage value; and
  - Monitoring and reporting frameworks.

#### 3.6.3 Heritage Searches

##### 3.6.3.1 European Heritage

A search of the State Register of Heritage Places (inHerit) was undertaken over the proposed pipeline footprint, no European heritage sites were identified. The Rabbit Proof Fence has been added to the Heritage Council assessment program for future consideration. The pipeline crosses the Rabbit Proof Fence line at point (MGA51) Easting - 7258011.9092, Northing: 7258011.9092.

### **3.6.3.2 Aboriginal Heritage**

Following the desktop assessment, several on-ground ethnographic and archaeological heritage surveys (2015 and 2016) and heritage monitoring site visits (2019 and 2020) were undertaken over the proposed road and pipeline easement to assess the presences of Aboriginal Heritage values and to agree the management of those areas.

## 4. Implementation Strategy

Implementation of the EP is via the APA Safeguard Environmental Management System and in compliance with the Petroleum Pipelines (Environment) Regulations 2012 requirements, including:

- communication of policies, objectives and roles and responsibilities;
- inductions, training and competency of personnel;
- monitoring, auditing, record keeping and reporting, including a dedicated hazard and incident reporting system;
- management of non-conformances and corrective actions;
- development, tracking and ongoing maintenance of documentation;
- emergency preparedness and response; and
- toolbox talks.

A risk-based approach has been adopted to manage potential threats to the environment as a result of pipeline operation. This process involved initial identification of environmental interactions (aspects) resulting from operational activities followed by an Environmental Risk Assessment (ERA) workshop attended by personnel from a range of qualifications. 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 primary environmental hazards, control measures and mitigating factors identified for the pipelines have been provided in Table 3.

It is important to note that Table 3 is intended to be indicative of major hazards and controls only and is not comprehensive of all commitments made by APA in the EP.

**Table 3: Primary Operations Environmental Hazards and Controls / Mitigating Factors**

Environmental Hazard	Control Measures and Mitigation Factors
All hazards	<ul style="list-style-type: none"> <li>• HSE inductions communicating Environment requirements</li> <li>• Competent personnel – training and procedures / guidance materials provided</li> <li>• Hazard and incident reporting via APA hazard and incident database</li> <li>• Management, Permit to Work System, maintenance and emergency response systems in place</li> <li>• Regular audits, inspections and other EP compliance checks</li> <li>• Third Party Contractor compliance with EP commitments via contractual requirements</li> <li>• Job Hazard Analysis for tasks presenting specific environmental hazards</li> <li>• Strict controls on vehicles and access implemented via Operations Manuals</li> <li>• Reporting as per Regulatory requirements</li> <li>• Compliance with all relevant legislation and regulatory requirements</li> </ul>
Air emissions	<ul style="list-style-type: none"> <li>• Hazard and Operability Study undertaken specifically addressing uncontrolled gas release</li> <li>• Assets designed as per standards of the day (failure prevention)</li> <li>• Physical protection (i.e. cordoning and signage) of live pipework</li> <li>• Relinquishment of Operations Site Works Only: Flaring rather than venting shall only occur for depressurisation works (SOW BGP.BEYO-SOW-AM-0001_1 - PL117 Beyondie Lateral – Relinquishment of Operatorship)</li> </ul>
Chemical use	ALL

Environmental Hazard	Control Measures and Mitigation Factors
	<ul style="list-style-type: none"> <li>• Procedures for chemical use</li> <li>• Chemical register and Safety Data Sheet (SDS) maintained for all hazardous substances onsite</li> </ul> <p>Storage &amp; handling</p> <ul style="list-style-type: none"> <li>• Storage of hazardous substances as per SDS and safety specifications</li> <li>• Storage receptacle sizes and types defined and controlled</li> <li>• Use of bunds and drip trays</li> <li>• Capacity of bunds sufficient to contain quantity of largest stored container</li> <li>• Minimise onsite chemical storage and use via off-site storage where possible</li> </ul> <p>Transport</p> <ul style="list-style-type: none"> <li>• Use of licensed contractors for (large quantities) DG Transport</li> <li>• Strict access controls and maintenance of road condition</li> <li>• Double skinned tank on diesel transport vehicles</li> </ul> <p>Spill prevention and response</p> <ul style="list-style-type: none"> <li>• Spill response equipment available at site</li> <li>• Emergency Response Plan (ERP) and Oil Spill Contingency Plan to ensure adequate preparedness for spill response</li> <li>• Regular checks and maintenance of machinery, plant and equipment</li> <li>• Use of self-bunded equipment, where practicable</li> </ul> <p>Chemical waste</p> <ul style="list-style-type: none"> <li>• Chemical waste treated as per other chemicals for management purposes</li> <li>• Waste chemicals clearly marked and disposed of in accordance with regulations</li> </ul>
Weed introduction and / or spread	<ul style="list-style-type: none"> <li>• Vegetation clearing and earthworks limited where possible (disturbed areas prone to weed proliferation)</li> <li>• Strict hygiene measures for digging equipment and</li> <li>• Access and vehicle controls imposed; as per existing roads and tracks</li> <li>• Weed identification information available to personnel</li> <li>• Timely response to declared weed occurrences as per Department of Biodiversity, Conservation and Attractions (DBCA) recommendations</li> </ul>
Disturbance to local vegetation (both native and other desirable plants i.e. feedstock)	<ul style="list-style-type: none"> <li>• Native vegetation clearing limited and in compliance with WA Environmental Protection (Native vegetation Clearing) Regulations 2004</li> <li>• Vegetative material from clearing retained for use during site remediation</li> <li>• Disturbed (by APA) areas to be remediated as follows:</li> <li>• Stockpiled topsoils re-spread evenly to a maximum depth of approx. 10 cm</li> <li>• Surfaces re-profiled and scarified to assist seed and water trapping</li> <li>• Stockpiled vegetative material spread over topsoils to aid vegetation re-establishment</li> </ul>
Soil erosion	<ul style="list-style-type: none"> <li>• Strict controls on vehicles and access imposed</li> <li>• Topsoil removal limited and controlled</li> <li>• Topsoils removed for construction reused during post construction remediation</li> <li>• Topsoil stockpiles maintained to minimise erosion</li> <li>• Remediation of disturbed areas as described above</li> </ul>
Ignition source for Fire	<ul style="list-style-type: none"> <li>• Fire response equipment maintained at site and in vehicles and machinery</li> <li>• Operations sites maintained to minimise fuel availability and fire risk</li> <li>• Localised fire emergency response covered in ERP</li> <li>• Emergency contact details available to all operations personnel</li> <li>• Dedicated containers for chemicals classed as flammable</li> <li>• Smoking within designated areas only</li> </ul>

Environmental Hazard	Control Measures and Mitigation Factors
	<ul style="list-style-type: none"> <li>• Fire awareness to be reinforced at toolbox meetings</li> </ul>
Waste Generation (excluding chemicals – see above)	<ul style="list-style-type: none"> <li>• All wastes to be removed from site and disposed of to the appropriate class landfill facility</li> <li>• Adequate waste receptacles maintained onsite and waste segregated as appropriate</li> </ul>
Dust generation	<ul style="list-style-type: none"> <li>• Strict controls on vehicles and access</li> <li>• Dust suppression assistance to be sought as required</li> </ul>
Disturbance to local fauna	<ul style="list-style-type: none"> <li>• Fauna movement not restricted – can move away from sources of disturbance</li> <li>• Trenching and excavation activities controlled</li> <li>• Escape ramps for fauna installed in open trenches and morning visual trench inspections undertaken</li> <li>• Trained and competent handlers engaged for fauna removal from site if required</li> <li>• Relinquishment of Operations Site Works Only: Open spools shall be plastic wrapped or capped to prevent trapped fauna (SOW BGP.BEYO-SOW-AM-0001_1 - PL117 Beyondie Lateral – Relinquishment of Operatorship)</li> </ul>
Third party disturbance	<ul style="list-style-type: none"> <li>• Regular landholder consultation undertaken</li> <li>• Lighting at site to be concentrated in required areas only</li> <li>• Strict controls on Operations vehicle movement imposed</li> </ul>
Disturbance to heritage values	<ul style="list-style-type: none"> <li>• Works to cease and DPLH to be notified immediately if suspected heritage artefacts identified</li> <li>• Strict controls on Operations vehicle movement imposed</li> <li>• All site works contained within easement boundary</li> </ul>

## 5. Stakeholder Consultation

Relinquishment of Operatorship Works only: The Roadhouse located 600m away will be notified prior to flaring works.

A summary of operations stakeholders and consultation undertaken is provided in Table 4.

**Table 4: Stakeholder Consultation**

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
Marymia Pastoral Station	<ul style="list-style-type: none"> <li>Mar 2015</li> <li>Aug 2015</li> <li>Dec 2015</li> <li>Sept 2017</li> <li>Jan 2018</li> <li>Aug 2018</li> <li>Sept 2018</li> <li>Mar 2019</li> </ul>	<ul style="list-style-type: none"> <li>Consent letters to Grant of Tenements</li> <li>Consent to Grant of Miscellaneous Licences</li> <li>Signed Land Access Agreement</li> <li>Letter correspondence - project update briefing note and investor presentation pack</li> <li>Consent to 5c licence applications</li> <li>Notice of gas pipeline licence application</li> <li>Beyondie Sulphate Of Potash Project – Notice of activities and access road upgrade works</li> <li>Further consultation and engagement in relation to BSOPP including gas pipeline and provisions for access conditions and notice periods</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>No response to date. Landowner to be kept updated during ongoing informal adhoc discussions</li> <li>Resulted in agreement to enter into revision Access and Compensation Agreement - including provisions for access conditions and notice periods. Kalium lakes to observe obligations in agreement</li> </ul>
Kumarina Pastoral Station	<ul style="list-style-type: none"> <li>Aug 2015</li> <li>Dec 2015</li> <li>Sept 2017</li> <li>Jan 2018</li> <li>Aug 2018</li> <li>Sept 2018</li> <li>Mar 2019</li> <li>Jul 2020</li> </ul>	<ul style="list-style-type: none"> <li>Consent to Grant of Miscellaneous Licences</li> <li>Signed Land Access Agreement</li> <li>Letter correspondence - project update briefing note and investor presentation pack</li> <li>Consent to 5c licence applications</li> <li>Notice of gas pipeline licence application</li> <li>Beyondie Sulphate Of Potash Project – Notice of activities and access road upgrade works</li> <li>Further consultation and engagement in relation to BSOPP including gas pipeline and provisions for access conditions and notice periods</li> <li>Discussion on Cattle issue around camp.</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>Kalium Lakes to continue liaison.</li> <li>No response to date. Landowner to be kept updated during ongoing informal adhoc discussions</li> <li>Resulted in agreement to enter into revision Access and Compensation Agreement - including provisions for access conditions and notice periods. Kalium lakes to observe obligations in agreement</li> </ul>

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
Wharton Capital (Marymia and Kumarina Station)	<ul style="list-style-type: none"> <li>• 11 Jun 2020</li> <li>• 1 Jul 2020</li> <li>• 9 Jul 2020 25 Sep 2020</li> <li>• 11 Sep 2020</li> </ul>	<ul style="list-style-type: none"> <li>• Introduction email from new owners seeking compensation and advising of new contacts.</li> <li>• Email to advise of cattle issue around camp &amp; advise contact details for Site Manager.</li> <li>• DoAA Discussion and follow up</li> <li>• Copies of signed DoAA for Marymia and Kumarina Stations provided.</li> <li>• Email to advise conditions of access for upcoming mustering activities.</li> </ul>	<ul style="list-style-type: none"> <li>• Resulted in the submitting of signed DoAA's. With Kalium &amp; Sellers for execution.</li> </ul>
Gingirana Native Title Claim Group	<ul style="list-style-type: none"> <li>• 13 Nov 2014</li> <li>• 5-7 Dec 2014</li> <li>• 16 Dec 2014</li> <li>• 11 Mar 2015</li> <li>• 11-16 May 2015</li> <li>• 29-Oct 2015</li> <li>• 1-2 Dec 2015</li> <li>• 11-16 Nov 2015</li> <li>• 22 March 2016</li> <li>• 9-Sept 2016 13-Dec 2016</li> <li>• 15-Jan 2017</li> <li>• 12-16-Aug 2017</li> <li>• 31-Oct 2017</li> <li>• 7-Mar 2018 13-Mar 2018 11-Apr 2018</li> <li>• 15-May 2018</li> <li>• 9 Aug 2018</li> <li>• 30 Aug 2019</li> </ul>	<ul style="list-style-type: none"> <li>• Introductory Meeting</li> <li>• Preliminary Heritage survey of project area</li> <li>• Letter of Support from Gingirana People</li> <li>• Land Access and mineral Exploration Agreement</li> <li>• Heritage Surveys</li> <li>• Community meetings</li> <li>• Mining Land Access Agreement negotiations</li> <li>• Annual community feedback meeting</li> <li>• Negotiation Protocols meeting</li> <li>• Community Signing meeting</li> <li>• Site Visit and final ethnographic consultation and sign off ( Aug 2017)</li> <li>• Land Access Agreement Signed (22 March 2016)</li> <li>• State Deeds signed</li> <li>• Various emails relating to EPA and EPBC referrals - Notice of submission and comments</li> <li>• Misc Licence consent letters</li> <li>• Mining Lease consent letters</li> <li>• Preliminary Works - Primary (MP / MCP) and Secondary (WWTP WA) issued for review and comment</li> <li>• Cultural Heritage Management Plan - Heritage surveys and processes to support upcoming construction, implementation discussions to commence in due course</li> <li>• Notice of gas pipeline licence application</li> <li>• Issue of tender EOI's M101, M102 and M103</li> </ul>	<ul style="list-style-type: none"> <li>• Heritage surveys to be conducted as required</li> <li>• Kalium Lakes to continue regular liaison and consultation as outlined in Access Agreements (confidential)</li> </ul>

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
	<ul style="list-style-type: none"> <li>4 Sep 2019</li> <li>11 Sep 2019</li> </ul>	<ul style="list-style-type: none"> <li>Issue of tender EOI's M125 and M127</li> <li>Issue of tender M109 and M128</li> </ul>	
<p>Marputu Aboriginal Corporation (MAC) on behalf of Gingirana Native Title Claim Group</p>	<ul style="list-style-type: none"> <li>9 Aug 2018</li> <li>6 Sept 2018</li> <li>13 Sept 2018</li> <li>17 June 2019</li> <li>30 Aug 2019</li> <li>3 October 2019</li> <li>26 Aug 2020</li> <li>27 Aug 2020</li> </ul>	<ul style="list-style-type: none"> <li>Notice of gas pipeline licence application</li> <li>MAC Directors Meeting. Key discussion points include:                             <ul style="list-style-type: none"> <li>General project update</li> <li>Contract and Job opportunities</li> <li>Success of ranger program already in place</li> <li>Importance of Engagement Officer</li> <li>Monitoring on lakes</li> </ul> </li> <li>MAC Directors meeting follow up</li> <li>Discuss Ten Mile West - New tenement - inclusion on Exploration Agreement / Heritage Management Measures</li> <li>Land Access Agreement Implementation</li> <li>InfraCo Deed of Covenant</li> <li>Inaugural Relationship Committee Meeting – held in conjunction with MNR</li> <li>KLL attended MAC AGM to provide overview of project</li> <li>Six monthly forum to discuss implementation of the Land Access Agreement</li> </ul>	<ul style="list-style-type: none"> <li>Consent letter from Marputu issued to DMIRS re: consent of tenure based on Native Title Land Access Agreement. No further action required</li> <li>Sept Meeting outcomes:                             <ul style="list-style-type: none"> <li>Skills Register to be prepared and issued by MAC for ranger</li> <li>MAC to nominate Liaison Officer</li> <li>MAC and KLL to nominate Relationship Committee Reps</li> <li>MAC to develop and advice on CAT materials - KLL to help facilitate rollout</li> <li>MAC to provide feedback on heritage notice, specifically around works on lake</li> </ul> </li> <li>13 Sept: KLL Relationship Committee members to be nominated</li> <li>17 June:                             <ul style="list-style-type: none"> <li>Minor changes agreed to Exploration licence</li> <li>Implementation discussions positive, key discussion points:                                     <ul style="list-style-type: none"> <li>Parties looking forward to kicking off Relationship Committees in Aug / Sept</li> <li>Cultural Awareness training to be done</li> <li>Ranger program to be looked into more by Kalium</li> </ul> </li> </ul> </li> </ul>
<p>MNR Determined Native Title</p>	<ul style="list-style-type: none"> <li>12 Nov 2014</li> <li>5-7 Dec 2014</li> <li>15 Feb 2015</li> <li>10 Mar 2015</li> <li>20-25 June 2015</li> <li>11-16 Nov 2015</li> <li>29-Jun 2016</li> </ul>	<ul style="list-style-type: none"> <li>Introductory Meeting</li> <li>Preliminary Heritage survey of project area</li> <li>Preliminary Heritage survey of additional project area</li> <li>Land Access and mineral Exploration Agreement</li> <li>Heritage Surveys</li> <li>Community meetings</li> <li>Mining Land Access Agreement negotiations</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to provide draft copies of approval applications for review</li> <li>Heritage surveys to be conducted as required</li> <li>Kalium Lakes to continue regular liaison</li> </ul>

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
	<ul style="list-style-type: none"> <li>• 16-May 2017</li> <li>• 12-16-Aug 2017</li> <li>• 22-Sep 2017</li> <li>• 31-Oct 2017</li> <li>• 17 Jan 2018</li> <li>• 7-Mar 2018</li> <li>• 20-Mar 2018</li> <li>• 15-May 2018</li> <li>• Aug 2018</li> <li>• 4 Oct 2018</li> <li>• 16 Apr 2019</li> <li>• 2 Oct 2019</li> <li>• 3 Oct 2019</li> <li>• 23 Sep 2020</li> </ul>	<ul style="list-style-type: none"> <li>• Annual community feedback meeting</li> <li>• Negotiation Protocols meeting</li> <li>• Community Signing meeting / Land Access Agreement Signed</li> <li>• Various emails relating to EPA and EPBC referrals - Notice of submission and comments</li> <li>• CHMP Discussions</li> <li>• State Deeds signed</li> <li>• Misc Licence consent letters / Mining Lease consent letters</li> <li>• Cultural Heritage Management Plan - Heritage surveys and processes to support upcoming construction, implementation discussions to commence in due course</li> <li>• Notice of gas pipeline licence application</li> <li>• highlight outstanding implementation items for further discussion, nominate KLL Relationship Committee members</li> <li>• Discuss tenement application Burnside - approach to pulling under Exploration Heritage Agreement</li> <li>• Land access agreement implementation matters</li> <li>• Welcome to Country &amp; Site Visit</li> <li>• Inaugural Relationship Committee meeting – held in conjunction with Marputu</li> <li>• Six monthly forum to discuss implementation of the Land Access Agreement</li> </ul>	<ul style="list-style-type: none"> <li>• August 2018: no action required</li> <li>• 4 October 2018: Feedback and MNR RC members nominated in letter received 4-Oct-18. No action required</li> <li>• Due to the Cultural sensitivities Kalium agreed to withdraw application for Burnside</li> <li>• Implementation Matters to be progressed at Inaugural RCM's - Due for July / August 2019.</li> </ul>
P. Gianni	<ul style="list-style-type: none"> <li>• 16-Mar 2018</li> <li>• Apr-18</li> </ul>	<ul style="list-style-type: none"> <li>• Miscellaneous License application discussions and Land Access Agreement Discussions</li> <li>• Consultation / Project update - resulting in execution of Land Access Agreement (including provisions for Gas Pipeline)</li> </ul>	<ul style="list-style-type: none"> <li>• No further action required</li> <li>• Kalium to comply with all requirements under LAA</li> </ul>
Kumarina Roadhouse	<ul style="list-style-type: none"> <li>• Sept 2017</li> <li>• 9 Aug 2018</li> <li>• June 2019</li> <li>• 2 Feb 2020</li> </ul>	<ul style="list-style-type: none"> <li>• Letter correspondence - project update briefing note and investor presentation pack</li> <li>• Notice of gas pipeline licence application</li> <li>• Discussions regarding BSOPP fuel supply</li> <li>• First Aid Training</li> </ul>	<ul style="list-style-type: none"> <li>• No response</li> <li>• Agreed to purchase fuel through parent company Geraldton Fuels</li> <li>• Using accommodation facilities at an agreed corporate rate</li> </ul>

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
	<ul style="list-style-type: none"> <li>17 Feb 2020</li> <li>20 Feb 2020</li> </ul>	<ul style="list-style-type: none"> <li>RFDS Medical Chest review and support</li> <li>Response to medical incident</li> </ul>	<ul style="list-style-type: none"> <li>Resolved on site, no further intervention required</li> </ul>
Cosmopolitan Minerals / AIC Resources	<ul style="list-style-type: none"> <li>13 Mar 2015 (phone call)</li> <li>2 April 2015</li> <li>5 July 2015</li> <li>15-Oct 20 5</li> <li>9-Mar 2018</li> <li>9 Aug 2018</li> <li>17 Jun 2020</li> </ul>	<ul style="list-style-type: none"> <li>Discuss Miscellaneous licence application</li> <li>Discuss Ten Mile Lake</li> <li>Discuss Miscellaneous Licence L52/162 application</li> <li>Access Agreement discussions</li> <li>Consultation resulting in additional Land Access Agreement for new Misc L applications including Gas Pipeline</li> <li>Notice of gas pipeline licence application</li> <li>Formal notice of Pipeline Construction Commencement</li> </ul>	<ul style="list-style-type: none"> <li>Consultation resulting in additional Land Access Agreement for new Misc Licence applications including Gas Pipeline.</li> <li>Kalium lakes to comply with Access Agreement</li> </ul>
Drillabit	<ul style="list-style-type: none"> <li>10-Dec 2015</li> <li>20-Jan 2016</li> <li>9 Aug 2018</li> </ul>	<ul style="list-style-type: none"> <li>Discuss Miscellaneous Licence L52/162 application</li> <li>Consultation / Project update - resulting in execution of Land Access Agreement (including provisions for Gas Pipeline)</li> <li>Notice of gas pipeline licence application</li> </ul>	<ul style="list-style-type: none"> <li>Consultation resulting in additional Land Access Agreement for new Misc Licence applications including Gas Pipeline.</li> <li>Kalium lakes to comply with Access Agreement</li> </ul>
Great Sandy Desert Pty Ltd	<ul style="list-style-type: none"> <li>Jun 2017</li> <li>May 2018</li> <li>9 Aug 2018</li> </ul>	<ul style="list-style-type: none"> <li>Misc L application discussions</li> <li>Land Access Agreement Discussions</li> <li>Consultation / Project update - resulting in execution of Land Access Agreement (including provisions for Gas Pipeline)</li> <li>Notice of gas pipeline licence application.</li> </ul>	<ul style="list-style-type: none"> <li>Consultation resulting in additional Land Access Agreement for new Misc Licence applications including Gas Pipeline.</li> <li>Kalium lakes to comply with Access Agreement</li> </ul>
DMIRS	<ul style="list-style-type: none"> <li>January 2015 to May 2018</li> <li>9 Aug 2018</li> <li>5 June 2019</li> <li>17 June 2019</li> <li>31 Jun 2019</li> </ul>	<ul style="list-style-type: none"> <li>Various discussions relating to the BSOPP and Mining Act requirements including:                             <ul style="list-style-type: none"> <li>Project assessment requirements and environmental referral</li> <li>Project, future tenure and approvals</li> <li>Tenure application requirements</li> <li>Mining Proposal and closure planning</li> </ul> </li> <li>Notice of gas pipeline licence application</li> <li>Project Overview and existing POWs (water) and roll over into Mining Approvals</li> <li>Scope and requirements for Pipeline EP</li> <li>Mining Proposal and Closure Plan</li> </ul>	<ul style="list-style-type: none"> <li>Mining Proposal and MCP to be prepared in accordance with DMIRS guidelines</li> <li>Mining Proposal and MCP to be submitted to allow parallel assessment with the Part IV EP Act process</li> <li>Pipeline construction EP to cover all activities up to the introduction of gas for the pipeline and facilities.</li> <li>Mine related - seeking further input from EPA</li> <li>Submission of EP to be soon and follow the DMIRS/DMP guidelines</li> <li>KLP's response to questions – ongoing engagement to resolve.</li> <li>OSC and EP Rev 5 Guideline provided, KLL to</li> </ul>

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
	<ul style="list-style-type: none"> <li>• 15 October 2019</li> <li>• 1 Nov 2019</li> <li>• 12 Nov 19</li> <li>• 14 Nov 2019</li> <li>• 7 Jan 2020</li> <li>• 29 Jun 2020</li> <li>• 10 Jun 2020</li> <li>• 2 Sept 2020</li> </ul>	<ul style="list-style-type: none"> <li>• Discuss CSC and EMP – Changes of Entity requirements</li> <li>• Discuss EP and Opportunity to modify items</li> <li>• Pipeline HAZOP</li> <li>• Safety Management Study</li> <li>• Gas Pipeline Environmental Plan</li> <li>• Construction CSC and EP – Outstanding items discussion in regards to change from DRA to KL</li> <li>• Site Inspection Planning</li> <li>• Discuss changes to the CSC and EP for Revision 5.</li> </ul>	<ul style="list-style-type: none"> <li>• submit updated documents for review</li> </ul>
<p>Department of the Environment and Energy - DotEE</p>	<ul style="list-style-type: none"> <li>• Oct 2017</li> <li>• 24 Oct 2017</li> <li>• 29 May 2019</li> <li>• 7 June 2019</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-referral meeting</li> <li>• EPBC Referral submission</li> <li>• Referral and assessment queries and discussions</li> <li>• Project update provided EPBC Approvals including approach for Night Parrot MP and Ground Water MP</li> <li>• Approval Received.</li> </ul>	<ul style="list-style-type: none"> <li>• Kalium lakes to continue to liaise with DotEE regarding approval under the EPBC Act</li> <li>• Kalium lakes to respond to any additional queries from DotEE during their assessment</li> <li>• Government review to be finalised and documents approved</li> <li>• Kalium to comply with Ministerial conditions</li> </ul>
<p>EPA Services - DWER</p>	<ul style="list-style-type: none"> <li>• Nov 2014</li> <li>• March, June, Aug 2015</li> <li>• Jan, April, June 2017</li> <li>• Feb, May, Oct 2018</li> <li>• Aug 2018</li> <li>• 21 Mar 2019</li> <li>• 1 Jul 2019</li> </ul>	<ul style="list-style-type: none"> <li>• Pre-referral meeting, level of assessment and Part IV assessment process</li> <li>• Environmental survey effort requirements discussed over this extended period of time                             <ul style="list-style-type: none"> <li>○ Briefing on survey results</li> <li>○ Briefing on trial ponds</li> <li>○ Scoping document</li> <li>○ Stygofauna management</li> <li>○ Staging of the Proposal</li> </ul> </li> <li>• Notice of gas pipeline licence application</li> <li>• Project Presentation to the EPA Board</li> <li>• Project Overview and Status Update</li> </ul>	<ul style="list-style-type: none"> <li>• Kalium Lakes to continue to liaise with EPA Services during Part IV approval process</li> <li>• ERD to include recommended information and discussed management approaches</li> <li>• Kalium Lakes to organise site visit if requested</li> <li>• ERD to cover stage 1 of the Proposal only</li> <li>• Facilitated project approvals</li> <li>• Facilitated Project approvals.</li> </ul>
<p>Water – DWER (previously DoW)</p>	<ul style="list-style-type: none"> <li>• May, June 2015</li> <li>• April 2016</li> <li>• Aug, Nov 2017</li> <li>• May, Aug 2018</li> <li>• Aug 2018</li> </ul>	<ul style="list-style-type: none"> <li>• 26D and 5C requirements</li> <li>• 5C approval for 1.5 GL per annum pilot study</li> <li>• Provision of groundwater reports</li> <li>• Pre-referral discussions</li> <li>• Freshwater abstraction and stygofauna management</li> </ul>	<ul style="list-style-type: none"> <li>• Kalium Lakes to continue liaison during Part IV approval process</li> <li>• Kalium Lakes to provide information as required to allow the approval of 5C licences</li> <li>• 5C licences approved with conditions. Kalium to comply with all conditions</li> </ul>

Stakeholder	Date/s	Issues / Topics Raised	Proponent Response / Outcome
		<ul style="list-style-type: none"> <li>Notice of gas pipeline licence application</li> </ul>	
Department of Biodiversity, Conservation and Attractions (DBCA) (DPaW)	<ul style="list-style-type: none"> <li>16-Jan 2015</li> <li>24-Mar 2015</li> <li>17-Jun 2015</li> <li>15-Aug 2015</li> <li>28-Apr 2017</li> <li>22-Jun 2017</li> <li>23-Jan 2018</li> </ul>	<ul style="list-style-type: none"> <li>Introductory Meeting</li> <li>Initial discussion on environmental survey effort requirements</li> <li>Discussion on survey requirements</li> <li>EPA &amp; DPAW briefing on initial survey results</li> <li>Nick Woolfrey email presentation on trial ponds</li> <li>Environmental survey findings</li> <li>EPA Assessment number</li> <li>Pre-referral discussions</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to continue to liaise with DBCA during Part IV approval process</li> <li>ERD to describe Night Parrot survey effort</li> <li>Kalium lakes to continue consult with DBCA re survey requirements</li> </ul>
Shire of Wiluna	<ul style="list-style-type: none"> <li>18-Jan 2017</li> <li>19-Feb 2017</li> <li>13-Mar 2017</li> <li>11-Sep 2017</li> <li>26-Mar 2019</li> </ul>	<ul style="list-style-type: none"> <li>Transport tonnages to and from mining operations</li> <li>Septic tanks for accommodation village (approved)</li> <li>Building Code requirements</li> <li>Letter correspondence - project update briefing note and investor presentation pack</li> <li>Shire of Wiluna Mining Forum. Information provided about BSOPP and possible opportunities.</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to obtain required approvals for the BSOPP and continue liaison with Shires.</li> </ul>
Shire of Meekatharra	<ul style="list-style-type: none"> <li>19-Feb 2018</li> <li>11-Sep 2017</li> </ul>	<ul style="list-style-type: none"> <li>Misc Licence Applications</li> <li>Letter correspondence - project update briefing note and investor presentation pack</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to obtain required approvals for the BSOPP and continue liaison with Shires.</li> </ul>
Shire East Pilbara	<ul style="list-style-type: none"> <li>11-Sep- 2017</li> </ul>	<ul style="list-style-type: none"> <li>Letter correspondence - project update briefing note and investor presentation pack</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to obtain required approvals for the BSOPP and continue liaison with Shires.</li> </ul>
Main Roads WA	<ul style="list-style-type: none"> <li>Jan 2016</li> <li>Jan 2018</li> </ul>	<ul style="list-style-type: none"> <li>Traffic Impact Statement</li> <li>Road signage</li> <li>Intersection approval</li> <li>Simplifying intersection for 75,000 t operation</li> </ul>	<ul style="list-style-type: none"> <li>Kalium Lakes to obtain required approvals for the BSOPP and continue liaison.</li> </ul>
Wildflower Society of WA and Conservation Council of WA	<ul style="list-style-type: none"> <li>Sept 2017</li> </ul>	<ul style="list-style-type: none"> <li>Project update briefing note</li> </ul>	<ul style="list-style-type: none"> <li>No response required</li> </ul>

## 6. Contact Details

For further queries regarding the EP for BGP Operations please contact Environment Lead Lisa Graham on (08) 6189 4512 or via the APA website at <https://www.apa.com.au/contact/>.

For further queries regarding the EP for BGP Rehabilitation please contact Environment Superintendent Clair Wilson on (08) 9240 3200.

## 7. References

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