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Please note that the documents made available on this platform were developed prior to the recent acquisition of Atlas to Reedy Creek Pipeline (ARCP) by APA Group. As such, they still carry the branding, logos and references of the former company.

These documents remain accurate and relevant and are made available for compliance, transparency and reference purposes. Revised versions incorporating APA branding and references will be progressively updated and published.

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APA Group comprises of two registered investment schemes: APA Infrastructure Trust, ARSN 091 678 778, APA Investment Trust, ARSN 115 585 441. The securities are stapled together and form: APA Group Limited, ACN 091 344 704 to which is the responsible entity of those trusts. The registered office is: Level 25, 580 George Street, Sydney NSW 2000.

Senex

Senex Energy Limited

Atlas to Reedy Creek Pipeline Environmental Management Plan

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Document:	SENEX-ARCP-EN-PLN-001
Revision:	3

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Document Status

Revision History

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Document Approval

Approved by	Jacob Cumpstay Environment Manager	**Signed**	Date 28/02/2024

1 Introduction

ARC Pipeline Pty Ltd (ABN 63 662 874 991) is a wholly owned subsidiary of Senex Energy Pty Ltd (ABN 008 942 827) (Senex). Senex is a privately owned company with more than three decades of experience in Australia's oil and gas industry. ARC Pipeline Pty Ltd (ARCP P/L) is planning to construct and operate the Atlas to Reedy Creek Pipeline (ARCP), a buried high pressure natural gas pipeline (Project).

The ARCP will transport natural gas produced from Surat Basin gas tenements southwest of Wandoan (including Senex Energy Pty Ltd's (**Senex**) Project Atlas CSG Project (EPBC 2018/8329), Atlas Stage 3 Project (EPBC 2022/09410), other potential future Senex projects, and other third-party projects) to the Reedy Creek to Wallumbilla Pipeline (**RCWP**) north of Yuleba (owned and operated by APA Reedy Creek Wallumbilla Pty Limited) for transportation under the capacity and services offered by that pipeline's owner. The Project Area is shown in ***Figure 1***.

PPL 2075 runs for 56.3 km between PFL 31 and APA Wallumbilla to Reedy Creek pipeline. The Project Area has been subject to extensive previous disturbance, with only a small percentage of native vegetation remaining.

The total Project Area is 654.4 hectares (**ha**). However, the maximum disturbance limit will be 206.9 ha within this Project Area.

1.1 Proposed Development

The Project comprises construction, operation, rehabilitation and decommissioning of:

- A buried steel pipeline (with 750 millimetre (**mm**) minimum depth of cover, increased as required at crossings and locations susceptible to external interference or erosion) that:
    - is approximately (~) 57 kilometre (**km**) in length with a diameter (**DN**) of up to 400 mm, a 40 year system design life and an operating pressure of ~15.3 megapascals;
    - is designed, and will be constructed and operated, in accordance with "*Australian Standard 2885: the Standard for High Pressure Pipeline Systems*" (**AS2885**); and
    - has a linear disturbance within a 30 metre (**m**) wide unfenced Right of Way (**ROW**).
- Corrosion integrity protection for the ARCP:
    - externally, via coating (primarily) and cathodic protection system (being, buried anode beds at each end of the ARCP and above ground test boxes (within a 20 m by 20 m unfenced disturbance area), with a buried cable and dirt access tracks between the ARCP and the anode beds); and
    - internally, via gas dehydration prior to entering the pipeline. A maintenance and monitoring program of 'pigging' will occur for the life of the ARCP.
- A single cold vent for safe depressurisation in emergencies. However, noting that with rigorous design and protection measures applied to high pressure gas pipelines, emergency events are expected to occur only once in the life of the ARCP. The cold vent will be installed near the ARCP inlet with:
    - ~DN200mm vent line and ~2.4 m high vent;
    - a peak flow rate of ~141,300 kilogram (**kg**) per hour (**hr**); and
    - a nominal 20 m^2 disturbance footprint.
- Associated above ground infrastructure (for the life of the Project), including:
    - pipeline marker signage;
    - access tracks within the ROW;
    - 6 m wide access track (within a 10 m wide corridor) to the ARCP inlet (~100 m long);
    - an end of line facility at the RCWP tie-in with pressure control system and gas scrubber to remove any free liquid;
    - metering skid upstream of the delivery point at RCWP; and
    - pig launcher and receiver at ARCP start and end.

The technical specifications of the pipeline are detailed in Table 5.1.

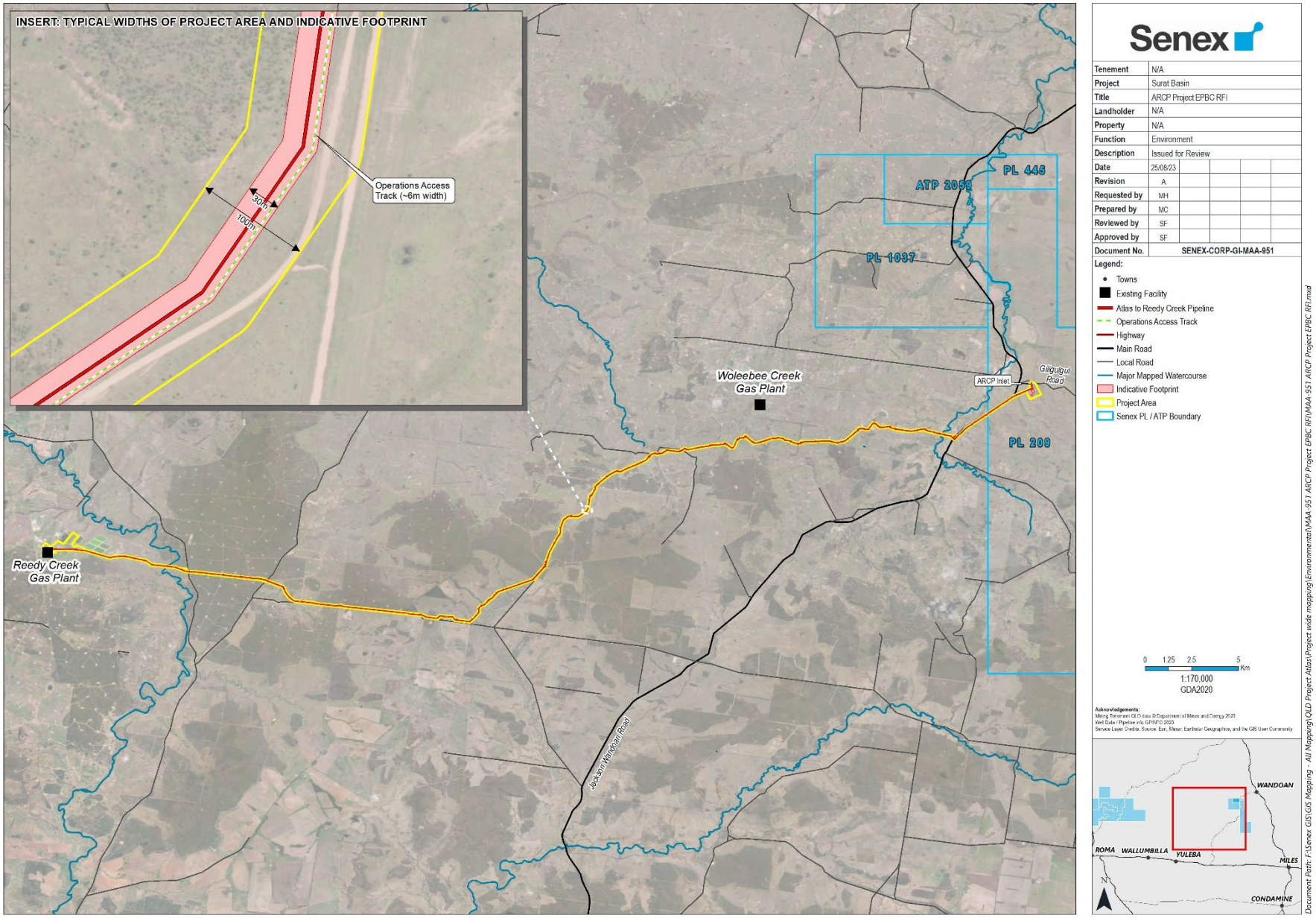


Figure 1 ARCP Project Area and Location

The majority of the Project infrastructure is known or proposed. During project planning for as yet un-sited infrastructure (the Environmental Protocol for Field Development and Constraints Analysis [SENEX-QLDS-EN-PRC-019] will be used to avoid all MNES and preferentially minimise disturbance to other biodiversity values. Un-sited infrastructure consists of consists of a 10% allowance, totaling up to 20.7ha, for:

- ROW in-field adjustments (16.3ha)
- workspaces (2.9ha)
- cathodic protection beds (1.5ha).

All other disturbance in the Project Area (comprising known and proposed locations) is included in the ARC Pipeline EPBC Act MNES Assessment Report (E2M, March 2024) as 'Indicative Footprint'.E2M (March 2024) assessed impacts associated with the maximum disturbance footprint with included the 10% allowance for un-sited infrastructure. **Figure 2** to **Figure 11** show the evolution and detail of the pipeline alignment.

1.2 Purpose and Scope

This Environmental Management Plan (**EMP**) describes how ARCP P/L will manage potential environmental impacts associated with construction, operation and decommissioning of the ARCP in the Project Area and ensure compliance with its approval conditions, industry guidelines and regulatory requirements.

The objectives of this EMP are to ensure:

- potential impacts upon the surrounding environment are identified and addressed within internal planning processes and incorporated into field procedures;
- activities that have, or are likely to have, temporary impacts on the environment are mitigated, monitored and managed; and
- activities which have, or are likely to have, long term significant impacts on the environment or land use are avoided or managed appropriately and mitigated wherever practicable.

Broadly, this EMP covers:

- specific requirements for compliance with government regulatory requirements, EA and other approval conditions including the EPBC approvals;
- activities authorised to be undertaken in the Project Area;
- for those activities that have potential for direct and indirect impacts on MNES, this plan directs the user to the Significant Species Management Plan [SENEX-ARCP-EN-PLN-002] for more detailed management measures;
- communication and documentation of environmental compliance activities for all activities; and
- environmental management measures to be implemented to minimize identified potential environmental impacts.

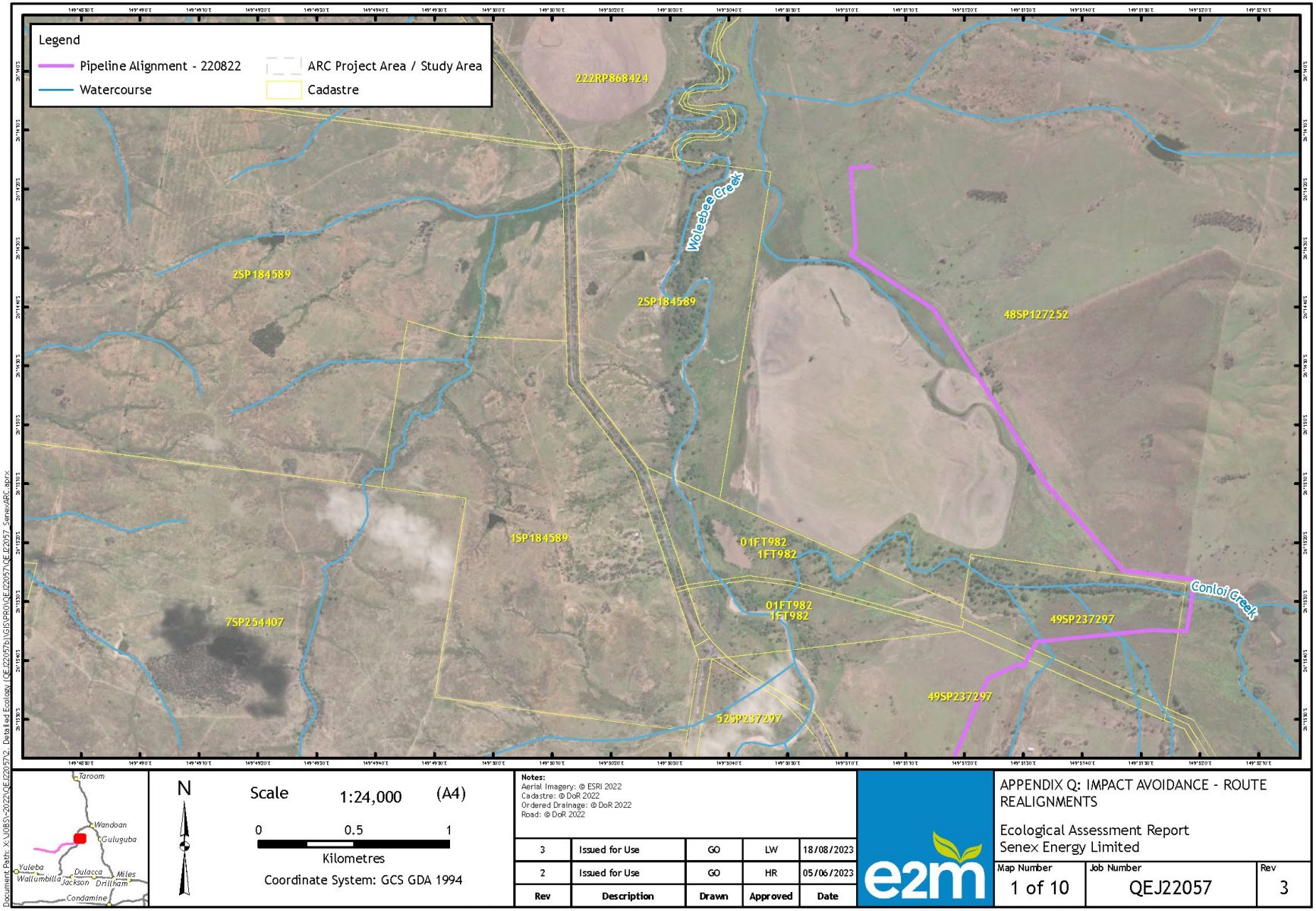


Figure 2 ARCP Alignment Evolution and Detail

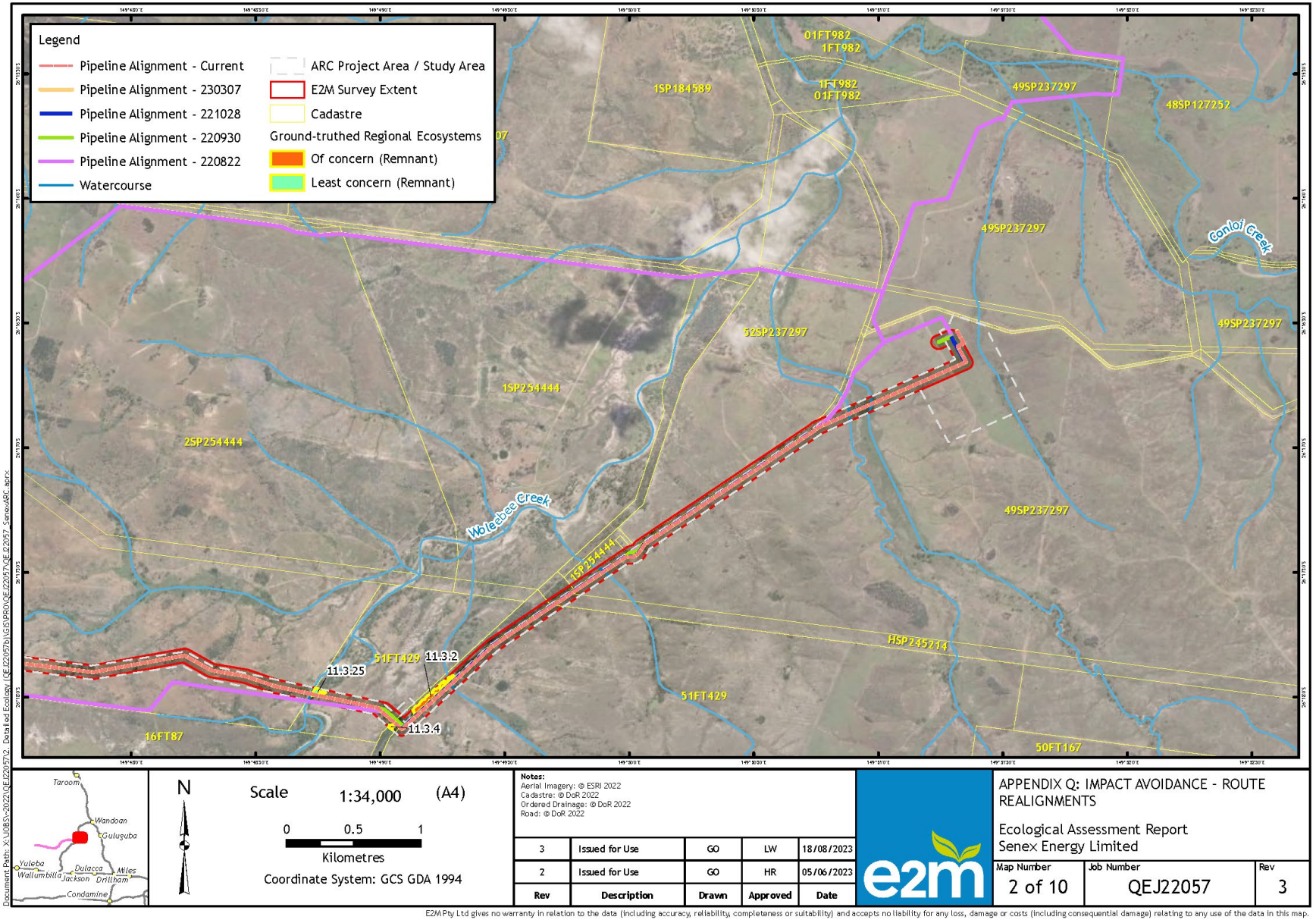


Figure 3 ARCP Alignment Evolution and Detail

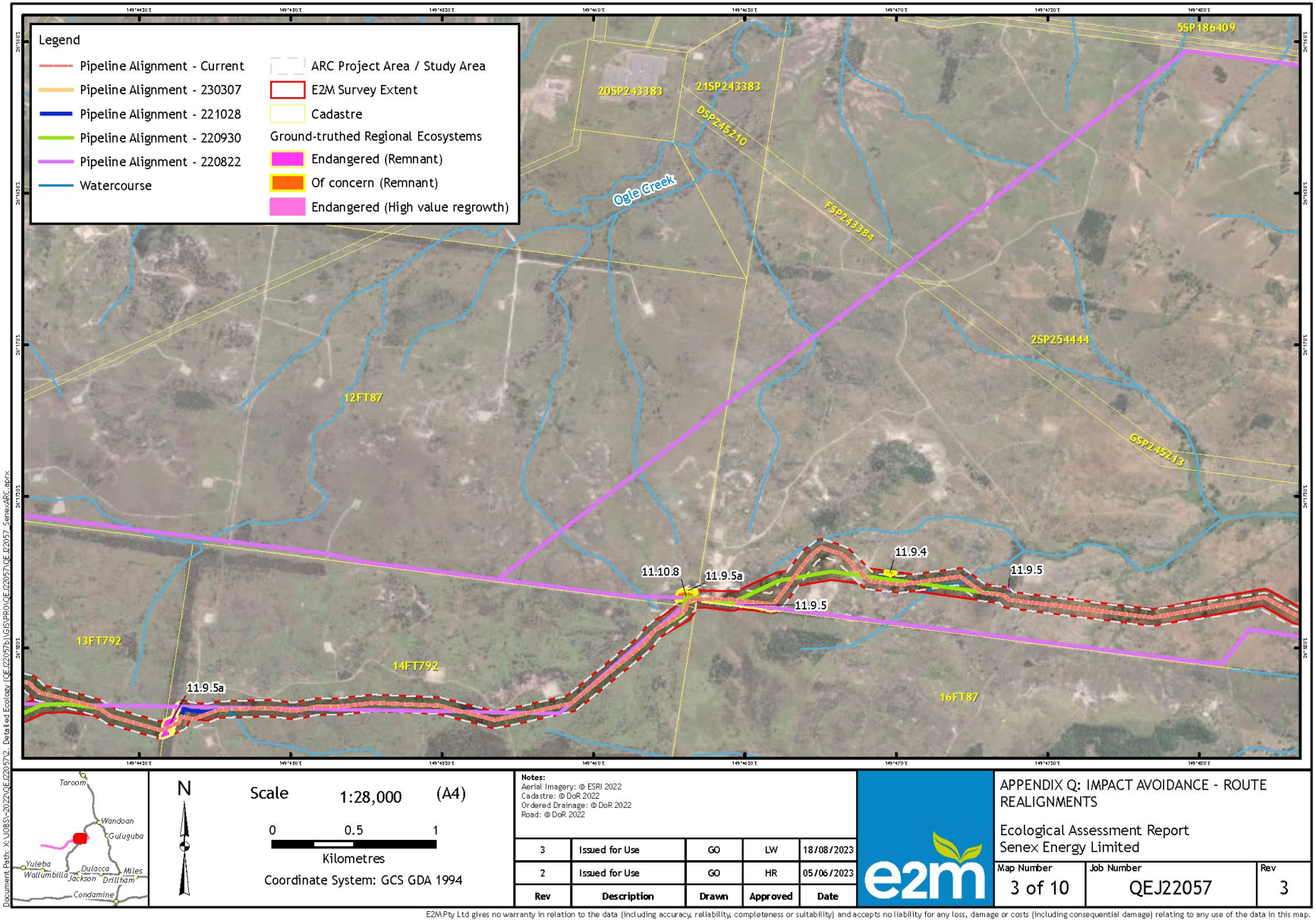


Figure 4 ARCP Alignment Evolution and Detail

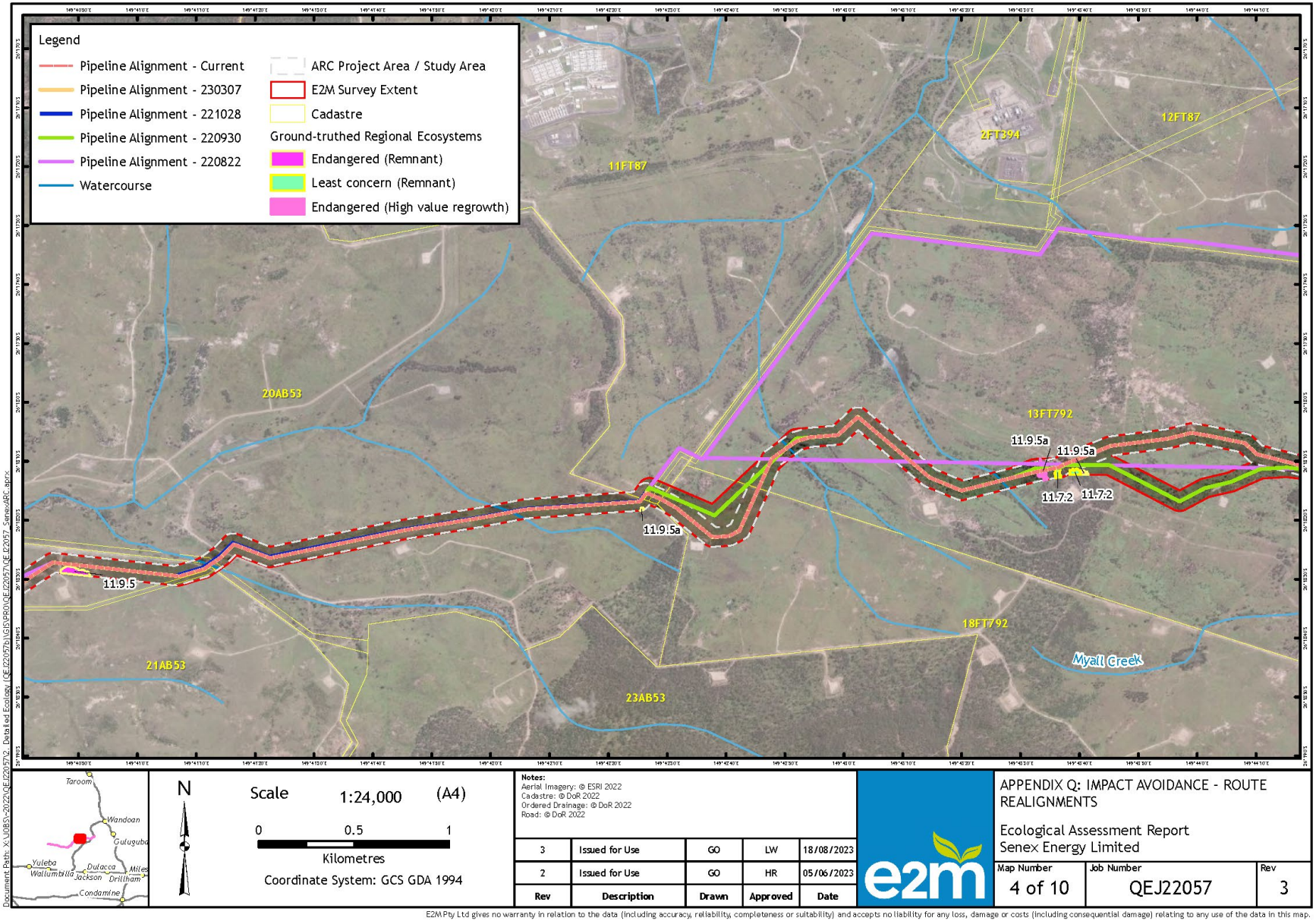


Figure 5 ARCP Alignment Evolution and Detail

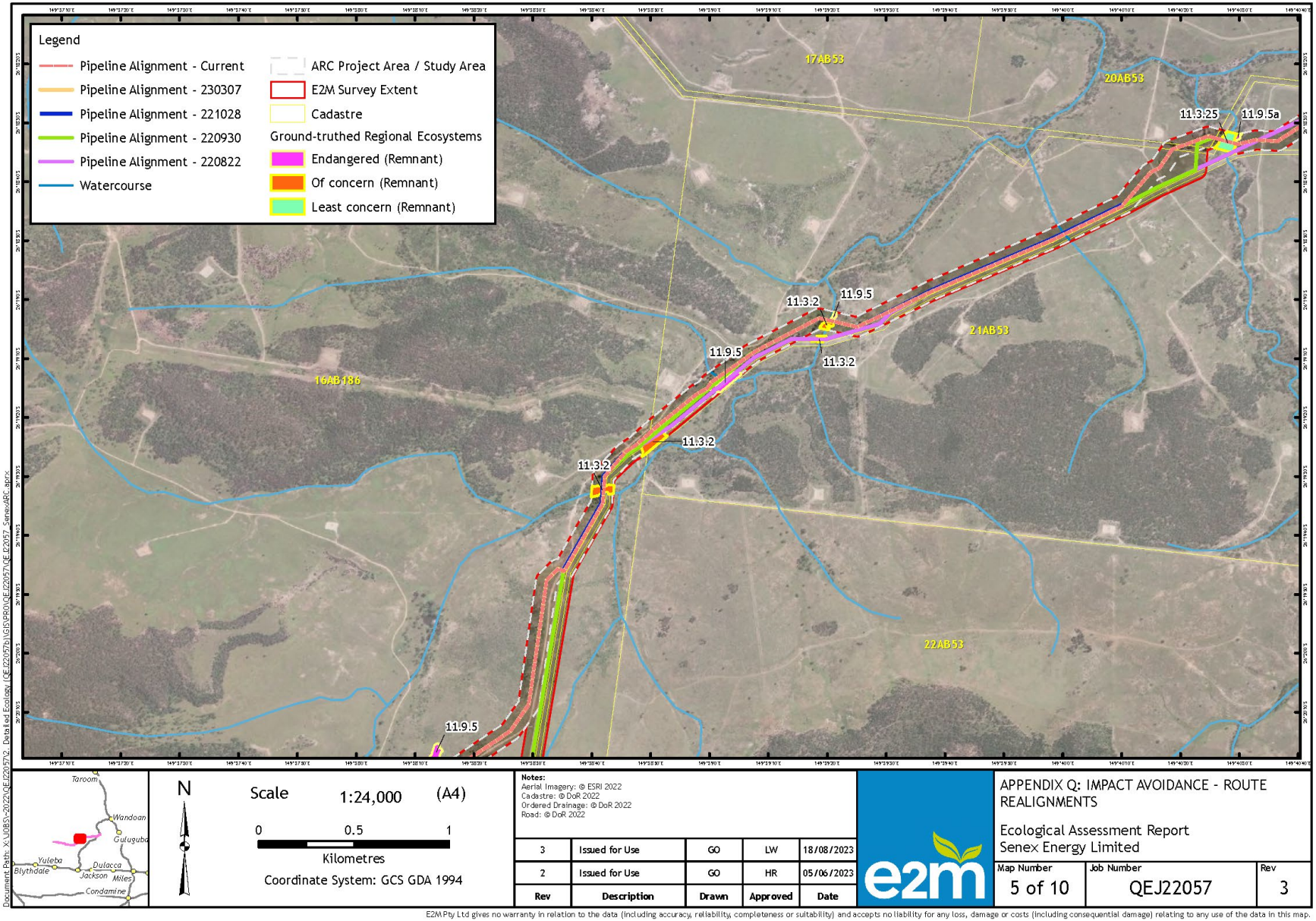


Figure 6 ARCP Alignment Evolution and Detail

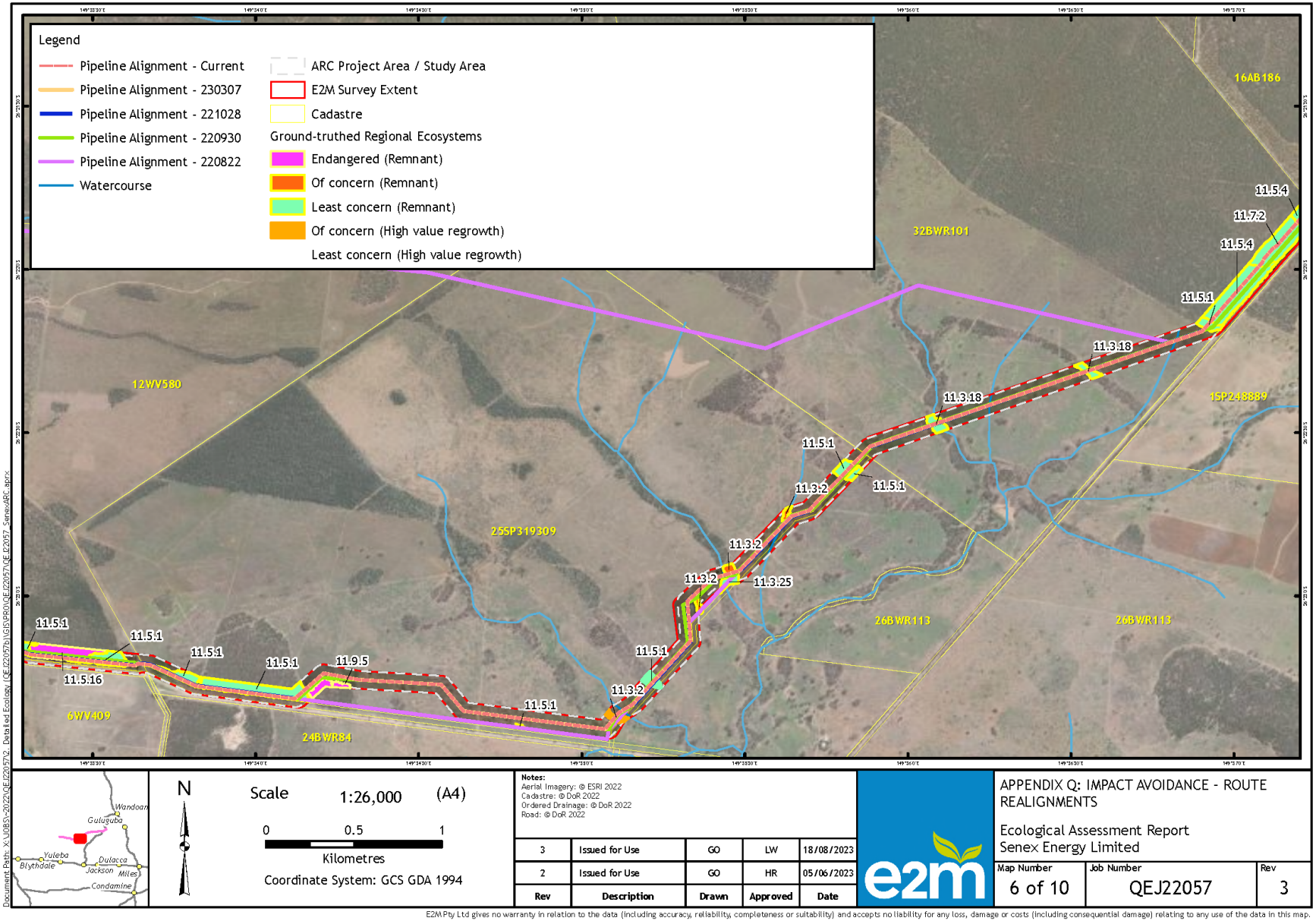


Figure 7 ARCP Alignment Evolution and Detail

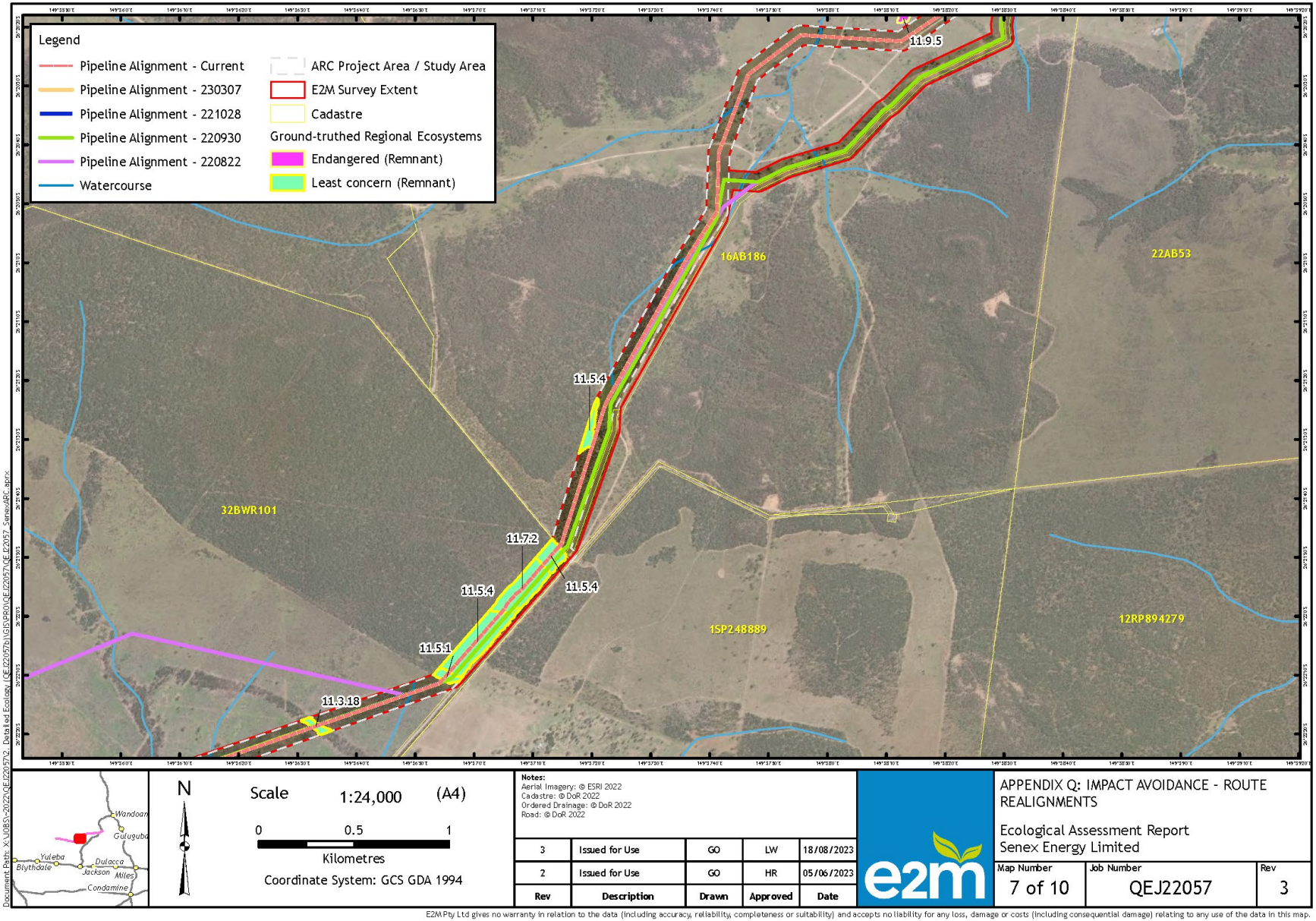


Figure 8 ARCP Alignment Evolution and Detail

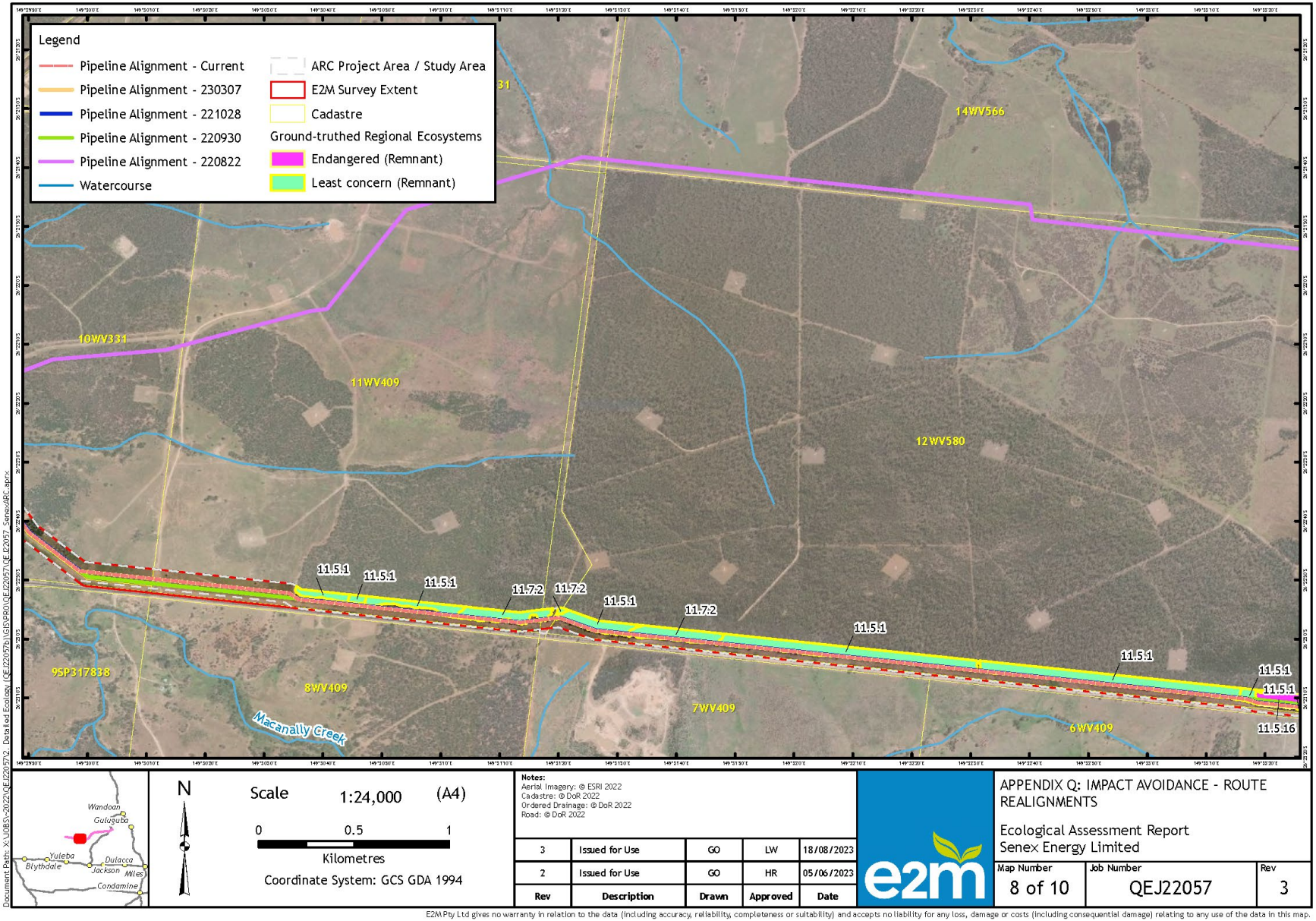


Figure 9 ARCP Alignment Evolution and Detail

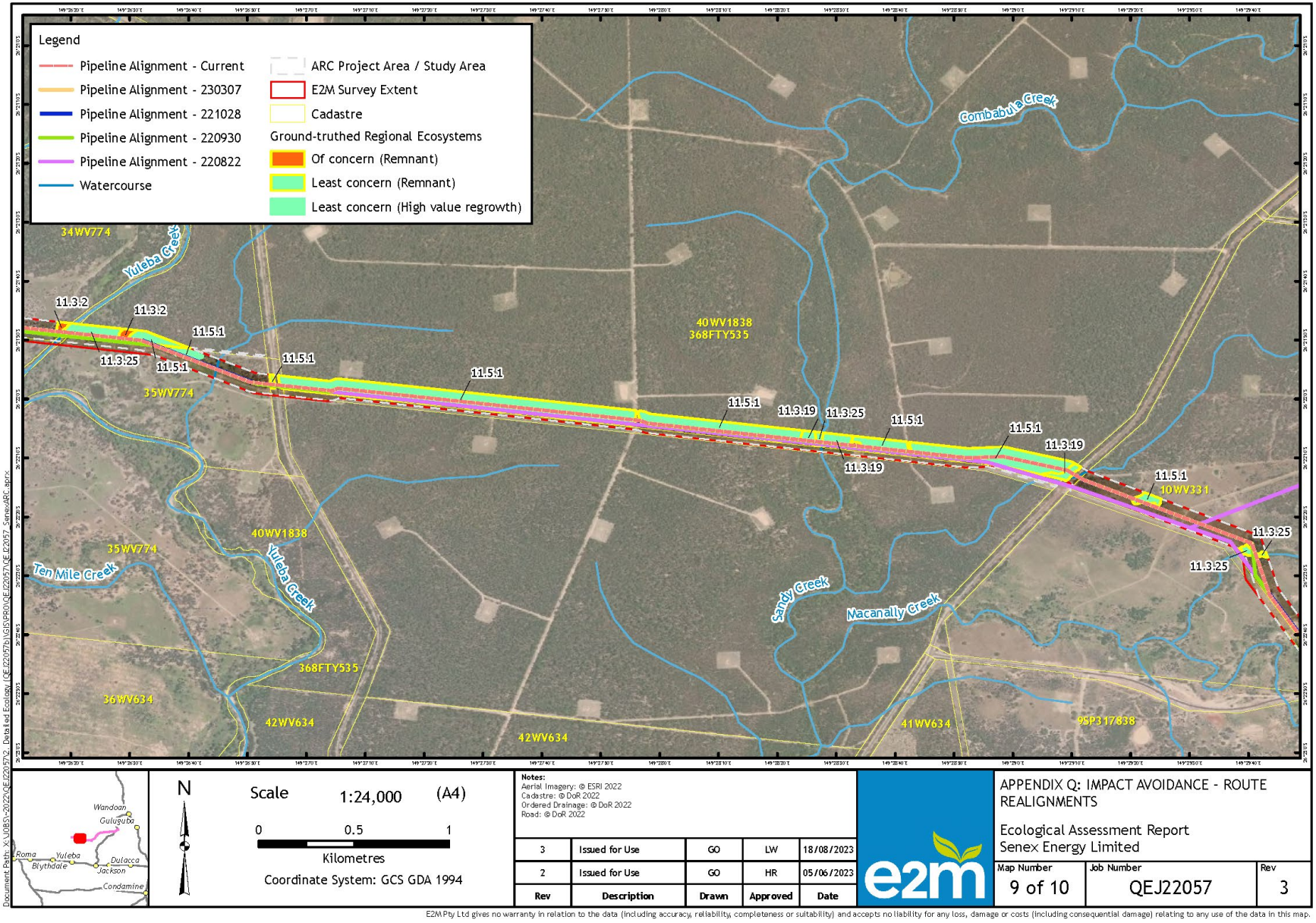


Figure 10 ARCP Alignment Evolution and Detail

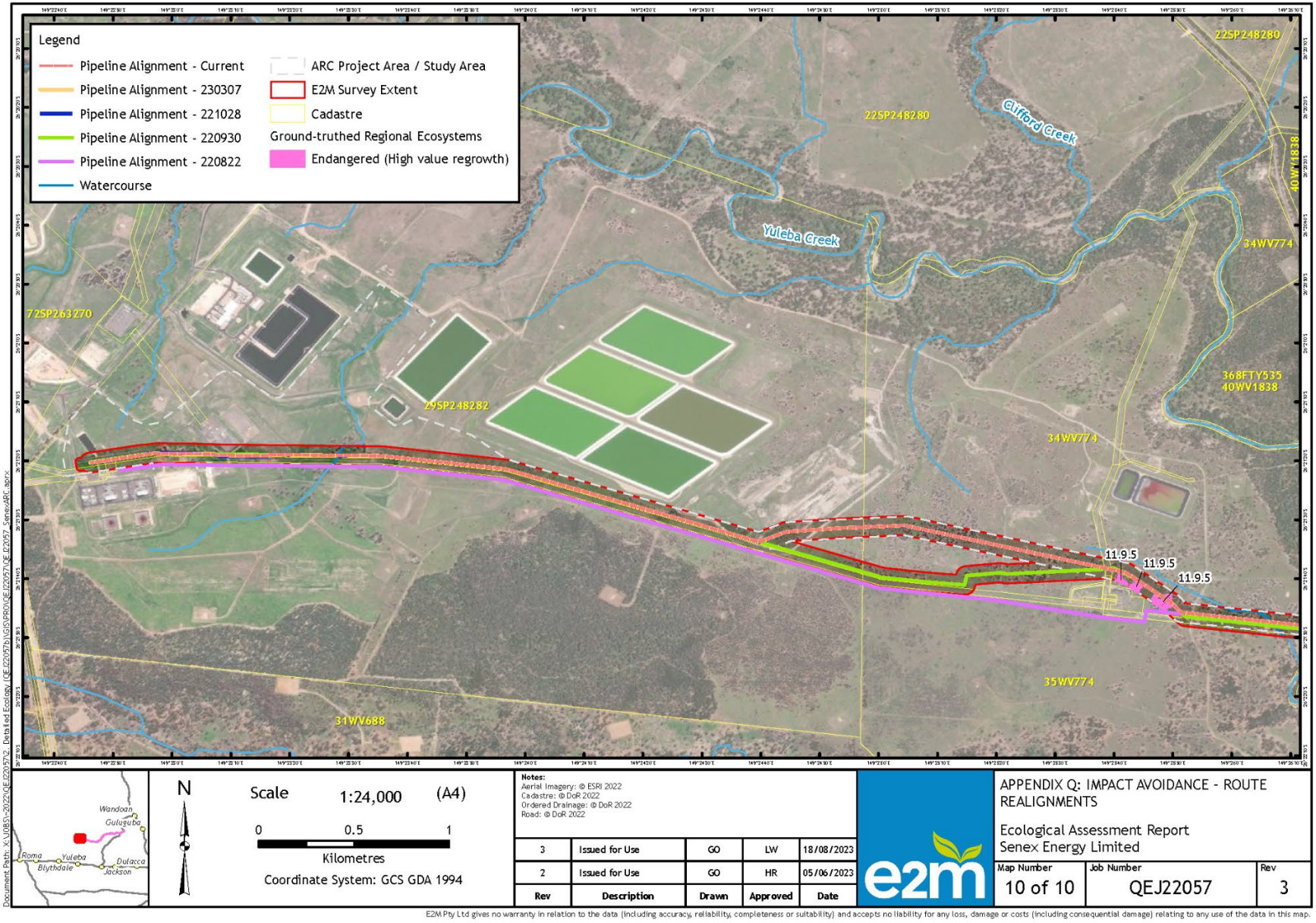


Figure 11 ARCP Alignment Evolution and Detail

1.3 Supporting Plans and Procedures

The EMP will be updated:

- to reflect new or additional permit conditions when issued, other regulatory requirements; or
- as required by a risk assessment or changed project outcomes.

ARCP P/L contractors will be provided with a copy of the EMP and will be required to comply with its contents.

ARCP P/L, as a subsidiary of Senex Energy, will use the internal plans and procedures developed for corporate policy compliance, including but not limited to the following:

- Senex Health, Safety and Environmental Management System [SENEX-CORP-HS-STD-001] (**HSEMS**) which outlines procedures for incident notification, response, investigation and reporting procedures and which references the:
  - Incident Management Procedure [SENEX-CORP-HS-PRC-004];
  - Senex Spill Response Plan [SENEX-CORP-ER-PLN-006]; and
  - Contingency procedures for emergency environmental incidents to be developed in accordance with the Environmental Authority (EA) conditions when issued;
- Environmental Constraints and Field Development Protocol [SENEX-CORP-EN-PRC-019] (the **Constraints Protocol**), comprising a GIS analysis tool and integrated within infrastructure development and land access planning processes;
- GIS database used to record ground-truthed habitat, no-go areas and track clearing activities;
- Senex Action Item Tracking Register (**AITR**) database which tracks complaints, grievances and all other items required to be actioned;
- Biosecurity Management Plan [SENEX-CORP-EN-PLN-003];
- Queensland Weed Hygiene Procedure [SENEX-QLDS-EN-PRC-023];
- Waste Management Procedure Qld [SENEX-QLDS-EN-PRC-022];
- Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PRC-003]; and
- Queensland Fauna and Stock Management Procedure [SENEX-QLDS-EN-PRC-021].

Project specific plans and procedures that have been developed for the ARC Pipeline that are relevant to this EMP are:

- ARCP Rehabilitation Management Plan [SENEX-ARCP-EN-PLN-003_1];
- ARCP Significant Species Management Plan [SENEX-ARCP-EN-PLN-002_1]; and
- ARCP Biodiversity Offset Strategy (CO2, September 2023) in accordance with the EPBC Act *Environmental Offsets Policy*.

1.4 Constraints Analysis Protocols

Senex undertakes relevant planning activities under the Environmental Protocol for Field Development and Constraints Analysis [SENEX-CORP-EN-PRC-019]. The document provides guidance for infrastructure siting to consider, among other aspects, the selection of preferential locations aimed at managing potential environmental impacts. This is the primary mechanism to achieving further avoidance and minimisation of impacts to biodiversity values. Broadly, the protocol includes:

1. *Desktop environmental constraints analysis* – involves review of GIS mapping layers relating to the proposed infrastructure locations. Depending on the nature of constraints locations may be

revised to avoid or minimise disturbance where possible.

2. *Site surveys* – once the preferred location is identified site surveys are undertaken to confirm suitability of the location. Suitability considerations include firstly, landholder requirements, secondly, constructability, thirdly, environmental features (such as significant species) and cultural heritage clearance. Site surveys are documented in a Survey Report.
3. *Post-survey environmental constraints analysis* – survey results are used to further refine the infrastructure locations and to budget and track the allowable areas of disturbance of areas of habitat or threatened ecological communities as identified in Section 5.1.

1.5 Abbreviations and Definitions

The following terms and abbreviations are used throughout this EMP.

Term	Definition
AITR	means the Senex Action Item Tracking Register.
ARCP	Atlas to Reedy Creek Pipeline
ARCP P/L	ARC Pipeline Pty Ltd
AREMP	means an Air Receiving Environment Monitoring Program.
AS	means Australian Standards.
ATP	means Authority to Prospect.
ATW	means Access to Work documentation.
BUA	means Beneficial Use Approval.
CCA	means Conduct and Compensation Agreement.
DCCEEW	Means the Commonwealth Department of Climate Change, Energy, the Environment and Water
Constraints Protocol	means the Environmental Constraints and Field development Protocol [SENEX- CORP-EN-PRC-019].
DAF	means the Department of Agriculture and Fisheries.
DES	means the Department of Environment and Science.
DTMR	means the Department of Transport and Main Roads.
EA	means Environmental Authority.
EMP	means this Environmental Management Plan for Atlas to Reedy Creek Pipeline.
EMS	means Senex's Environmental Management System.
EP Act	means the *Environmental Protection Act 1994* (Qld).
EP Regulation	means the *Environmental Protection Regulation 2008* (Qld).
EPBC Act	means the *Environmental Protection and Biodiversity Conservation Act 1999* (Cth).
ESA	means Environmentally Sensitive Areas.
HSEMS	means the Senex Health, Safety and Environment Management System.
MAOP	means maximum allowable operating pressure.
MNES	means matters of "national environmental significance" as that term is defined under the EPBC Act.
NC Act	means the *Nature Conservation Act 1992* (Qld).
P&G Act	means the *Petroleum and Gas (Production and Safety) Act 2004* (Qld).

Term	Definition
PL	means Petroleum Lease.
PPL	means Pipeline Licence
Project Area	means PPL 2075
RO	means reverse osmosis.
ROW	means Right of Way.
RTU	means remote terminal unit.
SCADA	means supervisory control and data acquisition.
SDS	means the Safety Data Sheets.
Senex	means ARC Pipeline Pty Ltd.
SP Act	means the *Sustainable Planning Act 2009* (Qld).
Water Act	means the *Water Act 2000* (Qld).
Waterway Code	means the *Code for self-assessable development, Minor waterway barrier works, Part 4: bed level crossings (Code number: WWBW01 April 2013*.
WRR Act	means the *Waste Reduction and Recycling Act 2011* (Qld).
WSA	means Water Supply Agreement.

2 Legislative Requirements

2.1 State Legislation

The principal legislation regulating petroleum and gas activities for the project is the *Petroleum and Gas (Production and Safety) Act 2004* (Qld) (**P&G Act**). The principal State environmental legislation is the *Environmental Protection Act 1994* (Qld) (**EP Act**) and associated regulation and protection policies.

The EP Act introduces the 'general environmental duty' which specifies that a person must not perform their duties in a manner which will cause, or is likely to cause, environmental harm unless the person takes all reasonable and practical measures to prevent or minimise the harm.

The EA authorises petroleum activities under the EP Act, and Senex and all contractors undertaking petroleum activities within the Project Area must comply with the conditions of the EA, to meet their respective obligations under the EP Act.

Fisheries resources and development in fisheries habitat areas in Queensland are regulated under the *Fisheries Act 1994* (Qld). The most relevant provisions in the *Fisheries Act 1994* (Qld) relate to installation of temporary and permanent waterway barriers ("waterway barrier works"), which may be assessable development under the *Sustainable Planning Act 2009* (Qld) (**SP Act**).

The *Nature Conservation Act 1992* (Qld) (**NC Act**) provides a framework for the creation and management of protected areas and the protection of native flora and fauna, which are classified as being either endangered, vulnerable, near threatened or least concern, and are referred to as "protected plants" and "protected animals", respectively.

There is a general prohibition on using, taking, keeping and interfering with protected plants and animals in Queensland, although there are various exemptions where the take may be lawful (depending on the purpose and the location in which the activity occurs).

The *Waste Reduction and Recycling Act 2011* (Qld) (**WRR Act**) establishes the framework for waste management and resource recovery in Queensland, including the waste and resource management hierarchy, the "user pays" principle, the proximity principle and product stewardship principles. Waste management strategies must be aligned with the hierarchy and principles under this Act.

The *Water Act 2000* (Qld) (**Water Act**) provides a framework for planning and regulating the use and control of water in Queensland. The Act provides a wide range of tools to regulate in-stream (that is, watercourses, lakes and springs) and overland water flow and groundwater within the context of "sustainable management and efficient use" of water.

Obligations also exist under other Queensland legislation for carrying out petroleum activities on the project area, a number of which are identified in the following sections of this EMP. It remains the duty of Senex employees and contractors to meet all obligations under Queensland legislation before undertaking activities in the project area. The Senex Environment Manager should be contacted where assistance is required.

2.2 Commonwealth Legislation

The *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**) is the principal piece of environmental legislation administered by the Commonwealth Government. It provides a legal framework to protect and manage nationally and internationally important flora, fauna, ecological communities and heritage places defined in the EPBC Act as "matters of national environmental significance" (**MNES**).

The EPBC Act requires the principles of ecologically sustainable development to be taken into account for a new development proposal if that proposal is likely to a result in a significant impact on the environment.

The Project has required approval under the EPBC Act as it has the potential to impact on threatened species and habitats. Senex and all contractors undertaking works within the Project Area must comply with the conditions of the approval, to meet their respective obligations under the EPBC Act.

Further information can be found in the Significant Species Management Plan [SENEX-ARCP-EN-PLN-002_1].

3 Roles and Responsibilities

ARCP P/L is responsible for the ongoing management of activities in the Project Area. All employees and contractors are responsible for conforming to applicable Australian and Queensland laws and regulations and for conducting work in accordance with permit requirements and this plan.

Roles and responsibilities of Senex personnel and contractors in relation to this EMP are summarised in the table below.

Role	Responsibility
Environment Manager	• Secure and administer environmental approvals. • Overall responsibility for environmental compliance, including monitoring, data collection and reporting. • Report incidents to the Queensland Department of Environment and Science (**DES**), Commonwealth Department of Climate Change, Energy, the Environment and Water (**DCCEEW**) and other Government agencies / stakeholders as required. • Ensure resources are available to manage environmental obligations and responsibilities. • Ensure that all personnel are competent to perform their assigned duties and have received appropriate training and inductions. • Implement an environmental compliance system that includes audits and assurance to help ensure compliance with approval conditions and other regulatory requirements. • Keep up to date environmental management documentation including this EMP and associated plans, such as Significant Species Management Plan and procedures.
Land Access Manager	• Secure land access for Project activities including land access agreements/land access rules or Conduct and Compensation Agreements (**CCA**) with landholders whose properties will be impacted by Project activities. • Engage with landholders and liaise with Construction Supervisor(s) to ensure activities are undertaken in accordance with the Queensland Land Access Code 2016 and conditions of any land access agreements/land access rules or CCAs. • Compile and distribute Access to Work documentation (**ATW**) prior to commencement of activities on site.
Construction Supervisor	• Responsible for ensuring this EMP and other relevant environmental procedures are implemented on site, including any site-specific requirements identified during the planning phase. • Ensure that staff and contractors comply with regulatory requirements including all relevant Approval conditions and requirements of the ATW. • Induct the Contractor Site Supervisor into relevant requirements of the EA, EMP, and supporting plans and procedures applicable to their activities on site. • Conduct inductions of any visitors to site. • Ensure toolbox and other safety talks adequately address environmental matters to be considered on site as relevant to the work being undertaken including those identified in the ATW (for example, property-specific weed hygiene requirements). • Ensure that the Contractor Site supervisor is adequately supervised. • Ensure activities do not harm or disturb cultural heritage objects or areas of significance.

Role	Responsibility
	• Ensure that the requirements under any native title agreement are adhered to. • Ensure compliance with landholder agreements or CCA conditions as defined in the ATW. • Ensure vehicle and machinery weed washdown requirements are complied with as specified in this EMP and supporting procedures and plans. • Empower all project staff to stop work when the potential for environmental harm is perceived. • Report to the Environmental Manager on environmental matters and provide all relevant reporting and monitoring documentation as required. • Report to the Land Access Manager on landholder and property matters.
Contractor Site Supervisor	• Adequately identify and address any risks associated with the Contractor's activities prior to commencing and develop a construction methodology that has due regard for identified risks. • Ensure that appropriate training and inductions in the requirements of this EMP, conditions of approval and other regulatory requirements as relates to their activities have been carried out for all Contractor personnel. • Ensure that Contractor personnel are adequately supervised. • Implement this EMP on site, including any site-specific requirements identified in Site Environmental Requirements documents, the ATW or as directed by the Site Supervisor. • Ensure all activities are carried out in accordance with the requirements set out in the EMP, approval conditions, regulatory requirements and as specified in other relevant documents including tender documentation and contract. • Immediately notify the Site Supervisor if cultural heritage sites, objects or human remains are found. • Immediately notify the Site Supervisor of any incidents and non- compliances with the approval conditions, this EMP, supporting plans or procedures. • Report to the Site Supervisor as instructed and provide all reporting and monitoring information to the Site Supervisor as required. • Ensure that records are maintained of all monitoring activities. • Empower all project staff to stop work when the potential for environmental harm is perceived. • Implement a program of internal environmental audit against this EMP and supporting plans and procedures.
Contractor Personnel	• Undertake training and induction as required to competently undertake activities on the ARCP Project area. • Carry out all activities in compliance with this EMP, approval conditions, site environmental requirements identified in planning, the ATW or as directed by the Contractor Site Supervisor and/or Senex Site Supervisor. • Immediately notify the Contractor Site Supervisor if cultural heritage sites, objects or human remains are found. • Immediately notify the Contractor Site Supervisor of any incidents and non-compliances with the approval conditions, this EMP, supporting plans or procedures.
Environment Team and/or Field Environment Representative	• Assist the Construction Supervisor as required in ensuring that all petroleum activities including those undertaken by Contractors are conducted in accordance with the EMP and in compliance with approval conditions. • Promote environmental awareness amongst the workforce and hold site meetings on environmental matters as required.

Role	Responsibility
	• Assist the Construction Supervisor in providing training in the form of toolbox talks and pre-works meetings on environmental matters. • Notify the Construction Supervisor and Environment Manager of any environmental incidents and non–compliances with conditions of approval, the EMP and associated plans and procedures within specified timeframes in the Health, Safety and Environmental Management System [SENEX-CORP-HS-STD-001] and liaise with the Construction Site Supervisor to investigate and report on the incident or noncompliance. • Ensure that all records, environmental approvals, and permits are managed, maintained and stored as appropriate and copies of the EMP, approval conditions and supporting procedures and plans are available as required. • Co-ordinate implementation of rehabilitation plans and programs as required for the project area. • Undertake monitoring in accordance with this EMP, supporting plans and procedures and approval conditions as directed by the Environment Manager. • Complete Environmental Audits as directed by the Environment Manager.

4 Environmental Training and Inductions

Environmental awareness training and inductions appropriate to the level of risk and type of work being performed will be provided to personnel, contractors and visitors as relevant. Contractors and consultants are made aware of the requirements of this EMP and associated procedures through the contracts and procurement process. Project staff will undergo formal induction into the requirements of the EMP and associated plans and procedures.

4.1 General Training and Inductions

Training and inductions will cover:

- environmental obligations responsibilities under the EP Act, *Environmental Protection Regulation 2008* (Qld) (**EP Regulation**) and the EA;
- environmental obligations responsibilities under the EPBC Act Controlled Action conditions of approval;
- requirements of this EMP and other project management plans and procedures;
- environmental hazards and control measures;
- emergency, incident and spill response procedures and incident notification procedures, including duty to report environmental incidents;
- weed management and hygiene procedures;
- water and waste management obligations; and
- interactions with flora and fauna.

Relevant site-specific environmental information will be considered during site planning and disseminated through contract documentation to Contractors, through Site Environmental Requirement plans, ATW documentation to site personnel and to all during toolbox sessions. Information may include:

- land access requirements;
- areas identified as containing weeds or being clean and weed free, and procedures for moving between these areas;
- weed hygiene certification requirements;
- environmentally sensitive areas that must be avoided;
- any areas for which specific management measures must be implemented prior to working adjacent to or within; and
- any significant flora and fauna species (including MNES) identified as potentially present in the work areas.

Records of training and inductions will be maintained to demonstrate achievement of competence. Training and induction material will be reviewed following change, incident investigations and hazard studies. Separate training and inductions are provided covering the topics of safety, cultural heritage and land access.

4.2 Fire Prevention Training

Fire on site has the potential to cause significant damage and/or injury to personnel, property, stock and the environment. The likelihood of fire starting in rural locations can be influenced by the condition of ground cover (for example, tall, dry grass), the type and working condition of machinery, and human behaviour such as inappropriate disposal of cigarette butts.

Fire prevention will be covered as part of safety training and/or toolbox meetings to ensure all personnel are fully aware of the potential for fire to start in the area in which work is being performed. Fire-fighting equipment and procedures will be in place at all Senex operated sites. Measures to aid in the prevention of fires may include:

- provision of appropriate fire-fighting equipment at Senex work sites;
- training of personnel in fire-fighting procedures appropriate to the workplace;
- fitting of Senex vehicles and/or other machinery with fire extinguishers which comply with the relevant Australian standards;
- ensuring Senex vehicles and/or machinery have efficient exhaust systems free from leaks and, where appropriate, spark arresters;
- develop specific procedures for the mobile welding crew to reduce risk of sparks reaching flammable and combustible materials and maintain firefighting equipment with the welding crew;
- inspection of the underneath of vehicles for, and removal of, collected flammable material as required (for example, after working in long grass); and
- Monitoring and complying with Fire Danger Ratings and the relevant advisories/restrictions issued by Queensland Fire and Emergency Services for activities in the Maranoa and Warrego district.

5 Description of Petroleum Activities

5.1 Gas Transmission Pipeline

The ARCP will transport natural gas produced from Surat Basin gas tenements southwest of Wandoan to the Reedy Creek to Wallumbilla Pipeline (RCWP) north of Yuleba (which is owned and operated by a third party). From Reedy Creek, transportation will continue under the capacity and services offered by the connecting pipeline's owner.
The ARCP design parameters are detailed in **Table 1** below.

Table 1 Design Parameters of PPL 2075

Parameter	Value
System design life	40 years
Total pipeline length	56.3 km
Pipeline capacity (initial)	28.75 TJ/d
Pipeline capacity (expanded)	189 TJ/d
Pipeline diameter	DN300
Line pipe material	API 5L X65 PSL2
MAOP = Design Pressure	15.3 MPa(g)
Design temperature	-20°C to 70°C

The ARCP will be buried with a minimum depth of cover of 750 mm which will be increased as required (e.g. at crossings, locations susceptible to external interference or erosion, Rural-Residential [R2] location classes etc).

5.2 Associated above ground infrastructure

Associated above ground infrastructure required for the safe operation of the pipeline for its 40 year design life are listed below. Typically, these areas will be cleared, graded and set up with the following equipment and facilities:

- pipeline marker signage;
- cathodic protection beds, for pipeline corrosion protection;
- pressure control / reduction system at either end of the pipeline;
- metering skid upstream of the delivery point at the Reedy Creek pipeline tie-in;
- pig launcher and receiver at start and end of pipeline respectively;
- gas Scrubber to remove any free water vapour; and
- cold vent at the inlet end of the pipeline to allow for safe depressurisation of the pipeline.

5.2.1 Cold Vent

The ARCP will have one cold vent located at the inlet facility which will be used for safely depressurising the pipeline during upset conditions and small vents at pig receiver and launcher facilities. The requirement to vent is driven by safety considerations and by its nature is unpredictable and unavoidable.

The cold vent is for the purpose of safe depressurisation of the pipeline in cases of emergency

situation / incident, namely either a:

- loss of containment that cannot be controlled (gas leak through corrosion or external interference causing a gas release); and
- pipeline defect that has been identified as requiring immediate repair that cannot be performed whilst the pipeline is pressurised.

With the rigorous design and protection measures applied to high pressure gas pipelines in Queensland, this type of emergency event is expected to occur only once within the life of the pipeline.

A single cold vent for safe depressurisation in emergencies (e.g. uncontrollable loss of containment), will be installed close to the inlet of the ARCP with:

- approximately DN200mm vent line and ~2.4 m high vent;
- a peak flow rate of approximately 141,300 kilogram per hour; and
- a nominal 20 metres squared disturbance footprint.

An approved Pipeline Management System (**PMS**) per Part 3 of AS2885 will be prepared with details on the management of depressurization.

5.2.2 Drainage control

Run-off from the hardstand areas between the inlet and end of line facilities within the plant footprint will be captured at the perimeter of the plant platform in open drains and channelled off site to practical discharge points at non-erosive flow velocities. Installation of drainage control will occur in accordance with Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PRC-003].

5.3 Pipeline Construction Activities

As the pipeline is buried, land users will be able to resume previous land use activities over the pipeline, provided that the use does not include heavy vehicles or excavation activities (unless authorised by Senex). Whilst deep-rooted vegetation cannot be re- established directly across the ROW; shallow root cropping and grassland re-establishment will be encouraged, and no long-term impacts would be expected to such areas once constructed.

The pipelines will have a minimum depth of cover of 750 mm, which will be increased as required at crossings, locations susceptible to external interference or erosion, and rural-residential location classes. Construction will take approximately 6 months, and typical activities required to construct pipelines to be utilised for the ARCP are listed below:

- establishment of temporary facilities such as work areas for equipment delivery and storage, access and turn-around areas for construction;
- clearing and stockpiling of vegetation and grading of the ROW to prepare a safe working area;
- separation and stockpiling of topsoil and subsoil to protect and preserve topsoil and to ensure soil profile is reinstated during backfill and rehabilitation;
- stringing and bending the pipe lengths along the ROW;
- welding the pipe lengths together;
- non-destructive testing of pipeline welds;
- coating pipeline joints;
- excavation of trench for pipeline;
- placing sand or trench sub-soil (padding and shading) into trench to protect the pipe coating from external damage;
- placing the pipeline into trench;
- returning subsoil and topsoil to their original horizons;

- testing pipeline integrity by pre-commissioning that may include filling it with water and pressurising it to above maximum operating pressure (hydrotest); and
- reinstating and rehabilitating the ROW and all temporary facilities.

Other construction activities include:

- line pipe delivery direct to the ROW;
- traffic management on and around the ROW;
- installation of end of pipeline facilities and connection to existing infrastructure; and
- horizontal directional drilling (HDD) for the crossing of Woleebee Creek.

ARCP P/L will utilise an existing camp (which is not part of the Project) during construction.

While an indicative footprint is illustrated in Figure 1, the actual ground disturbance location is subject to further design refinement within the approximately 100 m wide corridor. The total area to be disturbed for the project (including a 10% allowance to accommodate any potential refinements) will be up to 206.9ha. Approximately 39km of pipeline and ROW will be located as close to the existing Origin Energy Woleebee Lateral Pipeline (Petroleum Pipeline Licence (PPL) 2040) and the Jemena Atlas Gas Pipeline (PPL163) as practicable to minimise impacts. Figure 2 to Figure 11 show the evolution and detail of the pipeline alignment.

To install the ARCP a 30m Right of Way (ROW) will be cleared. However, pipeline survey activities have allowed the alignment to be optimised in terms of minimising disturbance to environmental values and land users through avoidance or alignment with existing gas pipelines, roads/tracks, fence or power lines or other linear infrastructure.

An indicative footprint for the ROW of the pipeline and associated infrastructure has been identified for the Project. The actual ground disturbance locations will be subject to further design refinement based on constraints assessment and land access negotiation. The locations of the anode beds are still to be determined and require owner/operator agreement at RCWP end. The actual ground disturbance locations will be subject to further design refinement based on any final constraints and land access negotiation. However, the maximum disturbance limit will be 206.9 ha within the Project Area. For 186.2 ha of the maximum disturbance limit the specific locations are locked down or proposed. The Project may also require up to 3 ha of additional clearing within remnant vegetation / mature regrowth (to allow for any potential future ROW refinements). The remaining 18.4ha, including the anode beds and up to 3 ha of additional workspaces will be sited within existing cleared areas that will be assessed under the Environmental Constraints and Field Development Protocol [SENEX-CORP-EN-PRC-019] prior to disturbance.

The indicative footprint described above has been used for the purposes of calculating maximum disturbance limits for each Matter of National Environmental Significance (MNES) and completing the significant impact assessment for the project activities. Where any deviations from the indicative footprint are required, these will only be adopted where the overall maximum disturbance limit and the maximum disturbance limit for each MNES are not exceeded within the Project Area.

The maximum disturbance limits for the Project are:

- 1.01 ha of Brigalow (*Acacia harpophylla*) dominant and co-dominant Threatened Ecological Community (**Brigalow TEC**) which represents less than 1% of that which occurs within 10 km of the Project Area;
- 0.88 ha of the Poplar Box Grassy Woodland Threatened Ecological Community (**Grassy Box TEC**) which represents approximately (~) 0.00001% of that which occurs within 10 km of the Project Area;
- 206.9 ha of White-throated Needletail (*Hirundapus caudacutus*) habitat (however, this is a predominantly aerial species and likely to be restricted to the airspace above the Project Area);

- 4.80 ha of Dulacca Woodland Snail (*Adclarkia dulacca*) critical habitat which represents ~0.19% of that which occurs within 10 km of the Project Area;
- 28.31 ha Critical Habitat of Glossy Black-cockatoo (*Calyptorhynchus lathami lathami*) which represents ~0.1% of the habitat which occurs within 10 km of the Project Area;
- 11.18 ha of Squatter Pigeon (southern) (*Geophaps scripta scripta*) breeding habitat and 20.76 ha of foraging and dispersal habitat which together represents ~0.26% of that which occurs within 10 km of the Project Area;
- 29.84 ha of critical habitat of Greater Glider (*Petauroides volans / Petauroides armillatus*) which represents ~0.12% of that which occurs within 10 km of the Project Area; and
- 35.08 ha of critical Habitat of Koala (*Phascolarctos cinereus*) which represents ~0.16% of that which occurs within 10 km of the Project Area.

It is noted that impacts to fauna dispersal and mobility will be largely temporary (during construction) as the pipeline will be buried and no fencing of the ROW will be required. The ROW and additional workspaces will be rehabilitated to a safe and stable landform once construction is completed. Should MNES be identified in the Project Area during preclearance surveys, additional works have been identified for activities and the rehabilitation of those areas. These additional works are described in the SSMP [SENEX-ARCP-EN-PLN-002].

5.4 Access Tracks

Access tracks are required to allow the construction and operation of the pipeline and associated infrastructure. Established access tracks will be used wherever possible with purpose-built access tracks constructed where existing tracks are not suitably located.

Appropriate erosion and sediment controls are to be installed and maintained for both construction and ongoing use of access tracks. A typical access track consists of a 6 m carriageway but may be wider in certain areas to provide for areas where more area is required, that is, truck turnarounds. Where access tracks are required to cross waterways the *Code for self-assessable development, Minor waterway barrier works, Part 4: bed level crossings (Code number: WWBW01 April 2013)* (**Waterway Code**) must be complied with. If the waterway crossings proposed cannot comply with the Waterway Code, Senex is required to obtain a Development Approval under the SP Act.

Once construction is complete, the access track disturbance is rehabilitated to the minimum width possible whilst ensuring safe use of the track. Rehabilitation requirements for waterway crossings are specified in the Waterway Code.

5.5 Transitional Rehabilitation of ROW and Buried Infrastructure

Rehabilitation methodology required for the ROW is detailed in the ARCP Rehabilitation Plan [SENEX-ARCP-EN-PLN-003]. Broadly, the ARCP ROW and all buried infrastructure will be rehabilitated post-installation, allowing land users to conduct activities in the ROW, with the exception of heavy vehicles and excavation activities (unless authorised by Senex). Deep-rooted vegetation (such as, trees) will not be reinstated for the operational width of the ROW to ensure pipeline integrity, however shallow root pasture/grass re-establishment will be encouraged throughout.

Pipelines trenches will be backfilled and topsoil reinstated within three (3) months after pipe laying. During backfilling of pipeline trenches, soils will be replaced back into the trench so that the topsoil and subsoil are consistent with the immediately surrounding area, allowing for natural regeneration. Areas that have been disturbed for operational purposes (i.e. access tracks and areas above pipelines) shall be revegetated with pasture grasses, or native grasses and ground cover species, as required, depending on the final land use.

The disturbed areas no longer required for operational activities or maintenance will be

rehabilitated to the agreed post disturbance land use. The pipeline trench will be reinstated with the C, B and A horizons intact and not mixed. The surface pipeline right of way will be rehabilitated to a stable landform minimizing the risk of erosion and encourage the re-establishment of stabilising vegetation consistent with the surrounding land use.

Where appropriate to the soil type, disturbed areas may be lightly cross tilled to aid binding of soil layers and increase water retention and seed germination. Revegetation will be pasture or native grasses and ground cover species, based on the proposed post-disturbance land use (for example, grazing or State Forest land use) and include measures required by the SSMP [SENEX-ARCP-EN-PLN-002] should MNES be identified in preclearance surveys.

Where open trenching through watercourse crossings is required, these will be rehabilitated by re-contouring to match the surrounding land. The surface may be lightly tilled before spreading topsoil on watercourse approaches. Temporary waterway barriers will be removed, and disturbed areas stabilised to minimise erosion and promote regeneration of riparian vegetation.

Revegetation and regeneration will improve soil retention and reduce erosion across the ROW.

5.6 Operations

Routine operations and maintenance programs may include ground and aerial patrols, routine inspection and overhauls of infrastructure, repairs (which may include excavating targeted positions on the pipeline), cleaning the pipeline, easement maintenance including access tracks and signage, and control of weed species or vegetation impeding line of site between pipeline markers.

Senex will conduct operations in accordance with:

- All required conditions of approval, relevant codes, standards and an operations environmental management plan.
- A routine maintenance program, including:
    - regular ground and aerial inspections – including monitoring third party activities (for example, heavy vehicle crossings, unauthorised excavations and encroachments etc.) on or near the ROW, erosion, subsidence and weeds, and rehabilitation success;
    - periodic pipe and pipe coating repairs;
    - repairs (with possible excavations);
    - internal cleaning of the pipeline (through pigging); and
    - easement maintenance including access tracks and signage, and control of weed species or vegetation.
- An approved Pipeline Management System (**PMS**) per Part 3 of AS2885. The PMS will be continually reviewed and updated over the life of the Project to ensure adequate pipeline integrity management but will cover operational policies, plans and procedures for the management of the pipeline including:
    - pipeline structural integrity, including technical maintenance aspects;
    - anomaly assessment and defect repair;
    - external interference threats;
    - operating condition changes and remaining life review;
    - stations operations and maintenance;
    - vegetation management; and
    - gas detection inspections.

5.6.1 Process Maintenance Wastes

When pipeline pigging occurs, small quantities of wastes accumulated within the pipeline will be released onto bunded hardstand areas and disposed of at facilities licensed to receive such wastes. The gas scrubber may also produce waste with small quantities of tri ethylene glycol

(TEG). Wastes generated from the gas scrubber will be disposed of at facilities licensed to receive such wastes.

5.7 Decommissioning

When decommissioning the Project at end of life, Senex's overall objective is to leave the ROW in a condition that is safe and stable and meets the agreed post-disturbance land use.

The ARCP will be isolated, capped and purged of hydrocarbons and liquids. The anode beds will be disconnected, and the steel pipeline will remain in situ, where practical and safe to do so to avoid disturbing re-established vegetation. If left in-situ, an abandonment plan will be developed in accordance with regulatory requirements to ensure that ground subsidence and the risk of contamination of the soil or groundwater is minimised.

If it is either unsafe or not practical to leave the steel pipeline in-situ, the infrastructure will be removed using similar methods as construction, and in compliance with AS2885 and other State approvals.

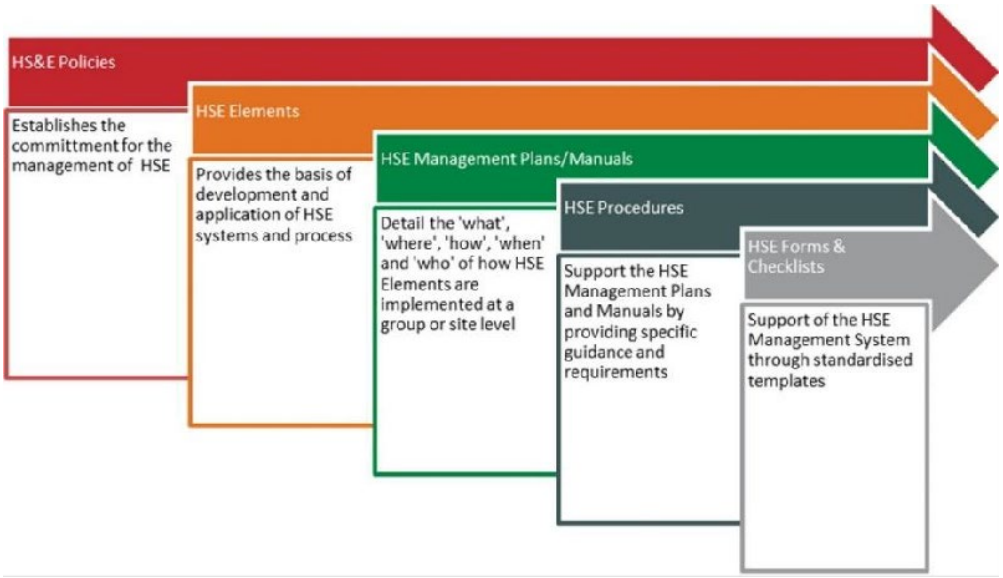
6 Environmental Management

6.1 Health, Safety and Environment Management System

The Senex HSEMS provides a framework that establishes expectations and parameters to drive continuous improvement in HSE performance. The HSEMS is applicable to all Senex worksites and personnel working for or on behalf of Senex.

The HSEMS (Figure 12) has a hierarchical document structure, with Health, Safety and Environment policies setting the corporate commitments for HSE management. The HSEMS framework includes 10 HSE elements, of which environmental impacts and effects is one. Potential environmental impacts and effects of Senex operations and activities are identified and managed, using a risk based and systematic approach.

Figure 12 Health, Safety and Environment Management System



Senex is committed to conducting its operations and activities in an environmentally sound and responsible manner. Activities are planned and managed to minimise disturbance to the environment as far as practicable by utilising environmental standards consistent with development in technology, industry codes of practice and relevant statutory requirements.

Environmental impacts are to be identified and measures are set in place to mitigate, measure and review impacts and environmental performance. This EMP is a component of the HSEMS within the HSE Management Plan and Manuals component.

By implementing the HSEMS, Senex aims to:

- Conduct operations in compliance with all relevant environmental legislation, regulations, licences, permits, standards, approvals and authorities;
- Clearly allocate responsibilities for environmental performance at all levels within Senex and its contractors;
- Develop environmental competency through instructing and educating employees and contractors;
- Continuously improve environmental performance through setting appropriate objectives and targets, providing sufficient financial and human resources to meet these objectives and targets, and where reasonably practicable applying research and development outcomes, cleaner production principles and using environmentally sustainable products

and resources;

- Apply best industry practice in the management, supply and delivery of oil and gas product; and
- Communicate with stakeholders and the community about environmental commitments, its application and Senex's performance.

6.2 Senex Environmental Policy

Senex's Environmental Policy (Appendix A) governs the development and implementation of Senex's Environmental Management System (**EMS**), and, along with the EMP, are the key tools used by Senex to carry out petroleum activities in an environmentally acceptable manner.

7 Environmental Management Controls

The environmental management controls within the following sections have been developed to mitigate the impact of the construction and operation, rehabilitation and decommissioning of the ARC Pipeline. The impacts include those which can be avoided in the planning stage, general housekeeping practices arising from entry and activity within landholder's properties and then those designed to specifically address environmental values.

7.1 Site Assessment and Internal Approval Process

To assist in meeting approval conditions, prior to carrying out any disturbance, construction or operational activities on the Project Area, approval must be obtained from the Senex cultural heritage, land access and environmental managers through the Access to Work (ATW) process.

Approval for disturbance for un-sited infrastructure is to be initiated using the Environmental Protocol for Field Development and Constraints Analysis [SENEX-CORP-EN-PRC-019]. Site selection considers engineering requirements, geological constraints, cultural heritage requirements and landholder requirements in addition to environmental constraints. As part of the site selection and approval process a site survey will be conducted.

The site survey findings will be captured in Site Environmental Instructions prepared for specific activities and areas. This report is used to decide whether the activity can proceed in that location and inform development of appropriate impact mitigation measures. Requirements for other approvals such as vegetation clearing permits, waterway barriers works permits and the reconciliation of offsets will also be determined at this stage.

Once all clearances, permits and approvals are in place, including any measures required under this EMP, final approval will be granted for the work to proceed by way of the ATW permit.

All personnel and contractors will familiarise themselves with ATW requirements prior to commencing works.

7.2 Control measures

7.2.1 Housekeeping Measures

The following housekeeping measures will be undertaken within the Project Area.

Category	Measures
Environmental Controls	• No firearms, traps, nets or pets are permitted on site with the exception of traps that are authorised by the Environment Manager for use in ecological assessments. • No fires are permitted on site. • Feeding of native animals is not permitted. • Personnel must stay within areas approved for operations (cleared work zones) and not drive off approved access tracks or enter exclusion areas or 'no-go' zones. • All rubbish and waste materials including cigarette butts are to be disposed of in the appropriate bins, or in the absence of bins, removed daily from site. All personnel are responsible for ensuring that sites remain litter free. • Only water from a Senex approved source will be used. • Adequate and properly maintained firefighting equipment will be present on site and potential ignition sources controlled.

7.2.2 Vehicle Management

The following vehicle management controls will apply within the Project Area.

Category	Controls
Performance Criteria	• All site vehicles must be equipped, maintained and operated in a safe manner. • All access to private property must be in accordance with landholder agreements and CCAs, as identified in the ATW. • Signage must be in place to warn third parties of access restrictions to construction and operational areas, with particular warnings when potentially dangerous activities are being undertaken. • All works on public roads must be in accordance with relevant approvals from local council or Department of Transport and Main Roads (**DTMR**).
Management Measures	• Vehicles and personnel will only enter and exit the site at designated access points from designated access tracks and roads. Vehicles, plant, machinery and equipment will remain on formed access tracks at all times unless agreed otherwise as specified in the CCA and identified in the ATW. • Vehicles or equipment will remain within authorised work zones, particularly during vegetation clearing activities to prevent unnecessary land and vegetation disturbance. • All gates will be left in the condition in which they are found. Damage caused to gates or fences by Senex activities is to be reported to the Senex Site Supervisor immediately. • Vehicles will carry adequate firefighting equipment including a fire extinguisher. • The integrity of private roads and tracks will be maintained at all times. • All vehicles will be maintained weed free.
Monitoring and Reporting	Heavy equipment and vehicle movements will be managed according to local council/DTMR requirements.

7.2.3 Land Disturbance and Flora Management

The following land disturbance and flora management controls will apply within the Project Area. Controls and management measures for MNES habitat are specified in the ARCP Significant Species Management Plan [SENEX-ARCP-EN-PLN-002].

Category	Controls
Performance Criteria	• Clearing of native vegetation must be minimised to that necessary for safe construction and operational activities. • No land disturbance or vegetation clearing is undertaken without appropriate authorisation and approval. • Clearing of vegetation and protected plants must be in accordance with relevant permits or exemptions issued under the *Nature Conservation Act 1992* and relevant approval conditions.
Management Measures	• During project planning for un-sited infrastructure, the Environmental Protocol for Field Development and Constraints Analysis [SENEX-CORP-EN-PRC-019] will be used to preferentially minimise disturbance to biodiversity values within and adjacent to the Indicative Footprint. • Vegetation will not be cleared unless authorised under a Senex ATW. The ATW must be approved prior to any vegetation clearance or disturbance occurring.

Category	Controls
	• Using horizontal directional drilling to minimise disturbance of timbered vegetation at the crossing of Woleebee Creek. • Positive visual markings or pegs will be used to physically demarcate the extent of proposed pipeline disturbance and vegetation to be removed. • Any sensitive areas, such as ESAs or threatened plants/communities adjacent to the work area will be communicated via toolboxes to project staff and contractors. • 'No-go' areas will be GPS located, made available through GIS for the Project and clearly marked (for example, with bunting, signage and/or flagging tape). Construction staff and contractors will be prohibited from accessing No-go areas and access will be by authorised persons for relevant activities only. • Wherever practicable, in temporary workspaces, vegetation will be removed at ground level by cutting or slashing rather than removing root stock. • Clearing of mature or hollow bearing trees providing denning or nesting habitat for fauna will be avoided. • Natural vegetation buffers along creeks shall not be disturbed unless authorised under an ATW and only at the location specified. • Coarse woody debris cleared from the Indicative Footprint will be retained and redeployed within the ROW as habitat for terrestrial fauna. • Hollows from hollow bearing trees, where cleared, will be retained for reuse as habitat. • Cleared vegetation/green waste that cannot be used on-site for rehabilitation and/or sediment erosion control will be stockpiled to facilitate re-spreading or salvaging for use in rehabilitation/habitat restoration works. • Limiting storage of equipment and machinery to the Indicative Footprint (i.e not within stands of adjacent, retained vegetation). • Rehabilitation of the Indicative Footprint following construction to a safe, stable and self-sustaining landform. • Rehabilitation of work areas following construction using native ground cover species where other 'fire promoting' (e.g. buffel grass) do not already occur.
Relevant Plans and Procedures	• Environmental Protocol for Constraints Planning and Field Development [SENEX- LDS-EN-PRC-019]. • Significant Species Management Plan [SENEX-ARCP-EN-PLN-002]. • Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PLN-003]. • Site Environmental Instructions issued for each phase of the project.
Monitoring and Reporting	• Each site will be ground-truthed and the extent and biodiversity value recorded (including GIS coordinates of the area) during baseline or, for un-sited infrastructure pre-clearance surveys by a suitably qualified ecologist. • This data will be retained on Senex record management and GIS. • Vegetation clearance works will be supervised by the Senex Site Supervisor or designated representative. • Coordinates of areas cleared of vegetation and/or where ground disturbance takes place will be recorded in GIS format by the Construction Site Supervisor and provided to the Senex Site Supervisor and managed by the GIS team.

7.2.4 Pest and Weed Management

The following pest and weed management controls will apply within the Project Area.

Category	Controls
Performance Criteria	• No spread of invasive plants (declared weeds) or high priority pest flora or fauna species within or outside of works area due to Senex activities (refer definitions and species in Biosecurity Management Plan [SENEX-CORP-EN-PLN-003]. • Invasive plants (declared) and high priority weeds identified in the Biosecurity Management Plan must be managed in accordance with ATWs, CCAs, Land Access Code 2016 requirements, *Biosecurity Act 2014* (Qld) and other regulatory requirements, and relevant Senex supporting procedures and plans. • Valid weed hygiene certification maintained at all times for vehicles, plant, machinery and equipment.
Management Measures	• A baseline weed assessment will be undertaken within the indicative footprint prior to construction works either as a specific survey or part of the Pre-clearance survey. • Activities will be planned so that movement of vehicles, plant, machinery and equipment avoid moving between properties, corridors or areas with weed infestations. • Site specific weed management requirements will be defined prior to access to any property or work site. • Pest and weed management control activities will be undertaken as directed by Senex. • Weed management and control methods will depend upon the location, weed species identified, the degree of the infestation, relevant landholder agreement or CCA provisions, and local, state and national regulatory requirements. • All vehicles, plant and equipment will be maintained weed free.
Relevant Plans and Procedures	• Biosecurity Management Plan [SENEX-CORP-EN- PLN-003] • Queensland Weed Hygiene Procedure [SENEX-QLDS-EN-PRC-023].
Monitoring and Reporting	• The Senex Site Supervisor will be notified of any pest sightings or weed infestations found on site, including infestations which have been reported by others (for example, pre-clearance staff and landholders). • Records of all weed notifications and inspection data will be maintained by the Senex Environment Manager. • Records of weed washdown and certification will be kept in the vehicle at all times and made available to landholders on request and presented to the Senex Site Supervisor upon initial entry to site.

7.2.5 Chemical Use and Fuel Storage

The following chemical use and fuel storage controls will apply within the Project Area.

Category	Controls
Performance Criteria	• No uncontrolled release of chemicals, oil or fuel is to occur to the environment. • All chemicals, oil and fuel must be handled, stored and effectively contained, and transported appropriately and in accordance with relevant Australian Standards (**AS**) and Australian Dangerous Good Code.
Management Measures	• All fuel, oil and chemicals will be stored, transported and handled in accordance appropriate standards including AS 3780:2008 – The storage and

Category	Controls
	handling of corrosive substances, AS 1940:2004 – The storage and handling of flammable and combustible liquids, AS 3833:2007 – Storage and handling of mixed classes of dangerous goods in packaged and intermediate bulk containers. • Bulk fuel tanks stored outside a bunded area will be contained within a self-bunded tank with safety valves. • Appropriate spill response equipment will be available on site and/or with vehicles, and regularly maintained. • An inventory of all chemicals maintained on each site will be maintained by the Senex Site Supervisor. • Safety Data Sheets (**SDS**) will be maintained on site at all times and for all chemicals. • Storage areas will be sealed, bunded, and adequately ventilated. • Storage and refuelling areas will be preferentially located away from watercourses, sensitive areas and any source of ignition as determined by the Senex Site Supervisor. • Incompatible substances will be segregated according to SDS specifications. • All flammable liquids used will be stored and dispensed only from approved containers. • Substances not in use will be sealed and safely stored in a secure area. • Substance storage/containment and disposal will be in accordance with the SDS (including personal protective equipment, ventilation, spill containment and precautions to avoid fire). • Containment bunds and/or sumps will be drained periodically of accumulated rainwater to prevent overflow and subsequent pollution of the surrounding land and watercourses.
Relevant Plans and Procedures	• Health, Safety and Environmental Management System [SENEX-CORP-HS-STD-001] • Senex Spill Response Plan [SENEX-CORP-ER-PLN-006] • Senex Hazardous Substances and Dangerous Goods Procedure [SENEX-CORP-HS-PRC-010] • Senex Personal Protective Equipment Procedure [SENEX-CORP-HS-PRC-12].
Monitoring and Reporting	• All chemical, oil and fuel storage areas will be inspected at least weekly for temporary storage, and monthly for permanent storage areas during the operating phase by the Contractor Site Supervisor and/or the Senex Site Supervisor. • All spills will be contained immediately and managed through the Senex Spill Response Procedure. • Emergency events will be managed in accordance with the contingency procedures for emergency environmental incidents and the Project Emergency Response Plan. • Incident details will be recorded immediately and notified through the Senex Incident reporting systems, reported and investigated accordingly.

7.2.6 Cultural Heritage

The following cultural heritage controls will apply within the Project Area.

Category	Controls
Performance Criteria	• No avoidable loss or disturbance of items or areas of cultural value due to Senex activities. • No valid complaints related to impacts on cultural heritage from the local community or traditional owners.
Management Measures	• Corporate cultural heritage inductions. • Cultural heritage clearance will be undertaken prior to commencing any works other than preliminary walk-over type surveys (for example, ecology surveys and bore baseline assessments) within the Project Area. • No works will be undertaken or access permitted within areas marked as cultural heritage 'no go' areas. • The Senex Site Supervisor will be notified immediately if any cultural heritage sites, objects or remains are located. Should this occur, work must cease immediately.
Relevant Plans and Procedures	Cultural Heritage and Native Title Management Procedure (Queensland) [SENEX-CORP-NT-PRC-002].
Monitoring and Reporting	• Any incidents including access into cultural heritage no-go zones or damage to any items or areas of cultural heritage value must be reported to the Senex Site Supervisor who in turn will report to the Approvals Manager. • Non-compliance and incident reporting will be closed out by management to ensure prompt rectification, as required.

7.2.7 Produced Water Management

The following produced water management controls will apply within the Project Area.

Category	Controls
Performance Criteria	• Contaminants must not be directly or indirectly released to water. • No accidental or uncontrolled release of water to waterways or drainage lines. • No use of produced water on site except in accordance with approval conditions or approved End of Waste Codes as relevant.

Management Measures	• No discharges of water to land or surface waters will occur without authorisation from the Senex Site Supervisor having consulted with the Senex Environment Manager.
	• Produced water may be used for dust suppression and construction purposes provided the use:
	  ○ does not result in negative impacts on the composition and structure of soil or subsoils;
	  ○ is not directly or indirectly released to waters;
	  ○ does not result in runoff from the construction site; and
	  ○ does not harm vegetation surrounding the construction site.
	• The use of produced water for dust suppression will:
	  ○ not cause on-site ponding or runoff;
	  ○ be directly applied to the area requiring suppression;
	  ○ not harm vegetation surrounding the area being dust suppressed; and
	  ○ not cause visible salting.
	• Produced water may be disposed of for domestic purposes or stock purposes and must meet the irrigation or livestock watering criteria as relevant to those purposes in the *Australian and New Zealand Guidelines for Fresh and Marine*

Category	Controls
	Water Quality (2000). It will be disposed of in accordance with the BUAs where approved by Senex Site Supervisor having consulted with the Senex Environment Manager. • Pipeline waste water (for example, hydrostatic test water or trench water), may be released to land provided, if it meets the following water quality parameters: o electrical conductivity does not exceed 3000 µS/cm; o sodium adsorption ratio (SAR) not exceeding 8; o pH between 6.0 and 9.0; o heavy metals (measured as total) meets the respective short-term trigger value in section 4.2.6, Table 4.2.10- Heavy metals and metalloids in Australian and New Zealand Guidelines for Fresh and Marine Water Quality; and o does not contain biocides. • Pipeline wastewater will be released in a way that does not result in visible scouring or erosion or pooling or run-off or vegetation die-off.
Relevant Plans and Procedures	• End of Waste Code Associated Water (including coal seam gas water) (ENEW07547018)
Monitoring and Reporting	• Visual inspection of areas where produced water is used will be undertaken during and post-application as required to ensure conditions are being met.

7.2.8 Noise and vibration

The following noise and vibration controls will apply within the Project Area.

Category	Controls
Performance Criteria	• Noise generated by activities must not cause environmental nuisance at any sensitive receptor, per limits specified in the EA. • No noise-related complaints received.
Management Measures	• Potentially impacted sensitive receptors will be identified in the ATW. • Prior to construction and other noisy activities, landholders will be notified of the nature and expected duration of noisy activities. • Construction hours will be in accordance with approval conditions and requirements of the *Environmental Protection (Noise) Policy 2008*. • Noise impacts and requirements for noise mitigation will be considered during the engineering design and site planning processes. Noise impacts will be minimised by adopting measures in the EPP Noise hierarchy as appropriate (for example, locating activities at suitable distances from noise sensitive places). Facility specific noise modelling will be undertaken during the design phase, where required. • Noise modelling or assessment will be undertaken for temporary and operational activities to assess expected noise emissions at potential sensitive receptors. • Operators of construction equipment will be made aware of potential noise impacts and will be required to employ techniques and/or equipment to minimise noise emissions where necessary.
Relevant Plans and Procedures	• Incident Reporting and Investigation Procedure [SENEX-CORP-HS-PRC-004].

Category	Controls
Monitoring and Reporting	• Noise complaints will be recorded in the Senex Stakeholder Management database and appropriate corrective actions taken (commensurate to the magnitude of the impact and non-conformance). • Noise must be measured in accordance with the prescribed standards in the Environmental Protection Regulation 2008. • Noise monitoring during construction activities will be undertaken where required as part of the investigation of noise incidents or complaints. Where required, noise monitoring will be carried out in accordance with approval conditions and provisions of the EPP Noise. • Where noise levels exceed those prescribed in the EA, corrective actions will be defined as part of the incident investigation. • Non-compliance and incident reporting will be closed out by senior management to ensure prompt rectification and change management as required and appropriate.

7.2.9 Air Quality

The following air quality controls will apply within the Project Area.

Category	Controls
Performance Criteria	• Dust or other air quality emissions must not cause environmental nuisance at any sensitive place as provided by approval conditions.
Management Measures	• Landholders or residents of any adjacent sensitive places will be advised of planned works prior to the commencement of activities. • Staff and contractors will be made aware through general site induction and training of the potential to generate dust emissions and mitigation and management measures that will be implemented. • Vehicles, plant and equipment will be regularly maintained to ensure all machinery is in good working order and does not generate excessive air emissions. Plant and equipment will be operated in their proper and effective condition. • Vehicles will be operated in a fuel-efficient manner and will not be left turned on or idling at the site for longer than required. • Vehicles, plant and machinery will comply with site-specific speed limits to minimise dust generation. • Disturbed areas and access roads will be watered using a water cart/truck on an as-required basis to minimise the potential for environmental nuisance due to dust. Watering frequency may be increased where required (for example, during periods of high risk (prolonged dry periods and under windy conditions), if excessive levels of dust is visible or as reasonably requested by the landholder). Dust suppression using produced water must comply with approval conditions. **Venting:** • Where authorised under the P&G Act, short duration cold venting during emergency depressurisation measures.
Relevant Plans and Procedures	• Health, Safety and Environmental Management System [SENEX-CORP-HS-STD- 001] • Incident Reporting and Investigation Procedure [SENEX-CORP-HS-PRC-004]
Monitoring and Reporting	• In the event of an environmental nuisance complaint, an incident report will be raised in accordance with the Senex Incident Reporting and Investigation Procedure and investigated. Where undertaken, dust/air quality must be monitored in accordance with EA requirements. • Any complaints relating to air quality including environmental nuisance will be recorded and actioned in a timely manner through the Senex Stakeholder Management database.

7.2.10 Waste Management

The following waste management controls will apply within the Project Area.

Category	Controls
Performance Criteria	• Contaminants must not be directly or indirectly released to land. • Waste is managed at all Senex sites in accordance with the waste and resource management hierarchy and the waste and resource management principles under the EP Regulation and the WRR Act.

Management Measures	• Waste will be appropriately managed to avoid or minimise the potential for:
	  ○ Release of hazardous waste to land or waters either through inappropriate waste disposal or accidental release;
	  ○ Inadequate waste management leading to inappropriate disposal or inadequate re-use and recycling; or
	  ○ Impacts to the environment, land use or well-being of people resulting from inappropriate storage, handling or disposal of waste.
	• All waste generated will be stored, handled and transported in accordance with the waste and resource management hierarchy, waste and resource management principles, appropriate standards and regulatory requirements as outlined in the Senex Waste Management Procedure – Qld Operations [SENEX-QLDS-EN-PRC-022].
	• The SDS for materials will be referenced to assist with the appropriate identification for handling and disposal of waste material.
	• All wastes will be transported in covered or sealed containers to prevent the loss of waste materials during transport.
	• All sites will be kept free from litter, including discarded rope, wire, plastic packaging and containers which may cause entanglement or injury to fauna.
	• Items of general waste are not to be disposed of in trench or pits.
	• Waste material (including domestic waste) will be collected and stored in covered bins to prevent loss and scavenging by animals.
	• Recyclable materials will be segregated (for example, glass and cans, scrap metals, used chemical and fuel drums and timber pallets) in designated containers for recycling where reasonably practicable.
	• All regulated wastes will be transported offsite by a licensed contractor to a suitably licensed facility for reuse, recycling or disposed unless authorised under the EA as being able to be disposed of on-site.
	• All waste materials will be removed from site once activities are completed.
	• Green waste may be used on site for both rehabilitation and sediment and erosion control.
	• Only licensed waste contractors may collect, transport and dispose of regulated waste from the site.

Relevant Plans and Procedures	• Senex Waste Management Procedure – Qld Operations [SENEX-QLDS-EN-PRC-022]. • Waste Tracking Procedure [SENEX-QLDS-EN-PRC-006].
Monitoring and Reporting	• Records will be maintained for all wastes removed from the site, including waste type and volume or weight as outlined in the Waste Tracking Procedure. • Waste tracking documentation will be maintained by the Contractors Supervisor and provided to the Senex Site Supervisor for all trackable waste removed from site. • All waste records will be provided to the Senex Environment Manager by the Senex Site Supervisor on a monthly basis or upon request.

7.2.11 Fauna and Stock Management

The following general fauna and stock management controls will apply within the Project Area. Controls and management measures for MNES are specified in the ARCP Significant Species Management Plan [SENEX-ARCP-EN-PLN-002].

Category	Controls
Performance Criteria	• Damage to, or destruction of wildlife habitat is avoided or minimised in accordance with approved management plans. • No injury, entrapment or death of wildlife or domestic stock, as a result of Senex's activities.
Management Measures	• Implement the Queensland Fauna Stock Management Procedure [SENEX-CORP-EN-PRC-021]. • Implementation of ARCP Significant Species Management Plan [SENEX-ARCP-EN-PLN-002]in the areas of potential MNES fauna habitat. • Pre-clearance surveys will be undertaken to identify habitat features and translocate fauna at direct risk from clearing activities by suitably experienced and qualified spotter-catcher. Where MNES habitat and/or features such as hollows is found, the control measures of the ARCP Significant Species Management Plan [SENEX-ARCP-EN-PLN-002] will be applied. • Where clearing in MNES habitat, a qualified fauna spotter-catcher will conduct a search immediately prior to clearing of woody vegetation for the presence of fauna species. Where fauna is detected, the spotter catcher will assess and implement the most appropriate method to avoid or minimise impacts on that fauna as a result of clearing, including relocation or fauna at direct risk from clearing activities to suitable nearby habitat. • Management of fauna identified during pre-clearance surveys and clearing activities will include relocating individuals to adjacent habitat and treatment/care of injured animals. • Active work areas hazardous to fauna other than the pipe trench (including pits and sumps), will be fenced off with shade cloth or covered to prevent fauna access. • The open ends of welded pipes will be capped/covered over to prevent fauna entry during pipeline construction. • During construction works, work areas and excavations (trenches) will be checked for fauna that may have become trapped. • Exit ramps (with a <45 degree incline) will be maintained at either end of the open trench and temporary earth or wooden ramps installed at 1 km intervals to facilitate fauna escape from the pipeline trench during construction. • During construction, hessian sacks providing shelter for fauna will be deployed at 100 m intervals along sections of open trench. • During construction and maintenance operations, open excavations (including trenches) will be inspected for trapped by a qualified spotter catcher twice daily (once in the morning and once in the late afternoon). Trenches will also be inspected for trapped fauna immediately prior to pipe laying and back-filling. • To reduce the risk of fauna drowning in the pipeline trench, if severe weather (flooding rain) is forecast, the pipeline trench will be temporarily backfilled as far as practicable to mitigate flooding and ESC risk. • Where activities may impose barriers to the movement of fauna for

Category	Controls
	extended period of time, reasonable measures will be implemented to facilitate fauna movement around or through active work areas, such as breaks in stockpiled cleared vegetation at least every 50 m. • Steel piping and spoil will be placed on opposite sides of the pipeline trench to deter fauna from crossing over/entering the trench during pipeline construction. • Any restrictions placed on stock movements in the vicinity of work areas will be agreed with landholders and identified in the ATW so that any disruption is minimised. • Where necessary, following the identification of animal breeding places in the pre-clearance surveys, Species Management Programs (SMPs) will be developed and implemented to minimise disturbance of animal breeding place (as required under the NC Act).
Relevant Plans and Procedures	• Queensland Fauna and Stock Management Procedure [SENEX-CORP-EN-PRC-021]. • Incident Reporting and Investigation Procedure [SENEX-CORP-HS-PRC-004]. • Significant Species Management Plan [SENEX-ARCP-EN-PLN-002] • ARCP Rehabilitation Management Plan [SENEX-ARCP-EN-PLN-003] • ARCP Dulacca Snail Translocation Strategy (Appendix U of the MNES Ecological Assessment Report (E2M 2024)). • Site Environmental Instructions issued for each phase of the Project.
Monitoring and Reporting	• Fauna and stock deaths will be immediately communicated to the Contractor Site Supervisor or Senex Site Supervisor as appropriate and then the Senex Environment Manager/ Senex Land Manager-Queensland • Fauna spotter-catcher update on interactions and reporting will be provided daily during clearing and construction to the Senex Site Supervisor then to the Senex Environment Manager. • Location of occupied hollows identified during pre-clearance survey will be recorded for rehabilitation planning and habitat reinstatement in the rehabilitation phase. • Monitoring for translocated snails as per ARCP Dulacca Snail Translocation Strategy should any be found to occur in proposed disturbance areas. • Reports on fauna interactions will be provided to regulatory authorities as required.

7.2.12 Watercourse and Wetlands

The following watercourse controls will apply within the Project Area. No wetlands have been identified in the study area for ARCP.

Category	Controls
Performance Criteria	• Water quality during construction and maintenance does not exceed authorised release limits. • The construction or maintenance of linear infrastructure must not result in land disturbance and clearing of riparian vegetation outside of the minimum area practicable to carry out the works. • After the construction or maintenance works for linear infrastructure are completed, the linear infrastructure must not: o Result in ongoing negative impacts to water quality; o Result in bank instability; or o Result in fauna ceasing to use adjacent areas for habitat, feeding, roosting or nesting.
Management Measures	• Using horizontal directional drilling to cross Woleebee Creek and Yuleba Creek. • Petroleum activities within any wetland area or watercourse will be carried out in accordance with an approved ATW. Watercourse crossings will be limited to those strictly necessary for construction or operation of infrastructure and only at locations approved in the ATW. • Other than linear infrastructure (including cathodic protection), petroleum activities will be 200m from a wetland, lake or spring; or 100m from the outer bank of a watercourse. • Construction and maintenance of linear infrastructure will be conducted in accordance with the following preference: o when no water is present, in times of no flow, o in times of flow but in a way that does not impede low flow. • Construction and maintenance of infrastructure resulting in a significant disturbance to a wetland or watercourse will be undertaken by a suitably qualified person in accordance with the guideline Activities in a watercourse, lake or spring associated with a resource activity or mining operations. • ROW soil or spoil stockpiles will be placed to minimise stormwater entering significantly disturbed land that will be exposed throughout construction. • ESC measures to prevent soil loss and deposition beyond significantly disturbed land will be implemented and maintained throughout construction and rehabilitation until such time as groundcover has established and the ROW has met the rehabilitation acceptance criteria. • Watercourse crossing points will be adequately stabilised to prevent erosion. • Positive visual markings or pegs will be used to identify the extent of any vegetation to be removed. • ‘No-go’ areas will be GPS located and clearly marked (for example, with bunting and/or flagging tape). • Construction activities will be managed to minimise interference with overland flow paths. • Clean stormwater will be diverted around land disturbed for ancillary aboveground infrastructure wherever practicable. • For linear Infrastructure (for example, pipelines) – construction or maintenance activities in wetlands or a watercourse will only be carried out under the authorisation of an ATW and under the supervision of a suitably qualified environmental representative to ensure conditions of the EA are achieved.

<table>
<tr><th>Category</th><th>Controls</th></tr>
<tr><td>Relevant Plans and Procedures</td><td>• Site Environmental Instructions issued for each phase of the Project.
• Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PRC- 003].
• ATW for the specific scope of work.</td></tr>
<tr><td>Monitoring and Reporting</td><td>• Records of all erosion and sediment control and water quality checks will be maintained by the Senex Site Supervisor and provided weekly during period of activity in the wet season and monthly at other times to the Senex Environment Manager.
• Watercourse crossings will be monitored for erosion and sedimentation during construction, with at least weekly inspections during dry conditions, and daily inspections during rainfall of >50mm in one day or >100mm over 4 days or as soon as watercourse access is re-established after flooding
• Release limits for construction or maintenance of linear infrastructure;

<table>
<tr><th>Water Quality Parameters</th><th>Units</th><th>Assessment procedure</th></tr>
<tr><td rowspan="2">Turbidity</td><td rowspan="2">Nephelometric Turbidity Units (NTU)</td><td>For a wetland of other environmental value, if background water turbidity is above 45 NTU, no greater than 25% above background water turbidity measured within a 50m radius of the construction or maintenance activity.
For a watercourse, if background water turbidity is above 45 NTU, no greater than 25% above background water turbidity measured within 50m downstream of the construction or maintenance activity.</td></tr>
<tr><td>For a wetland of other environmental value, if background water turbidity is equal to, or below 45 NTU, a turbidity limit of no greater than 55 NTU applies, measured within a 50m radius of the construction or maintenance activity.
For a watercourse, if background water turbidity is equal to, or below 45 NTU, a turbidity limit of no greater than 55 NTU applies, measured within 50m downstream of the construction or maintenance activity</td></tr>
<tr><td>Hydrocarbons</td><td></td><td>For a wetland of other environmental value, or watercourse, no visible sheen or slick.</td></tr>
</table>
• Construction or maintenance works on linear infrastructure in wetlands or watercourses will be monitored by a Senex Environment representative to ensure compliance with the approval conditions.</td></tr>
</table>

7.2.13 Soil and Erosion Management

The following soil and erosion management controls will apply within the Project Area.

Category	Controls
Performance Criteria	• Compliance with the Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PRC-003] and any contractor erosion and sediment control procedures. • Minimise soil erosion resulting from wind, rain and flowing water. • Mass movement, gully erosion, sheet erosion and tunnel erosion do not occur. • Topsoil managed to preserve its biological and chemical properties. • No preventable irreversible erosion or loss of soil from sites.

Category	Controls
Management Measures	• Works on site will not commence until the Contractors erosion and sediment control procedures have been approved by the Senex Site Supervisor and are installed as required on significantly disturbed land. • ROW soil or spoil stockpiles will be placed to minimise stormwater entering significantly disturbed land will be that will be exposed throughout construction. • Sediment and erosion control will be managed in accordance with the Senex Queensland Erosion and Sediment Procedure [SENEX-QLDS-EN-PRC-003] and the Contractor's erosion and sediment control procedures. • Erosion and sediment control structures will be inspected periodically and after rain events and maintenance carried out. • All contaminated soils will be managed and remediated in accordance with EP Act requirements. • Where soil is moved to the site, a weed declaration will be provided. • Measures to minimise stormwater entering significantly disturbed land that is not subject to transitional rehabilitation will be implemented and maintained. • Sediment and erosion control measures to prevent soil loss and deposition beyond significantly disturbed land will be implemented and maintained. • Ensure stormwater passes through the site in a controlled manner and at non- erosive flow velocities. Divert clean water from the work sites where transitional rehabilitation is not planned to be undertaken. • Complete transitional rehabilitation such that the duration that disturbed soils are exposed to the erosive forces of wind rain and flowing water is less than 6 months. • Implement erosion and sediment control measures to all work-related disturbances. • Minimise negative impacts to land or properties adjacent to the activities (including roads). • Be periodically inspected at worksites as required, before expected rainfall events, and after rain events and maintenance undertaken where required as per the Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PRC-003]. • Soil stripping (where necessary), will not be undertaken in periods of high wind, rainfall or within the immediate period after rainfall to help avoid soil degradation. • Topsoil (approx. upper 100 to 200 mm depending on soil type), which contains the bulk of the natural seed bank and organic matter will be stockpiled separately from subsoil. • Topsoil is to be stockpiled in mounds no greater than 2 metres height except where not possible on watercourse crossing approaches due to ROW limitations. • Topsoil will not be mixed with subsoil either during stockpiling or during re-placement on disturbed areas. • Topsoil stockpiles will be located away from watercourses, natural drainage and flow lines to minimise erosion and waterway sedimentation. • Erosion and sediment controls will be established around topsoil stockpiles to minimise the loss of soil during rain and slumping events. Stockpiles and sediment controls are to be routinely checked. • Once construction activities are complete, soil horizons will be reinstated in the order in which they are excavated to the extent practicable by pipe displacement.

Category	Controls
Relevant Plans and Procedures	• Queensland Erosion and Sediment Control Procedure [SENEX-QLDS-EN-PRC- 003]. • Site Environmental Instructions issued for each phase of the project.
Monitoring and Reporting	• Regular inspections to monitor for potential erosion and sedimentation during construction works will be undertaken. These inspections will include at least weekly inspections during dry conditions, and daily inspections during rainfall of >50 mm in one day or >100 mm over 4 days or as soon as site access is re- established. • Records of all erosion and sediment control and water quality monitoring will be maintained by the Senex Site Supervisor and provided weekly during period of activity in the wet season and monthly at other times to the Senex Environment Manager.

8 Environmental Incident and Notification

8.1 Emergency and Incident Response

The following emergency and incident response controls will apply within the Project Area.

Category	Controls
Performance Criteria	• All emergencies on site will be managed in accordance with the project contingency procedures for emergency environmental incidents and Emergency Response Plan. • All incidents are reported, notified and investigated in accordance with the HSE management system and Senex Incident Reporting and Investigation Procedures [SENEX-CORP-HS-PRC- 004]. • All spills are managed in accordance with the Senex Spill Response Plan [SENEX-CORP-ER-PLN-006].

Management Measures	• Personnel who observe an environmental incident including a spill will immediately notify the Contractor Site Supervisor who will then notify the Senex Site Supervisor.
	• In the event of a chemical, oil or fuel spill, the spill will be contained and cleaned up as outlined in the Senex Spill Response Plan [SENEX-CORP-ER-PLN-006].
	• Contractors will have in place procedures for spill response which are in accordance with the Senex Spill Response Plan [SENEX-CORP-ER-PLN-006] and will include details requirements for:
	  ○ minimising release;
	  ○ containing spilled material;
	  ○ raising the alarm and response;
	  ○ locations of spill kits; and
	  ○ management of contaminated material if necessary.
	• Any spills will be assessed by the Senex Site Supervisor supported by the Senex Environment Manager as required to determine appropriate remediation options such as the removal of contaminated material.
	• Incident reports will contain information required by the HSE Management System and Incident Reporting and Investigation Procedure [SENEX-CORP-HS-PRC- 004].
	• Emergency Response drills will be performed to ensure readiness and identify opportunities for improvement.

Relevant Plans and Procedures	• HSE Management System [SENEX-CORP-HS-STD-001]. • Senex Spill Response Plan [SENEX-CORP-ER-PLN-006]. • Senex Incident Reporting and Investigation Procedure [SENEX-CORP-HS-PRC-004].
Monitoring and Reporting	• Refer to section 8.2 for reporting and notification requirements for environmental incidents. • Regular inspection of spill response kits and general emergency preparedness.

8.2 Environmental Incident Notification

Senex requires that all incidents including spills are reported and fully investigated in accordance with their specific level of potential risk. The Senex Incident Reporting and Investigation Procedure [SENEX-CORP-HS- PRC-004] defines the process for the investigation and reporting of incidents

and ensures that Senex meets all regulatory notification requirements. Senex's Spill Response Plan [SENEX-CORP-ER-PLN-006] provides the standard protocols that will be used to respond in an appropriate and timely manner in the event of a spill. The procedure details the following steps:

- Prevention – take actions to reduce or eliminate the likelihood of effects of an incident.
- Preparedness – take steps before an incident to ensure effective response and recovery.
- Response – contain, control or minimise the impacts of an incident.
- Recovery – take steps to minimise disruption and recovery times.

Figure 13 Incident Reporting Steps

Activities that have caused or are likely to cause environmental nuisance or environmental harm under the EP Act will be notified to DES. Additionally, the EA requires the following notification process to be complied with in the event of an incident. Should notifications under other approvals, such as EPBC conditions, the notification and investigation processes will be managed through these processes.

Events that must be notified under approval conditions include:

- a person carries out activities or becomes aware of an act of another person arising from or connected to those activities which causes or threatens serious or material environmental harm;
- the activity negatively affects (or is reasonably likely to negatively affect) the water quality of an aquifer;
- the activity has caused the unauthorised connection of 2 or more aquifers; and
- activation of the contingency procedures (within 5 business days of activation). Contingency measures must be prepared prior to petroleum activities commencing under Schedule B of the EA.

All notification of environmental incidents or events will be reported to regulatory authorities in accordance with the process in the Senex Regulatory Reporting Requirements [SENEX-CORP-ER-CHA-002].

9 Rehabilitation

9.1 Transmission Pipelines

The rehabilitation of ARCP will be completed according to the methodologies presented in ARCP Rehabilitation Plan [SENEX-ARCP-EN-PLN-003]. The pipeline trenches will be backfilled and topsoil reinstated within three (3) months of pipelaying. Reinstatement if ROW will be completed within six (6) months of pipelaying, including the installation of habitat features and seeding if required.

Significantly disturbed areas that are no longer required for the on-going petroleum activities, will be rehabilitated within 12 months (unless an exceptional circumstance in the area to be rehabilitated (e.g. a flood event) prevents this timeframe being met) and be maintained to meet the following acceptance criteria:

(a) contaminated land resulting from petroleum activities is remediated and rehabilitated

(b) the areas are:

i. non-polluting
ii. a stable landform
iii. re-profiled to contours consistent with the surrounding landform

(c) surface drainage lines are re-established

(d) top soil is reinstated; and

(e) either:

i. groundcover, that is not a declared pest species, is growing; or

ii. an alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained.

9.2 Access Tracks

Temporary access tracks no longer required for ongoing operational activities or not to be retained by the landholder will be closed and reinstated to a condition compatible with the surrounding land use. This will generally involve tilling to remove compaction, re-spreading stockpiled topsoil and revegetating. Landholder tracks in existence prior to construction will have access re-instated and will not be blocked in anyway. Where tracks are to be retained by landholders, any wheel ruts will be graded and erosion-control measures such as diversion drains installed to an agreed condition.

9.3 Waterway Crossings

Waterway crossings will be rehabilitated by re-contouring disturbed areas to match the surrounding land after construction activities for the crossing have ceased. The surface will usually be lightly scarified before spreading the topsoil, to promote vegetation re-growth and protect against the topsoil loss. Temporary waterway barriers will be removed and reseeding undertaken to minimise erosion and promote regeneration of riparian vegetation.

9.4 Laydown and Stockpile Areas

Rehabilitation will be undertaken when the area for infrastructure, laydowns, or stockpile areas are no longer required for operational activities. Once infrastructure is removed or transported off site, gravel is generally removed from the hardstand and any areas of contamination remediated or excavated for disposal at an off- site licensed facility. Compacted areas should be tilled and the area seeded with a species mix determined by the post-disturbance land use.

10 Environmental Monitoring and Auditing

Monitoring, auditing of, and reporting on, contractor and ARCP P/L's on-site activities provides a direct measure of ARCP P/L's compliance with environmental regulations, approval conditions and other permits, together with an indication of the effectiveness of the HEMS, EMP and supporting procedures and plans.

Environmental inspection, monitoring and auditing will be undertaken by the Senex Site Supervisor and Senex Environmental representative on a periodic basis to assess whether activities are in compliance with the requirements of these systems and documents.

10.1 Complaints and Grievances

Complaints and grievances will be recorded and responses (actions) tracked in the Senex Action Item Tracking Register (AITR) maintained by the Land Access Delivery Team. Records of complaints will be kept and must include the date, complainant's details, source, reason for the complaint, description of investigation and actions undertaken in resolving the complaint.

Depending on the nature of the complaint or grievance the responsibility and associated timeframes for addressing and closing out the complaint or grievance will be assigned to the relevant Senex personnel. Any investigations required to be carried out will be undertaken with input from relevant personnel. Results of any investigation including proposed mitigation or management measures will be recorded and the complainant informed of how Senex either proposes to, or has, resolved the issue.

10.2 Monitoring

All monitoring will be undertaken by a suitably qualified person who has professional qualifications, training or skills or experience relevant to the monitored subject matter as defined in the approval conditions. Monitoring to be undertaken on the Project Area includes the following:

- Monitoring implementation of the EMP and supporting procedures and plans by the Senex Site Supervisor or the Senex Environmental representative as appropriate;
- Regular inspection of construction and operational activities by the Senex Site Supervisor or the Senex Environmental representative as appropriate.
- Environmental monitoring of over time for weed infestations with reference to the Biosecurity Management Plan [SENEX-CORP-EN-PLN-003] and rehabilitation progress (for example, photo- monitoring and audits).
- Reporting and analysis of regulated discharges, emissions and waste disposal.
- Any other prescribed monitoring in accordance with the conditions of approval.

10.3 Corrective Actions

Where inspections, monitoring and analysis for reporting indicate that performance criteria are not being met or are trending towards criteria not being met, corrective actions will be applied to the matter to protect environmental values and improve predicted outcomes. Results of environmental audits and resolutions of complaints and grievances will also drive changes to methodologies and frequency of controls.

This may include re-application of control measures, increased frequency of inspection or revision of methodologies.

The implementation of revised management measures will provide an adaptive management framework to improve achievement of performance criteria over time.

10.3.1 Notifications

Where monitoring indicates a non-compliance with conditions of approval, this will be considered an incident. All incidents are reported, notified and investigated in accordance with the Contingency Procedures for Emergency Environmental Incidents [SENEX-QLDS-EN-PRC-024] and Incident Reporting and Investigation Procedure [SENEX-CORP-HS-PRC-004].

Senex requires that all incidents are reported and fully investigated in accordance with their specific level of potential risk. The Incident Reporting and Investigation Procedure (SENEX-CORP-HS-PRC-004) defines:

- the process for the investigation and reporting of incidents
- ensures that Senex meets all regulatory notification requirements
- how to report emergency environmental incidents to:
  - Internal communications.
  - Regulatory notifications.
  - Local Government notifications.

10.4 Auditing

Environmental audits will be undertaken as both scheduled and unscheduled activities. The audit program may include the use of external auditors and will include regular (for example, annual) environmental compliance audits to assess compliance with this EMP, approval conditions and other regulatory requirements. The audit program will include audits of Contractor procedures and management plans and will be undertaken by the Senex Site Supervisor or Senex Environmental representative as appropriate.

The outcomes of audits will be used to refine or adjust management measures to better achieve the performance criteria and environmental outcomes identified in this and associated plans.

11 Record Keeping and Reporting

ARCP P/L and its contractors will maintain an appropriate and auditable record system. Environmental reporting information will include as relevant:

- inspection / monitoring reports;
- photographic records;
- training and induction attendance and associated dates;
- incident reports;
- remedial actions taken following incident reports;
- records of waste removal including waste tracking certificates; and
- audit reports.

All records and data required to be maintained by approval conditions will be retained for a minimum of 5 years.

The annual reporting to DES (annual return) will require providing details of activities conducted during the annual return period, demonstrating actions such as:

- the area of significant disturbance from the project;
- rehabilitation undertaken;
- a list of all valid complaints relating to environmental issues made including the date, source, reason for the complaint and a description of investigations undertaken in resolving the complaint; and
- the results of all monitoring undertaken; or
- otherwise required for evidence of compliance.

Record requirements under other approvals, such as EPBC conditions, will be maintained and reported at the frequency stipulated in the conditions of approval.

12 References

E2M. (2024). MNES Ecological Assessment Report for Atlas to Reedy Creek Pipeline prepared for Senex Energy. Brisbane.

Appendix A - Senex Environmental Management Policy

See next page.

Environmental Management Policy

Document Number
SENEX-CORP-EN-POL-001

Senex Energy Limited

ENVIRONMENTAL MANAGEMENT POLICY

Senex Energy Limited (Senex) is an environmentally responsible company committed to conducting our business in a manner which ensures high standards of environmental management performance.

Senex will achieve this commitment through applying our core values to promote and maintain a culture of sustainability and continuously review and improve our environmental performance across the business.

We will achieve our environmental goals by actively focusing on:

- Assessing the potential impacts of our operations and activities on the local environment to limit disturbance;
- Operate in a safe and environmentally responsible manner;
- Empowering employees and contractors to achieve environmentally responsible operations and to improve environmental performance; and
- Maintaining and continuously improving environmental standards, systems and controls across all activities and operational areas.

Senex will ensure effective implementation of this policy through:

- Ensuring that environmental goals and standards are understood and adopted at all levels across the Company;
- Instructing and educating employees and contractors where appropriate of their environmental responsibilities;
- Reporting environmental incidents, determining the cause and where appropriate implementing changes to prevent a recurrence;
- Measuring our performance through regular monitoring, environmental audits and reporting; and
- Ensuring compliance with relevant laws, regulations and where appropriate industry codes.

Ian Davies
Managing Director
Senex Energy Limited

Approved – 15 December 2016

Review Date – 15 December 2018

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