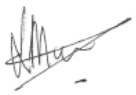
Health, Safety and Environment Management System

Environment Plan Summary

CCL.2373-PL-HSE-0002

COCKBURN CEMENT LATERAL ENVIRONMENT PLAN SUMMARY

APA safeguard

Rev	Date	Status	Originated/ Custodian	Checked	Approved
1.0	21/12/2018	Five yearly review, alignment with DMIRS Guidelines (2016).			
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1. Introduction

This Environment Plan (EP) Summary details the requirements for the management of environmental aspects arising from the operation of the pipeline listed in Table 1 (herein referred to as 'The Pipeline').

Table 1 Pipeline Licences

Licence	Pipeline	Licensee	Nominated Operator
PL39	Cockburn Cement Lateral (CCL)	Origin Energy Pipelines Pty Ltd	APT Goldfields Pty Ltd

CCL is operated by APA Group (APA).

1.1 Purpose and Scope

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

The scope of this EP Summary is limited to operational works associated with The Pipeline.

1.2 Objectives

The overall environmental objectives of the EP are to:

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

1.3 Corporate Environmental Policy

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

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

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

1.4 Definitions

Table 2: Definitions

ALARP	As Low as Reasonably Practicable
APA	APA Group
ASS	Acid Sulphate Soils
CCL	Cockburn Cement Lateral
CP	Cathodic protection
DBNGP	Dampier to Bunbury Natural Gas Pipeline
DPLH	Department of Planning, Lands and Heritage
EP	Environment Plan
ERA	Environmental Risk Assessment
ERP	Emergency Response Plan
HSE	Health Safety and Environment
IOC	Integrated Operations Centre
SDS	Safety Data Sheet

2. Facility Area and Activity Description

2.1 Facility Area

The CCL comprises 18 km of gas transmission pipeline.

The Pipeline commences at the off-take facility on the Dampier to Bunbury Natural Gas Pipeline (DBNGP) at KP 1044 approximately 20 km east-southeast of Dongara. From the DBNGP Off-take The Pipeline runs east-west through farmland along a farm access track to Pye Road. The Pipeline then continues along Pye Road in an east – west direction within the road reserve. At the end of Pye Road, The Pipeline crosses the Brand Highway and deviates into the Kailis Drive road reserve and continues west through the Cockburn Cement Mining lease to The Pipeline Delivery Station, within the Cockburn Cement Plant Site.

The Pipeline traverses the Shire of Irwin.

The approximate coordinates of the CCL are listed below:

- CCL commencement: -29.312629°, 115.121017°
- CCL termination: -29.312391°, 114.944082°

Please refer to Figure 1 for CCL Locality Map.

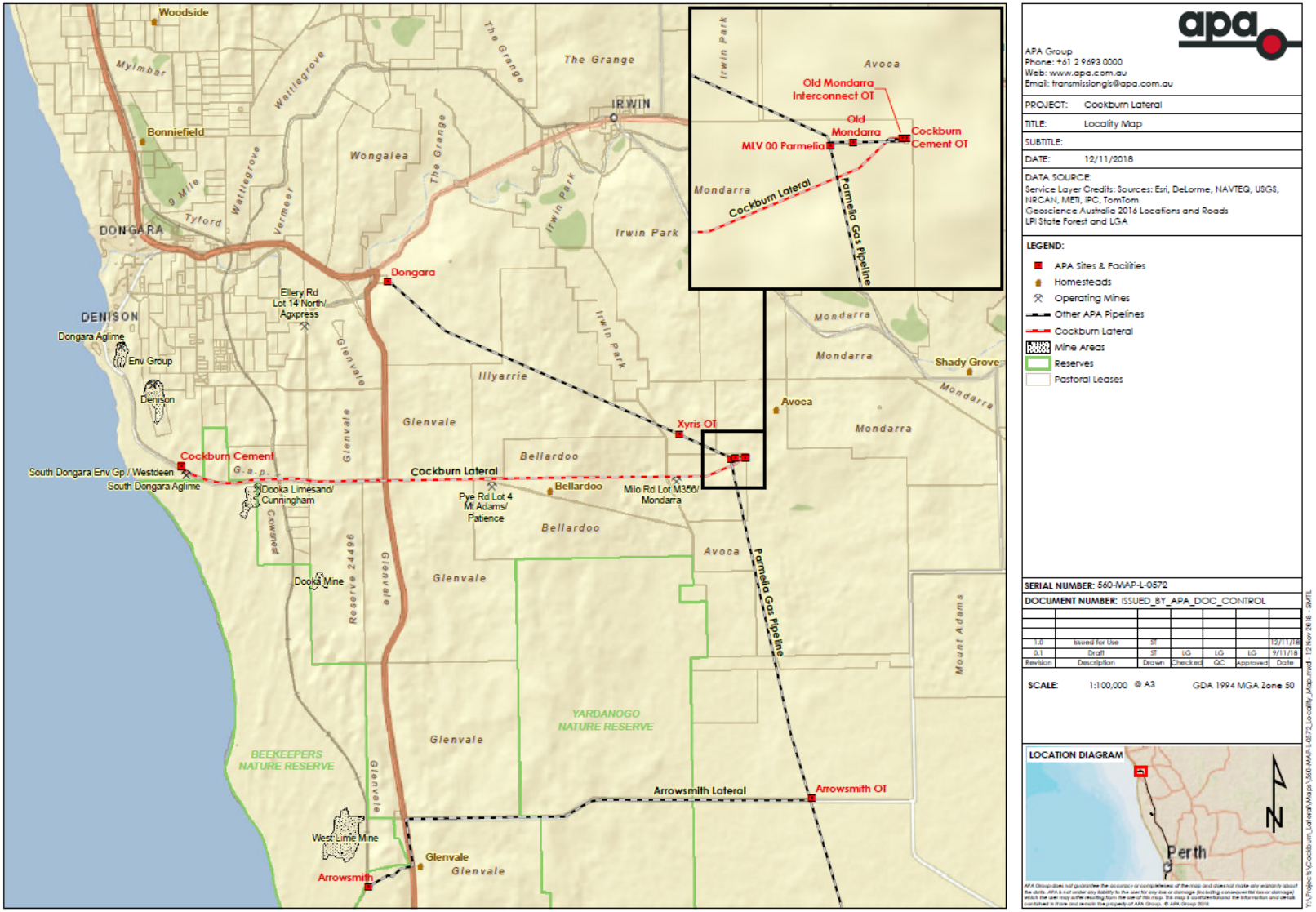

Figure 1 CCL Locality Map

2.2 Pipeline Operations and Maintenance

The CCL is operated from the Mondarra Maintenance Base, as a part of the Northern Team for the Western Region.

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

- General equipment and facility maintenance;
- Filter changes;
- Cathodic protection surveys;
- Pipeline excavation;
- Venting;
- Pipeline pigging;
- Pipeline patrols;
- Easement, facility and equipment inspections; and
- Breakdown and emergency response exercises.

Routine maintenance of The Pipeline is undertaken as determined by the Field Services Manager, Team Leaders and plans which are implemented via a dedicated maintenance management system (MAXIMO).

2.2.1 General Equipment & Facility Maintenance

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

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

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

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

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

2.2.2 Cathodic Protection Surveys

Cathodic protection (CP) refers to the use of electrical current to protect steel pipework against corrosion. CP surveys are undertaken on a regular basis to monitor pipeline integrity and ensure the CP system itself remains functional. CP surveys involve accessing CP test points at approximately 5 km intervals along The Pipeline and connection to a meter which measures corrosion.

2.2.3 Pipeline Excavation

Pipeline excavations are undertaken periodically typically for pipeline repairs and crossing installations. Pipeline excavations are strictly controlled for safety reasons via risk assessment, work permits and procedures. The scale of excavations can vary from single defect dig-ups

of a few cubic metres to trenching of a kilometre of more in length to access multiple defects in close proximity.

2.2.4 Venting

Venting of gas from The Pipeline is undertaken to purge pipelines and / or facilities for maintenance or emergency response purposes. Venting for maintenance purposes under normal operating pressure could typically release approximately 10 m^3 of gas. Quantities of vented gas are recorded by the APA Integrated Operations Center (IOC) and contained in the quarterly emissions and discharges reporting to Department of Mines Industry Regulation and Safety (DMIRS).

2.2.5 Pigging

Pipeline pigging is undertaken for the purposes of either pipeline cleaning or integrity assessment (intelligent pigging). Intelligent pigging is completed in accordance with the requirements of AS2885.3 Section 6 – Pipeline Structural Integrity. Pigging programs involve thorough planning involving specialist Engineering, Operations and Safety personnel.

Pigs are run between pipeline Scraper Stations containing pig launching and receiving facilities. Particulate matter separated from the gas stream is a common by-product of pigging (removal of which is the ultimate goal in the case of a cleaning pig run), these are caught in the pig receiver trap along with the recovered pig and contained for offsite disposal. Small amounts of general-purpose grease and degreaser may be used during the pigging process which is managed as per the chemical requirements specified in the EP.

2.2.6 Right of Way Patrols

Pipeline Right of Way (ROW) vehicle patrols occur on a regular basis. Vehicle patrols are completed by Pipeline Technicians and involve visual inspections of The Pipeline corridor from a light vehicle. Patrols may identify issues such as:

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

Aerial patrols are completed monthly and are undertaken through a contractor who records and reports any issues observed to APA to investigate and action. The contractors follow the APA Aerial Surveillance Procedure.

Corridor condition inspections are conducted annually.

3. Receiving Environment

Topography of the CCL is gently undulating. Elevation at the DBNGP Off-take is approximately 80 m ASL. Elevation gradually decreases in a westerly direction between the DBNGP Off-take and intersection between Kailis Drive and Brand Highway. West of Kailis Drive topography is dominated by undulating sand dunes.

The Perth Basin is a deep faulted sedimentary trough extending approximately 1,000 km north south along the south-west Australian coast between Geraldton and Augusta (Cadman, Pain & Vuckovic, 1994). The Perth Basin averages approximately 65 km in width and is bound in the east by the Darling Fault (McPherson and Jones, 2005). Geology of the Perth Basin consists of sedimentary Mesozoic rocks, primarily siltstones and sandstones (Patrick and Brown, 2001). The Northern Perth Basin coincides with the southern region of the Geraldton Sandplains Interim Biogeographic Regionalisation of Australia (IBRA) Region.

The Geraldton Sandplains IBRA Region extends from the Peron Peninsula north of Kalbarri to south of Eneabba in Western Australia (ANRA, 2009). The Geraldton Sandplains comprise sandy earths of extensive, undulating and lateritic sand plain overlying Permian to Cretaceous rocks (Desmond & Chant, 2001). More specifically, the CCL is confined to an area of leached calcareous deep sands (Department of Agriculture, 2002).

An Atlas of Australian Acid Sulphate Soils (ASS) desktop assessment (October 2018) showed that the CCL is predominately located in an area of Extremely Low Probability (1 - 5%) of ASS.

The CCL does not traverse any rivers, creeks or significant drainage lines.

The Pipeline does not intersect any Environmentally sensitive areas declared by the Minister for Environment under section 51B of the *Environmental Protection Act 1986*.

4. Implementation Strategy

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

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

A risk-based approach has been adopted to manage potential threats to the environment as a result of pipeline operation. This process involved initial identification of environmental interactions (aspects) resulting from operational activities followed by an Environmental Risk Assessment (ERA) workshop attended by personnel from a range of qualifications. The ERA process involved:

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

A summary of the primary environmental hazards, control measures and mitigating factors identified for The Pipeline have been provided in Table 3.

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

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

Environmental Hazard	Control Measures and Mitigation Factors
All hazards	• HSE inductions communicating Environment requirements • Competent personnel – training and procedures / guidance materials provided • Hazard and incident reporting via APA hazard and incident database • Management, Permit to Work System, maintenance and emergency response systems in place • Regular audits, inspections and other EP compliance checks • Third Party Contractor compliance with EP commitments via contractual requirements • Job Hazard Analysis for tasks presenting specific environmental hazards • Strict controls on vehicles and access implemented via Operations Manuals • Reporting as per Regulatory requirements • Compliance with all relevant legislation and regulatory requirements
Air emissions	• Hazard and Operability Study undertaken specifically addressing uncontrolled gas release • Assets designed as per standards of the day (failure prevention) • Physical protection (i.e. cordoning and signage) of live pipework
Chemical use	ALL

Environmental Hazard	Control Measures and Mitigation Factors
	• Procedures for chemical use • Chemical register and Safety Data Sheet (SDS) maintained for all hazardous substances onsite Storage & handling • Storage of hazardous substances as per SDS and safety specifications • Storage receptacle sizes and types defined and controlled • Use of bunds and drip trays • Capacity of bunds sufficient to contain quantity of largest stored container • Minimise onsite chemical storage and use via off-site storage where possible Transport • Use of licensed contractors for (large quantities) DG Transport • Strict access controls and maintenance of road condition • Double skinned tank on diesel transport vehicles Spill prevention and response • Spill response equipment available at site • Emergency Response Plan (ERP) and Oil Spill Contingency Plan to ensure adequate preparedness for spill response • Regular checks and maintenance of machinery, plant and equipment • Use of self-bunded equipment, where practicable Chemical waste • Chemical waste treated as per other chemicals for management purposes • Waste chemicals clearly marked and disposed of in accordance with regulations
Weed introduction and / or spread	• Vegetation clearing and earthworks limited where possible (disturbed areas prone to weed proliferation) • Strict hygiene measures for digging equipment and • Access and vehicle controls imposed; as per existing roads and tracks • Weed identification information available to personnel • Timely response to declared weed occurrences as per DBCA recommendations
Disturbance to local vegetation (both native and other desirable plants i.e. feedstock)	• Native vegetation clearing limited and in compliance with WA Environmental Protection (Native vegetation Clearing) Regulations 2004 • Vegetative material from clearing retained for use during site remediation • Disturbed (by APA) areas to be remediated as follows: • Stockpiled topsoils re-spread evenly to a maximum depth of approx. 10 cm • Surfaces re-profiled and scarified to assist seed and water trapping • Stockpiled vegetative material spread over topsoils to aid vegetation re-establishment
Soil erosion	• Strict controls on vehicles and access imposed • Topsoil removal limited and controlled • Topsoils removed for construction reused during post construction remediation • Topsoil stockpiles maintained to minimise erosion • Remediation of disturbed areas as described above
Ignition source for Fire	• Fire response equipment maintained at site and in vehicles and machinery • Operations sites maintained to minimise fuel availability and fire risk • Localised fire emergency response covered in ERP • Emergency contact details available to all operations personnel • Dedicated containers for chemicals classed as flammable

Environmental Hazard	Control Measures and Mitigation Factors
	• Smoking within designated areas only • Fire awareness to be reinforced at toolbox meetings
Waste Generation (excluding chemicals – see above)	• All wastes to be removed from site and disposed of to the appropriate class landfill facility • Adequate waste receptacles maintained onsite and waste segregated as appropriate
Dust generation	• Strict controls on vehicles and access • Dust suppression assistance to be sought as required
Disturbance to local fauna	• Fauna movement not restricted – can move away from sources of disturbance • Trenching and excavation activities controlled • Escape ramps for fauna installed in open trenches and morning visual trench inspections undertaken • Trained and competent handlers engaged for fauna removal from site if required
Third party disturbance	• Regular landholder consultation undertaken • Lighting at site to be concentrated in required areas only • Strict controls on Operations vehicle movement imposed
Disturbance to heritage values	• Works to cease and Department of Planning, Lands and Heritage (DPLH) to be notified immediately if suspected heritage artefacts identified • Strict controls on Operations vehicle movement imposed • All site works contained within easement boundary

5. Stakeholder Consultation

A summary of Operations Stakeholders and consultation undertaken by APA is provided in Table 4.

Table 4: Stakeholder Consultation

Stakeholder	Consultation to date	Ongoing commitment
Shires and Local Governments Shire of Irwin	• Regular contact with the Shire via third party works process	• Consultation as necessary as part of pipeline operations consultation program
Landholders	• Ongoing liaison since prior to PGP construction • Operations specific consultation ongoing	• Notification of activities planned for sites • Ongoing liaison throughout the course of the Operations.
DFES: Local emergency services provider	• Liaison throughout ERP development and implementation	• Notification of risk activities as agreed (i.e. venting) • Ongoing liaison throughout site operations
DMIRS: Regulator	• Liaison ongoing throughout Operations	• Reporting monthly, three-monthly, annually and at Operations close out; • General liaison as required i.e. due to Operations changes, audits etc.
DWER/DBCA: Regulator	• Liaison / advice ongoing throughout Operations	• General liaison regarding vegetation, flora and fauna management as required
DLHP: Regulator	• Liaison / advice ongoing throughout Operations	• DLHP to be contacted if heritage area's / artefacts encountered during Operations

6. APA Contact Details

For further queries regarding the CCL Operations EP please contact the APA Environment Advisor on (08) 6189 4300 or via the APA website at https://www.apa.com.au/contact/.

7. References

- Cadman, S.J, Pain, L. & Vuckovic, V. (1994) Australian Petroleum Accumulations Report 10: Perth Basin Western Australia, Department of Primary Industries and Energy, Bureau of Resource Sciences.
- Desmond, A & Chart, A (2001) Geraldton Sandplains 3 (GS3 – Lesuear Sandplains Subregion) in A Biodiversity Audit of Western Australia's 53 Biographical Subregions in 2002. Report Published by CALM. Perth Western Australia.
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- Patrick, S.J and Brown, A.P (2001) Western Australian Wildlife Management Program No. 28: Declared Rare and Poorly Known Flora in the Moora District, Department of Conservation and Land Management, Government of Western Australia.
- Department of Agriculture and Food WA, Natural Resources Assessment Group (2002) Characteristic Soils of south-Western Australia, Government of Western Australia