Permit

Environmental Protection Act 1994

Environmental authority EPPG00903813

This environmental authority is issued by the administering authority under Chapter 5 of the Environmental Protection Act 1994.

Environmental authority number: EPPG00903813

Environmental authority takes effect on 26 February 2020

Environmental authority holder(s)

Name(s)	Registered address
AUSTRALIA PACIFIC LNG CSG PROCESSING PTY LIMITED	Level 4 135 Coronation Drive MILTON QLD 4064

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 03: A petroleum activity that is likely to have a significant impact on a category A or B environmentally sensitive area	PPL181
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	PPL181
Ancillary 08 - Chemical Storage 4: storing 200t or more of chemicals that are solids or gases, other than chemicals mentioned in items 1 to 3, under subsection (1)(d)	PPL181
Schedule 3 08: A petroleum or GHG storage activity, other than items 1 to 7, that includes an activity from Schedule 2 with an AES	PPL181

ABN 46 640 294 485

Environmentally relevant activity/activities	Location(s)
Non-Scheduled Petroleum Activity Petroleum Pipeline Licence - PPL	PPL185
Non-Scheduled Petroleum Activity Petroleum Pipeline Licence - PPL	PPL177

Additional information for applicants

Environmentally relevant activities

The description of any environmentally relevant activity (ERA) for which an environmental authority (EA) is issued is a restatement of the ERA as defined by legislation at the time the EA is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an EA as to the scale, intensity or manner of carrying out an ERA, the conditions prevail to the extent of the inconsistency.

An EA authorises the carrying out of an ERA and does not authorise any environmental harm unless a condition stated by the EA specifically authorises environmental harm.

A person carrying out an ERA must also be a registered suitable operator under the *Environmental Protection Act 1994* (EP Act).

Contaminated land

It is a requirement of the EP Act that an owner or occupier of contaminated land give written notice to the administering authority if they become aware of the following:

- the happening of an event involving a hazardous contaminant on the contaminated land (notice must be given within 24 hours); or
- a change in the condition of the contaminated land (notice must be given within 24 hours); or
- a notifiable activity (as defined in Schedule 3) having been carried out, or is being carried out, on the contaminated land (notice must be given within 20 business days);

that is causing, or is reasonably likely to cause, serious or material environmental harm.

For further information, including the form for giving written notice, refer to the Queensland Government website www.qld.gov.au, using the search term 'duty to notify'.

Take effect

Please note that, in accordance with section 200 of the EP Act, an EA has effect:

a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority-on the nominated day; or

b) if the authority states a day or an event for it to take effect-on the stated day or when the stated event happens; or

c) otherwise-on the day the authority is issued.

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Sustainable Planning Act 2009* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

If this EA takes effect when the additional authorisation takes effect, you must provide the administering authority written notice within 5 business days of receiving notification of the related additional authorisation taking effect.

If you have incorrectly claimed that an additional authorisation is not required, carrying out the ERA without the additional authorisation is not legal and could result in your prosecution for providing false or misleading information or operating without a valid environmental authority.

Clancy Mackaway
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

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Date issued: 27 February 2020

Obligations under the *Environmental Protection Act 1994*

In addition to the requirements found in the conditions of this environmental authority, the holder must also meet their obligations under the EP Act, and the regulations made under the EP Act. For example, the holder must comply with the following provisions of the Act:

- general environmental duty (section 319)
- duty to notify environmental harm (section 320-320G)
- offence of causing serious or material environmental harm (sections 437-439)
- offence of causing environmental nuisance (section 440)
- offence of depositing prescribed water contaminants in **waters** and related matters (section 440ZG)
- offence to place contaminant where environmental harm or nuisance may be caused (section 443)

Conditions of Environmental Authority

This environmental authority consists of the following Schedules and Appendices:

Part 1 – Conditions applicable to the Orana to Talinga CSG Water Pipeline (PPL181)

Schedule A General
Schedule B Water
Schedule C Regulated Structures
Schedule D Land
Schedule E Disturbance to Land
Schedule F Environmental Nuisance
Schedule G Air
Schedule H Waste
Schedule I Rehabilitation
Schedule J Project Infrastructure and Decommissioning
Schedule K Community Issues
Schedule L Notification

Part 2 – Conditions applicable to the Condabri to Talinga CSG Water Pipeline (PPL177)

Schedule A General
Schedule B Water
Schedule C Regulated Structures
Schedule D Land
Schedule E Disturbance to Land
Schedule F Environmental Nuisance
Schedule G Air
Schedule H Waste
Schedule I Rehabilitation
Schedule J Project Infrastructure and Decommissioning
Schedule K Community Issues
Schedule L Notification

Part 3 – Conditions applicable to the Fairymeadow Road Irrigation Water Pipeline (PPL185)

Schedule AA Eligibility Criteria
Schedule A Authorised Activities
Schedule B Protecting Environmental Values
Schedule C General
Schedule D Pipeline Planning
Schedule E Construction
Schedule F Post-construction including Operations, Maintenance and Decommissioning

Part 1 – Conditions applicable to the Orana to Talinga CSG Water Pipeline

Environmentally relevant activity(ies)	Location(s)
Schedule 3 03: A petroleum activity that is likely to have a significant impact on a category A or B environmentally sensitive area	PPL181
Schedule 3 08: A petroleum or GHG storage activity, other than items 1 to 7, that includes an activity from Schedule 2 with an AES	
Ancillary 63 - Sewage Treatment 1: Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of (b-ii) more than 100 but not more than 1500EP otherwise	
Ancillary 08 - Chemical Storage 4: storing 200t or more of chemicals that are solids or gases, other than chemicals mentioned in items 1 to 3, under subsection (1)(d)	

Schedule A: General	
Condition number	**Condition**
A1	**Authorised Petroleum Activities** In the carrying out of the petroleum activity(ies), the holder of this environmental authority must not exceed the number and maximum size for each of the specified petroleum activities listed in *Schedule A, Table 1 – Authorised Petroleum Activities and Pipeline Location*.
A2	The pipeline corridor must be constructed within the locations outlined in *Schedule A, Table 1 – Authorised Petroleum Activities and Pipeline Location*.
A3	**Maintenance of Measures, Plant and Equipment** The holder of the environmental authority must: a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; b) maintain such measures, plant and equipment in their proper and effective condition; and c) operate such measures, plant and equipment in a proper and effective manner.
A4	No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration materially increases, or is likely to increase, the **environmental harm** caused by the petroleum activity(ies).
A5	**Compliance with Australian Pipeline Industry Association Code of Environmental**

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	Practice The holder of this environmental authority must undertake petroleum activities in relation to the operation of petroleum pipelines in accordance with *the Australian Pipeline Industry Association Code of Environmental Practice – Onshore Pipelines, October 2009* (the code) or subsequent versions thereof. To the extent of any inconsistency between the conditions of this environmental authority and the Code, the conditions of this authority prevail.
A6	**Operational Plan** Prior to commencement of the petroleum activities, an Operational Plan must be developed and submitted to the administering authority that provides detailed information about the petroleum activities to be carried out under this environmental authority.
A7	The petroleum activity(ies) identified in the Operational Plan must set out the maximum scope of the petroleum activity(ies) as outlined in the Environmental Management Plans planned for the stated period of the Operational Plan.
A8	The Operational Plan must be consistent with the requirements of this environmental authority and include, but not be limited to: a) a stated period for the Operational Plan which is at least one (1) year but does not exceed three (3) years duration and which specifies an end date; b) a description of the existing and all proposed petroleum activities under the period of the Operational Plan; c) a map or series of maps that: i. record the location of all **infrastructure** and its unique reference name / number that exists at the commencement of the period of the Operational Plan, including but not necessarily being limited to: a. pipeline; b. sewage treatment facility(ies); c. inlet stations; d. turn around areas; e. main line valves; f. access tracks and roads. ii. show the location of all **programmed and approved infrastructure** that will be developed during the period of the Operational Plan, including the items listed under condition A8(c)(i) and their unique reference name / number, if applicable; iii. show major environmental features such as waters, **sensitive place**s and environmentally sensitive areas; and d) spatial datasets (GIS) which depict those requirements under condition A8(c)(i), A8(c)(ii) and A8(c)(iii) in shapefile format.
A9	The Operation Plan must contain a record of **significant disturbance** to land as a result of existing and **programmed and approved infrastructure** during the period of the Operational Plan, which must include, but not necessarily be limited to the following: a) as at the commencement of the Operational Plan period: i. minimum undisturbed area; ii. maximum existing disturbed area;

	iii. total areas(s) of disturbance to Category B and C Environmentally Sensitive Areas by area type (e.g. Of concern RE, Endangered RE);
	iv. total areas(s) of disturbance to **State Significant Biodiversity Values**;
	v. total area(s) of disturbance to in **high value regrowth** and **remnant vegetation** areas that are not environmentally sensitive areas;
	vi. total area(s) rehabilitated (ha);
	vii. identification of rehabilitated areas by category, including age and status of rehabilitation;
	viii. maps showing rehabilitated areas by category;
	ix. the results of the Rehabilitation Monitoring Program undertaken on rehabilitation carried out under the previous Operational Plan(s) and an assessment in relation to the requirements and acceptance criteria set out in this environmental authority; and
	b) **programmed and approved infrastructure** for the current Operational Plan period:
	i. maximum area(s) to be disturbed (ha);
	ii. a description of each area(s) to be disturbed including tenure, coordinates, general site characteristics and disturbance types (e.g. access tracks and pipeline ROW);
	iii. existing land use(s) of each area(s) to be disturbed; and
	iv. forecasted total area (in hectares) to be rehabilitated for the period of the Operation Plan.

A10	The Operational Plan must include a calculation of **financial assurance** for the maximum proposed and existing disturbance during the period of the Operational Plan.
A11	The commencement of the first Operational Plan period is 8 April 2013.
A12	A subsequent Operational Plan must be submitted to the administering authority not less than 20 business days prior to the expiry of the current Operational Plan.
A13	**Financial Assurance** **Financial assurance** must be: a) provided to the administering authority in the amount and form required from time to time by the administering authority; and b) reviewed and maintained based on the maximum disturbance from the proposed and existing petroleum activities.
A14	The calculation of **financial assurance** must be in accordance with the Department of Environment and Resource Management's Guideline "**Financial assurance** for petroleum activities", as amended from time to time.
A15	The **financial assurance** is to remain in force until the administering authority is satisfied that no claim is likely to be made on the assurance.
A16	**Third Party Audit** A **third party auditor**, nominated by the holder of this environmental authority and accepted by the administering authority, must audit compliance with the conditions of this environmental authority at a minimum frequency of every three (3) years.

A17	Notwithstanding condition A16 and prior to undertaking the third party audit, the scope and content of the third party audit can be negotiated with the administering authority.
A18	An audit report must be prepared and certified by the **third party auditor** presenting the findings of each audit carried out.
A19	Any recommendations arising from the audit report must be acted upon by: a) investigating any non-compliance issues identified; and b) as soon as reasonably practicable, implementing measures or taking necessary action to ensure compliance with the requirements of this environmental authority.
A20	A written response must be attached to the audit report detailing the actions taken or to be taken on stated dates: a) to ensure compliance with this environmental authority; and b) to prevent a recurrence of any non-compliance issues identified.
A21	The audit report required by condition A18 and the written response to the audit report required by condition A20 must be submitted to the administering authority with the subsequent annual return.
A22	The financial cost of the third party audit is to be borne by the holder of this environmental authority.
A23	**Contingency Plans for Emergency Environmental Incidents** A Contingency Plan for Emergency Environmental Incidents which has been certified by a **suitably qualified person** must be developed prior to carrying out the petroleum activity(ies).
A24	The Contingency Plan for Emergency Environmental Incidents must include, but not necessarily be limited to: a) a clear definition of what constitutes an emergency environmental incident or near miss for the petroleum activity(ies) authorised to be carried out under this environmental authority; b) identification of the types of environmental incidents that may occur, including but not limited to flooding impacts, relevant to the petroleum activity(ies) authorised to be carried out under this environmental authority; c) response procedures to be implemented to prevent or minimise the risk of **environmental harm** arising from emergency environmental incidents; d) response procedures to minimise the extent and duration of **environmental harm** caused by emergency environmental incidents; e) the practices and procedures to be employed to restore the environment or mitigate any **environmental harm** caused; f) communication procedures and lines of communication within and beyond the organisation, including but not limited to Local Government, to be employed in responding to environmental emergency incidents; g) the resources to be used in response to environmental emergency incidents; h) procedures to investigate the cause of any incidents including releases or near misses, and where necessary, the remedial actions to be implemented to reduce the likelihood of recurrence of similar events;

	i) a receiving environment monitoring program, to be specifically implemented in the event of a **release** to **waters** or land to examine/assess environmental impacts. For monitoring of **waters**, this program must include upstream, downstream and impact site monitoring procedures. For soils monitoring, three replicate samples must be taken at depth intervals of 0-10 cm, 20-30 cm and 50-60 cm at both a reference site and the impact site as a minimum; j) the provision and availability of documented procedures to staff attending any emergency environmental incident to enable them to effectively respond; k) training of staff that will be called upon to respond to emergency environmental incidents to enable them to effectively respond; l) timely and accurate reporting of the circumstance and nature of emergency environmental incidents to the administering authority and any affected landholder, occupier and/or their nominated representative in accordance with conditions of this environmental authority; and m) procedures for accessing monitoring locations during emergency environmental incidents.
A25	The holder of this environmental authority must implement the Contingency Plan for Emergency Environmental Incidents.
A26	**Monitoring** A monitoring program for all monitoring required by the conditions of this environmental authority must be developed and implemented by 1 May 2013.
A27	All monitoring under this environmental authority must be conducted by a **suitably qualified person**.
A28	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this environmental authority must be calibrated, operated and maintained effectively in accordance with the manufacturer's specifications.
A29	All laboratory analyses and tests required to be conducted under this environmental authority must be carried out by a laboratory that has **NATA accreditation** for such analyses and tests, except as otherwise authorised by the administering authority.
A30	Any management or monitoring plans, systems, programs or procedures required to be developed and implemented by a condition of this environmental authority must be reviewed for performance and amended as required but not less than once every three (3) years in accordance with the requirements for the particular plans, systems, programs and procedures in the conditions of this environmental authority.
A31	If monitoring conducted in accordance with this environmental authority indicates a circumstance, condition or contaminant level has caused, or has potential to cause, **environmental harm**, necessary actions must be taken to rectify the condition or contaminant level so as to avoid or minimise **environmental harm**.
A32	An annual monitoring report must be prepared each year and submitted to the administering authority upon request and in the form required. This report must include but not necessarily be limited to: a) a summary of the previous twelve (12) months monitoring results obtained under all monitoring programs required under this environmental authority and a comparison of the

	previous twelve (12) months monitoring results to both the limits set in this environmental authority and to relevant prior results, including data analyses and interpretation to assess the nature and extent of any contamination and the level of **environmental harm** caused as a result of the contamination and the environmentally relevant activity(ies); b) the date on which the samples were taken; c) the time at which the samples were taken; d) the monitoring point at which the sample was taken; e) the **release** flow rate of any authorised discharges to **waters** from each **release** point; f) the results of all monitoring and details of any exceedances with the conditions of this environmental authority and the dates and times these exceedances were reported to the administering authority; g) a summary of all records of quantities of **release**s required to be kept under this environmental authority including the total volume of any authorised discharge(s) to **waters** for the previous yearly period from all **release** points and the individual daily volume of any authorised discharges to **waters** from all **release** points; h) details of all maintenance or work carried out on any discharge **meter**(s) and the resultant impact (if any) on the **release** volume readings; i) details regarding the status of disturbance, progressive rehabilitation associated with the petroleum activities and the schedule of disturbance submitted to the administering authority as part of the **financial assurance** calculations; j) an evaluation / explanation of the data derived from any monitoring programs; k) data analyses and interpretation to assess the nature and extent of any contamination and the level of **environmental harm** caused as a result of the contamination and the environmentally relevant activities; and l) an outline of actions taken to minimise the risk of **environmental harm** from any circumstance, condition or elevated contaminant level identified by the monitoring or recording programs as required by condition A31.
A33	The evaluation and explanation of data for the purposes of the annual monitoring report must be performed by a **suitably qualified person**.
A34	**Documentation and Records Management** A record of all documents required by this environmental authority must be: a) kept for a minimum of five (5) years; and b) be made available to an **authorised person** upon request.
A35	All documents required under this environmental authority must be developed in a way that is consistent with the requirements of this environmental authority.
A36	All plans and monitoring programs required under this environmental authority must be implemented.
A37	**Annual Environmental Report** An Annual Environmental Report must be submitted to the administering authority for the environmental authority. This report must include but not be limited to: a) provide details regarding the status of disturbance, progressive rehabilitation and final rehabilitation associated with project activities and the schedule of disturbance submitted to

	the administering authority as part of the **financial assurance** calculations; b) identify all non-compliances with the conditions and commitments contained in the following documents: i. the Australia Pacific LNG Project – Coordinator-General's Report on the Environmental Impact Statement, dated November 2010; ii. this environmental authority; and iii. the current environmental management plan for the project; iv. any current Operational Plan for the project; and v. any reporting conducted in accordance with condition E1 and/or condition E21. c) provide details regarding complaints relating to **environmental harm** and **environmental nuisance** made during the reporting period; and d) identify any amendments needed to the following documents that relate to the conditions of this environmental authority: e) any current environmental management plan for the project; f) any current Operational Plan for the project; and g) the annual monitoring report required under condition A32.
A38	An Annual Environmental Report is to be lodged with the administering authority not more than 30 calendar days after the anniversary date of the environmental authority.
A39	**CSG Industry Monitoring Group** The holder of this environmental authority must provide data and or information as requested by the CSG Industry Monitoring Group (CIMG) in accordance with their Terms of Reference.
A40	The holder of this environmental authority must supply to the CSG Industry Monitoring Group any reports on cumulative impacts, including: a) regional impacts on terrestrial flora and fauna, biodiversity values, listed species and ecosystems; b) riparian habitats and aquatic ecosystems; c) surface and groundwater **environmental values;** d) groundwater modelling; and e) soils, including ability to support ongoing agricultural production.
A41	**Abrasive Blasting and Surface Coating** Where abrasive blasting or surface coating activities are to be carried out over water, on land below the highest astronomical tide or on land subject to 1:10 year flood regime, the holder of this environmental authority must carry out the activity in accordance with the requirements and procedures outlined in the following Department of Environment and Resource Management guidelines to prevent the **release** of contaminants to **waters**: a) over-water abrasive blasting in marine and other aquatic environments (guideline); and b) over-water abrasive blasting – environmental risk assessment (information sheet).

Schedule A, Table 1 – Authorised Petroleum Activities and Pipeline Location

Petroleum Licence No.	Petroleum Activity	Maximum size and number (where applicable)	Longitude	Latitude
181	**Orana to Talinga CSG Water Pipeline**			
	KP 0 (start point) – Orana Water Transfer Station	20 km	150.5076	-26.9580
	KP 20 (end point) – Talinga Water Treatment Facility		150.3490	-26.8745
	Kenya Spur Pipeline			
	KP 0 (start point) – Mid-point of the Orana to Talinga CSG Water Pipeline	2.2 km	150.4841	-26.9421
	KP 2 (end point) – Kenya Water Treatment Facility Discharge Point 1		150.4831	-26.9529
	KP 2 (end point) – Kenya Water Treatment Facility Discharge Point 2		150.4835	-26.9543
	Orana Water Transfer Station (isolation valve and pig launcher/receiver)	0.2 ha	150.5076	-26.9580
	Talinga Water Treatment Facility (isolation valve and pig launch/receiver)	0.2 ha	150.3490	-26.8745
	Kenya Spur metering and control compound (isolation valve, metering, flow controls, balance tank)	0.5 ha	150.4841	-26.9421
	Temporary Accommodation Facility (including sewage treatment plant)	One (1) with 20ha total disturbance		
	Laydown area	One (1) with 15ha total disturbance		

Schedule B: Water	
Condition number	**Condition**
B1	Contaminants must not be directly or indirectly **released** to any **waters** except as permitted under this environmental authority.
B2	**Release of Treated Sewage Effluent Contaminants to Land** The peak design capacity of the sewage treatment plant under the conditions of this environmental authority must not exceed 1500 equivalent persons.
B3	Sewage pump stations must be fitted with a stand-by pump and a visible or audible high level alarm.
B4	Treated effluent may only be **released** to land at the designated, fenced and delineated contaminant **release** area(s).
B5	The contaminant **release** area(s) must be maintained in a proper and efficient condition so as to provide adequate assimilation, percolation, evaporation and transpiration of the **released** contaminants.
B6	Treated effluent must not be applied by spray irrigation.
B7	Treated effluent must be applied in a manner that does not cause ponding or runoff of effluent beyond the contaminant **release** area(s).
B8	When weather conditions or soil conditions preclude the **release** of contaminants, the contaminants must be directed to on-site storage or lawfully disposed of off-site.
B9	**Quality of Contaminants Released from the Sewage Treatment Works** Treated effluent must comply, at the sampling and in-situ measurement point(s), with each of the **release** limits specified in *Schedule B, Table 1 - Treated Sewage Effluent Standards* for each quality characteristic.
B10	The **release** of contaminants to land must be monitored at the frequency and at the sampling and in-situ measurement point specified in *Schedule B, Table 1 - Treated Sewage Effluent Standards*.
B11	An Erosion and Sediment Control Plan which has been certified by a **suitably qualified person** must be developed prior to the commencement of the petroleum activity(ies) authorised by this environmental authority.
B12	The Erosion and Sediment Control Plan must include but not necessarily be limited to: a) a risk assessment identifying areas on the relevant resource authority(ies) where the risk of erosion from stormwater and overland flows is greatest; b) definition of catchments, drainage systems, receiving environments, land-use patterns, land-use activities and potential contaminants; c) managing and / or diverting uncontaminated stormwater run-off around areas disturbed by

	the petroleum activities or where contaminants or wastes are stored or handled that may contribute to contamination of **waters**; d) ensuring that contaminated stormwater runoff and incident rainfall is collected, treated, reused, or **released** in accordance with the conditions of this environmental authority; e) roofing or minimising the size of areas where contaminants or wastes are stored or handled; f) revegetating disturbed areas as soon as practicable after the completion of works; g) using materials and or processes (e.g. dry absorbents) to clean up spills that will minimise contamination of **waters**; h) placing erosion and sediment control structures to minimise erosion of disturbed areas and prevent the contamination of **waters**; i) an inspection and maintenance program for the erosion and sediment control measures; j) provision for adequate access to maintain all erosion and sediment control measures especially during the wet season from November to April; k) additional erosion and sediment control measures for construction of pipelines on slopes >10%; l) a surface water monitoring program designed to detect impacts from sediment runoff into **waters**; m) identification of remedial actions required to ensure compliance with the conditions of this environmental authority; and n) details of community consultation strategies and processes to be used in further developing and implementing the Erosion and Sediment Control Plan.
B13	The Erosion and Sediment Control Plan must be implemented.
B14	A copy of the Erosion and Sediment Control Plan must be made available to any potentially affected landholder upon request by that landholder.
B15	**Maintenance and Cleaning** The maintenance and cleaning of vehicles and any other equipment or plant must be carried out in areas from where the resultant contaminants cannot be **released** into any **waters**.
B16	**Watercourses, Wetlands and Springs** Unless otherwise authorised under this environmental authority, petroleum activities that require earthworks, vegetation **clearing** and / or placing **fill**, other than that associated with the construction of **linear infrastructure**, is not permitted in or within: a) 100 metres from any **wetland**, lake or **spring**; or b) 100 metres of the **high bank** of any other watercourse.
B17	Works for **linear infrastructure** resulting in **significant disturbance** to a watercourse, **wetland**, lake or **spring** must: a) be no greater than the minimum area necessary for the purpose of the **significant disturbance**; b) be for a maximum period of 10 business days; c) be designed and 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 as amended from time to time*;* and d) upon cessation of the works, be rehabilitated immediately.
B18	Further to condition B17, works for **linear infrastructure** within **wetlands** and lakes listed in *Schedule B, Table 2 – Wetlands and Lakes* may be conducted for a period greater than ten (10) business days.
B19	Pipeline and road construction works may be undertaken in those watercourses listed in *Schedule B, Table 3 – Watercourse Crossings with Extended Work Time*, where there is no practicable alternative for a maximum period of thirty (30) days.
B20	Notwithstanding condition B17, condition B18 and condition B19, an extension to the maximum period of **significant disturbance** to a watercourse may be provided by the administering authority, where: a) written notification of the potential exceedance is provided in writing prior to end of the exceedance of the maximum period required by condition B17 and condition B18; b) reasoning for the exceedance is provided; and c) it is demonstrated that the exceedance has been caused by an unforeseen or emergency situation.
B21	Sediment control measures must be implemented to minimise any increase in water turbidity due to works for **linear infrastructure** in the **bed and banks** of a watercourse, **wetland**, lake or **spring**.
B22	Routine, regular and frequent visual monitoring must be undertaken while carrying out works for **linear infrastructure** and any maintenance of completed works in a watercourse, **wetland**, lake or **spring**.
B23	If, due to works for **linear infrastructure**, water turbidity increases in a watercourse, **wetland**, lake or **spring** outside contained areas, works must cease and the sediment control measures must be rectified to limit turbidity before the works recommence.
B24	**Aquatic Ecology** All water crossings must be in accordance with the construction methods described in the *Australia Pacific Upstream Phase 1 – Orana to Talinga CSG Water Pipeline Environmental Management Plan* (Q-4328-15-MP-0002) Section 17: Surface water and aquatic ecology.
B25	All investigation summaries along with a copy of the Aquatic values Survey Report are to be published on the environmental authority holder's website.
B26	An Aquatic Values Management Plan which has been prepared by a **suitably qualified person** must be developed prior to the commencement of pipeline construction activities.
B27	The Aquatic Values Management Plan required under condition B26 must include but not necessarily be limited to: a) Identification of the representative water course crossings as specified in Appendix 5 of *Australia Pacific LNG Upstream Phase 1 – Environmental Management Plan – Orana to Talinga CSG Water Pipeline* (Q-4328-15-MP-0002) b) wet and dry season aquatic surveys of all watercourse crossings for:

	i. aquatic habitat; ii. nesting, spawning and breeding sites; iii. macrophytes; iv. aquatic macroinvertebrates; v. fish; vi. turtles; and vii. aquatic vertebrates. c) interpretation and analysis of the dry and wet season **environmental values** and ecological condition for the pipeline length; d) identification of site specific **environmental values**; e) identification of the site specific ecological condition; f) identification of actual breeding and nesting sites for listed turtle species; g) identification of existing or likely endangered species habitat; h) identification of site specific crossing method and location ensuring that pipeline construction activities do not impact on identified **environmental values** and ecological condition; i) identification of site specific crossing mitigation measures ensuring that pipeline construction activities do not impact on identified **environmental values** and ecological condition; and j) a pipeline construction schedule which includes, but is not necessarily limited to, minimisation of construction in watercourse crossings during the wet season from November to April.
B28	The Aquatic Values Management Plan required under condition B26 must include a review of the pipeline alignment to ensure the optimal pipeline route is selected, including: a) minimisation of adverse impacts on fauna and significant habitat areas; b) minimisation of impacts on riparian, aquatic and water dependent flora and fauna; c) minimisation of erosion and sediment impacts; d) maintaining water quality and water flow requirements; and e) maximisation of rehabilitation success of achieving longer-term site stability.
B29	If the wet and dry season aquatic surveys required under condition B28 identify a significant impact, the environmental authority holder must: a) review the pipeline alignment route in accordance with condition B28; b) amend the construction program to minimise the identified impact; and /or c) identify and implement additional site specific management measures to protect identified **environmental values**; and/or d) identify and implement alternative construction methods to protect identified **environmental values**.
B30	The holder of this environmental authority must provide a copy of the Aquatic Values Management Plan required under condition B26 to the administering authority prior to commencing pipeline construction activities.
B31	Pipeline construction activities must be undertaken in accordance with the *Australian Pipeline*

	Industry Association Code of Environmental Practice and *APIA Upstream PE Gathering Networks – CSG Code of Practice*, as amended from time to time.
B32	The design of all creek crossings and waterway barrier works should take account of the matters discussed in Waterway barrier works development approvals (*Fish Habitat Management Operational Policy FHMOP 008, DIP&F, July 2009*).
B33	The holder of this environmental authority must ensure that flora and fauna are protected and that disruption to habitat areas are minimised during pipeline construction activities and pipeline operation activities.
B34	Rehabilitation of disturbed riparian areas must include the use of locally sourced species and intensive planting.
B35	**Floodplains** Where the petroleum activities is carried out on **floodplains**, the petroleum activities must be carried out in a way that does not: a) concentrate flood flows in a way that will or may cause or threaten an adverse environmental impact; or b) divert flood flows from natural drainage paths and alter flow distribution; or c) increase the local duration of floods; or d) increase the risk of detaining flood flows; or e) pose an **unacceptable risk** to the safety of persons from flooding; or f) pose an **unacceptable risk** of damage to property from flooding.
B36	**Water Monitoring** The methods of water sampling required by this environmental authority must comply with that set out in the latest edition of the *Queensland Monitoring and Sampling Manual* as amended from time to time. At the time of granting this environmental authority, the latest edition of the *Queensland Monitoring and Sampling Manual* is the *Monitoring and Sampling Manual 2009 – Environmental Protection (Water) Policy 2009 Version 2 September 2010*.

Schedule B, Table 1 - Treated Sewage Effluent Standards

Quality Characteristic	Sampling and in-situ measurement Point Location	Limit Type	Release Limit	Frequency
5-day Biochemical oxygen demand (inhibited)	E.g. Release pipe from sewage treatment plant	maximum	20 mg/L	Monthly
TDS		maximum	1000 mg/L	
TSS		maximum	30 mg/L	
EC		maximum	1600 µS/cm	
pH		range	6.0 to 9.0	
Total Nitrogen		maximum	30 mg/L	
Total Phosphorus		maximum	10 mg/L	
E. Coli		**80th percentile** based on at least 5 samples with not less than 30 minutes between samples.	1000 CFU/100 mL	
		maximum	10000 CFU/100 ml	

Schedule B, Table 2 – Wetlands and Lakes

Pipeline Section	Name of land area	KP (approximate)	Longitude	Latitude
Orana to Talinga CSG Water Pipeline	Wetland Management Area	1.31 – 1.87	150.4970	-26.9512
	Wetland Management Area	2.34 – 2.50	150.4892	-26.9459
	Wetland Management Area	5.86 – 6.06	150.4590	-26.9332
	Wetland Management Area	9.39 – 9.57	150.4238	-26.9299
Kenya Spur	Gilgai Wetland	0.03 – 0.07	150.4839	-26.9426
	Gilgai Plain	0.11 – 1.18	150.4839	-26.9432
	Gilgai Plain	0.30 – 1.10	150.4849	-26.9447
	Gilgai Plain	1.41 – 1.75	150.4885	-26.9521
Kenya Spur Metering Control Compound	Gilgai Plain		150.4839	-26.9426

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Schedule B, Table 3 – Watercourse Crossings with Extended Work Time

Pipeline	Name of water feature	KP (approximate)	Longitude	Latitude
Orana to Talinga CSG Water Pipeline	Nine Mile Creek	2.46	150.4881	-26.9458
	Nine Mile Creek	5.98	150.4579	-26.9331
	Wieambilla Creek	9.65	150.4211	-26.9296
	Cobbareena Creek	12.40	150.4018	-26.9152

Schedule C: Regulated Structures	
Condition number	**Condition**
C1	Regulated structures are not permitted.

Schedule D: Land	
Condition number	**Condition**
D1	Contaminants must not be directly or indirectly **released** to land except as permitted under this environmental authority.
D2	**Soil Management Plan** A Soil Management Plan which has been prepared by a **suitably qualified person** must be developed prior to the carrying out of any petroleum activity(ies) authorised by this environmental authority.
D3	The Soil Management Plan must include, but not necessarily be limited to: a) procedures for identifying soil units within areas to be disturbed by the petroleum activity(ies) at a scale in accordance with the "Guidelines for Surveying Soil and Land Resources, 2nd Edition" (McKenzie et al. 2008), "Australian Soil and Land Survey Handbook, 3rd Edition" (National Committee on Soil and Terrain 2009), "The Australian Soil Classification" (Isbell 2002) and the "Guidelines for agricultural land evaluation in Queensland" (Queensland Department of Primary Industries Information Series QI90005 1990), as amended from time to time; b) procedures for establishing baseline soils information for areas to be disturbed including soil depth, pH, electrical conductivity (EC), chloride, cations (aluminium, calcium, magnesium, potassium and sodium), exchangeable sodium percentage (ESP), particle size and soil fertility (including carbon, nitrogen, phosphorous, potassium, sulphur and micronutrients); c) identification of the types of soils and soil units requiring specific management practices (e.g. saline or sodic soils) relevant to assessment for agricultural suitability, erodibility and rehabilitation; d) for areas of good quality agricultural land, detailed methods to be undertaken to minimise

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	potential impacts to soil productivity; e) detailed horizon and soils compaction management procedures for each soil unit, including **top soil** and **top soil** stockpile management procedures and methods of keeping soil horizons separate on excavation, storage and backfilling so as to minimise the impacts of soil disturbance and promote successful rehabilitation; f) detailed mitigation measures and procedures for each soil unit to manage the risk of adverse soil disturbance in the carrying out of the petroleum activity(ies); and g) a soils impact monitoring program outlining parameters to be monitored, frequency of monitoring and acceptable ranges for each parameter for each soil unit.
D4	The Soil Management Plan must be implemented whenever **significant disturbance** to land occurs as a result of the petroleum activities.
D5	A copy of the Soil Management Procedures must be made available to any potentially affected landholder upon request by that landholder.
D6	**Fauna Management Procedures** Fauna management procedures must be developed prior to the carrying out of any petroleum activities authorised under this environmental authority.
D7	The fauna management procedures must be certified by a **suitably qualified person**.
D8	The fauna management procedures must ensure that the petroleum activities are carried out in a manner that minimises the risk of injury, harm, or entrapment to wildlife and stock.
D9	The fauna management procedures must include training and awareness of staff and contractors.
D10	Planned fauna handling must be undertaken by a **suitably qualified person**.
D11	The fauna management procedures must be implemented.
D12	**Chemical and Fuel Storage** All explosives, hazardous chemicals, corrosive substances, toxic substances, gases, dangerous goods, flammable and combustible liquids (including petroleum products and associated piping and **infrastructure**) must be stored and handled in accordance with the relevant Australian Standard where such is available.
D13	Notwithstanding the requirements of any Australian Standard, any liquids stored on site that have the potential to cause environmental harm must be stored in, or serviced by, an effective containment system that is impervious to the materials stored and managed to prevent the **release** of liquids to **waters** or land.
D14	Where no relevant Australian Standard is available for the chemical and / or fuel storage activity, the following requirements apply: a) storage tanks must be **bunded** so that the capacity and construction of the **bund** is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and

	b) drum storages must be **bunded** so that the capacity and construction of the **bund** is sufficient to contain at least 25% of the maximum design storage volume within the **bund**.
D15	All containment systems must be designed to minimise rainfall collection within the system.
D16	**Pipelines** The holder of this environmental authority must: a) limit the pipeline **right of way** width to a maximum of 30 metres; b) minimise disturbance to land in order to prevent land degradation; c) ensure that for land that is to be significantly disturbed by petroleum activities (except in areas of highly erosive soils), soil excavation is undertaken so that: i. the top layer of the soil profile is removed; ii. subsoils are kept separate during the excavation, storage and backfilling of pipeline trenches; iii. all soils are stored in a manner that their physical and chemical properties are preserved; and iv. soils are used for rehabilitation purposes; d) pipeline trenches are left open for the minimum time practicable; e) the total length of pipeline trench open at any one time is minimised as far as practicable; and f) detailed mitigation measures and procedures are in place to manage the risk of adverse soil disturbance in the carrying out of the petroleum activities.

Schedule E: Disturbance to Land	
Condition number	**Condition**
E1	**Minimising Disturbance to Areas of Ecological Value** Prior to conducting petroleum activities that involve **significant disturbance** to land, an assessment must be undertaken of the condition, type and ecological value of soils and vegetation in such areas where the activity is proposed to take place.
E2	The assessment required by condition E1 must be undertaken by a **suitably qualified person** and include, but not necessarily be limited to: a) the carrying out of field validation surveys; b) observations and mapping of: i. Category A, B or C Environmentally Sensitive Areas; ii. **State Significant Biodiversity Values**; iii. **wetlands**; and iv. the presence of species classed as endangered, vulnerable, rare or threatened under the *Nature Conservation Act 1992*; and c) baseline soils quality data for soil to be significantly disturbed as provided for in the Soils Management Plan;

	d) identification of the vegetation communities present (including species composition and regional ecosystem type[1] for native vegetation communities) within each area(s) to be disturbed.
E3	The holder of this environmental authority, when carrying out petroleum activities must: a) avoid, minimise or mitigate (in order of preference) any impacts on areas of vegetation or other areas of ecological value; b) minimise the risk of injury, harm, or entrapment to wildlife and stock; c) minimise disturbance to land that may otherwise result in land degradation; d) ensure that for land that is to be significantly disturbed by petroleum activities: i. the top layer of the soil profile is removed; ii. stockpiled in a manner that will preserve its biological and chemical properties; iii. use for rehabilitation purposes (in accordance with condition I2). e) prior to carrying out field based activities, make all relevant staff, contractors or agents carrying out those activities, aware of the location of any Category A, B or C Environmentally Sensitive Areas and the requirements of this environmental authority.
E4	Any vegetation **clearing** authorised under this authority must be stockpiled in a manner that facilitates respreading or salvaging and does not impede vehicle, stock or wildlife movements.
E5	**Remnant vegetation** must not be cleared for the purposes of camps, borrow pits, vehicle access tracks or additional work areas associated with the construction of the pipeline.
E6	Despite condition E5, **clearing** of **remnant vegetation** for additional work areas may be undertaken within **remnant vegetation**, subject to the following: a) a demonstration that no reasonable or feasible alternative exists in a Pre-Clearance Plan; b) the **clearing** is located and carried out in areas according to the following order of preference: i. pre-existing areas of **significant disturbance** within the **remnant vegetation**; ii. areas within the remnant of lower environmental value (e.g. presence of weed or **pest** species); iii. areas where **clearing** of **remnant vegetation** is unavoidable. c) be no greater than the minimum area necessary for the purpose of the additional work area.
E7	The Pre-clearance Plan in accordance with condition E6(a) must be provided to the administering authority at least 20 business days prior to commencement of **clearing remnant vegetation**.
E8	If within twenty (20) business days following the submission of the Pre-clearance Plan as required by condition E7, the administering authority provides comment, the holder of this environmental authority must:

[1] Regional ecosystem type should be established using the most current version of the Qld Government's *"Methodology for Survey and Mapping of Regional Ecosystems and Vegetation Communities in Queensland".* Assessment of the vegetation communities should be sufficient to establish any inherent variation within a single regional ecosystem type.

	a) implement that comment in the finalisation of the Pre-clearance Plan; and b) submit the finalised amended Pre-clearance Plan within forty (40) business days after the administering authority provided comments; and c) implement the amended Pre-clearance Plan.
E9	For any **clearing** conducted in accordance with condition E6, the holder of this environmental authority must record and submit to the administering authority with each annual return the following information: a) The amount of **remnant vegetation** cleared; b) The location of the **clearing**; c) The purpose the area was cleared for; and d) A record of the assessment required by conditions E1 and E2.
E10	**Environmentally Sensitive Areas** A maximum area of 73 hectares (ha) of vegetation may be cleared within the PPL181 boundary for the pipeline **right of way**, associated above ground infrastructure and additional work areas comprising: a) regional ecosystems with an 'endangered' biodiversity status – 0.3 ha b) regional ecosystems with an 'of concern' biodiversity status – 4.3 ha c) regional ecosystems with a 'no concern at present' biodiversity status – 4.7 ha
E11	**Essential Habitat** No **clearing** of Essential Habitat is authorised under this environmental authority.
E12	**Offsets** The holder of this environmental authority must comply with any environmental offset agreement made in accordance with the conditions of this environmental authority.
E13	**Land Release Management Plan** The holder of this environmental authority must develop and implement a Land Release Management Plan for the relevant area that incorporates land **release** by sewage effluent irrigation, **coal seam gas water** for dust suppression and hydrostatic water testing.
E14	The Land Release Management Plan must be able to demonstrate the following: a) the efficient application of water or waste using best practice methods; b) control of sodicity in the soil; c) minimal degradation of soil structure; d) control of the build-up, from water, waste or other sources, of nutrients and contaminants in the soil and subsoil; e) prevention of subterranean flows of contaminants to **waters**; f) prevention of impact of infiltration on groundwater resources; g) prevention of run-off; h) prevention of surface ponding; i) prevention of spraydrift or overspray from the relevant area; j) prevention of damage to vegetation; and

	k) reporting the results of monitoring, and an assessment of the impact on the groundwater in the relevant area of the **release** of the water or waste.
E15	The holder of this environmental authority may allow pipeline trench water to be **released** to land in accordance with E13 for disposal provided that the water does not have any properties nor contain any organisms or other contaminants in concentrations that are capable of causing **environmental harm**
E16	**Management of Hydrostatic Test Water** The holder of this environmental authority must develop a hydrostatic water management plan which must include but not be limited to the following: a) details of the impacts of hydrostatic test water activities along the pipeline route to land; b) source water quality data and characteristics of additives (particularly biocides); c) the proposed storage, treatment and disposal methods; and d) site specific mitigation measures including monitoring and reporting.
E17	The hydrostatic water management plan must be submitted to the administering authority for review at least 30 business days prior to the commencement of hydrotest activities.
E18	If, within 20 business days following the submission of the hydrostatic water management plan the administering authority provides comments on the submission, the holder of this environmental authority must: a) implement that comment into the finalisation of the amended hydrostatic water management plan; and b) submit the finalised amended hydrostatic water management plan within 40 business days after the administering authority provided comments; and c) implement the amended hydrostatic water management plan.
E19	The holder of this environmental authority must ensure that hydrostatic test water **released** to land does not exceed the water quality limits specified in *Schedule E, Table 2 – Limits for the disposal of hydrostatic test water to land*.
E20	Any **release** of hydrostatic test water authorised by condition E19 must be located at least 100 metres from the nearest watercourse and carried out in a manner that ensures that: a) vegetation is not damaged; b) soil erosion and soil structure damage is avoided; and c) hydrotest water does not migrate outside the nominated land **discharge areas**.
E21	The holder of this environmental authority must undertake integrity testing of pipe sections where pipe joints fall within a watercourse, prior to installation of these pipe sections.
E22	The holder of this environmental authority must ensure that the **release** of any hydrostatic test water is in accordance with the Land Release Management Plan required by condition E13.

Schedule E, Table 2 – Limits for the disposal of hydrostatic test water to land

Parameter	Maximum Value
pH	6.5-8.5 (Range)
Aluminium (mg/L)	20
Arsenic (mg/L)	2.0
Boron (mg/L)	0.5
Cadmium (mg/L)	0.05
Chromium (mg/L)	1
Copper (mg/L)	5
Iron (mg/L)	10
Fluoride	2
Lead (mg/L)	5
Manganese	10
Mercury	0.002
Nickel	2
Selenium	0.05
Silver	5.0
Chloride (mg/L)	800
Total Petroleum Hydrocarbons	10
Vanadium	0.5
Zinc (mg/L)	5
Nitrogen (mg/L)	35
Phosphorus (mg/L)	10
Electrical Conductivity (µS/cm)	2900

Schedule F: Environmental Nuisance	
Condition number	**Condition**
F1	**Odour, dust and other airborne contaminants**

	The **release** of odour, dust or any other airborne contaminant(s), or light from the petroleum activities must not cause an **environmental nuisance** at any **sensitive place** unless alternative arrangements are in place with an affected person(s) at a **sensitive receptor**.
F2	**Nuisance monitoring (other than noise)** When the administering authority advises of a complaint alleging nuisance other than noise, the holder must investigate the complaint as soon as practicable.
F3	The administering authority must be advised in writing of the action proposed or undertaken to resolve the complaint within three (3) business days of completing the complaint investigation.
F4	When requested by the administering authority, monitoring must be undertaken as specified by the administering authority, within a reasonable and practical timeframe nominated by the administering authority to investigate any complaint of **environmental nuisance** at any **sensitive place**.
F5	The results of the investigation (including an analysis and interpretation of the monitoring results) and the abatement measures implemented must be provided to the administering authority within ten (10) business days of receiving the advice under condition F4, unless a longer time is agreed to in writing by the administering authority.
F6	If monitoring in accordance with condition **Error! Reference source not found.** indicates that emissions exceed the limits set in this environmental authority or are causing **environmental nuisance**, then: a) the complaint must be addressed including the use of alternative dispute resolution services if required; and / or b) abatement or attenuation measures must be implemented so that the authorised petroleum activities does not result in further **environmental nuisance**.
F7	**Noise** A Noise Management Plan which has been certified by a **suitably qualified person** must be developed prior to the carrying out of any petroleum activity(ies) authorised by this environmental authority.
F8	The Noise Management Plan must include, but not necessarily be limited to: a) a commitment by the Chief Executive Officer for the holder of this environmental authority, or their delegate, to ensure adequate allocation of staff and resources to the establishment and operation of the Noise Management Plan; b) definition of roles, responsibilities and authorities within the staffing of the Noise Management Plan; c) delivery of training to staff and contractors and maintenance of competencies; d) risk / constraint analysis methods to be undertaken prior to any new operation (e.g. drill site) or installation of new equipment that has the potential to create noise nuisance; e) procedures and methods to undertake assessments to determine compliance with the noise limits in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise limits at Sensitive Receptors for Construction* in the event of a **valid complaint** being received and when there are no alternative arrangements in place, taking in to account any tonal or **impulsive noise** impacts;

	f) procedures for handling noise complaints; g) community liaison and consultation procedures including but not limited to consultation for when night time petroleum activities (i.e. between 10:00 pm and 6:00 am) are likely to exceed 25 dBA; h) procedures for managing records associated with all aspects of the Noise Management Plan including standardised forms for recording monitoring results and complaints; i) details of petroleum activities and measured and / or predicted noise levels of noise sources associated with those activities; j) reasonable and practicable control or abatement measures (including relocating the activity, altering the hours of operation, or having an alternate arrangement in place with any potentially affected person) that can be undertaken to ensure compliance with the noise limits in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise limits at Sensitive Receptors for Construction;* k) the level of noise at **sensitive receptor**s that would be achieved from implementing the measures detailed under condition 0(j); and l) mediation processes to be used in the event that noise complaints are not able to be resolved.
F9	The Noise Management Plan must be implemented.
F10	Prior to undertaking petroleum activities that will result in short-term, medium-term or **long term noise events** that are likely to impact on a **sensitive receptor**, any potential noise emissions from the relevant petroleum activity(ies) must be modelled to calculated to demonstrate that noise emissions will not exceed the noise levels specified in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise limits at Sensitive Receptors for Construction.*
F11	The emission of noise from the petroleum activities authorised under this environmental authority must not result in levels greater than those specified in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction* in the event of a **valid complaint** about noise being made to the administering authority.
F12	If the noise subject to a complaint is tonal or impulsive, the adjustments detailed in *Schedule F, Table 3 – Adjustments to be Added to Noise Levels at Sensitive Receptors* are to be added to the measured noise level(s) to derive $L_{Aeq, adj, 15\ min}$
F13	Where alternative arrangements are in place with an affected person(s) at a sensitive receptor as referred to by condition F9(j), the noise limits in *Schedule F, Table 1 - Noise Limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction* do not apply at that **sensitive receptor** for the duration for which the alternative arrangements are in place.
F14	**Low Frequency Noise** Notwithstanding condition F12, emission of any low frequency noise must not exceed the following limits in the event of a **valid complaint** about low frequency noise being made to the administering authority: a) 60 dB(C) measured outside the **sensitive receptor**; and

	b) the difference between the external A-weighted and C-weighted noise levels is no greater than 20 dB; or c) 50 dB(Z) measured inside the **sensitive receptor**; and d) the difference between the internal A-weighted and Z-weighted noise levels is no greater than 15 dB.
F15	**Noise Monitoring** Noise monitoring must be undertaken as soon as practicable when requested by the administering authority.
F16	The results of noise monitoring must be reported to the administering authority within three (3) business days of completion of the monitoring event.
F17	Noise monitoring and recording must include, but not necessarily be limited to: a) $L_{AN,T}$ (where N equals the statistical levels of 1, 10 and 90 and T=15 mins); b) $L_{Aeq\ adj,\ 15\ mins}$; c) background noise level as $L_{A\ 90,\ 15\ mins}$; d) Max $L_{pA,\ 15\ mins}$; e) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to measured noise levels levels; f) atmospheric conditions including temperature, relative humidity and wind speed and directions; g) effects due to any extraneous factors such as traffic noise; h) location, date and time of monitoring; i) if the complaint concerns low frequency noise, Max $L_{pZ,\ 15\ mins}$; and j) if the complaint concerns low frequency noise, one third octave band measurements in dB(LIN) for centre frequencies in the 10 – 200 Hz range for both the noise source and the background noise in the absence of the noise source.
F18	Noise must be measured in accordance with the prescribed standards in the *Environmental Protection Regulation 2008*.
F19	The method of reporting of noise levels and background sound pressure levels must comply with the Department of Environment and Resource Management's *"Noise Measurement Manual" 2000* or *Australian Standard 1055*, as amended from time to time.
F20	**Vibration and Blasting** A Blast Management Plan must be developed in accordance with Australian Standard 2187 by a **suitably qualified person** prior to each blasting activity.
F21	The Blast Management Plan must include measures to minimise the likelihood of any adverse effects being caused by airblast overpressure and / or ground borne vibrations at any **sensitive receptor** and demonstrate current best practice environmental management.
F22	All blasting must be carried out in a proper manner by a **suitably qualified person**.
F23	All blasting must be carried out in accordance with the Blast Management Plan.

F24	Noise from blasting operations must not exceed an airblast overpressure level of 120 dB (linear peak) at any time, when measured at or extrapolated to any **sensitive receptor**.
F25	Ground-borne vibration peak particle velocity caused by blasting operations must not exceed 10 mm/s at any time, when measured at or extrapolated to any **sensitive receptor**.
F26	**Blast and Vibration Monitoring** Monitoring and recording of the air blast overpressure and ground borne vibration of every blast must be undertaken.
F27	Blast and vibration monitoring must include but not necessarily be limited to: a) maximum instantaneous charge; b) location of the blast within the site (including any bench level); c) airblast overpressure level (dB Linear Peak); d) peak particle velocity (mm / s); e) location, date and time of recording; f) measurement instrumentation and procedure; g) meteorological conditions for blast monitoring (including temperature, relative humidity, temperature gradient, cloud cover, wind speed and direction); and h) distances from the blast site to potentially noise-affected buildings or structures.

Schedule F, Table 1 – Noise Limits at Sensitive Receptors for Operation

Time Period	Metric	Short Term Noise Event	Medium Term Noise Event	Long Term Noise Event
7:00 am – 6:00 pm	$L_{Aeq,adj,15\ min}$	45 dBA	43 dBA	40 dBA
6:00 pm – 10:00 pm	$L_{Aeq,adj,15\ min}$	40 dBA	38 dBA	35 dBA
10:00pm – 7:00am	$L_{Aeq,adj,15\ min}$	28 dBA (measured indoors at any sensitive receptor)		

Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction

Time Period	Metric	Monday to Saturday	Sunday and Public Holidays
7:00 am – 6:00 pm	$L_{Aeq,adj,15\ min}$	43 dBA	40 dBA
6:00 pm – 10:00 pm	$L_{Aeq,adj,15\ min}$	38 dBA	35 dBA
10:00 pm – 6:00 am	$L_{Aeq,adj,15\ min}$	28 dBA	28 dBA
	$L_{A}Max$	55 dBA	55 dBA

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6:00 am – 7:00 am	$L_{Aeq,adj,15\ min}$	38 dBA	35 dBA

Noise limits in Table 1 and Table 2 are taken to be measured noise levels outside a sensitive receptor unless stated otherwise.

L_{Aeq} is to be measured over any 15 minute period

L_{ABG} is the deemed background noise levels which for the purposes of Schedule F, Table 1 - Noise Limits at Sensitive Receptors for Operation and Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction are:

7:00 am – 6:00 pm: 35 dBA

6:00 pm – 10:00 pm: 30 dBA

10:00 pm – 6:00 am: 25 dBA

6:00 am – 7:00 am: 30 dBA

Schedule F, Table 3 – Adjustments to be Added to Noise Levels at Sensitive Receptors

Noise Characteristic	Adjustment to Noise
Tonal characteristic is just audible	+ 2 dBA
Tonal characteristic is clearly audible	+ 5 dBA
Impulsive characteristic is just audible	+ 2 dBA
Impulsive characteristic is clearly audibly	+ 5 dBA

Schedule G: Air	
Condition number	**Condition**
G1	**Fuel burning or Combustion Equipment** This environmental authority does not authorise the use of fuel burning equipment that is capable of burning at least 500kg of fuel in an hour.

Schedule H: Waste	
Condition number	**Condition**
H1	All general waste must only be removed from the site and sent to a recycling facility or disposal facility licensed to accept the waste under the *Environmental Protection Act 1994*.
H2	All regulated waste must only be removed from the site by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994* and sent to a recycling facility or disposal facility licensed to accept the waste.
H3	Waste must not be burned on the site, unless it is vegetation and is authorised in writing under the *Forestry Act 1959*.

H4	**Coal Seam Gas Water Use for Dust Suppression** **Coal seam gas water** produced from authorised petroleum activities may only be used for dust suppression: a) on roads; and b) for construction and operational purposes for the petroleum activities authorised by this environmental authority.
H5	**Coal seam gas water** produced from authorised petroleum activities may only be used for dust suppression as provided for in condition 0 provided that: a) the water quality meets the limits specified in *Schedule H, Table 1 – Dust suppression water contaminant release limits* for each of the water quality characteristics; and b) on local government controlled roads, written approval from the relevant Local Government has been given to the holder of this environmental authority.
H6	Use of **coal seam gas water** for dust suppression in accordance with conditions 0 and 0 must be carried out in a manner such that: a) vegetation is not damaged; or b) soil quality is not adversely impacted; or c) there is no surface ponding or runoff of the coal seal gas water from the application area; or d) deep drainage below the root zone of any vegetation is minimised; or e) the quality of shallow **aquifers** is not adversely affected; or f) there are no **release** of **coal seam gas water** to **waters**.

Schedule H, Table 1 – Dust suppression water contaminant release limits

Water Quality Characteristics	Unit	Limit	Limit Type
pH	pH Units	6.0 to 9.0	Range
Sodium adsorption ratio	ratio	8	**80th percentile**
		12	Maximum
Total dissolved solids	mg/L	2000	Maximum
Total petroleum hydrocarbons	mg/L	10	Maximum

Schedule I: Rehabilitation	
Condition number	**Condition**
I1	**Rehabilitation Plan**

	A Rehabilitation Plan which has been certified by a **suitably qualified person** must be developed prior to the carrying out of the petroleum activities.
I2	The Rehabilitation Plan must include strategies for the determination of final land use(s) and rehabilitation goals and details of how rehabilitation objectives will be achieved. The Rehabilitation Plan must include: a) a rehabilitation hierarchy for: i. reinstating a native ecosystem as similar as possible to the original ecosystem as the preferred option; then ii. establishing an alternative outcome with a higher environmental value than the previous land use; then iii. reinstating the previous land use (e.g. grazing or cropping); and b) methods to achieve rehabilitation goals including, but not necessarily being limited to: i. establishing final land use(s) in consultation with affected landholder(s) and the administering authority; ii. identifying suitable analogue[2] sites to measure rehabilitation success that may either be the pre-disturbed area or another area that has equivalent values and characteristics as the intended final land use(s); and iii. for sites that are being reinstated to a land use other than a native ecosystem, the Rehabilitation Plan must identify any additional and relevant indicators to be measured at both the analogue and rehabilitation site(s) so as to assess progressive and final rehabilitation success for that land use; iv. for sites that are being reinstated to native ecosystems and the **analogue site** is the pre-disturbed site, the Rehabilitation Plan must include indicators that will be able to measure success against the progressive and final rehabilitation criteria in this environmental authority; v. identification of any land use constraints which have resulted from the petroleum activities; vi. residual pollution risks with strategies for managing and mitigating them; vii. landscape planning and landform design principles to achieve **stable** landforms including slope designs, erosion controls and drainage lines; viii. integrating rehabilitated areas so they are compatible with the surrounding landscape, including linking rehabilitated areas of native vegetation with undisturbed native vegetation to provide larger areas and wildlife corridors where feasible; ix. ensuring that significantly disturbed areas are rehabilitated progressively and that the progressive rehabilitation criteria are routinely measured; x. site preparation such as re-profiling, re-instating surface drainage systems; xi. **top soil** management such as **top soil** handling and stockpiling to preserve soil fertility and biota, respreading techniques, planned thickness, ripping, **top soil** treatments / amendments and mulching in consideration of analogue data; xii. flora to be established, including required species diversity, abundance and

[2] The latest version of the Qld Government's *"Biocondition, a Condition Assessment Framework for Terrestrial Biodiversity in Queensland, Assessment Manual"* and accompanying document *"Methodology for the Establishment and Survey of Reference Sites for Biocondition"* may be used to establish suitable **analogue sites** for like native vegetation communities.

	composition and projective cover in consideration of analogue data; xiii. plant propagation and / or supply methods including using seeds / spores of local provenance where feasible; xiv. establishment methods to maximise rehabilitation success such as seed treatments, seed spreading, timing of seeding to suit best local climatic conditions, hydroseeding, transplanting; xv. weed control; xvi. sourcing habitat structures for native fauna and installation methods in consideration of matching analogue data; xvii. ongoing maintenance program for rehabilitated areas; and xviii. rehabilitation monitoring program as required by conditions I13 and I14 of this environmental authority.
I3	The Rehabilitation Plan must be implemented.
I4	**Progressive Rehabilitation for Significantly Disturbed Land** Pipelines trenches must be backfilled immediately after pipe laying and rehabilitated as soon as practicable but not longer than three (3) months after completion.
I5	During backfilling of pipeline trenches, soils must be replaced in accordance with the Soil Management Plan required by condition D2.
I6	Backfilled and rehabilitated pipeline trenches must: a) be a **stable** landform; b) exhibit no subsidence or erosion gullies for the life of the operational pipeline; and c) be re-profiled to a level consistent with surrounding soils; and d) be re-profiled to original contours and established drainage lines; and e) be visually consistent with the surround land features; and f) be vegetated with groundcover as a minimum to ensure that erosion is minimised.
I7	Progressive rehabilitation of **significantly disturbed land** caused by the carrying out of the petroleum activities (other than constructing pipelines) which is not required for the ongoing conduct of the petroleum activities must commence as soon as practicable, but not longer than nine (9) months following the completion of any construction or operational works associated with the petroleum activity(ies).
I8	Progressive rehabilitation of **significantly disturbed land** caused by the carrying out of the petroleum activities must be undertaken in accordance with the Schedule of Disturbance as submitted to the administering authority as part of the **financial assurance** calculations.
I9	Progressive rehabilitation of **significantly disturbed land** caused by the carrying out of the petroleum activity(ies) must: a) remediate any contaminated land (e.g. contaminated soils, decommissioned dams containing salt); b) reshape all **significantly disturbed land** to a **stable** landform; c) reprofile all **significantly disturbed land** to original contours;

	d) on all significantly disturbed land: i. re-establish surface drainage lines; ii. reinstate the top layer of the soil profile; iii. establish groundcover to ensure that erosion is minimised; iv. establish vegetation of floristic species composition found in **analogue sites**; e) undertake rehabilitation in a manner such that any actual and potential acid sulfate soils in or on the site are either not disturbed, or submerged, or are treated to prevent and / or minimise **environmental harm**.
I10	**Final Acceptance Criteria for Significantly Disturbed Land** All **significantly disturbed land** caused by the carrying out of the petroleum activities must be rehabilitated to meet the following final acceptance criteria: a) For all land use(s): i. all **significantly disturbed land** is reinstated to the pre-disturbed soil suitability class; ii. the landform is safe for humans and fauna; iii. the landform is **stable** with no subsidence or erosion gullies for at least three (3) years; iv. all **significantly disturbed land** is reinstated so that the distribution of vegetation communities represents the **analogue site**; v. the water quality of any residual **void** or water bodies constructed by the petroleum activities meets criteria for subsequent uses and does not have potential to cause **environmental harm**; vi. there is no ongoing contamination to **waters**; vii. there is no ongoing contamination to groundwater from dams or monocells (demonstrated via groundwater monitoring and leak detection monitoring systems); and viii. the maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the petroleum activity(ies). b) Additional requirements for sites that are being reinstated to native ecosystems: i. each vegetation community must be re-established so that each of the following rehabilitation parameters are maintained for at least three (3) years: a. the rehabilitated site shows distinct and progressive re-establishment of the various strata which characterise the vegetation community in the **analogue site**; b. all dominant species within each strata are re-established at densities equivalent to that of the **analogue site**; c. notwithstanding 0(b)(i)(a) and 0(b)(i)(b), a minimum of 70% **species richness** and species diversity is observed when compared to the relevant **analogue site**; d. a minimum of 50% **foliage cover** is observed when compared to the relevant **analogue site**; e. each vegetation community must be rehabilitated and maintained until it can be demonstrated that it is resilient and self-sustaining (demonstrated

	by reproduction and colonisation); and f. A minimum equal density of habitat structures, including but not limited to litter cover, fallen woody material and hollow logs, have been installed at numbers and densities no lower than the **analogue site**.
I11	Notwithstanding condition 0, all buried pipelines must be decommissioned in accordance with the requirements of Australian Standard 2885, as amended from time to time.
I12	Despite condition 0, any dam may be decommissioned for a beneficial use provided that it: a) no longer contains contaminants that will migrate in to the environment; and b) the administering authority and the landholder agree in writing that the dam will be used by the landholder following the cessation of the petroleum activities.
I13	**Rehabilitation Monitoring Program** A Rehabilitation Monitoring Program which has been certified by a **suitably qualified person** must be developed by 1 May 2013.
I14	The Rehabilitation Monitoring Program must include, but not necessarily be limited to: a) methods to measure subsidence and erosion rates at rehabilitated buried transmission pipeline corridors and buried flow lines; b) monitoring of indicators identified in the Rehabilitation Plan at **analogue sites** to measure progressive and final rehabilitation success relevant to the final land use(s); and c) frequency and seasonality of monitoring **analogue sites** and rehabilitated areas to assess rehabilitation success; and d) identification of the experimental design for analysing analogue and rehabilitated site data including statistical methods of analyses.
I15	The Rehabilitation Monitoring Program must be implemented.
I16	**Monitoring of Progressive Rehabilitation** Regular maintenance and at least yearly monitoring of rehabilitated areas must take place to measure compliance with condition 0 and 0.
I17	**Monitoring of Final Rehabilitation Success** Final acceptance criteria are deemed to be met when monitoring of rehabilitated areas demonstrate compliance with the requirements of condition 0 for three (3) consecutive years.
I18	**Buried Pipeline Rehabilitation Monitoring** The holder of this environmental authority must monitor rehabilitated buried pipeline corridors for subsidence and erosion at least every 20 business days for the first 120 business days after rehabilitation.

Schedule J: Project Infrastructure and Decommissioning	
Condition number	**Condition**
J1	All above ground petroleum **infrastructure** must be removed from the relevant petroleum

	authority prior to the surrender of this authority, except where agreed in writing by the administering authority and the current landowner.
J2	Prior to the commencement of **decommissioning** or abandonment activities, the scope of work for **decommissioning** or abandonment of project **infrastructure** shall be developed and agreed to with the administering authority.
J3	The holder of this authority must decommission the pipeline to a situation where ongoing, or potential **environmental harm** is prevented or minimised. As a minimum, the pipeline must be decommissioned such that: a) it no longer contains hazardous contaminants; b) it is left in **stable** condition; c) all the above ground **infrastructure** is removed; and d) all areas disturbed by above ground **infrastructure** are rehabilitated in accordance with the requirements of this authority.

Schedule K: Community Issues

Condition number	Condition
K1	A record of all **valid complaint**s and incidents causing **environmental harm**, and actions taken in response to the **valid complaint** or incident must be kept.
K2	The following details for all **valid complaint**s received must be recorded: a) name, address and contact number for **valid complainant;** b) time and date of **valid complaint;** c) reasons for the complaint as stated by the **valid complainant;** d) investigations undertaken in response to the **valid complaint;** e) conclusions formed; f) actions taken to resolve the **valid complaint;** g) any abatement measures implemented to mitigate the cause of the **valid complaint;** and h) name and contact details of the person responsible for resolving the **valid complaint.**

Schedule L: Notification Procedures

Condition number	Condition
L1	The Pollution Hotline must be notified as soon as reasonably practicable, but within 48 hours after becoming aware of: a) any unauthorised disturbance to land; or b) **releases** to land of greater than 5,000 L of **coal seam gas water**; or c) **releases** to land of greater than 200L of hydrocarbons; or d) **releases** of any volume of contaminants to water; or e) any unauthorised **release** of contaminants.

L2	The notification of emergencies or incidents as required by condition L1 must be submitted to the administering authority using an *Incident Notification (chapter 5a activities)(EM706)*.
L3	Unless a longer time is agreed to in writing by the administering authority, a written report must be provided to the administering authority within 10 business days of notification under condition L1 including the following (where relevant to the emergency or incident): a) the root cause of the emergency or incident; b) the confirmed quantities and types of any contaminants involved in the incident; c) results and interpretation of any analysis of samples taken at the time of the emergency or incident (including the analysis results of any impact monitoring); d) a final assessment of the impacts from the emergency or incident including any actual or potential **environmental harm** that has occurred or may occur in the longer term as a result of the **release**; e) the success or otherwise of actions taken at the time of the incident to prevent or minimise **environmental harm**; f) results and current status of landholder consultation, including commitment to resolve any outstanding issues / concerns; and g) actions and / or procedural changes to prevent a recurrence of the emergency or incident.

Part 2 – Conditions applicable to the Condabri to Talinga CSG Water Pipeline

Environmentally relevant activity(ies)	Location(s)
Non-Scheduled Petroleum Activity Petroleum Pipeline Licence - PPL	PPL177

Schedule A: General Conditions	
Condition number	**Condition**
A1	In the carrying out of the petroleum activities, the holder of this environmental authority must not exceed the number and maximum size for each of the specified petroleum activities listed in *Schedule A, Table 1 – Authorised Petroleum Activities and Pipeline Location.*
A2	The pipeline corridor must be constructed within the locations outlined in *Schedule A, Table 1 – Authorised Petroleum Activities and Pipeline Location.*
A3	**Prevent or Minimise Likelihood of Environmental Harm** This environmental authority does not authorise **environmental harm** unless a condition contained in this environmental authority explicitly authorises that harm. Where there is no condition, the lack of a condition shall not be construed as authorising harm.
A4	**Maintenance of Measures, Plant and Equipment** The holder of the environmental authority must: c) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority; d) maintain such measures, plant and equipment in their proper and effective condition; and e) operate such measures, plant and equipment in a proper and effective manner.
A5	No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration materially increases, or is likely to increase, the **environmental harm** caused by the petroleum activities.
A6	**Compliance with Australian Pipeline Industry Association Code of Environmental Practice** The holder of this environmental authority must undertake petroleum activities in relation to the operation of petroleum pipelines in accordance with the *Australian Pipeline Industry Association Code of Environmental Practice – Onshore Pipelines, October 2009* (the code) or subsequent versions thereof. To the extent of any inconsistency between the conditions of this environmental authority and the Code, the conditions of this authority prevail.
A7	**Operational Plan** Prior to commencement of the petroleum activities, an Operational Plan must be developed and submitted to the administering authority that provides detailed information about the petroleum activities to be carried out under this environmental authority.

A8	The petroleum activities identified in the Operational Plan must set out the maximum scope of the petroleum activities as outlined in the Environmental Management Plans planned for the stated period of the Operational Plan.
A9	The Operational Plan must be consistent with the requirements of this environmental authority and include, but not be limited to: a) a stated period for the Operational Plan which is at least one (1) year but does not exceed three (3) years duration and which specifies an end date; b) a description of the existing and all proposed petroleum activities under the period of the Operational Plan; c) a map or series of maps that: i. record the location of all **infrastructure** and its unique reference name / number that exists at the commencement of the period of the Operational Plan, including but not necessarily being limited to: a. pipeline; b. sewage treatment facility, c. inlet stations; d. turn around areas; e. main line valves; and f. access tracks. ii. show the location of all **programmed and approved infrastructure** that will be developed during the period of the Operational Plan, including the items listed under condition A9(c)(i) and their unique reference name / number, if applicable; iii. show major environmental features such as **waters**, **sensitive place**s and environmentally sensitive areas; and d) spatial datasets (GIS) which depict those requirements under condition A9(c)(i), A9(c)(ii) and A9(c)(iii) in shapefile format.

A10	The Operation Plan must contain a record of **significant disturbance** to land as a result of existing and **programmed and approved infrastructure** during the period of the Operational Plan, which must include, but not necessarily be limited to the following:
	a) as at the commencement of the Operational Plan period:
	i. minimum undisturbed area;
	ii. maximum existing disturbed area;
	iii. total areas(s) of disturbance to Category B and C Environmentally Sensitive Areas by area type (e.g. Of concern RE, Endangered RE);
	iv. total area(s) rehabilitated (ha);
	v. identification of rehabilitated areas by category, including age and status of rehabilitation;
	vi. maps showing rehabilitated areas by category;
	vii. the results of the Rehabilitation Monitoring Program undertaken on rehabilitation carried out under the previous Operational Plan(s) and an assessment in relation to the requirements and acceptance criteria set out in this environmental authority; and
	b) **programmed and approved infrastructure** for the current Operational Plan period:
	i. maximum area(s) to be disturbed (ha);

	ii. a description of each area(s) to be disturbed including tenure, coordinates, general site characteristics and disturbance types (e.g. access tracks and pipeline ROW); iii. existing land use(s) of each area(s) to be disturbed; and iv. forecasted total area to be rehabilitated for the period of the Operation Plan (ha).
A11	The Operational Plan must include a calculation of **financial assurance** for the maximum proposed and existing disturbance during the period of the Operational Plan.
A12	The commencement of the first Operational Plan period is 20 business days from the grant of the environmental authority.
A13	The Operational Plan must be implemented.
A14	A subsequent Operational Plan must be submitted to the administering authority not less than 20 business days prior to the expiry of the current Operational Plan.
A15	**Financial Assurance** **Financial assurance** must be: a) provided to the administering authority in the amount and form required from time to time by the administering authority; and b) reviewed and maintained based on the maximum disturbance from the proposed and existing petroleum activities.
A16	The calculation of **financial assurance** must be in accordance with the Department of Environment and Resource Management's Guideline "**Financial assurance** for petroleum activities", as amended from time to time.
A17	The **financial assurance** is to remain in force until the administering authority is satisfied that no claim is likely to be made on the assurance.
A18	**Third Party Audit** A **third party auditor**, nominated by the holder of this environmental authority and accepted by the administering authority, must audit compliance with the conditions of this environmental authority at a minimum frequency of every three (3) years.
A19	Notwithstanding condition A18 and prior to undertaking the third party audit, the scope and content of the third party audit can be negotiated with the administering authority.
A20	An audit report must be prepared by the **third party auditor** presenting the findings of each audit carried out.
A21	The **third party auditor** must certify the findings in the audit report.
A22	Any recommendations arising from the audit report must be acted upon by: a) investigating any non-compliance issues identified; and b) as soon as reasonably practicable, implementing measures or taking necessary action to ensure compliance with the requirements of this environmental authority.

A23	A written response must be attached to the audit report detailing the actions taken or to be taken on stated dates: a) to ensure compliance with this environmental authority; and b) to prevent a recurrence of any non-compliance issues identified.
A24	The audit report required by condition A20 and the written response to the audit report required by condition A23 must be submitted to the administering authority with the subsequent annual return.
A25	The financial cost of the third party audit is to be borne by the holder of this environmental authority.
A26	**Contingency Plans for Emergency Environmental Incidents** A Contingency Plan for Emergency Environmental Incidents which has been certified by a **suitably qualified person** must be developed prior to carrying out the petroleum activities.
A27	The Contingency Plan for Emergency Environmental Incidents must include, but not necessarily be limited to: a) a clear definition of what constitutes an emergency environmental incident or near miss for the petroleum activities authorised to be carried out under this environmental authority; b) identification of the types of environmental incidents that may occur, relevant to the petroleum activities authorised to be carried out under this environmental authority; c) response procedures to be implemented to prevent or minimise the risk of **environmental harm** arising from emergency environmental incidents; d) response procedures to minimise the extent and duration of **environmental harm** caused by environmental incidents; e) the practices and procedures to be employed to restore the environment or mitigate any **environmental harm** caused; f) communication procedures and lines of communication within and beyond the organisation, including but not limited to Local Government, to be employed in responding to environmental emergency incidents; g) the resources to be used in response to environmental emergency incidents; h) procedures to investigate the cause of any incidents including **releases** or near misses, and where necessary, the remedial actions to be implemented to reduce the likelihood of recurrence of similar events; i) a receiving environment monitoring program, to be specifically implemented in the event of a **release** to **waters** or land to examine/assess environmental impacts. For monitoring of **waters**, this program must include upstream, downstream and impact site monitoring procedures. For soils monitoring, three replicate samples must be taken at depth intervals of 0-10 cm, 20-30 cm and 50-60 cm at both a reference site and the impact site as a minimum; j) the provision and availability of documented procedures to staff attending any emergency environmental incident to enable them to effectively respond; k) training of staff that will be called upon to respond to emergency environmental incidents to enable them to effectively respond; l) timely and accurate reporting of the circumstance and nature of emergency environmental incidents to the administering authority and any affected landholder, occupier and/or their nominated representative in accordance with conditions of this environmental authority; and

	m) procedures for accessing monitoring locations during emergency environmental incidents.
A28	The holder of this environmental authority must implement the Contingency Plan for Emergency Environmental Incidents.
A29	**Monitoring** A monitoring program for all monitoring required by the conditions of this environmental authority must be developed and implemented by 5 April 2013.
A30	All monitoring under this environmental authority must be conducted by a **suitably qualified person**.
A31	All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this environmental authority must be calibrated, operated and maintained effectively in accordance with the manufacturer's specifications.
A32	All laboratory analyses and tests required to be conducted under this environmental authority must be carried out by a laboratory that has **NATA accreditation** for such analyses and tests, except as otherwise authorised by the administering authority.
A33	Any management or monitoring plans, systems, programs or procedures required to be developed and implemented by a condition of this environmental authority must be reviewed for performance and amended as required but not less than once every three (3) years in accordance with the requirements for the particular plans, systems, programs and procedures in the conditions of this environmental authority.
A34	If monitoring conducted in accordance with this environmental authority indicates a condition or contaminant level has caused, or has potential to cause, **environmental harm**, necessary actions must be taken to rectify the condition or contaminant level so as to avoid or minimise **environmental harm**.
A35	An annual monitoring report must be prepared each year and submitted to the administering authority upon request and in the form required. This report must include but not necessarily be limited to: a) a summary of the previous twelve (12) months monitoring results obtained under all monitoring programs required under this environmental authority and a comparison of the previous twelve (12) months monitoring results to both the limits set in this environmental authority and to relevant prior results; b) the date on which the samples was taken; c) the time at which the samples was taken; d) the monitoring point at which the sample was taken; e) the **release** flow rate of any authorised discharges to **waters** from each **release** point; f) the results of all monitoring and details of any exceedances with the conditions of this environmental authority and the dates and times these exceedances were reported to the administering authority; g) a summary of all records of quantities of **releases** required to be kept under this environmental authority including the total volume of any authorised discharge(s) to **waters** for the previous yearly period from all **release** points and the individual daily volume of any authorised discharges to **waters** from all **release** points;

	h) details of all maintenance or work carried out on any discharge **meter**(s) and the resultant impact (if any) on the **release** volume readings; i) details regarding the status of disturbance, progressive rehabilitation associated with the petroleum activities and the schedule of disturbance submitted to the administering authority as part of the financial assurance calculations; j) an evaluation / explanation of the data derived from any monitoring programs; k) data analyses and interpretation to assess the nature and extent of any contamination and the level of **environmental harm** caused as a result of the contamination and the environmentally relevant activities; and l) an outline of actions taken to minimise the risk of **environmental harm** from any condition or elevated contaminant level identified by the monitoring or recording programs as required by condition A34.
A36	The evaluation and explanation of data for the purposes of the annual monitoring report must be performed by a **suitably qualified person**.
A37	**Documentation and Records Management** A record of all documents required by this environmental authority must be: a) kept for a minimum of five (5) years; and b) be made available to an **authorised person** upon request.
A38	All documents required under this environmental authority must be developed in a way that is consistent with the requirements of this environmental authority.
A39	**CSG Industry Monitoring Group** The holder of this environmental authority must provide data and or information as requested by the CSG Industry Monitoring Group (CIMG) in accordance with their Terms of Reference.
A40	The holder of this environmental authority must supply to the CSG Industry Monitoring Group any reports on cumulative impacts, including: a) regional impacts on terrestrial flora and fauna, biodiversity values, listed species and ecosystems; b) riparian habitats and aquatic ecosystems; c) surface and groundwater **environmental values**; d) groundwater modelling; and e) soils, including ability to support ongoing agricultural production.

Schedule A, Table 1 – Authorised Petroleum Activities and Pipeline Location

Petroleum Licence No.	Petroleum Activity	Maximum size and number (where applicable)	Longitude	Latitude
177	**Condabri to Talinga CSG Water Pipeline**			
	KP 0 (start point) – Condabri Central Water Treatment Facility	22 km	150.1924	-26.8051
	KP 22 (end point) – Talinga Water Treatment Facility		150.3480	-26.8747
	Horizontal Directional Drilling under the Condamine River			
	Entry Point		150.2111	-26.8237
	Exit Point		150.2152	-26.8290
	Temporary Accommodation Facility (including sewage treatment plant)	One (1) with 20ha total disturbance		
	Laydown area	One (1) with 15ha total disturbance		

Schedule B: Water	
Condition number	**Condition**
B1	**Contaminant Release** Contaminants must not be directly or indirectly **released** to any **waters** except as permitted under this environmental authority.
B2	**Release of Treated Sewage Effluent Contaminants to Land** The peak design capacity of the sewage treatment plant under the conditions of this environmental authority must not exceed 1500 equivalent persons.
B3	Sewage pump stations must be fitted with a stand-by pump and a visible or audible high level alarm.
B4	Treated effluent may only be **released** to land at the designated, fenced and delineated contaminant **release** area(s).
B5	The contaminant **release** area(s) must be maintained in a proper and efficient condition so as to provide adequate assimilation, percolation, evaporation and transpiration of the **released**

	contaminants.
B6	Treated effluent must not be applied by spray irrigation
B7	Treated effluent must be applied in a manner that does not cause ponding or runoff of effluent beyond the contaminant **release** area(s).
B8	When weather conditions or soil conditions preclude the **release** of contaminants, the contaminants must be directed to on-site storage or lawfully disposed of off-site.
B9	**Quality of Contaminants Released from the Sewage Treatment Works** Treated effluent must comply, at the sampling and in-situ measurement point(s), with each of the **release** limits specified in *Schedule B, Table 1 - Treated Sewage Effluent Standards* for each quality characteristic.
B10	The **release** of contaminants to land must be monitored at the frequency and at the sampling and in-situ measurement point specified in *Schedule B, Table 1 - Treated Sewage Effluent Standards.*
B11	**Erosion and Sediment Control Plan** An Erosion and Sediment Control Plan which has been certified by a **suitably qualified person** must be developed prior to the commencement of the petroleum activities authorised by this environmental authority.
B12	The Erosion and Sediment Control Plan must include but not necessarily be limited to: a) managing and / or diverting uncontaminated stormwater run-off around areas disturbed by the petroleum activities or where contaminants or wastes are stored or handled that may contribute to contamination of **waters**; b) ensuring that contaminated stormwater runoff and incident rainfall is collected, treated, reused, or **released** in accordance with the conditions of this environmental authority; c) roofing or minimising the size of areas where contaminants or wastes are stored or handled; d) revegetating disturbed areas as soon as practicable after the completion of works; e) using materials and or processes (e.g. dry absorbents) to clean up spills that will minimise contamination of **waters**; f) placing erosion and sediment control structures to minimise erosion of disturbed areas and prevent the contamination of **waters**; g) an inspection and maintenance program for the erosion and sediment control measures; h) provision for adequate access to maintain all erosion and sediment control measures especially during the wet season from November to April; i) additional erosion and sediment control measures for construction of pipelines on slopes >10%; j) a surface water monitoring program designed to detect impacts from sediment runoff into **waters**; k) identification of remedial actions required to ensure compliance with the conditions of this environmental authority; and l) details of community consultation strategies and processes to be used in further developing and implementing the Erosion and Sediment Control Plan.

B13	The Erosion and Sediment Control Plan must be implemented.
B14	A copy of the Erosion and Sediment Control Plan must be made available to any potentially affected landholder upon request by that landholder.
B15	**Maintenance and Cleaning** The maintenance and cleaning of vehicles and any other equipment or plant must be carried out in areas from where the resultant contaminants cannot be **released** into any **waters**.
B16	**Watercourses, Wetlands and Springs** Unless otherwise authorised under this environmental authority, petroleum activities that require earthworks, vegetation **clearing** and / or placing **fill**, other than that associated with the construction of **linear infrastructure**, is not permitted in or within: a) 100 metres from any **wetland**, lake or **spring**; or b) 100 metres of the **high bank** of any other watercourse.
B17	Works for **linear infrastructure** resulting in **significant disturbance** to a watercourse, **wetland**, lake or **spring** must: a) be no greater than the minimum area necessary for the purpose of the **significant disturbance**; b) be for a maximum period of 10 business days; c) be designed and 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* as amended from time to time; and d) upon cessation of the works, be rehabilitated immediately.
B18	Further to Condition B17, works for **linear infrastructure** within **wetlands** and lakes listed in *Schedule B, Table 2 – Wetlands and Lakes* may be conducted for a period greater than ten (10) business days.
B19	Pipeline and road construction works may be undertaken in those watercourses listed in *Schedule B, Table 3 – Watercourse Crossings with Extended Work Time*, where there is no practicable alternative for a maximum period of thirty (30) days.
B20	Sediment control measures must be implemented to minimise any increase in water turbidity due to works for **linear infrastructure** in the **bed and banks** of a watercourse, **wetland**, lake or **spring**.
B21	Routine, regular and frequent visual monitoring must be undertaken while carrying out works for **linear infrastructure** and any maintenance of completed works in a watercourse, **wetland**, lake or **spring**.
B22	If, due to works for **linear infrastructure**, water turbidity increases in a watercourse, **wetland**, lake or **spring** outside contained areas, works must cease and the sediment control measures must be rectified to limit turbidity before the works recommence.
B23	**Aquatic Ecology** All water crossings must be in accordance with the construction methods described in the

	Australia Pacific Upstream Phase 1 – Condabri to Talinga CSG Water Pipeline Environmental Management Plan (Q-4528-15-MP-0001) Section 17: Surface water and aquatic ecology.
B24	All investigation summaries along with a copy of the Aquatic values Survey Report are to be published on the environmental authority holder's website.
B25	An Aquatic Values Survey Report which has been prepared by a **suitably qualified person** must be developed prior to the commencement of pipeline construction activities.
B26	The Aquatic Values Survey Report required under condition B25 must include but not necessarily be limited to: a) identification of the three (3) representative watercourse crossings as specified in the Appendix 6 of the *Condabri to Talinga CSG Water Pipeline Environmental Management Plan* (Doc Ref: Q-4528-15-MP-0001, Revision: B) b) wet and dry season aquatic surveys of the watercourse crossings identified in condition B26(a) for: i. aquatic habitat; ii. nesting, spawning and breeding sites; iii. macrophytes; iv. aquatic macroinvertebrates; v. fish; vi. turtles; and vii. aquatic vertebrates. c) interpretation and analysis of the dry and wet season **environmental values** and ecological condition for the pipeline length; d) identification of site specific **environmental values**; e) identification of the site specific ecological condition; f) identification of actual breeding and nesting sites for listed turtle species; g) identification of existing or likely endangered species habitat; h) identification of site specific crossing method and location ensuring that pipeline construction activities do not impact on identified **environmental values** and ecological condition; i) identification of site specific crossing mitigation measures ensuring that pipeline construction activities do not impact on identified **environmental values** and ecological condition; and j) a pipeline construction schedule which includes, but is not necessarily limited to, minimisation of construction in watercourse crossings during the wet season from November to April.
B27	The Aquatic Values Survey Report required under condition B25 must include a review of the pipeline alignment to ensure the optimal pipeline route is selected, including: a) minimisation of adverse impacts on fauna and significant habitat areas; b) minimisation of impacts on riparian, aquatic and water dependent flora and fauna; c) minimisation of erosion and sediment impacts; d) maintaining water quality and water flow requirements; and e) maximisation of rehabilitation success of achieving longer-term site stability.

B28	If the wet and dry season aquatic surveys required under condition B25 identify a significant impact, the environmental authority holder must: a) review the pipeline alignment route in accordance with condition B25; b) amend the construction program to minimise the identified impact; and /or c) identify and implement additional site specific management measures to protect identified **environmental values**; and/or d) identify and implement alternative construction methods to protect identified **environmental values.**
B29	The holder of this environmental authority must provide a copy of the Aquatic Values Survey Report required under condition B25 to the administering authority prior to commencing pipeline construction activities.
B30	Pipeline construction activities must be undertaken in accordance with the *Australian Pipeline Industry Association Code of Environmental Practice* and *APIA Upstream PE Gathering Networks – CSG Code of Practice*, as amended from time to time.
B31	The design of all creek crossings and waterway barrier works should take account of the matters discussed in Waterway barrier works development approvals (*Fish Habitat Management Operational Policy FHMOP 008, DIP&F, July 2009*).
B32	The holder of this environmental authority must ensure that flora and fauna are protected and that disruption to habitat areas are minimised during pipeline construction activities and pipeline operation activities.
B33	Rehabilitation of disturbed riparian areas must include the use of locally sourced species and intensive planting.
B34	**Floodplains** Where the petroleum activities is carried out on **floodplains**, the petroleum activities must be carried out in a way that does not: a) concentrate flood flows in a way that will or may cause or threaten an adverse environmental impact; or b) divert flood flows from natural drainage paths and alter flow distribution; or c) increase the local duration of floods; or d) increase the risk of detaining flood flows; or e) pose an **unacceptable risk** to the safety of persons from flooding; or f) pose an **unacceptable risk** of damage to property from flooding.
B35	**Water Monitoring** The method of water sampling required by this environmental authority must comply with that set out in the most recent version of the Department of Environment and Resource Management's *"Monitoring and Sampling Manual 2009 – Environmental Protection (Water) Policy 2009 Version 2 September 2010"* as amended from time to time.

Schedule B, Table 1 - Treated Sewage Effluent Standards

Quality Characteristic	Sampling and in-situ measurement Point Location	Limit Type	Release Limit	Frequency
5-day Biochemical oxygen demand (inhibited)	E.g. Release pipe from sewage treatment plant	maximum	20 mg/L	Monthly
TDS		maximum	1000 mg/L	
TSS		maximum	30 mg/L	
EC		maximum	1600 µS/cm	
pH		range	6.0 to 9.0	
Total Nitrogen		maximum 50th percentile short term 50th percentile long term	30 mg/L 10 mg/L 5 mg/L	
Total Phosphorus		maximum 50th percentile short term 50th percentile long term	10 mg/L 8 mg/L 5 mg/L	
E. Coli		**80th percentile** based on at least 5 samples with not less than 30 minutes between samples.	1000 CFU/100 mL	
		maximum	10000 CFU/100 ml	

Schedule B, Table 2 – Wetlands and Lakes

Pipeline	Name of water feature	KP (approximate)	Longitude	Latitude
Condabri to Talinga CSG Water Pipeline	Unmapped floodplain wetland	4.2	150.2124	-26.8261
	Condamine River – Referrable Wetland	4.5	150.2132	-26.8266
	Gilgai Plain - Wetland	6.6 – 6.8	150.2256 – 150.2268	-26.8426 -26.4445
	Gilgai - Wetland	7.0	150.2270	-26.8461
	Gilgai - Wetland	7.7	150.2290	-26.8516
	Dam - Waterhole	16.7	150.3046	-26.8807

Schedule B, Table 3 – Watercourse Crossings with Extended Work Time

Name	Stream Order	Longitude	Latitude
Sandy Creek	3	150.3302	-26.8833
Unnamed Creek	2	150.3129	-26.8818

Schedule C: Regulated Structures	
Condition number	**Condition**
C1	Regulated structures are not permitted.
Schedule D: Land	
Condition number	**Condition**
D1	Contaminants must not be directly or indirectly **released** to land except as permitted under this environmental authority.
D2	**Soil Management Plan** A Soil Management Plan which has been prepared by a **suitably qualified person** must be developed prior to the carrying out of any petroleum activities authorised by this environmental authority.
D3	The Soil Management Plan must include, but not necessarily be limited to: a) procedures for identifying soil units within areas to be disturbed by the petroleum activities at a scale in accordance with the "Guidelines for Surveying Soil and Land Resources, 2nd Edition" (McKenzie et al. 2008), "Australian Soil and Land Survey Handbook, 3rd Edition" (National Committee on Soil and Terrain 2009), "The Australian Soil Classification" (Isbell 2002) and the "Guidelines for agricultural land evaluation in Queensland" (Queensland Department of Primary Industries Information Series QI90005 1990), as amended from time to time; b) procedures for establishing baseline soils information for areas to be disturbed including soil depth, pH, electrical conductivity (EC), chloride, cations (aluminium, calcium, magnesium, potassium and sodium), exchangeable sodium percentage (ESP), particle size and soil fertility (including carbon, nitrogen, phosphorous, potassium, sulphur and micronutrients); c) identification of the types of soils and soil units requiring specific management practices (e.g. saline or sodic soils) relevant to assessment for agricultural suitability, erodibility and rehabilitation; d) detailed horizon and soils compaction management procedures for each soil unit, including **top soil** and **top soil** stockpile management procedures and methods of keeping soil horizons separate on excavation, storage and backfilling so as to minimise the impacts of soil disturbance and promote successful rehabilitation; e) detailed mitigation measures and procedures for each soil unit to manage the risk of adverse soil disturbance in the carrying out of the petroleum activities; and

	f) a soils impact monitoring program outlining parameters to be monitored, frequency of monitoring and acceptable ranges for each parameter for each soil unit.
D4	The Soil Management Plan must be implemented whenever significant disturbance to land occurs as a result of the petroleum activities.
D5	A copy of the Soil Management Procedures must be made available to any potentially affected landholder upon request by that landholder.
D6	**Fauna Management Procedures** Fauna management procedures must be developed prior to the carrying out of any petroleum activities authorised under this environmental authority.
D7	The fauna management procedures must be certified by a **suitably qualified person**.
D8	The fauna management procedures must ensure that the petroleum activities are carried out in a manner that minimises the risk of injury, harm, or entrapment to wildlife and stock.
D9	The fauna management procedures must include training and awareness of staff and contractors.
D10	Planned fauna handling must be undertaken by a **suitably qualified person**.
D11	The fauna management procedures must be implemented.
D12	**Chemical and Fuel Storage** All explosives, hazardous chemicals, corrosive substances, toxic substances, gases, dangerous goods, flammable and combustible liquids (including petroleum products and associated piping and infrastructure) must be stored and handled in accordance with the relevant Australian Standard where such is available.
D13	Notwithstanding the requirements of any Australian Standard, any liquids stored on site that have the potential to cause environmental harm must be stored in, or serviced by, an effective containment system that is impervious to the materials stored and managed to prevent the **release** of liquids to **waters** or land.
D14	Where no relevant Australian Standard is available for the chemical and / or fuel storage activity, the following requirements apply: a) storage tanks must be **bunded** so that the capacity and construction of the **bund** is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and b) drum storages must be **bunded** so that the capacity and construction of the **bund** is sufficient to contain at least 25% of the maximum design storage volume within the **bund**.
D15	All containment systems must be designed to minimise rainfall collection within the system.
D16	**Pipelines** The holder of this environmental authority must: a) limit the pipeline **right of way** width to a maximum of 30 metres;

	b) minimise disturbance to land in order to prevent land degradation; c) ensure that for land that is to be significantly disturbed by petroleum activities (except in areas of highly erosive soils), soil excavation is undertaken so that: i. the top layer of the soil profile is removed; ii. subsoils are kept separate during the excavation, storage and backfilling of pipeline trenches; iii. all soils are stored in a manner that their physical and chemical properties are preserved; and iv. soils are used for rehabilitation purposes; d) pipeline trenches are left open for the minimum time practicable; e) the total length of pipeline trench open at any one time is minimised as far as practicable; and f) detailed mitigation measures and procedures are in place to manage the risk of adverse soil disturbance in the carrying out of the petroleum activities.

Schedule E: Disturbance to Land

Condition number	Condition
E1	**Minimising Disturbance to Areas of Ecological Value** Prior to conducting petroleum activities that involve **significant disturbance** to land, an assessment must be undertaken of the condition, type and ecological value of soils and vegetation in such areas where the activity is proposed to take place.
E2	The assessment required by condition E1 must be undertaken by a **suitably qualified person** and include the carrying out of field validation surveys, observations and mapping of any Category A, B or C Environmentally Sensitive Areas and **State significant biodiversity values** and the presence of species classed as endangered, vulnerable, rare or threatened under the *Nature Conservation Act 1992.*
E3	The holder of this environmental authority, when carrying out petroleum activities must: a) avoid, minimise or mitigate (in order of preference) any impacts on areas of vegetation or other areas of ecological value; b) minimise the risk of injury, harm, or entrapment to wildlife and stock; c) minimise disturbance to land that may otherwise result in land degradation; d) ensure that for land that is to be significantly disturbed by petroleum activities: i. the top layer of the soil profile is removed; ii. stockpiled in a manner that will preserve its biological and chemical properties; iii. use for rehabilitation purposes (in accordance with condition I2). e) prior to carrying out field based activities, make all relevant staff, contractors or agents carrying out those activities, aware of the location of any Category A, B or C Environmentally Sensitive Areas and the requirements of this environmental authority.
E4	Any vegetation **clearing** authorised under this authority must be stockpiled in a manner that facilitates respreading or salvaging and does not impede vehicle, stock or wildlife movements.

E5	**Remnant vegetation** must not be cleared for the purposes of camps, borrow pits, vehicle access tracks or additional work areas associated with the construction of the pipeline.
E6	Despite condition E5, **clearing** of **remnant vegetation** for additional work areas may be undertaken within **remnant vegetation**, subject to the following: a) a demonstration that no reasonable or feasible alternative exists in a Pre-Clearance Plan; b) the **clearing** is located and carried out in areas according to the following order of preference: i. pre-existing areas of **significant disturbance** within the **remnant vegetation**; ii. areas within the remnant of lower environmental value (e.g. presence of weed or **pest** species); iii. areas where **clearing** of **remnant vegetation** is unavoidable. c) be no greater than the minimum area necessary for the purpose of the additional work area.
E7	The Pre-clearance Plan in accordance with condition E6(a) must be provided to the administering authority at least 20 business days prior to commencement of **clearing remnant vegetation**.
E8	If within twenty (20) business days following the submission of the Pre-clearance Plan as required by condition E7, the administering authority provides comment, the holder of this environmental authority must: a) implement that comment in the finalisation of the Pre-clearance Plan; and b) submit the finalised amended Pre-clearance Plan within forty (40) business days after the administering authority provided comments; and c) implement the amended Pre-clearance Plan.
E9	For any **clearing** conducted in accordance with condition E6, the holder of this environmental authority must record and submit to the administering authority with each annual return the following information: a) The amount of **remnant vegetation** cleared; b) The location of the **clearing**; c) The purpose the area was cleared for; and d) A record of the assessment required by conditions E1 and E2.
E10	**Environmentally Sensitive Areas** A maximum area of 99.7 ha of vegetation may be cleared within the PPL177 boundary for the pipeline **right of way**, associated above ground **infrastructure** and additional work areas comprising: a) regional ecosystems with an 'endangered' biodiversity status – 0.5 ha b) regional ecosystems with an 'of concern' biodiversity status – 0 ha c) regional ecosystems with a 'no concern at present' biodiversity status – 23.5 ha
E11	**Essential Habitat** No **clearing** of Essential Habitat is authorised under this environmental authority.
E12	**Offsets**

ABN 46 640 294 485

	The holder of this environmental authority must comply with any environmental offset agreement made in accordance with the conditions of this environmental authority.
E13	**Land Release Management Plan** The holder of this environmental authority must develop and implement a Land **Release** Management Plan for the relevant area that incorporates land **release** by sewage effluent irrigation, **coal seam gas water** for dust suppression and hydrostatic water testing.
E14	The Land **Release** Management Plan must be able to demonstrate the following: a) the efficient application of water or waste using best practice methods; b) control of sodicity in the soil; c) minimal degradation of soil structure; d) control of the build-up, from water, waste or other sources, of nutrients and contaminants in the soil and subsoil; e) prevention of subterranean flows of contaminants to **waters**; f) prevention of impact of infiltration on groundwater resources; g) prevention of run-off; h) prevention of surface ponding; i) prevention of spraydrift or overspray from the relevant area; j) prevention of damage to vegetation; and k) reporting the results of monitoring, and an assessment of the impact on the groundwater in the relevant area of the **release** of the water or waste.
E15	The holder of this environmental authority may allow pipeline trench water to be **released** to land in accordance with condition E13 for disposal provided that the water does not have any properties nor contain any organisms or other contaminants in concentrations that are capable of causing **environmental harm**.
E16	**Management of Hydrostatic Test Water** The holder of this environmental authority must develop a hydrostatic water management plan which must include but not be limited to the following: a) details of the impacts of hydrostatic test water activities along the pipeline route to land; b) source water quality data and characteristics of additives (particularly biocides); c) the proposed storage, treatment and disposal methods; and d) site specific mitigation measures including monitoring and reporting.
E17	The hydrostatic water management plan must be submitted to the administering authority for review prior to the commencement of petroleum activities.
E18	If, within 20 business days following the submission of the hydrostatic water management plan the administering authority provides comments on the submission, the holder of this environmental authority must: a) implement that comment into the finalisation of the amended hydrostatic water management plan; and b) submit the finalised amended hydrostatic water management plan within 40 business days after the administering authority provided comments; and

	c) implement the amended hydrostatic water management plan.
E19	The holder of this environmental authority must ensure that hydrostatic test water released to land does not exceed the water quality limits specified in *Schedule E, Table 2 – Limits for the disposal of hydrostatic test water to land.*
E20	Any **release** of hydrostatic test water authorised by condition E16 must be located at least 100 metres from the nearest watercourse and carried out in a manner that ensures that: a) vegetation is not damaged; b) soil erosion and soil structure damage is avoided; and c) hydrotest water does not migrate outside the nominated land **discharge areas**.
E21	The holder of this environmental authority must undertake integrity testing of pipe sections where pipe joints fall within a watercourse, prior to installation of these pipe sections.
E22	The holder of this environmental authority must ensure that the **release** of any hydrostatic test water is in accordance with the Land Release Management Plan required by condition E13.

Schedule E, Table 2 – Limits for the disposal of hydrostatic test water to land

Parameter	Maximum Value
pH	6.5 - 8.5 (Range)
Arsenic (mg/L)	2.0
Cadmium (mg/L)	0.05
Chromium (mg/L)	1
Copper (mg/L)	5
Iron (mg/L)	10
Lead (mg/L)	5
Manganese (mg/L)	10
Zinc (mg/L)	5
Nitrogen (mg/L)	5
Phosphorus (mg/L)	1
Electrical Conductivity (µS/cm)	2000

Schedule F: Environmental Nuisance	
Condition	**Condition**

number	
F1	**Odour, dust and other airborne contaminants** The **release** of odour, dust or any other airborne contaminant(s), or light from the petroleum activities must not cause an **environmental nuisance** at any **sensitive place** unless alternative arrangements are in place with an affected person(s) at a **sensitive receptor**.
F2	**Nuisance monitoring (other than noise)** When the administering authority advises of a complaint alleging nuisance other than noise, the holder must investigate the complaint as soon as practicable.
F3	The administering authority must be advised in writing of the action proposed or undertaken to resolve the complaint within three (3) business days of completing the complaint investigation.
F4	When requested by the administering authority, monitoring must be undertaken as specified by the administering authority, within a reasonable and practical timeframe nominated by the administering authority to investigate any complaint of **environmental nuisance** at any **sensitive place**.
F5	The results of the investigation (including an analysis and interpretation of the monitoring results) and the abatement measures implemented must be provided to the administering authority within ten (10) business days of receiving the advice under condition F4, unless a longer time is agreed to in writing by the administering authority.
F6	If monitoring in accordance with condition F4 indicates that emissions exceed the limits set in this environmental authority or are causing **environmental nuisance**, then: a) the complaint must be addressed including the use of alternative dispute resolution services if required; and / or b) abatement or attenuation measures must be implemented so that the authorised petroleum activities does not result in further **environmental nuisance**.
F7	**Noise** A Noise Management Plan which has been certified by a **suitably qualified person** must be developed prior to the carrying out of any petroleum activities authorised by this environmental authority.
F8	The Noise Management Plan must include, but not necessarily be limited to: a) a commitment by the Chief Executive Officer for the holder of this environmental authority, or their delegate, to ensure adequate allocation of staff and resources to the establishment and operation of the Noise Management Plan; b) definition of roles, responsibilities and authorities within the staffing of the Noise Management Plan; c) delivery of training to staff and contractors and maintenance of competencies; d) risk / constraint analysis methods to be undertaken prior to any new operation (e.g. drill site) or installation of new equipment that has the potential to create noise nuisance; e) procedures and methods to undertake assessments to determine compliance with the noise limits in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise limits at Sensitive Receptors for Construction* in the event of a

	valid complaint being received and when there are no alternative arrangements in place, taking in to account any tonal or **impulsive noise** impacts; f) procedures for handling noise complaints; g) community liaison and consultation procedures including but not limited to consultation for when night time petroleum activities (i.e. between 10:00 pm and 6:00 am) are likely to exceed 25 dBA; h) procedures for managing records associated with all aspects of the Noise Management Plan including standardised forms for recording monitoring results and complaints; i) details of petroleum activities and measured and / or predicted noise levels of noise sources associated with those activities; j) reasonable and practicable control or abatement measures (including relocating the activity, altering the hours of operation, or having an alternate arrangement in place with any potentially affected person) that can be undertaken to ensure compliance with the noise limits in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise limits at Sensitive Receptors for Construction;* k) the level of noise at **sensitive receptor**s that would be achieved from implementing the measures detailed under condition F8(j); and l) mediation processes to be used in the event that noise complaints are not able to be resolved.
F9	The Noise Management Plan must be implemented.
F10	Prior to undertaking petroleum activities that will result in short-term, medium-term or **long term noise events** that are likely to impact on a **sensitive receptor**, any potential noise emissions from the relevant petroleum activities must be modelled to calculated to demonstrate that noise emissions will not exceed the noise levels specified in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise limits at Sensitive Receptors for Construction.*
F11	The emission of noise from the petroleum activities authorised under this environmental authority must not result in levels greater than those specified in *Schedule F, Table 1 – Noise limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction* in the event of a **valid complaint** about noise being made to the administering authority.
F12	If the noise subject to a complaint is tonal or impulsive, the adjustments detailed in *Schedule F, Table 3 – Adjustments to be Added to Noise Levels at Sensitive Receptors* are to be added to the measured noise level(s) to derive $L_{Aeq,\ adj,\ 15\ min}$.
F13	Where alternative arrangements are in place with an affected person(s) at a **sensitive receptor** as referred to by condition 0(j), the noise limits in *Schedule F, Table 1 - Noise Limits at Sensitive Receptors for Operation* and *Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction* do not apply at that **sensitive receptor** for the duration for which the alternative arrangements are in place.
F14	**Low Frequency Noise** Notwithstanding condition 0, emission of any low frequency noise must not exceed the following limits in the event of a **valid complaint** about low frequency noise being made to the administering authority:

	a) 60 dB(C) measured outside the **sensitive receptor**; and b) the difference between the external A-weighted and C-weighted noise levels is no greater than 20 dB; or c) 50 dB(Z) measured inside the **sensitive receptor**; and d) the difference between the internal A-weighted and Z-weighted noise levels is no greater than 15 dB.
F15	**Noise Monitoring** Noise monitoring must be undertaken as soon as practicable when requested by the administering authority.
F16	The results of noise monitoring must be reported to the administering authority within three (3) business days of completion of the monitoring event.
F17	Noise monitoring and recording must include, but not necessarily be limited to: a) $L_{AN,T}$ (where N equals the statistical levels of 1, 10 and 90 and T=15 mins); b) $L_{Aeq\ adj,\ 15\ mins}$; c) background noise level as $_{LA\ 90,\ 15\ mins}$; d) Max $L_{pA,\ 15\ mins}$; e) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to measured noise levels levels; f) atmospheric conditions including temperature, relative humidity and wind speed and directions; g) effects due to any extraneous factors such as traffic noise; h) location, date and time of monitoring; i) if the complaint concerns low frequency noise, Max $L_{pZ,\ 15\ mins}$; and j) if the complaint concerns low frequency noise, one third octave band measurements in dB(LIN) for centre frequencies in the 10 – 200 Hz range for both the noise source and the background noise in the absence of the noise source.
F18	The method of measurement and reporting of noise levels and background sound pressure levels must comply with the Department of Environment and Resource Management's *"Noise Measurement Manual" 2000* or *Australian Standard 1055*, as amended from time to time.
F19	**Vibration and Blasting** A Blast Management Plan must be developed in accordance with Australian Standard 2187 by a **suitably qualified person** prior to each blasting activity.
F20	The Blast Management Plan must include measures to minimise the likelihood of any adverse effects being caused by airblast overpressure and / or ground borne vibrations at any sensitive receptor and demonstrate current best practice environmental management.
F21	All blasting must be carried out in a proper manner by a **suitably qualified person**.
F22	All blasting must be carried out in accordance with the Blast Management Plan.

F23	Noise from blasting operations must not exceed an airblast overpressure level of 120 dB (linear peak) at any time, when measured at or extrapolated to any **sensitive receptor**.
F24	Ground-borne vibration peak particle velocity caused by blasting operations must not exceed 10 mm/s at any time, when measured at or extrapolated to any **sensitive receptor**.
F25	**Blast and Vibration Monitoring** Monitoring and recording of the air blast overpressure and ground borne vibration of every blast must be undertaken.
F26	Blast and vibration monitoring must include but not necessarily be limited to: a) maximum instantaneous charge; b) location of the blast within the site (including any bench level); c) airblast overpressure level (dB Linear Peak); d) peak particle velocity (mm / s); e) location, date and time of recording; f) measurement instrumentation and procedure; g) meteorological conditions for blast monitoring (including temperature, relative humidity, temperature gradient, cloud cover, wind speed and direction); and h) distances from the blast site to potentially noise-affected buildings or structures.

Schedule F, Table 1 – Noise Limits at Sensitive Receptors for Operation

Time Period	Metric	Short Term Noise Event	Medium Term Noise Event	Long Term Noise Event
7:00 am – 6:00 pm	$L_{Aeq,adj,15\ min}$	45 dBA	43 dBA	40 dBA
6:00 pm – 10:00 pm	$L_{Aeq,adj,15\ min}$	40 dBA	38 dBA	35 dBA
10:00pm – 7:00am	$L_{Aeq,adj,15\ min}$	28 dBA (measured indoors at any sensitive receptor)		

Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction

Time Period	Metric	Monday to Saturday	Sunday and Public Holidays
7:00 am – 6:00 pm	$L_{Aeq,adj,15\ min}$	43 dBA	40 dBA
6:00 pm – 10:00 pm	$L_{Aeq,adj,15\ min}$	38 dBA	35 dBA
10:00 pm – 6:00 am	$L_{Aeq,adj,15\ min}$	28 dBA	28 dBA
	Max L_{oA}, 15 mins	55 dBA	55 dBA

6:00 am – 7:00 am	$L_{Aeq,adj,15\ min}$	38 dBA	35 dBA
Noise from HDD activities undertaken from 10:00pm – 7:00am	$L_{Aeq,adj,15\ min}$	30 dBA (measured indoors any sensitive receiver)	

Noise limits in Table 1 and Table 2 are taken to be measured noise levels outside a sensitive receptor unless stated otherwise.

L_{Aeq} and Max L_{pA} are to be measured over any 15 minute period

L_{ABG} is the deemed background noise levels which for the purposes of Schedule F, Table 1 - Noise Limits at Sensitive Receptors for Operation and Schedule F, Table 2 – Noise Limits at Sensitive Receptors for Construction are:

7:00 am - 6:00 pm: 35 dBA

6:00 pm – 10:00 pm: 30 dBA

10:00 pm – 6:00 am: 25 dBA

6:00 am – 7:00 am: 30 dBA

Schedule F, Table 3 – Adjustments to be Added to Noise Levels at Sensitive Receptors

Noise Characteristic	Adjustment to Noise
Tonal characteristic is just audible	+ 2 dBA
Tonal characteristic is clearly audible	+ 5 dBA
Impulsive characteristic is just audible	+ 2 dBA
Impulsive characteristic is clearly audibly	+ 5 dBA

Schedule G: Air	
Condition number	**Condition**
G1	**Fuel burning or Combustion Equipment** This environmental authority does not authorise the use of fuel burning equipment that is capable of burning at least 500kg of fuel in an hour.
Schedule H: Waste	
Condition number	**Condition**
H1	All general waste must only be removed from the site and sent to a recycling facility or disposal facility licensed to accept the waste under the *Environmental Protection Act 1994*.

H2	All regulated waste must only be removed from the site by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994* and sent to a recycling facility or disposal facility licensed to accept the waste.
H3	Waste must not be burned on the site, unless it is vegetation and is authorised in writing under the *Forestry Act 1959*.
H4	**Coal Seam Gas Water Use for Dust Suppression** **Coal seam gas water** produced from authorised petroleum activities may only be used for dust suppression: a) on roads; and b) for construction and operational purposes for the petroleum activities authorised by this environmental authority.
H5	**Coal seam gas water** produced from authorised petroleum activities may only be used for dust suppression as provided for in condition H4 provided that: a) the water quality meets the limits specified *in Schedule H, Table 1 – Dust suppression water contaminant release limits* for each of the water quality characteristics; and b) on local government controlled roads, written approval from the relevant Local Government has been given to the holder of this environmental authority.
H6	Use of **coal seam gas water** for dust suppression in accordance with conditions 0 and 0 must be carried out in a manner such that: a) vegetation is not damaged; or b) soil quality is not adversely impacted; or c) there is no surface ponding or runoff of the coal seal gas water from the application area; or d) deep drainage below the root zone of any vegetation is minimised; or e) the quality of shallow **aquifers** is not adversely affected; or f) there are no **release** of **coal seam gas water** to **waters**.

Schedule H, Table 1 – Dust suppression water contaminant release limits

Water Quality Characteristics	Unit	Limit	Limit Type
pH	pH Units	6.0 to 9.0	Range
Sodium adsorption ratio	ratio	8	**80th percentile**
		12	Maximum
Total dissolved solids	mg/L	2000	Maximum
Total petroleum hydrocarbons	mg/L	10	Maximum

Schedule I: Rehabilitation	
Condition number	**Condition**
I1	**Rehabilitation Plan** A Rehabilitation Plan which has been certified by a suitably qualified person must be developed prior to the carrying out of the petroleum activities.
I2	The Rehabilitation Plan must include strategies for the determination of final land use(s) and rehabilitation goals and details of how rehabilitation objectives will be achieved. The Rehabilitation Plan must include: a) a rehabilitation hierarchy for: i. reinstating a native ecosystem as similar as possible to the original ecosystem as the preferred option; then ii. establishing an alternative outcome with a higher environmental value than the previous land use; then iii. reinstating the previous land use (e.g. grazing or cropping); and b) methods to achieve rehabilitation goals including, but not necessarily being limited to: i. establishing final land use(s) in consultation with affected landholder(s) and the administering authority; ii. identifying suitable analogue[3] sites to measure rehabilitation success that may either be the pre-disturbed area or another area that has equivalent values and characteristics as the intended final land use(s); and

[3] The latest version of the Qld Government's *"Biocondition, a Condition Assessment Framework for Terrestrial Biodiversity in Queensland, Assessment Manual"* and accompanying document *"Methodology for the Establishment and Survey of Reference Sites for Biocondition"* may be used to establish suitable **analogue sites** for like native vegetation communities.

	iii. for sites that are being reinstated to a land use other than a native ecosystem, the Rehabilitation Plan must identify any additional and relevant indicators to be measured at both the analogue and rehabilitation site(s) so as to assess progressive and final rehabilitation success for that land use; iv. for sites that are being reinstated to native ecosystems and the **analogue site** is the pre-disturbed site, the Rehabilitation Plan must include indicators that will be able to measure success against the progressive and final rehabilitation criteria in this environmental authority; v. identification of any land use constraints which have resulted from the petroleum activities; vi. residual pollution risks with strategies for managing and mitigating them; vii. landscape planning and landform design principles to achieve **stable** landforms including slope designs, erosion controls and drainage lines; viii. integrating rehabilitated areas so they are compatible with the surrounding landscape, including linking rehabilitated areas of native vegetation with undisturbed native vegetation to provide larger areas and wildlife corridors where feasible; ix. ensuring that significantly disturbed areas are rehabilitated progressively and that the progressive rehabilitation criteria are routinely measured; x. site preparation such as re-profiling, re-instating surface drainage systems; xi. **top soil** management such as **top soil** handling and stockpiling to preserve soil fertility and biota, respreading techniques, planned thickness, ripping, **top soil** treatments / amendments and mulching in consideration of analogue data; xii. flora to be established, including required species diversity, abundance and composition and projective cover in consideration of analogue data; xiii. plant propagation and / or supply methods including using seeds / spores of local provenance where feasible; xiv. establishment methods to maximise rehabilitation success such as seed treatments, seed spreading, timing of seeding to suit best local climatic conditions, hydroseeding, transplanting; xv. weed control; xvi. sourcing habitat structures for native fauna and installation methods in consideration of matching analogue data; xvii. ongoing maintenance program for rehabilitated areas; and xviii. rehabilitation monitoring program as required by conditions I13 and I14 of this environmental authority.
I3	The Rehabilitation Plan must be implemented.
I4	**Progressive Rehabilitation for Significantly Disturbed Land** Pipelines trenches must be backfilled immediately after pipe laying and rehabilitated as soon as practicable but not longer than three (3) months after completion.
I5	During backfilling of pipeline trenches, soils must be replaced in accordance with the Soil Management Plan required by condition D2.
I6	Backfilled and rehabilitated pipeline trenches must:

	a) be a **stable** landform; b) exhibit no subsidence or erosion gullies for the life of the operational pipeline; and c) be re-profiled to a level consistent with surrounding soils; and d) be re-profiled to original contours and established drainage lines; and e) be visually consistent with the surround land features; and. f) be vegetated with groundcover as a minimum to ensure that erosion is minimised.
I7	Progressive rehabilitation of **significantly disturbed land** caused by the carrying out of the petroleum activities (other than constructing pipelines) which is not required for the ongoing conduct of the petroleum activities must commence as soon as practicable, but not longer than nine (9) months following the completion of any construction or operational works associated with the petroleum activities
I8	Progressive rehabilitation of **significantly disturbed land** caused by the carrying out of the petroleum activities must be undertaken in accordance with the Schedule of Disturbance as submitted to the administering authority as part of the **financial assurance** calculations.
I9	Progressive rehabilitation of **significantly disturbed land** caused by the carrying out of the petroleum activities must: a) remediate any contaminated land (e.g. contaminated soils, decommissioned dams containing salt); b) reshape all **significantly disturbed land** to a **stable** landform; c) reprofile all **significantly disturbed land** to original contours; d) on all significantly disturbed land: i. re-establish surface drainage lines; ii. reinstate the top layer of the soil profile; iii. establish groundcover to ensure that erosion is minimised; iv. establish vegetation of floristic species composition found in **analogue sites**; e) undertake rehabilitation in a manner such that any actual and potential acid sulfate soils in or on the site are either not disturbed, or submerged, or are treated to prevent and / or minimise **environmental harm**.
I10	**Final Acceptance Criteria for Significantly Disturbed Land** All **significantly disturbed land** caused by the carrying out of the petroleum activities must be rehabilitated to meet the following final acceptance criteria: a) For all land use(s): i. all **significantly disturbed land** is reinstated to the pre-disturbed soil suitability class; ii. the landform is safe for humans and fauna; iii. the landform is **stable** with no subsidence or erosion gullies for at least three (3) years; iv. all **significantly disturbed land** is reinstated so that the distribution of vegetation communities represents the **analogue site**; v. the water quality of any residual **void** or water bodies constructed by the petroleum activities meets criteria for subsequent uses and does not have potential to cause

	environmental harm; vi. there is no ongoing contamination to **waters**; vii. there is no ongoing contamination to groundwater from dams or monocells (demonstrated via groundwater monitoring and leak detection monitoring systems); and viii. the maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the petroleum activities. b) Additional requirements for sites that are being reinstated to native ecosystems: i. each vegetation community must be re-established so that each of the following rehabilitation parameters are maintained for at least three (3) years; ii. the rehabilitated site shows distinct and progressive re-establishment of the various strata which characterise the vegetation community in the **analogue site**; iii. notwithstanding 0(b)(i) and 0(b)(ii), a minimum of 70% **species richness** and species diversity is observed when compared to the relevant **analogue site**; iv. a minimum of 50% **foliage cover** is observed when compared to the relevant **analogue site**; v. each vegetation community must be rehabilitated and maintained until it can be demonstrated that it is resilient and self-sustaining (demonstrated by reproduction and colonisation); and vi. a minimum equal density of habitat structures, including but not limited to litter cover, fallen woody material, hollow bearing logs and next boxes as that in the **analogue sites.**
I11	Notwithstanding condition 0, all buried pipelines must be decommissioned in accordance with the requirements of Australian Standard 2885, as amended from time to time.
I12	Despite condition 0, any dam may be decommissioned for a beneficial use provided that it: a) no longer contains contaminants that will migrate in to the environment; and b) the administering authority and the landholder agree in writing that the dam will be used by the landholder following the cessation of the petroleum activities.
I13	**Rehabilitation Monitoring Program** A Rehabilitation Monitoring Program which has been certified by a **suitably qualified person** must be developed by 5 April 2013.
I14	The Rehabilitation Monitoring Program must include, but not necessarily be limited to: a) methods to measure subsidence and erosion rates at rehabilitated buried transmission pipeline corridors and buried flow lines; b) monitoring of indicators identified in the Rehabilitation Plan at **analogue sites** to measure progressive and final rehabilitation success relevant to the final land use(s); and c) frequency and seasonality of monitoring **analogue sites** and rehabilitated areas to assess rehabilitation success; and d) identification of the experimental design for analysing analogue and rehabilitated site data including statistical methods of analyses.
I15	The Rehabilitation Monitoring Program must be implemented.

I16	**Monitoring of Progressive Rehabilitation** Regular maintenance and at least yearly monitoring of rehabilitated areas must take place to measure compliance with condition 0 and 0.
I17	**Monitoring of Final Rehabilitation Success** Final acceptance criteria are deemed to be met when monitoring of rehabilitated areas demonstrate compliance with the requirements of condition 0 for three (3) consecutive years.
I18	**Buried Pipeline Rehabilitation Monitoring** The holder of this environmental authority must monitor rehabilitated buried pipeline corridors for subsidence and erosion at least every 20 business days for the first 120 business days after rehabilitation.

Schedule J: Project Infrastructure and Decommissioning	
Condition number	**Condition**
J1	All above ground petroleum **infrastructure** must be removed from the relevant petroleum authority prior to the surrender of this authority, except where agreed in writing by the administering authority and the current landowner.
J2	Prior to the commencement of **decommissioning** or abandonment activities, the scope of work for **decommissioning** or abandonment of project **infrastructure** shall be developed and agreed to with the administering authority.
J3	The holder of this authority must decommission the pipeline to a situation where ongoing, or potential **environmental harm** is prevented or minimised. As a minimum, the pipeline must be decommissioned such that: a) it no longer contains hazardous contaminants; b) it is left in **stable** condition; c) all the above ground **infrastructure** is removed; and d) all areas disturbed by above ground **infrastructure** are rehabilitated in accordance with the requirements of this authority.

Schedule K: Community Issues	
Condition number	**Condition**
K1	A record of all **valid complaint**s and incidents causing **environmental harm**, and actions taken in response to the **valid complaint** or incident must be kept.
K2	The following details for all **valid complaint**s received must be recorded: a) name, address and contact number for valid complainant; b) time and date of **valid complaint**; c) reasons for the complaint as stated by the valid complainant;

	d) investigations undertaken in response to the **valid complaint**; e) conclusions formed; f) actions taken to resolve the **valid complaint;** g) any abatement measures implemented to mitigate the cause of the **valid complaint;** and h) name and contact details of the person responsible for resolving the **valid complaint.**
Schedule L: Notification Procedures	
Condition number	**Condition**
L1	The Pollution Hotline must be notified as soon as reasonably practicable, but within 48 hours after becoming aware of: a) any unauthorised disturbance to land; or b) **release**s to land of greater than 5,000 L of **coal seam gas water**; or c) **release**s to land of greater than 200L of hydrocarbons; or d) **release**s of any volume of contaminants to water; or e) any unauthorised **release** of contaminants.
L2	The notification of emergencies or incidents as required by condition L1**Error! Reference source not found.** must be submitted to the administering authority using an *Incident Notification (chapter 5a activities)(EM706)*.
L3	Unless a longer time is agreed to in writing by the administering authority, a written report must be provided to the administering authority within 10 business days of notification under condition L1 including the following (where relevant to the emergency or incident): a) the root cause of the emergency or incident; b) the confirmed quantities and types of any contaminants involved in the incident; c) results and interpretation of any analysis of samples taken at the time of the emergency or incident (including the analysis results of any impact monitoring); d) a final assessment of the impacts from the emergency or incident including any actual or potential **environmental harm** that has occurred or may occur in the longer term as a result of the **release**; e) the success or otherwise of actions taken at the time of the incident to prevent or minimise **environmental harm**; f) results and current status of landholder consultation, including commitment to resolve any outstanding issues / concerns; and g) actions and / or procedural changes to prevent a recurrence of the emergency or incident.

Part 3 – Conditions applicable to the Fairymeadow Road Irrigation Water Pipeline

Environmentally relevant activity(ies)	Location(s)
Non-Scheduled Petroleum Activity Petroleum Pipeline Licence - PPL	PPL185

Schedule AA: Eligibility Criteria	
Condition number	**Condition**
AA1	The petroleum activities are authorised petroleum activities for the purposes of the *Petroleum and Gas (Production and Safety) Act 2004.*
AA2	The petroleum activity does not include extending an existing pipeline by more than 150 kilometres under a petroleum authority.
AA3	The petroleum activity does not include constructing a new pipeline of more than 150 kilometres under a petroleum authority.
AA4	The petroleum activities do not occur in **coastal waters** of Queensland.
AA5	The following petroleum activities are not authorised: a) injection of a waste fluid or gas for gas storage into a natural underground reservoir or **aquifer**: b) dams; and c) carrying out the following **environmentally relevant activities** (ERAs): i. ERA 8 — Chemical Storage ii. ERA 60(1a) — (1d) — Regulated waste disposal iii. ERA 60(2d) — (2h) — General waste disposal > 10,000t/year iv. ERA 63(1a)(ii) – (1b)(ii), (1c) – (1g) – Sewage treatment with a total **daily peak design capacity** of greater than 21 equivalent persons (EP) which **releases** to other than an infiltration trench or irrigation scheme or where the sewage treatment activities have a total combined **daily peak design capacity** exceeding 1500 **equivalent persons** (EP) v. ERA 64(2a) and (2b) and (4a) and (4b) — Water treatment where desalination of more than 0.5ML of water is treated, allowing the **release** of waste to **waters** other than seawater; or carrying out, in a day, advanced treatment of 5ML or more of water, allowing the **release** of waste only to seawater, or to **waters** other than seawater.
Schedule A: Authorised Activities	
Condition number	**Condition**

A1	The following types of petroleum activities are not authorised: a) processing or storing petroleum or petroleum by-products that are not necessarily associated with pipeline construction or operation; b) extracting earthen materials (other than drilling waste rock or **trench spoil**) of more than 100,000t/year; c) extracting by dredging more than 1000t/year of material from the bed of naturally occurring surface **waters**; and d) construction of power lines (either above or below ground) outside the **right of way** necessary for the pipeline.
A2	a) The petroleum activities listed in *Schedule A, Table 1 — Authorised Pipeline Location* are the authorised activities for each petroleum pipeline tenure. b) The petroleum activities listed in *Schedule A, Table 1 — Authorised Pipeline Location* are authorised to the extent they occur at the intensity listed in *Schedule A, Table 1 — Authorised Pipeline Location.* c) The petroleum activities listed in *Schedule A, Table 1 — Authorised Pipeline Location* are authorised to the extent they occur at the scale listed in *Schedule A, Table 1 — Authorised Pipeline Location.* d) The authorised petroleum activities must be carried out as specified in *Schedule A, Table 1 — Authorised Pipeline Location.* e) The carrying out of authorised activities is subject to the conditions of this environmental authority. f) A relevant act is not authorised to occur in carrying out an authorised petroleum activity unless a condition of this environmental authority expressly authorises the relevant act to occur.
A3	Only **low impact petroleum activities** can be undertaken within **Category A Environmentally Sensitive Areas (ESAs)**, or **Category B ESAs** or **Category C ESAs** other than state forests or timber reserves, or within the ESAs' **primary protection zone.**
A4	**Non-linear infrastructure** is permitted within the **secondary protection zone** of ESAs provided the location is justified given other constraints and cannot be avoided and it can be demonstrated that there will be no negative impacts on the ESA.
A5	Records demonstrating compliance with Condition A4 must be kept.
A6	Despite conditions A3 and A4, a maximum area of 1.41 ha of regional ecosystems may be cleared within the PPL185 boundary for the pipeline **right of way**, associated above ground **infrastructure** and additional work areas comprising: a) regional ecosystems with an 'endangered' biodiversity status — 0.66 ha b) regional ecosystems with an ‘of concern’ biodiversity status — 0.75ha.
A7	The holder of this environmental authority must ensure that any **clearing** in accordance with conditions A4 and A6 complies with the following: a) all reasonable and practical measures are made to minimise the area cleared and to avoid the **clearing** of mature trees; b) **clearing** of mature and hollow bearing trees is avoided where practicable; and

	c) a **suitably qualified person** is present during **clearing** activities to ensure impacts on flora and fauna are minimised.
A8	**Impacts to State Significant Biodiversity Values** Offsets must be provided for impacts to **State significant biodiversity values** in accordance with the *Coordinator General's Report on the environmental impact statement-Australia Pacific LNG Project* and the approved Environmental Offset Strategy, titled *Australia Pacific LNG Environmental Offset Strategy* (Q-LNG01-15-EA-0021).

Schedule A, Table 1 — Authorised Pipeline Location

Petroleum Activities	Scale					Intensity	
	ha of disturbance	Location				Number	Capacity
		Tenure	Description	Longitude	Latitude		
Installation and operation of a water pipeline within the Right of way (ROW)	90.75 ha	PPL185	Start of Main Pipeline	150.190880	-26.790188		
			End of Main Pipeline	150.334277	-26.810637		
			Start of Kuhl Lateral	150.203992	-26.772619		
			End of Kuhl Lateral	150.174254	-26.768805		
			Start of Gowan-Brae Lateral	150.190499	-26.790345		
			End of Gowan-Brae Lateral	150.178130	-26.812335		
			Start of Freeman Road Lateral	150.314772	-26.786427		
			End of Freeman Road Lateral	150.317304	-26.752275		
			Start of Cullingral Lateral	150.334462	-26.795207		
			End of Cullingral Lateral	150.337663	-26.807551		
			Start of Bottle Tree Lateral	150.335217	-26.795968		
			End of Bottle Tree Lateral	150.352681	-26.807551		

Schedule B: Protecting Environmental Values	
Condition number	**Condition**
B1	Petroleum activities that cause **significant disturbance to land** must not be carried out until **financial assurance** has been given to the **administering authority** as security for compliance with the environmental authority and any costs or expenses, or likely costs or expenses,

	mentioned in section 312O of the *Environmental Protection Act 1994* (effective as of 7 December 2012, Reprint No. 11B).
B2	Petroleum activities must not cause **environmental nuisance** from dust, odour, light, smoke or noise at a **sensitive place**, other than where an alternative arrangement is in place.
B3	Contaminants must not be directly or indirectly **released** to land or air except for those **releases** authorised by conditions C10, C14, C15, C16, C17, E4, E7, E8 and F3.
B4	Petroleum activities must: a) firstly, avoid, then minimise, then mitigate any negative impacts on areas of vegetation or other areas of ecological value b) minimise disturbance to land that may otherwise result in land degradation c) minimise isolation, fragmentation or dissection of tracts of vegetation that would lead to a reduction in the current level of **ecosystem functioning** or **ecological connectivity** d) minimise **clearing** of mature or hollow bearing trees.
B5	Where **significant disturbance** to land is to occur, records demonstrating compliance with condition B4 must be kept.
B6	Contaminants must not be directly or indirectly **released** to any **waters** except as permitted under this environmental authority.

Schedule C: General Conditions

Condition number	Condition
C1	**Documentation** All plans, procedures and reports required under this environmental authority must: a) be **certified** by a **suitably qualified person** b) be kept on record for a minimum of 5 years.
C2	All plans and procedures required to be developed under this environmental authority must be implemented.
C3	**Plant and Equipment** All plant and equipment reasonably necessary to ensure compliance with the conditions must be installed.
C4	All plant and equipment must be maintained and operated in their proper and effective condition.
C5	All measures reasonably necessary to ensure compliance with the conditions must be implemented.
C6	**Contingency and emergency response**

	Petroleum activities involving **significant disturbance** to land or which have the potential to cause **environmental harm** can only commence after the development of written contingency procedures which address the risks of non-compliance with Schedule B conditions.
C7	The contingency procedures must include, but not necessarily be limited to: a) **environmental nuisance** and complaint management procedures including: i. a description of the petroleum activities that might result in non-compliance with Schedule B conditions and what mitigation measures are required to be implemented; and ii. the action that will be undertaken when a member of the public makes a **valid complaint.** b) management procedures including details of what actions will be taken to protect **environmental values** and minimise potential **environmental harm** from petroleum activities as a result of floods, severe storms and fires c) environmental emergency management procedures including details of the response and mitigation measures that will be actioned to reduce negative impacts to **environmental values** in the event of a non-compliance with Schedule B conditions.
C8	**Erosion and Sediment Control** Petroleum activities must not cause the **release** of sediment laden water to **waters** and **wetlands**.
C9	Measures must be implemented and maintained to minimise stormwater entry onto **significantly disturbed land** that has not been rehabilitated in accordance with this environmental authority.
C10	Sediment and erosion control measures to minimise soil loss and deposition beyond **significantly disturbed land** must be implemented and maintained until rehabilitation in accordance with this environmental authority has been completed.
C11	The measures required by conditions C8, C9 and C10 must be in accordance, to the greatest practicable extent, with the International Erosion Control Association (IECA) *Best Practice Erosion and Sediment Control (BPESC) document* and/or the Australian Pipeline Industry Association (APIA) *Code of Environmental Practice: Onshore Pipelines* (2009).
C12	**Chemical storage** Chemicals and fuels on the relevant tenures must be stored in, or serviced by, an effective containment system that meets Australian Standards, where such a standard is relevant.
C13	**Waste management** Measures must be implemented so that waste is managed in accordance with the **waste and resource management hierarchy** and the **waste and resource management principles.**
C14	For waste fluids that can be stored in a container that is other than a **low hazard dam**, the container must either be an above ground container or a **structure** which contains the wetting front.

C15	Waste, including waste fluids, must be transported off-site for lawful re-use, remediation, recycling or disposal unless the waste is specifically authorised by conditions C16, C17, E4 and F3 to be disposed of or used on-site.
C16	**Green waste** may be used on-site for **rehabilitation** and/or sediment and erosion control purposes.
C17	**Treated sewage effluent** Treated sewage effluent or **greywater** can be **released** to land provided it: a) meets or exceeds **secondary treated class B standards** for a treatment system with a **daily peak design capacity** of between 150 EP and 1500 EP; or b) meets or exceeds **secondary treated class C standards** for a treatment system with a **daily peak design capacity** of less than 150 EP; and c) is **released** within fenced and signed contaminant **release** area(s) and does not result in pooling or run-off or aerosols or spray drift or vegetation die-off.
C18	**Financial assurance** Prior to any changes in petroleum activities which would result in an increase to the maximum disturbance since the last **financial assurance** calculation was submitted, the holder of the environmental authority must submit, and the administering authority must have approved, an application to amend the **financial assurance**.

Schedule D: Pipeline Planning	
Condition number	**Condition**
D1	**Site planning** Pipeline planning must be in accordance, to the greatest practicable extent, with the relevant section of the *Australian Pipeline Industry Association (APIA) Code of Environmental Practice – Onshore Pipelines* and *APIA Code of Practice Upstream PE Gathering Networks – CSG Industry*, as amended from time to time.
D2	**Planning for land disturbance** Notwithstanding condition D1, pipeline construction corridors must: a) be minimised in width to the greatest practicable extent; b) not exceed 25m in width; c) not include turn around and work areas associated with pipeline construction that exceed 50m in width; and d) be preferentially located alongside existing **linear infrastructure.**
D3	Prior to any **significant disturbance** to land: a) an ecological assessment of areas with native vegetation that are to be significantly disturbed,

	must be conducted in accordance with the Queensland Government's *Biocondition, a Condition Assessment Framework for Terrestrial Biodiversity in Queensland, Assessment Manual*; and b) an assessment of the impacts that will occur as a result of **significant disturbance** to land must be undertaken.

Schedule E: Construction	
Condition number	**Condition**
E1	Pipeline construction must be in accordance, to the greatest practicable extent, with the relevant section of the *Australian Pipeline Industry Association (APIA) Code of Environmental Practice – Onshore Pipelines* and *APIA Code of Practice Upstream PE Gathering Networks – CSG Industry*.
E2	**Activities in watercourses, wetlands, lakes and springs** Petroleum activities are not permitted in or within: a) 200 metres of any **wetland**, **lake** or **spring**; or b) 100 metres of a **watercourse.**
E3	**Fauna management** Measures to prevent fauna entrapment must be implemented during the construction of pipelines in pipe sections and pipeline trenches.
E4	**Waste** Trench water, hydrostatic testing water or water from low point drains, may be **released** to land provided that it: a) can be demonstrated to meet the **acceptable standards for release to land**; and b) is **released** in a way that does not cause visible scouring or erosion.
E5	If hydrostatic testing water quality does not or cannot be treated to meet the requirements of condition E4, it must be managed in accordance with conditions C14 or C15.
E6	**Blasting** A Blast Management Plan must be developed for each blasting activity in accordance with Australian Standard 2187.
E7	Blasting operations must be designed to not exceed an airblast overpressure level of 120dB (linear peak) at any time, when measured at or extrapolated to any **sensitive place**.
E8	Blasting operations must be designed to not exceed a ground-borne vibration peak particle velocity of 10mm/s at any time, when measured at or extrapolated to any **sensitive place**.
E9	**Pipeline reinstatement and revegetation**

	Pipeline trenches must be backfilled and topsoils **reinstated** within 3 **months** after pipe laying.
E10	**Reinstatement** and **revegetation** of the pipeline **right of way** must commence within 6 months after completion of petroleum activities for the purpose of pipeline construction.
E11	Backfilled, reinstated and **revegetated** pipeline trenches and **right of way** must be: a) a **stable** landform; b) re-profiled to a level consistent with surrounding soils; c) re-profiled to original contours and established drainage lines; and d) vegetated with groundcover which is not a declared **pest** species, and which is established and self-sustaining.
Schedule F: Post-construction including operations, maintenance and decommissioning	
Condition number	**Condition**
F1	Pipeline operation and maintenance must be in accordance, to the greatest practicable extent, with the relevant section of the *Australian Pipeline Industry Association (APIA) Code of Environmental Practice – Onshore Pipelines* and *APIA Code of Practice Upstream PE Gathering Networks – CSG Industry*.
F2	Written procedures must be developed to ensure operations and maintenance of the pipeline complies with the conditions of the environmental authority.
F3	Flush water may be **released** to land provided that it meets the requirements of condition E4.
F4	**Final acceptance criteria for rehabilitation** After **decommissioning**, all **significantly disturbed land** caused by the carrying out of the petroleum activity(ies) must be rehabilitated to meet the following final acceptance criteria: a) any contaminated land (e.g. contaminated soils) is remediated and rehabilitated; b) rehabilitation is undertaken in a manner such that any actual or potential acid sulfate soils on the area of **significant disturbance** are treated to prevent or minimise **environmental harm** in accordance with the *Instructions for the treatment and management of acid sulfate soils* (2001); c) for land that is not being **cultivated** by the landholder: i. groundcover, that is not a declared **pest** species is established and self-sustaining; ii. vegetation of similar **species richness** and **species diversity** to pre-selected **analogue sites** is established and self-sustaining; and d) for land that is to be **cultivated** by the landholder, establish final land use(s) that is acceptable to the affected landholder(s) and the administering authority.
F5	Monitoring of **performance indicators** must be carried out on rehabilitation activities until final

	acceptance criteria in Condition F4 have been met for the rehabilitated area.
Schedule G: Monitoring and Reporting	
Condition number	**Condition**
G1	All monitoring must be undertaken by a **suitably qualified person**.
G2	If requested by the administering authority in relation to investigating a **valid complaint**, monitoring must be undertaken within 10 business days or a longer period agreed to with the administering authority.
G3	All laboratory analyses and tests must be undertaken by a laboratory that has **NATA accreditation** for such analyses and tests, except as otherwise authorised in writing by the administering authority.
G4	Notwithstanding condition G3, where there are no **NATA accredited** laboratories available to test for a specific **analyte** or substance, then duplicate samples must be sent to separate laboratories for independent testing or evaluation.
G5	**Sampling** The methods of surface water sampling must comply with that set out in the Queensland Government's *Monitoring and Sampling Manual 2009 – Environmental Protection (Water) Policy 2009*.
G6	The methods of groundwater sampling must comply with the Australian Government's *Groundwater Sampling and Analysis – A Field Guide* (2009:27 GeoCat #6890.1).
G7	Noise must be measured in accordance with the prescribed standards in the *Environmental Protection Regulation 2008*.
G8	The method of measurement of ambient air quality or point source contaminant releases to air must comply with the *Queensland Air Quality Sampling Manual* and/or Australian Standard 4323.1:1995 *Stationary source emissions method 1: Selection of sampling positions*, whichever is appropriate for the relevant measurement.
G9	**Notification** In addition to the requirements under section 320A of the *Environmental Protection Act 1994* (effective as of 7 December 2012, Reprint No. 11B), the administering authority must be notified in writing within 5 business days of any event which has resulted in the contingency procedures required by conditions C6 and C7 being activated.
G10	**Reporting** The annual return must include an Update Report detailing activities during the **annual return**

	period, demonstrating: a) **significant disturbance** during the period; b) rehabilitation undertaken; c) 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 d) the results of all monitoring undertaken.

DEFINITIONS

Note: Where a term is not defined in this environmental authority the definition in the *Environmental Protection Act 1994*, its regulations and Environmental Protection Policies, or the *Acts Interpretation Act 1954*, or the Macquarie Dictionary or the *Petroleum and Gas (Production and Safety) Act 2004* or its regulations must be used in that order.

"acceptable standards for release to land" is defined as:
(a) electrical conductivity (EC) not exceeding 3000µS/cm
(b) sodium adsorption ratio (SAR) not exceeding 8
(c) and for hydrostatic testing water, water from low point drains and flush water, total heavy metals for each element listed meets the respective short term trigger value in Table 4.2.6. – Heavy metals and metalloids in Australian and New Zealand Guidelines for Fresh and Marine Water Quality (ANZECC) 2000.

"accepted engineering standards" in relation to dams, means those standards of design, **construction**, operation and maintenance that are broadly accepted within the profession of engineering as being good practice for the purpose and application being considered. In the case of dams, the most relevant **documents** would be publications of the Australian National Committee on Large Dams (ANCOLD), guidelines published by Queensland government departments and relevant Australian and New Zealand Standards.

"acid sulfate soils" means soil or sediment containing highly acidic soil horizons or layers affected by the oxidation of iron sulfides (*actual acid sulfate soils*) and / or soil or sediment containing iron sulfides or other sulfidic material that has not been exposed to air and oxidised (*potential acid sulfate soils*). The term acid sulfate soil generally includes both actual and potential **acid sulfate soils**. Actual and potential **acid sulfate soils** are often found in the same soil profile, with actual **acid sulfate soils** generally overlying potential acid sulfate soil horizons.

"additional work areas" means the additional work areas adjacent to and in the pipeline **right of way** (ROW) required for a specific purpose during pipeline construction including:
(d) creek crossings, road crossings, steep inclines where additional burial depth is required,
(e) equipment storage areas,
(f) turn around bays, and
(g) areas for in-field pipe bending.

"administering authority" means:
(a) for a matter, the administration and enforcement of which has been devolved to a local government under section 514 of the *Environmental Protection Act 1994* – the local government; or
(b) for all other matters – the Chief Executive of the Department of Environment and Resource Management; or
(c) another State Government Department, Authority, Storage Operator, Board or Trust, whose role is to administer provisions under other enacted legislation.

"AHD" means Australian Height Datum and is the datum used for the determination of elevations in Australia. The determination uses a national network of benchmarks and tide gauges and sets mean sea level at zero elevation.

"alternative arrangement" means a written agreement between the holder of this environmental authority and an affected or potentially affected person at a **sensitive receptor** for a defined nuisance impact and may include an agreed period of time for which the arrangement is in place. An agreement for alternative arrangement may include, but not necessarily be limited to a range of abatement measures to be installed at a **sensitive receptor** and / or provision of alternative accommodation for the duration of the defined nuisance impact.

"analogue site" means an area of land which contains values and characteristics representative of an area to be rehabilitated prior to disturbance. Such values must encompass land use, topographic, soil, vegetation and other ecological characteristics. **Analogue sites** can be the pre-disturbed site of interest where significant surveying effort has been undertaken to establish benchmark parameters such as that ground truthing assessment required under the Land Schedule of this environmental authority.

"analyte" means a chemical parameter determined by either physical measurement in the field or by laboratory analysis.

"annual exceedance probability or AEP" is the probability that a given rainfall total accumulated over a given duration will be exceeded in any one **year**.

"annual return period" means the most current 12-month period between 2 anniversary dates.

"aquifer" means an identifiable stratigraphic formation that has the potential to produce useful flows of water.

"associated works" in relation to a dam, means:

- any kind and all things associated with the **construction** and operation of a dam; and
- any land used for those operations.

"Australian Standard 1055" means Australian Standard 1055.1:1997 "Description and Measurement of Environmental Noise – General procedures".

"Australian Standard 2187" means Australian Standard 2187.0:1998 Explosives—Storage, transport and use, Part 0, Australian Standard 2187.1:1998 Explosives—Storage, transport and use Part 1 and Australian Standard 2187.2:2006 Explosives—Storage and use, Part 2 or any updated versions that becomes available from time to time.

"Australian Standard 2885" means Australian Standard 2885.0:2008 "Pipelines – Gas and Liquid Petroleum General Requirements", Australian Standard 2885.1:2007 "Pipelines – Gas and Liquid Petroleum Design and Construction" and Australian Standard 2885.3:2001 "Pipelines – Gas and Liquid Petroleum Operation and Maintenance", or any updated versions that becomes available from time to time.

"Australian Standard 4323" means Australian Standard 4323.1:1995 "Stationary source emissions method 1: Selection of sampling positions".

"Australian / New Zealand Standard 5667.11" means Australian / New Zealand Standard 5667.11: 1998 "Water Quality – Sampling – Guidance on sampling at Groundwaters".

"Australian / New Zealand Standard 5667.12" means Australian / New Zealand Standard 5667.12:1999 "Guidance on Sampling of Bottom Sediments" for permanent, semi-permanent water holes and water storages".

"authorised person" means a person holding office as an **authorised person** under an appointment under the *Environmental Protection Act 1994* by the chief executive or chief executive officer of a local government.

"background noise level" means the sound pressure level, measured in the absence of the noise under investigation, as the $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90 percent of the measurement time period T of not less than 15 minutes, using Fast response.

"bed" of any **waters**, has the meaning in Schedule 12 Part 2 of the Environmental Protection Regulation 2008.

"bed and banks" for a **watercourse** or **wetland** means land over which the water of the **watercourse** or **wetland** normally flows or that is normally covered by the water, whether permanently or intermittently; but does not include land adjoining or adjacent to the bed or banks that is from time to time covered by floodwater.

"bore" means a water observation **bore** or a water supply **bore** that is either sub-artesian or artesian.

"bund or bunded" in relation to spill containment systems for fabricated or manufactured tanks or containers designed to a recognised standard means an embankment or wall of brick, stone, concrete or other impervious material which may form part or all of the perimeter of a compound and provides a barrier to retain liquid. Since the **bund** is the main part of a spill containment system, the whole system (or **bunded** area) is sometimes colloquially referred to within industry as the **bund**. The **bund** is designed to contain spillages and leaks from liquids used, stored or processed above ground and to facilitate clean-up operations. As well as being used to prevent pollution of the receiving environment, **bunds** are also used for fire protection, product recovery and process isolation.

business day has the meaning in the *Acts Interpretation Act 1954* and means a day that is not—
- a Saturday or Sunday; or
- a public holiday, special holiday or bank holiday in the place in which any relevant act is to be or may be done.

"Category A Environmentally Sensitive Area" means any area listed in Section 25 of the *Environmental Protection Regulation 2008.*

"Category B Environmentally Sensitive Area" means any area listed in Section 26 of the *Environmental Protection Regulation 2008.*

"Category C Environmentally Sensitive Area" means any of the following areas:
- Nature Refuges as defined under the Nature Conservation Act 1992;
- Koala Habitat Areas as defined under the Nature Conservation (Koala) Conservation Plan 2006;
- State Forests or Timber Reserves as defined under the Forestry Act 1959;
- Declared catchment areas under the Water Act 2000;
- Resources reserves under the *Nature Conservation Act 1992;*
- An area identified as "Essential Habitat" or "Essential Regrowth Habitat" under the *Vegetation Management Act 1999* for a species of wildlife listed as endangered, vulnerable, rare or near threatened under the *Nature Conservation Act 1992*; or
- Of Concern Regional Ecosystems identified in the database maintained by the Department of Environment and Resource Management called 'RE description database' containing Regional Ecosystem numbers and descriptions.
- threshold regional ecosystems as defined and listed in Appendix 6 of the *Queensland Biodiversity Offsets Policy*
- critically limited regional ecosystems as defined and listed in Appendix 5 of the *Queensland Biodiversity Offsets Policy.*

"certification or certified by a suitably qualified and experienced person" in relation to a **design plan**, 'as constructed' drawings or an annual report regarding dams, means that a statutory declaration has been made by that person and, when taken together with any attached or appended **documents** referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:
- exactly what is being **certified** and the precise nature of that certification.
- the relevant legislative, regulatory and technical criteria on which the certification has been based;

- the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

"certify or certification or certified" in relation to any matter other than a **design plan**, 'as constructed' drawings or an annual report regarding dams in this environmental authority means a Statutory Declaration by a **suitably qualified person** accompanying the written **document** stating that:

- the person's qualifications and experience relevant to the function
- that the person has not knowingly included false, misleading or incomplete information in the document
- that the person has not knowingly failed to reveal any relevant information or document to the administering authority
- that the document addresses the relevant matters for the function and is factually correct; and that the opinions expressed in the document are honestly and reasonably held.

"clearing" for vegetation means removing, cutting down, ringbarking, pushing over, poisoning or destroying in any way including by burning, flooding or draining; but does not include destroying standing vegetation by stock, or **lopping a tree**.

"cultivated" means used for cropping or gardening.

"coal seam gas water" means underground water brought to the surface of the earth, or otherwise interfered with, in connection with exploring for or producing coal seam gas. CSG water is a waste, as defined under s13 of the *Environmental Protection Act 1994*.

"coastal waters" has the meaning in section 440ZH of the *Environmental Protection Act 1994* (effective as of 7 December 2012, Reprint No. 11B) and means the coastal **waters** of the state, and includes other **waters** within the limits of the state that are subject to the ebb and flow of the tide.

"dams" means a land-based structure or a **void** that is designed to contain, divert or control flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or **void** and associated works. A dam does not mean a fabricated or manufactured tank or container, designed and constructed to an Australian Standard that deals with strength and structural integrity of that tank or container.

"daily peak design capacity" for sewage treatment works, has the meaning in Schedule 2, section 63(4) of the Environmental Protection Regulation 2008 as the higher equivalent person (EP) for the works calculated using each of the formulae found in the definition for EP.

"declared pest species" has the meaning in the Land Protection (Pest and Stock Route Management) Regulation 2003 and is a live animal or plant declared to be a declared pest under section 36 (Declaring Pests by Regulation) or section 37(2) (Declaring Pest under Emergency Pest Notice) of that Act and includes reproductive material of the animal or plant.

"decommissioning" in relation to pipelines means the actions undertaken in accordance with the requirements of Australian Standard 2885, as amended from time to time, to prepare the pipeline and peripheral facilities for pending suspension or abandonment

"discharge area" means:

- that part of the land surface where groundwater discharge produces a net movement of water out of the groundwater; and

- identified by an assessment process consistent with the **document** "Salinity Management Handbook" Queensland Department of Natural Resources, 1997, as amended from time to time; or
- identified by an approved salinity hazard map held by the Department of Environment and Resource Management.

"document" has the meaning in the *Acts Interpretation Act 1954* and means:
- any paper or other material on which there is writing; and
- any paper or other material on which there are marks, figures, symbols or perforations having a meaning for a person qualified to interpret them; and
- any disc, tape or other article or any material from which sounds, images, writings or messages are capable of being produced or reproduced (with or without the aid of another article or device).

"ecological connectivity" is a measure of ecological condition and means the flow or connection of organisms and ecological processes across landscapes at multiple scales. Ecological connectivity has a positive relationship with landscape connectivity and habitat connectivity and effects vary between species. It includes connectivity by stepping stone or contiguous bioregional/local corridor networks.

"ecosystem functioning" means the interactions between and within living and nonliving components of an ecosystem and generally correlates with the size, shape and location of an area of vegetation.

"environmental harm" has the meaning in section 14 of the *Environmental Protection Act 1994*.

"environmentally relevant activity or ERA" has the meaning in section 18 of the *Environmental Protection Act 1994.*

"environmental nuisance" has the meaning in section 15 of the *Environmental Protection Act 1994.*

"environmental value(s)" has the meaning in section 9 of the *Environmental Protection Act 1994.*

"end" means the stopping of the particular activity that has caused a **significant disturbance** in a particular area. It refers to, among other things, the end of a seismic survey or the end of a drilling operation. It does not refer to the end of all related petroleum activities such as **rehabilitation**. In other words, it does not refer to the 'completion' of the petroleum activities, the time at which the petroleum authority ends or the time that the land in question ceases to be part of an authority.

"equivalent person or EP" has the meaning under section 3 of the Planning Guidelines For Water Supply and Sewerage, 2005, published by the Queensland Government. It is calculated in accordance with Schedule 2, Section 63(4) of the Environmental Protection Regulation 2008 where:
- EP = V/200 where V is the volume, in litres, of the average dry weather flow of sewage that can be treated at the works in a day; or
- EP = M/2.5 where M is the mass, in grams, of phosphorus in the influent that the works are designed to treat as the inlet load in a day.

"fill" means any kind of material in solid form (whether or not naturally occurring) capable of being deposited at a place but does not include material that forms a part of, or is associated with, a **structure** constructed in a **watercourse**, **wetland** or **spring** including a bridge, road, causeway, pipeline, rock revetment, drain outlet works, erosion prevention **structure** or fence.
"financial assurance" for an environmental authority, means financial assurance given for the authority under Chapter 5A, Part 7 of the *Environmental Protection Act 1994* (effective as of 7 December 2012, Reprint No. 11B).

"floodplain" has the meaning in the *Water Act 2000* and means an area of reasonably flat land adjacent to a **watercourse** that—
- is covered from time to time by floodwater overflowing from the **watercourse**; and
- does not, other than in an upper valley reach, confine floodwater to generally follow the path of the **watercourse**; and
- has finer sediment deposits than the sediment deposits of any bench, bar or in-stream island in the **watercourse**.

"foliage cover" means the proportion of the ground, which would be shaded if sunshine came from directly overhead and is defined for each stratum. It includes branches and leaves and is similar to the crown type of Walker and Hopkins (1990) but is applied to a stratum or plot rather than an individual crown.

"foreseeable future" means the period used for assessing the total probability of an event occurring. Permanent structures and ecological sustainability should be expected to still exist at the **end** of a 150 year foreseeable future with an acceptably low probability of failure before that time.

"green waste" means waste that is grass cuttings, trees, bushes, shrubs, material lopped from trees, untreated timber or other waste that is similar in nature but does not include declared pest species.

"grey water" means wastewater generated from domestic activities such as laundry, dishwashing, and bathing. Greywater does not include sewage.

"hazard category" means a category, either low significant or high, into which a **dam** is assessed as a result of the application of tables and other criteria in "Manual for Assessing Hazard Categories and Hydraulic Performance of Dams", prepared by the Department of Environment and Resource Management, as amended from time to time.

"high bank" means the defining terrace or bank or, if no bank is present, the point on the active **floodplain**, which confines the average annual peak flows in a **watercourse**.

"high ecological value waters" means Queensland **waters** that are scheduled **waters** under the Environmental Protection (Water) Policy 2009 as high value ecological **waters**.

"high value regrowth" vegetation means
- any of the following:
  - an endangered regional ecosystem;
  - an of concern regional ecosystem;
  - a least concern regional ecosystem; and
- have not been cleared since 31 December 1989; and
- is shown on a **regrowth vegetation map**.

"impacts to State significant biodiversity values" means to have a negative effect on a State Significant Biodiversity Value as identified by the Queensland Biodiversity Offset Policy (Department of Environment and Resource Management, 2011). Examples may include, but are not necessarily limited to:
- clearing, removal or fragmentation of vegetation
- interference or disturbance of fauna habitat

"impulsive noise" means sound characterised by brief excursions of sound pressure (acoustic impulses) that significantly exceed the background sound pressure. The duration of a single impulsive sound is usually less than one second.

"infrastructure" means plant or works including for example, communication systems, compressors, powerlines, pumping stations, reservoirs, roads and tracks, water storage dams, evaporation or storage ponds and tanks, equipment, buildings and other **structures** built for the purpose and duration of the conduct of the petroleum activities including temporary **structures** or **structures** of an industrial or technical nature, including, for example, mobile and temporary camps.

Infrastructure does not include other facilities required for the long term management of the impact of those petroleum activities or the protection of potential resources. Such other facilities include dams other than water storage dams, pipelines and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

"$L_{Aeq, adj, 15 mins}$" means the A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within any 15 minute period has the same square sound pressure as a sound level that varies with time.

"$L_{A 90, adj, 15 mins}$" means the A-weighted sound pressure level, adjusted for tonal character, that is equal to or exceeded for 90% of any 15 minutes sample period equal, using Fast response.

"lake" means:
- a lagoon, swamp or other natural collection of water, whether permanent or intermittent; and
- the **bed and banks** and any other element confining or containing the water.

"leachate" means a liquid that has passed through or emerged from, or is likely to have passed through or emerged from, a material stored, processed or disposed of on site which contains soluble, suspended or miscible contaminants likely to have been derived from the said material.

"levee" means an embankment that only provides for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from releases from other works, during the progress of those stormwater or flood flows or those releases; and does not store any significant volume of water or flowable substances at any other times.

"limit of reporting" means the lowest amount of an analyte in a sample that can be quantitatively determined with stated, acceptable precision and accuracy under stated analytical conditions (i.e. the lower limit of quantitation.

"linear infrastructure" means powerlines, pipelines, roads and access tracks.

"long term noise event" is a noise exposure, when perceived at a **sensitive receptor**, persists for a period of greater than five (5) days, even when there are respite periods when the noise is inaudible within those five (5) days.

"lopping a tree" means cutting or pruning its branches, but does not include—
- removing its trunk; and
- cutting or pruning its branches so severely that it is likely to die.

"low hazard dam" means any dam that is not classified as high or significant as assessed using the *Manual for Assessing Hazard Categories and Hydraulic Performance of Dams*, published by the Queensland Government and which contains contaminants in concentrations which exceed or will exceed, during the dam's operational life, the values or range shown in Table 3 of the manual.

"low impact petroleum activities" means petroleum activities which do not result in the clearing of native vegetation, cause disruption to soil profiles through earthworks or excavation or result in **significant**

disturbance to land which cannot be rehabilitated immediately using hand tools after the activity is completed. Examples of such activities include but are not necessarily limited to soil surveys (excluding test pits), topographic surveys, cadastral surveys and ecological surveys, may include installation of monitoring equipment provided that it is within the meaning of low impact and traversing land by car or foot via existing access tracks or routes or in such a way that does not result in permanent damage to vegetation.

"Max $L_{pZ,\ 15\ min}$" means the maximum value of the Z-weighted sound pressure level measured over 15 minutes.

"Max $L_{pA,\ 15\ min}$" means the absolute maximum instantaneous A-weighted sound pressure level, measured over 15 minutes.

"medium term noise event" is a noise exposure, when perceived at a **sensitive receptor**, persists for an aggregate period not greater than five (5) days and does not re-occur for a period of at least four (4) weeks. Re-occurrence is deemed to apply where a noise of comparable level is observed at the same receptor location for a period of one hour or more, even if it originates from a difference source or source location.

"meter" means a device for measuring, or giving an output signal proportional to, quantities of water passed and/or the rate of flow in a pipe.

"month" has the meaning in the Acts Interpretation Act 1954 and means a calendar **month** and is a period starting at the beginning of any day of one (1) of the 12 named **months** and ending—
- immediately before the beginning of the corresponding day of the next named **month**; or
- if there is no such corresponding day—at the **end** of the next named **month**.

"NATA accreditation" means accreditation by the National Association of Testing Authorities Australia.

"non-linear infrastructure" means **infrastructure** that is other than a powerline, a pipeline, a road, an access track and includes only the following:
- workers camps
- maintenance facilities
- no-release sewage treatment plants
- laydown areas
- structures (i.e. dams or levees)
- tanks
- sediment and erosion control measures
- above ground containers and chemical / fuel storages
- water pumps and generators
- stockpiles.

"pest" means species:
- declared under the *Land Protection (Pest and Stock route Management) Act 2002*;
- declared under Local Government model local laws; and
- which may become invasive in the future.

"performance indicator" means a quantitative measure against which success can be assessed and audited in a consistent, objective and repeatable manner.

"programmed and approved" means when the location of **infrastructure** has been approved by the **authorised person(s)** with the organisation(s).

"primary protection zone" means an area within 200 metres from the boundary of any Category A, B or C environmentally sensitive area.

"rehabilitation" means the process of reshaping and revegetating land to restore it to a **stable** landform and in accordance with the acceptance criteria set out in this environmental authority and, where relevant, includes remediation of contaminated land.

"regrowth vegetation map" means a map **certified** by the chief executive as the **regrowth vegetation map** for the State and showing for the State:

- areas of regrowth vegetation, identified on the map as high-value regrowth vegetation, that—
  - are any of the following:
  (i) an endangered regional ecosystem;
  (ii) an of concern regional ecosystem;
  (iii) a least concern regional ecosystem; and
  - have not been cleared since 31 December 1989; and
- particular **watercourses** in the Burdekin, Mackay Whitsunday and Wet Tropics catchments, identified on the map as regrowth **watercourses;** and
- areas the chief executive decides under section 20AI to show on the map as **high value regrowth** vegetation.

"rehabilitation or rehabilitated" means the process of reshaping and revegetating land to restore it to a **stable** landform and in accordance with acceptance criteria and, where relevant, includes remediation of contaminated land. For the purposes of pipeline rehabilitation, rehabilitation includes reinstatement, revegetation and **restoration**.

"reinstated or reinstatement" means the process of bulk earth works and structural replacement of pre-existing conditions of a site (i.e. soil surface typography, **watercourse**s, culverts, fences and gates and other landscape(d) features) and is detailed in the APIA *Code of Environmental Practice: Onshore Pipelines* (2009).

"release, releases, released" has the meaning in Schedule 4 of the *Environmental Protection Act 1994* (effective as of 7 December 2012, Reprint No. 11B).

"remnant vegetation" means vegetation, part of which forms the predominant canopy of the vegetation—

- covering more than 50 % of the undisturbed predominant canopy; and
- averaging more than 70 % of the vegetation's undisturbed height; and
- composed of species characteristic of the vegetation's undisturbed predominant canopy cover.

"restoration" means the replacement of structural habitat complexity, ecosystem processes, services and function from a disturbed or degraded site to that of a pre-determined or analogue state. For the purposes of pipelines, restoration applies to final rehabilitation after pipeline decommissioning.

"revegetation or revegetating or revegetate" means to actively re-establish vegetation through seeding or planting techniques in accordance with site specific management plans.

"right of way" means the linear construction footprint required to install pipelines.

"secondary protection zone" in relation to a Category A or Category B environmentally sensitive area means an area within 100 metres from the boundary of the **primary protection zone**.

"secondary treated class B standards" means treated sewage effluent or greywater which meets the following standards:

- total phosphorous as P, maximum 20mg/L

- total nitrogen as N, maximum 30mg/L
- 5-day biochemical oxygen demand (inhibited) (e.g. release pipe from sewage treatment plant), maximum 20mg/L
- suspended solids, maximum 30mg/L
- pH, range 6.0 to 8.5
- e-coli, **80th percentile** based on at least 5 samples with not less than 30 minutes between samples, 1000cfu per 100mL, maximum 10000cfu per 100mL.

"secondary treated class C standards" means treated sewage effluent or greywater which meets the following standards:

- total Phosphorous as P, maximum 20mg/L
- total Nitrogen as N, maximum 30mg/L
- 5-day Biochemical oxygen demand (inhibited) (e.g. Release pipe from sewage treatment plant), maximum 20mg/L
- suspended solids, maximum 30mg/L
- pH, range 6.0 to 8.5
- e-Coli, **80th percentile** based on at least 5 samples with not less than 30 minutes between samples, 10000cfu per 100mL, maximum 100000cfu per 100mL.

"sensitive place" means:

- a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel; or
- a library, childcare centre, kindergarten, school, university or other educational institution;
- a medical centre, surgery or hospital; or
- a protected area; or
- a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment; or
- a work place used as an office or for business or commercial purposes, which is not part of the petroleum activities and does not include employees accommodation or public roads.

"sensitive receptor" means an area or place where noise (including low frequency, vibration and blasting) is measured to investigate whether nuisance impacts are occurring and includes:

- a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel; or
- a library, childcare centre, kindergarten, school, university or other educational institution;
- a medical centre, surgery or hospital; or
- a protected area; or
- a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment; or
- a work place used as an office or for business or commercial purposes, which is not part of the petroleum activities and does not include employees accommodation or public roads.

"short term noise event" is a noise exposure, when perceived at a **sensitive receptor**, persists for an aggregate period not greater than eight hours and does not re-occur for a period of at least seven (7) days. Re-occurrence is deemed to apply where a noise of comparable level is observed at the same receptor location for a period of one hour or more, even if it originates from a different source or source location.

"significantly disturbed land or significant disturbance to land or significant disturbance" means disturbance to land as defined in section 28 of the *Environmental Protection Regulation 2008*.

"species richness" means the number of different species in a given area.

"species diversity" means the diversity within an ecological community that incorporates both **species richness** and the evenness of species' abundances.

"spring" has the meaning in Schedule 4 of the *Water Act 2000.*

"stable" in relation to land, means landform dimensions are or will be **stable** within **tolerable limits** now and in the **foreseeable future**. Stability includes consideration of geotechnical stability, settlement and consolidation allowances, bearing capacity (trafficability), erosion resistance and geochemical stability with respect to seepage, **leachate** and related contaminant generation.

"State significant biodiversity values" means those regional ecosystems, essential habitat, **wetlands**, **watercourses,** legally secured offset areas and connectivity areas provided in Appendix 1 of the "*Queensland Biodiversity Offset Policy*" (Department of Environment and Resource Management, 2011).

"structure" means a dam or levee.

"suitably qualified person" means a person who has professional qualifications, training, skills or experience relevant to the nominated subject matter and can give authoritative assessment, advice and analysis to performance relative to the subject matter using the relevant protocols, standards, methods or literature.

"third party auditor" means a **suitably qualified person** who is either a **certified third party auditor** or an internal auditor employed by the holder of the environmental authority and the person is independent of the day to day management and operation of the petroleum activities covered by this environmental authority.
"tolerable limits" means a range of parameters regarded as being sufficient to meet the objective of protecting relevant environmental values (e.g. a range of settlement for a tailings capping, rather than a single value, could still meet the objective of draining the cap quickly, preventing damage and limiting infiltration and percolation).

"top soil" means the surface (top) layer of a soil profile, which is more fertile, darker in colour, better structured and supports greater biological activity than underlying layers. The surface layer may vary in depth depending on soil forming factors, including parent material, location and slope, but generally is not greater than about 300 mm in depth from the natural surface.

"trenchless methods" means **construction** methods for the installation of pipelines and cables below the ground with minimal excavation. **Trenchless methods** can include, but not necessarily be limited to:

- moling
- pipe ramming method
- horizontal directional drilling
- utility tunneling, pipe jacking, auger boring
- microtunnelling and pipe jacking
- on-line replacement

"trench spoil" means soil from the pipeline trench.

"unacceptable risk" means those risks identified as unacceptable through a risk assessment that substantially conforms with Australian Standard 4360:2004 "Risk Management" or any updated version that becomes available from time to time.

"valid complaint" means a complaint the **administering authority** considers is not frivolous, nor vexatious, nor based on mistaken belief.

"void" means any man-made, open excavation in the ground (includes borrow pits, drill sumps, frac pits, flare pits, cavitation pits and trenches).

"waste and resource management hierarchy" has the meaning provided in section 9 of the *Waste Reduction and Recycling Act 2011*.

"waste and resource management principles" has the meaning provided in section 4(2)(b) of the *Waste Reduction and Recycling Act 2011*.

"waters" includes all or any part of a creek, river, stream, **lake**, lagoon, swamp, **wetland**, **spring**, unconfined surface water, unconfined water in natural or artificial **watercourses**, bed and bank of any **waters**, non-tidal or tidal **waters** (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and underground water.

"watercourse" has the meaning provided in section 5 of the *Water Act 2000* and includes the **bed and banks** and any other element of a river, creek or stream confining or containing water.

"wetland" means a **wetland** as defined under the Queensland Wetlands Program and are areas of permanent or periodic / intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six (6) metres. To be classified as a **wetland**, the area must have one or more of the following attributes:

- at least periodically, the land supports plants or animals that are adapted to and dependent on living in wet conditions for at least part of their life cycle, or
- the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers, or
- the substratum is not soil and is saturated with water, or covered by water at some time.

For the purposes of Chapter 5A activities, **wetlands** do not include **springs** and **watercourse** and those **wetlands** that are defined in the **document** entitled *"Wetland Mapping and Classification Methodology*" *(*Department of Environment and Resource Management, 2005) as:

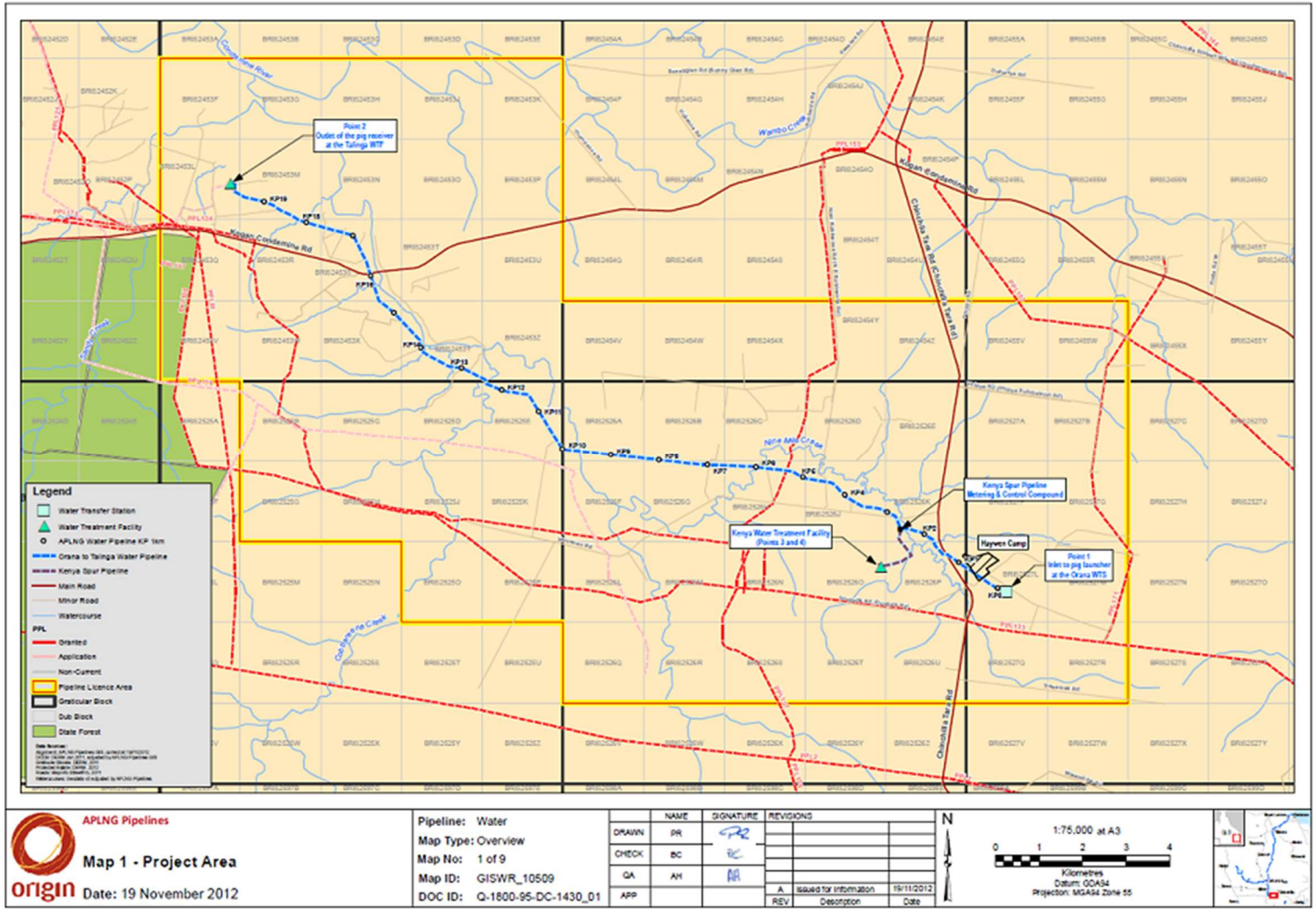
- H2M1 Riverine or ex-riverine (lacustrine) water bodies associated with dams and weirs located in a channel;
- H2M3p Ponded pastures;
- H2M5 Palustrine / lacustrine water bodies where ecological character has changed due to gross mechanical disturbance (e.g. cropping);
- H2M6 Palustrine / lacustrine water bodies that have been converted, completely or mostly, to a ring tank or other controlled storage;
- H2M7 Riverine water bodies that have been converted mostly to canals or irrigation channels;
- H3C1 Artificial stand-alone water storages not within a natural water body or channel; or
- H3C2 Artificial Channel drain / canal –bore drains, swales, **bores** and irrigation channel overflows / ponding.

"year" means a period of 12 **months**.

"80th percentile" in relation to release limits means that not more than one (1) of the measured values is to exceed the stated release limit for any five (5) consecutive samples where:

- the consecutive samples are taken over a five (5) **month** period; and
- the consecutive samples are taken at approximately equal periods.

APPENDIX 1 – LOCATION OF PETROLEUM PIPELINE LICENCE (PPL) 181



APPENDIX 2 – LOCATION OF PETROLEUM PIPELINE LICENCE (PPL) 177