

Permit

Environmental Protection Act 1994

Environmental authority EPPG00881613

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

Environmental authority number: EPPG00881613

Environmental authority takes effect on 14 August 2023.

Environmental authority holder(s)

Name(s)	Registered address
Santos GLNG Pty Ltd	Ground Floor, Santos Centre 60 Flinders Street ADELAIDE SA 5000
KGLNG Liquefaction Pty Ltd	Level 11 28 The Esplanade PERTH WA 6000
Total GLNG Australia	Level 13 28 The Esplanade PERTH WA 6000
PAPL (Downstream) Pty Limited	'ADDISONS' Level 12 60 Carrington Street SYDNEY NSW 2000

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	PPL166 PPL167 PPL168
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	PPL166 PPL167 PPL168
Ancillary 38 - Surface coating - 2 - Coating, painting or powder coating, using, in a year, more than 100t of surface coating materials	PPL166 PPL167 PPL168

Environmentally relevant activity/activities	Location(s)
Ancillary 47 - Timber milling and woodchipping - (b) - Milling, in a year, the following total quantity of timber - more than 10,000t but not more than 20,000t	PPL166 PPL167 PPL168
Ancillary 63 - Sewage Treatment - 1(b-ii) - Operating sewage treatment works, other than no-release works, with a total daily peak design capacity of more than 100 but not more than 1500EP - otherwise	PPL166 PPL167 PPL168

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:

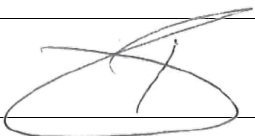
- a) if the authority is for a prescribed ERA and it states that it takes effect on the day nominated by the holder of the authority in a written notice given to the administering authority - on the nominated day; or
- b) if the authority states a day or an event for it to take effect-on the stated day 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 *Planning Act 2016* 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.

The anniversary day of this environmental authority is the same day each year as the original take effect date unless you apply to change the anniversary day. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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.



Signature

14 August 2023

Date

Tristan Roberts
Department of Environment and Science
Delegate of the administering authority
Environmental Protection Act 1994

Enquiries:
Energy and Extractive Resources
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Privacy statement

Pursuant to section 540 of the EP Act, the Department is required to maintain a register of certain documents and information authorised under the EP Act. A copy of this document will be kept on the public register. The register is available for inspection by members of the public who are able to take extracts, or copies of the documents from the register. Documents that are required to be kept on the register are published in their entirety, unless alteration is required by the EP Act. There is no general discretion allowing the Department to withhold documents or information required to be kept on the public register. For more information on the Department's public register, search 'public register' at www.qld.gov.au. For queries about privacy matters please email privacy@des.qld.gov.au or telephone 13 74 68.

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)

Other permits required

This permit only provides an approval under the *Environmental Protection Act 1994*. In order to lawfully operate you may also require permits / approvals from your local government authority, other business units within the department and other State Government agencies prior to commencing any activity at the site. For example, this may include permits / approvals with your local Council (for planning approval), the Department of Transport and Main Roads (to access state controlled roads), the Department of Resources (to clear vegetation), and the Department of Agriculture and Fisheries (to clear marine plants or to obtain a quarry material allocation).

Conditions of environmental authority

Schedule A – General conditions					
Condition number	Condition				
A1	This environmental authority authorises the carrying out of the following resource activity(ies): (a) the petroleum activities listed in <i>Schedule A, Table – Scale and Intensity for the Activities</i> to the extent they are carried out in accordance with the activity’s corresponding scale and intensity, including the maximum number and size; (b) incidental activities that are not otherwise specified relevant activities. Schedule A, Table – Scale and Intensity for the Activities				
	PPL166				
	Petroleum Activity	Maximum Size	Location		
			MGA Zone	Easting	Northing
	Pipeline including Right of Way (RoW):				
	KP 000 (start point)	406 km	55	693555	7150304
	KP 406 (end point)	1553 ha	56	307687	7371937
	Camps:				
	Camp 1 / Stockpile 2 - Arcadia	36.5 ha	55	671023	7211877
	Camp 2 – Bauhinia	24.7 ha	55	732491	7276784
	Camp 3 / Stockpile 7 - Killburnie	34.8 ha	56	248677	7316287
	Stockpiles:				
	Stockpile 1	9.9 ha	55	689757	7166253
	Stockpile 4	9.3 ha	55	733825	7279878
	Stockpile 5	10.5 ha	55	755258	7287280
Stockpile 6	8.8 ha	56	212177	7302813	
Pipe Lay Down Areas:					
Bajool - Port Alma Road – Lot 5	6.1 ha	56	261927	7382578	
Bajool - Port Alma Road – Lot 6	7.2 ha	56	262200	7382513	
Auckland Point Logistics Base - Lot 300	7.8 ha	56	323281	7362352	
Low Hazard Dams:					
Peart Dam	15.4 ha	55	688528	7201181	
Clematis Creek	10 ha	55	681397	7252381	
Biloela	7.26 ha	56	241197	7312091	
Purbrook Dam	6 ha	55	678507	7254561	

Calliope River		9.17 ha	56	279010	7335033
Zamia Dam		10.05 ha	55	751870	7285006
Vents and Valves:					
F-HCS-05		0.22 ha	55	689300	7160558
A-HCS-01 / MLV-80		1.9 ha	55	689609	7196669
MLV-160		0.41 ha	55	715280	7272654
Scraper Launcher Trap Fairview (F-PCS-01)		1.5 ha	55	693337	7150399
MLV-380		0.43 ha	56	298510	7357631
MLV-400 (including Interconnector)		0.53 ha	56	296951	7365236
MLV-410		1.1 ha	56	307019	7371825
MLV-270		4.11 ha	56	212088	7303019
Meridian Interconnector		2.2 ha	55	796879	7296514
Fibre Optic Cables (FOC):					
FOC-128		1.13 ha	55	692294	7265600
FOC-200		0.81 ha	55	756713	7286391
FOC-333		1.51 ha	56	267674	7327371
Washdown:					
Allembee Washdown		1.6 ha	55	678402	7248817
Washdown KP258		0.87 ha	56	201336	7302428
Washdown KP383		0.3 ha	56	298281	7357438
Washdown KP397		1.66 ha	56	300251	7368336
Additional Temporary Work Areas:		51.06 ha	Additional areas for infrastructure and activities including, but not limited to, watercourse crossings, material storage, road diversions, wash downs, pipe infrastructure and other temporary activities as required from time to time.		
Watercourse Crossing:					
Pipeline RoW Maintenance / Protection Activities		0.10 ha	55	699742	7269659
Cathodic Protection Units (CPU)	Maximum size ¹	Disturbance off GTP RoW	MGA Zone	Location ²	
				Easting	Northing
CPU - 1	0.27 ha	0.21 ha	55	711168.98	7271858.32
CPU - 2	0.32 ha	0.26 ha	55	715236.56	7272613.51
CPU - 3	0.28 ha	0.22 ha	55	732482.31	7278169.14
CPU - 4	0.31 ha	0.25 ha	55	742432.09	7281860.28
CPU - 5	0.41 ha	0.33 ha	55	772182.40	7291011.75
CPU - 6	0.35 ha	0.26 ha	55	782985.94	7291062.96
CPU - 7	0.45 ha	0.39 ha	55	791403.34	7295100.91
CPU - 8	0.24 ha	0.18 ha	56	198093.61	7301322.89

CPU - 9	0.45 ha	0.39 ha	56	224905.57	7307429.02
CPU - 10	0.44 ha	0.38 ha	56	229699.99	7309274.50
CPU - 11	0.36 ha	0.24 ha	56	239893.01	7311738.10
CPU - 12	0.14 ha	0 ha	56	249586.05	7315559.42
CPU - 13	0.24 ha	0.17 ha	56	256438.67	7319695.04
CPU - 15	0.30 ha	0.24 ha	56	271408.60	7331164.80
CPU - 16	0.52 ha	0.46 ha	56	278487.56	7333939.60
CPU - 17	0.82 ha	0.76 ha	56	282081.63	7338825.21
CPU - 18	0.14 ha	0 ha	56	290040.58	7342479.56
CPU - 19	0.6 ha	0.5 ha	56	293519.76	7345871.00
CPU - 20	0.26 ha	0.20 ha	56	298849.74	7360497.57
CPU - 21	0.28 ha	0.21 ha	56	296907.75	7364026.69
CPU - 22	0.42 ha	0.36 ha	56	300529.98	7368480.85
¹ Disturbance area is based on construction footprint					
² Coordinate represents the location of the Cathodic Protection Unit on the GTP (Gas Transmission Pipeline) Easement					
PPL167					
Marine Crossing Pipeline Section	Description			Maximum Disturbance Area	
Mainland Right of Way and adjoining land used for ancillary construction works	Includes: • ROW • Acid sulfate soils treatment area/s • Laydown area/s • Pipe stringing area/s • Construction Site Pad on Mainland • Land Release Area • Weed Washdown Facility • Water Treatment Plant • Watercourse Crossing Ancillary Areas • Access track to site including scour protection • Temporary seawater storage dam • Other incidental infrastructure			25.71 ha	
Tunnel under The Narrows in Port Curtis	Includes: Pipeline Tunnel			17.19 ha	
Curtis Island Right of Way and adjoining land used for ancillary construction works	Includes: • ROW • Laydown area/s • Pipe stringing area/s • Construction site pad on Curtis Island			7.84 ha	
All Sections				50.74 ha	

	PPL168			
	Petroleum Activity	Maximum size and number (where applicable)	Easting (MGA Zone 56)	Northing (MGA Zone 56)
	KP 414.338 (start point)	5.027 km 14.6 ha	314,986	7,372,579
	KP 419.365 (end point)		317,760	7,369,813
	Vents and Valves (permanent)			
	MLV-420 (including Scraper Receiver Trap and Anode Bed)	1.29	317,883	7,369,794
	Interconnector (Tie-in 415)	0.42	317,428	7,371,076
	Temporary Infrastructure			
	Additional Temporary Works Area 1 – ATWA #416	1.50	317,900	7,370,523
	Additional Temporary Works Area 2 – ATWA #418	1.50	316,656	7,372,581
	Additional Temporary Work Area 3 – ATWA #421	1.53	318,077	7,370,070
	Temporary Hydrotest Water Storage Tank – ATWA #420	0.71	317,563	7,370,795
A2	Petroleum activities must be constructed within the locations outlined in <i>Schedule A, Table – Scale and Intensity for the Activities</i> .			
A3	The resource activities in condition (A1) are authorised subject to the conditions of this environmental authority.			
A4	This environmental authority authorises a relevant act¹ to occur only to the extent that: (a) the relevant act is an ordinary consequence of carrying out the resource activities authorised by this environmental authority in accordance with its conditions; or (b) the relevant act is specifically authorised by the conditions of this environmental authority and carrying out an activity which results in the relevant act does not contravene the conditions of this authority. ¹See section 493A of the <i>Environmental Protection Act 1994</i>.			
Monitoring				
A5	All monitoring required must be undertaken by a suitably qualified person.			
A6	If requested by the administering authority in relation to investigating a complaint, monitoring must be commenced within 10 business days.			
A7	All laboratory analyses and tests required must be undertaken by a laboratory that has NATA accreditation for such analyses and tests.			

A8	Notwithstanding condition (A7), where there are no NATA accredited laboratories for a specific analyte or substance, then duplicate samples must be sent to at least two separate laboratories for independent testing or evaluation.
A9	Monitoring and sampling must be carried out in accordance with the requirements of the following documents (as relevant to the sampling being undertaken), as amended from time to time: (a) for waters and aquatic environments, the Queensland Government's Monitoring and Sampling Manual Environmental Protection (Water) Policy 2009 (b) for groundwater, the Australian Government's Groundwater Sampling and Analysis - A Field Guide and any applicable Australian Standard (c) for noise, the latest Department of Environment and Science Noise Measurement Manual and any applicable Australian Standard (d) for air, the Queensland Air Quality Sampling Manual and/or Australian Standard 4323.1:1995 Stationary source emissions method 1: Selection of sampling positions, as appropriate for the relevant measurement (e) for soil, the Guidelines for Surveying Soil and Land Resources, 2nd edition (McKenzie et al. 2008), and/or the Australian Soil and Land Survey Handbook, 3rd edition (National Committee on Soil and Terrain, 2009) for dust, Australian Standard AS3580.
Contingency Procedures for Emergency Environmental Incidents	
A10	Petroleum activities involving significant disturbance to land cannot commence until the development of written contingency procedures for emergency environmental incidents which include, but are not necessarily limited to: (a) A clear definition of what constitutes an environmental emergency incident or near miss for the petroleum activity. (b) Consideration of the risks caused by the petroleum activity including the impact of flooding and other natural events on the petroleum activity. (c) Response procedures to be implemented to prevent or minimise the risks of environmental harm occurring. (d) The practices and procedures to be employed to restore the environment or mitigate any environmental harm caused. (e) Procedures to investigate causes and impacts including impact monitoring programs for releases to waters and/or land. (f) Training of staff to enable them to effectively respond. (g) Procedures to notify the administering authority, local government and any potentially impacted landholder.
Maintenance of Plant and Equipment	
A11	All plant and equipment must be maintained and operated in their proper and effective condition.
Documentation	

A12	A certification must be prepared by a suitably qualified person within 30 business days of completing every plan, procedure, program and report required to be developed under this environmental authority, which demonstrates that: (a) relevant material, including current published guidelines (where available) have been considered in the written document; (b) the content of the written document is accurate and true; and (c) the document meets the requirements of the relevant conditions of the environmental authority.
A13	All plans, procedures, programs, reports and methodologies required under this environmental authority must be written and implemented.
A14	All documents required to be developed under this environmental authority must be kept for five years.
A15	All documents required to be prepared, held or kept under this environmental authority must be provided to the administering authority upon written request within the requested timeframe.
A16	A record of all complaints must be kept including the date, complaint's details, source, reason for the complaint, description of investigations and actions undertaken in resolving the complaint.
Third Party Audit	
A17	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.
A18	Notwithstanding condition (A17), and prior to undertaking the third party audit, the scope and content of the third party audit can be negotiated with the administering authority.
A19	An audit report must be prepared and certified by the third party auditor presenting the findings of each audit carried out.
A20	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.
A21	A written response must be attached to the audit report detailing the actions taken or to be taken on stated dates: (a) by the holder to ensure compliance with this environmental authority; and (b) to prevent a recurrence of any non-compliance issues identified.
Schedule B – Water	
General	

B1	Contaminants must not be directly or indirectly released to any waters except as permitted under this environmental authority.
Works in Watercourses and Wetlands	
B2	Only construction or maintenance of linear infrastructure is permitted in or within any wetland of other environmental value or in a watercourse.
B3	The construction or maintenance of linear infrastructure in a wetland of other environmental value must not result in the: (a) clearing of riparian vegetation outside of the minimum area practicable to carry out the works; or (b) ingress of saline water into freshwater aquifers; or (c) draining or filling of the wetland beyond the minimum area practicable to carry out the works.
B4	After construction or maintenance works for linear infrastructure in a wetland of other environmental value are completed, the linear infrastructure must not: (a) drain or fill the wetland (b) prohibit the flow of surface water in or out of the wetland (c) lower or raise the water table and hydrostatic pressure outside the bounds of natural variability that existed before the activities commenced (d) result in ongoing negative impacts to water quality (e) result in bank instability; or (f) result in fauna ceasing to use adjacent areas for habitat, feeding, roosting or nesting.
B5	Unless otherwise authorised under this environmental authority, petroleum activity(ies) that require earthworks; vegetation clearing; placing fill that will result in significant disturbance other than that associated with the maintenance of linear infrastructure, is not permitted in or within: (a) 200 metres from any wetland, lake or spring; or (b) 100 metres of the high bank of any other watercourse.
B6	The construction and/or maintenance of linear infrastructure that will result in significant disturbance in or on the bed and banks of a watercourse or within the areas specified in (B5)(a) and (b) must be conducted in accordance with the following order of preference: (a) conducting works in times when there is no water present; (b) conducting works in times of no flow; (c) conducting works in times of flow but in a way that does not impede low flow.
B7	The construction and/or maintenance of linear infrastructure that will result in significant disturbance in or on the bed and banks of a watercourse or within the areas specified in (B5)(b) must not release from the site any contaminants to any waters that exceed the water

	quality limits specified in <i>Schedule B, Table – Release limits for Construction or Maintenance of Linear Infrastructure</i>. Schedule B, Table – Release limits for Construction or Maintenance of Linear Infrastructure <table><tr><th>Water Quality Parameters</th><th>Units</th><th>Water Quality Limits</th></tr><tr><td rowspan="2">Turbidity</td><td rowspan="2">NTU</td><td>If background water turbidity is above 45 NTU, 10% above background water turbidity measured within 20 meters downstream of the construction and/or maintenance activity</td></tr><tr><td>If background water turbidity is equal to or below 45 NTU, a turbidity limit of 50NTU applies, measured within 20 metres downstream of the construction and/or maintenance activity.</td></tr><tr><td>Hydrocarbons</td><td>-</td><td>No visible sheen</td></tr></table>	Water Quality Parameters	Units	Water Quality Limits	Turbidity	NTU	If background water turbidity is above 45 NTU, 10% above background water turbidity measured within 20 meters downstream of the construction and/or maintenance activity	If background water turbidity is equal to or below 45 NTU, a turbidity limit of 50NTU applies, measured within 20 metres downstream of the construction and/or maintenance activity.	Hydrocarbons	-	No visible sheen
Water Quality Parameters	Units	Water Quality Limits									
Turbidity	NTU	If background water turbidity is above 45 NTU, 10% above background water turbidity measured within 20 meters downstream of the construction and/or maintenance activity									
		If background water turbidity is equal to or below 45 NTU, a turbidity limit of 50NTU applies, measured within 20 metres downstream of the construction and/or maintenance activity.									
Hydrocarbons	-	No visible sheen									
B8	Monitoring must be undertaken at a frequency that is appropriate to demonstrate compliance with condition (B7).										
B9	Written notification detailing the location (GPS coordinates) and timing of any significant disturbance to be undertaken in or on the bed and banks of a watercourse, or within the areas specified in condition (B5)(b) must be provided to the administering authority at least 10 business days prior to the commencement of the significant disturbance.										
B10	The construction and/or maintenance for linear infrastructure that will result in significant disturbance to a lake, spring or watercourse must 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.										
Floodplains											
B11	Petroleum activity(ies) on floodplains must be carried out in a way that does not: (a) concentrate flood flows in a way that will or may cause or threaten a negative 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.										
Erosion and Sediment Control											
B12	For activities involving significant disturbance to land, control measures that are commensurate to the site-specific risk of erosion, and risk of sediment release to waters must be implemented to:										

	(a) preferentially divert stormwater around significantly disturbed land, or allow stormwater to pass through the site in a controlled manner and at non-erosive flow velocities; (b) minimise soil erosion resulting from wind, rain, and flowing water; (c) minimise the duration that disturbed soils are exposed to the erosive forces of wind, rain, and flowing water; (d) minimise work-related soil erosion and sediment runoff; and (e) minimise negative impacts to land or properties adjacent to the activities (including roads).
Structures that are Dams or Levees	
B13	The hazard category of any dam or levee to be used in carrying out petroleum activities must be assessed in accordance with the Queensland Government Manual for Assessing Hazard Categories and Hydraulic Performance of Dams.
B14	Low hazard dams must be: (a) constructed, operated and maintained in accordance with accepted engineering standards currently appropriate for the purpose for which the dam is intended to be used; and (b) designed with a floor and sides made of material that will contain the wetting front and any entrained contaminants within the bounds of the containment system during both its operational life and including any period of decommissioning and rehabilitation.
B15	All low hazard dams must be monitored for early signs of loss of structural or hydraulic integrity as specified in the initial hazard assessment.
Schedule C – Land	
General	
C1	Contaminants must not be directly or indirectly released to land except as permitted under this environmental authority.
Top Soil Management	
C2	Top soil must be managed in a manner that preserves its biological and chemical properties.
Chemical Storage	
C3	Chemicals and fuels stored, must be effectively contained and where relevant, meet Australian Standards, where such a standard is applicable.
Pipeline Operation and Maintenance	

C4	Pipeline operation and maintenance must be in accordance, to the greatest practicable extent, with the relevant section of the APIA Code of Environmental Practice: Onshore Pipelines (2009) and/or AS 2885.3:2012.
C5	Written procedures must be developed to ensure operations and maintenance of the pipeline complies with the conditions of the environmental authority.
Pipeline Wastewater	
C6	Pipeline waste water may be released to land provided that it: (a) can be demonstrated it meets the acceptable standards for release to land; and (b) is released in a way that does not result in visible scouring or erosion or pooling or run-off or vegetation die-off.
Produced Water	
C7	Produced water may be used for dust suppression provided the following criteria are met: (a) the amount applied does not exceed the amount required to effectively suppress dust; and (b) the application: (i) does not cause on-site ponding or runoff (ii) is directly applied to the area being dust suppressed (iii) does not harm vegetation surrounding the area being dust suppressed; and (iv) does not cause visible salting.
C8	Produced water may be used for construction purposes provided the use: (a) does not result in negative impacts on the composition and structure of soil or subsoils (b) is not directly or indirectly released to waters (c) does not result in runoff from the construction site; and (d) does not harm vegetation surrounding the construction site.
C9	If there is any indication that any of the circumstances in condition (C7)(b)(i) to (C7)(b)(iv) or (C8)(a) to (C8)(d) is occurring the use must cease immediately and the affected area must be remediated without delay.
Acid Sulfate Soils	
C10	Acid sulfate soils must be treated and managed in accordance with the latest edition of the Queensland Acid Sulfate Soil Technical Manual.
Sewage Treatment Works	
C11	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.
C12	The release of treated sewage effluent or greywater authorised in condition (C11) must (a) be to a fenced and signed contaminant release area(s) (b) not result in pooling or run-off or aerosols or spray drift or vegetation die-off (c) be to a contaminant release area(s) that is kept vegetated with groundcover, that is: (i) not a declared pest species (ii) kept in a viable state for transpiration and nutrient uptake; and (iii) grazed or harvested and removed from the contaminant release area as needed, but not less than every three months.
C13	Sewage pump stations must be fitted with a: (a) stand-by pump; and (b) high level alarm to warn of imminent pump station overflow, that operates without mains power or with a back-up power source that starts automatically in the event of a power failure.
Schedule D – Biodiversity Values	
Confirming Biodiversity Values	
D1	Prior to undertaking activities that result in significant disturbance to land in areas of native vegetation, confirmation of on-the-ground environmentally sensitive areas and wetlands at that location must be undertaken by a suitably qualified person.
D2	A suitably qualified person must develop and certify a methodology so that condition (D1) can be complied with and which is appropriate to confirm on-the-ground environmentally sensitive areas and wetlands.
D3	Where areas mapped as environmentally sensitive areas and wetlands differ from those confirmed under conditions (D1) and (D2), petroleum activities may proceed in accordance with the conditions of the environmental authority based on the confirmed on the- ground values.
D4	All documentation, survey information photographs, field data or any material associated with the field validation requirements in (D1) must be maintained for the life of the environmental authority to demonstrate to the administering authority that surveys were conducted in a manner consistent with requirements contained in (D2).
D5	The location of the petroleum activity must be selected in accordance with the following site planning principles: (a) maximise the use of areas of pre-existing disturbance (b) in order of preference, avoid, minimise or mitigate any impacts, including cumulative impacts, on areas of native vegetation or other areas of ecological value (c) minimise disturbance to land that may result in land degradation (d) in order of preference, avoid then minimise isolation, fragmentation, edge effects or dissection of tracts of native vegetation; and

	(e) in order of preference, avoid then minimise clearing of native mature trees.																																																				
Vegetation Clearing																																																					
D6	A maximum area of vegetation cleared for authorised petroleum activities is specified in <i>Schedule D, Table – Authorised Disturbances</i>. Schedule D, Table – Authorised Disturbances <table><tr><th>Tenure</th><th>Pipeline section</th><th>Regional Ecosystem Classification</th><th>Area (ha)</th></tr><tr><td rowspan="3">PPL166</td><td rowspan="3">n/a</td><td>Remnant vegetation</td><td>215.50</td></tr><tr><td>High value regrowth</td><td>75.39</td></tr><tr><td>PPL166 total</td><td>290.89</td></tr><tr><td rowspan="13">PPL167</td><td rowspan="8">Mainland</td><td>Of Concern (remnant)</td><td>4.96</td></tr><tr><td>Of Concern subdominant (remnant)</td><td>0.07</td></tr><tr><td>Of Concern (high value regrowth)</td><td>7.31</td></tr><tr><td>Endangered (remnant)</td><td>0</td></tr><tr><td>Least Concern (remnant)</td><td>3.58</td></tr><tr><td>Least Concern (high value regrowth)</td><td>0.05</td></tr><tr><td>Non-remnant</td><td>8.46</td></tr><tr><td>Sub-total</td><td>24.43</td></tr><tr><td rowspan="5">Curtis Island</td><td>Least Concern (remnant)</td><td>0.98</td></tr><tr><td>Of Concern (remnant)</td><td>7.68</td></tr><tr><td>Non-remnant</td><td>0.05</td></tr><tr><td>Sub-total</td><td>8.71</td></tr><tr><td>PPL167 total</td><td>33.14</td></tr><tr><td rowspan="3">PPL168</td><td rowspan="3">n/a</td><td>Remnant vegetation</td><td>21.23</td></tr><tr><td>High value regrowth vegetation</td><td>0</td></tr><tr><td>PPL168 total</td><td>21.23</td></tr></table>				Tenure	Pipeline section	Regional Ecosystem Classification	Area (ha)	PPL166	n/a	Remnant vegetation	215.50	High value regrowth	75.39	PPL166 total	290.89	PPL167	Mainland	Of Concern (remnant)	4.96	Of Concern subdominant (remnant)	0.07	Of Concern (high value regrowth)	7.31	Endangered (remnant)	0	Least Concern (remnant)	3.58	Least Concern (high value regrowth)	0.05	Non-remnant	8.46	Sub-total	24.43	Curtis Island	Least Concern (remnant)	0.98	Of Concern (remnant)	7.68	Non-remnant	0.05	Sub-total	8.71	PPL167 total	33.14	PPL168	n/a	Remnant vegetation	21.23	High value regrowth vegetation	0	PPL168 total	21.23
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D7	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 except as permitted under this environmental authority.																																																				
Disturbance to Land – Environmentally Sensitive Areas																																																					
D8	Maximum areas of environmentally sensitive areas that may be cleared within the Pipeline right of way, turnaround bays and other areas where authorised petroleum activities are																																																				

carried out is specified in <i>Schedule D, Table – Petroleum Activities in Environmentally Sensitive Areas</i> .		
Schedule D, Table – Petroleum Activities in Environmentally Sensitive Areas		
Regional Ecosystem Classification	PPL166 Maximum Area (ha) cleared	PPL168 Maximum Area (ha) cleared
'Endangered' dominant remnant regional ecosystems	14.53	1.7
'Endangered' high value regrowth regional ecosystems	18.14	0
'Of Concern' dominant remnant regional ecosystem	30.23	0.34
'Of Concern' subdominant remnant regional ecosystem	0.64	1.14
'Least concern' remnant regional ecosystem	170.1	18.05
'Of Concern' high value regrowth regional ecosystems	10.71	0
'Least concern' high value regrowth regional Ecosystems	56.54	0
'Endangered' subdominant remnant regional ecosystems	0	0
Category C Environmentally Sensitive Area	35.66	0
Essential habitat for <i>Acacia Gittinsii</i>	11.1	0
Essential habitat for <i>Acacia pedleyi</i> and <i>Acacia pubicosta</i>	8.43	0
Essential habitat for <i>Acacia spania</i> and <i>Melaleuca irbyana</i>	5.09	0
Essential habitat for <i>Cupaniopsis shirleyana</i> (wedge-leaf tuckeroo), <i>Hernandia bivalvis</i> (grease nut), <i>Graptophyllum excelsum</i> (scarlet fuchsia), <i>Macropteranthes leiocaulis</i> (southern bonewood)	0.57	0
Essential habitat for <i>Taphozous australis</i> (coastal sheath-tail bat)	1.6	0
Essential habitat for <i>Cycas megacarpa</i>	8.77	0
Essential habitat for <i>Petauroides volans</i> (greater glider) and <i>Petauroides volans volans</i> (southern greater glider)	0.10	0
Essential habitat for <i>Phascolarctos cinereus</i>	0	4.88
Referable Wetlands (Category C Environmentally Sensitive Area)	3.92	0
State Forest/Timber Reserves (Category C Environmentally Sensitive Area)	37.56	0
Offset Delivery		
D9	The holder of this environmental authority must comply with any environmental offset agreement made in accordance with the conditions of this environmental authority.	

D10	Measures to prevent fauna entrapment must be implemented during the construction of pipelines in pipe sections and pipeline trenches and operation of dams.																													
Schedule E – Waste																														
General Waste Management																														
E1	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.																													
E2	Waste, including waste fluids, but excluding waste used in closed-loop systems, must be transported off-site for lawful re-use, remediation, recycling or disposal, unless the waste is specifically authorised by conditions (C6), (C7), (E3), and (E5) to be disposed of or used on site.																													
E3	Waste fluids, other than flare precipitant stored in flare pits, or residual drilling material, or drilling fluids stored in sumps, must be contained in either: (a) an above ground container; or (b) a structure which contains the wetting front.																													
E4	Vegetation waste may be burned if it relates to a state forest, timber reserve or forest entitlement area administered by the <i>Forestry Act 1959</i> and a permit has been obtained under the <i>Fire and Rescue Service Act 1990</i> .																													
E5	Green waste may be used on-site for either rehabilitation or sediment and erosion control, or both.																													
Schedule F – Noise																														
F1	Petroleum activities must not cause environmental nuisance at a sensitive place, other than where an alternative arrangement is in place.																													
F2	Notwithstanding condition (F1), emission of noise from the petroleum activity at levels less than those specified in <i>Schedule F, Table – Noise nuisance limits</i> are not considered to be environmental nuisance. Schedule F, Table – Noise nuisance limits <table><tr><th>Time period</th><th>Metric</th><th>Short term noise event</th><th>Medium term noise event</th><th>Long term noise event</th></tr><tr><td>7:00am—6:00pm</td><td>L_{Aeq,adj,15 min}</td><td>45 dBA</td><td>43 dBA</td><td>40 dBA</td></tr><tr><td>6:00pm—10:00pm</td><td>L_{Aeq,adj,15 min}</td><td>40 dBA</td><td>38 dBA</td><td>35 dBA</td></tr><tr><td rowspan="2">10:00pm—6:00am</td><td>L_{Aeq,adj,15 min}</td><td>28 dBA</td><td>28 dBA</td><td>28 dBA</td></tr><tr><td>Max L_{pA, 15 mins}</td><td>55 dBA</td><td>55 dBA</td><td>55 dBA</td></tr><tr><td>6:00am—7:00am</td><td>L_{Aeq,adj,15 min}</td><td>40 dBA</td><td>38 dBA</td><td>35 dBA</td></tr></table>	Time period	Metric	Short term noise event	Medium term noise event	Long term noise event	7:00am—6:00pm	L _{Aeq,adj,15 min}	45 dBA	43 dBA	40 dBA	6:00pm—10:00pm	L _{Aeq,adj,15 min}	40 dBA	38 dBA	35 dBA	10:00pm—6:00am	L _{Aeq,adj,15 min}	28 dBA	28 dBA	28 dBA	Max L _{pA, 15 mins}	55 dBA	55 dBA	55 dBA	6:00am—7:00am	L _{Aeq,adj,15 min}	40 dBA	38 dBA	35 dBA
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	1. The noise limits in <i>Schedule F, Table – Noise nuisance limits</i> have been set based on the following deemed background noise levels (L_{ABG}): 7:00am—6:00 pm: 35 dBA 6:00pm—10:00 pm: 30 dBA 10:00pm—6:00 am: 25 dBA 6:00am—7:00 am: 30 dBA								
F3	If the noise subject to a valid complaint is tonal or impulsive, the adjustments detailed in <i>Schedule F, Table – Adjustments to be added to noise levels at sensitive receptors</i> are to be added to the measured noise level(s) to derive $L_{Aeq, adj, 15 min}$. Schedule F, Table – Adjustments to be added to noise levels at sensitive receptors <table border="1"> <thead> <tr> <th>Noise characteristic</th><th>Adjustment to noise</th></tr> </thead> <tbody> <tr> <td>Tonal characteristic is just audible</td><td>+ 2 dBA</td></tr> <tr> <td>Tonal characteristic is clearly audible</td><td>+ 5 dBA</td></tr> <tr> <td>Impulsive characteristic is detectable</td><td>+ 2 to + 5 dBA</td></tr> </tbody> </table>	Noise characteristic	Adjustment to noise	Tonal characteristic is just audible	+ 2 dBA	Tonal characteristic is clearly audible	+ 5 dBA	Impulsive characteristic is detectable	+ 2 to + 5 dBA
Noise characteristic	Adjustment to noise								
Tonal characteristic is just audible	+ 2 dBA								
Tonal characteristic is clearly audible	+ 5 dBA								
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F4	Notwithstanding condition (F2), emission of any low frequency noise must not exceed either (F4)(a) and (F4)(b), or (F4)(c) and (F4)(d) 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 ($Max L_{pZ, 15 min}$) noise levels is no greater than 15 dB.								
F5	A Blast Management Plan must be developed for each blasting activity in accordance with Australian Standard 2187.								
F6	Blasting operations must be designed to not exceed an airblast overpressure level of 120 dB (linear peak) at any time, when measured at or extrapolated to any sensitive place.								
F7	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.								
Schedule G – Rehabilitation									
Rehabilitation Planning									
G1	A Rehabilitation Plan must be developed by a suitably qualified person and must include the: (a) rehabilitation goals; and (b) procedures to be undertaken for rehabilitation that will: (i) achieve the requirements of conditions (G2), (G3), (G9) and (G10); and								

	(ii) provide for appropriate monitoring and maintenance.
Transitional Rehabilitation	
G2	Significantly disturbed areas that are no longer required for the on-going petroleum activities, must be rehabilitated within 12 months (unless an exceptional circumstance in the area to be rehabilitated (e.g. a flood event) prevents this timeframe being met) and be maintained to meet the following acceptance criteria: (a) contaminated land resulting from petroleum activities is remediated and rehabilitated; (b) the areas are: (i) non-polluting; (ii) a stable landform; (iii) re-profiled to contours consistent with the surrounding landform (c) surface drainage lines are re-established; (d) top soil is reinstated; and (e) either: (i) groundcover, that is not prohibited or restricted pest species, is growing; or (ii) an alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained.
Remaining Dams	
G3	When no longer required all low hazard dams must be decommissioned to no longer accept inflow from the petroleum activities and be either: (a) rehabilitated; or (b) agreed to in writing by the administering authority and the landholder to remain in situ following the cessation of the petroleum activity(ies) associated with the dam, with the contained water of a quality suitable for the intended ongoing uses(s) by that landholder.
Pipeline Reinstatement and Revegetation	
G4	The holder of this environmental authority must: (a) For PPL166 and PPL167: limit the pipeline right of way width to a maximum of 40 metres¹; (b) For PPL168: limit the pipeline right of way width to a maximum of 30 metres. ¹ For clarification, this does not include the disturbance permitted off the GTP RoW in <i>Schedule A, Table – Scale and Intensity for the Activities</i>.
G5	Pipeline trenches must be backfilled and topsoils reinstated within three months after pipe laying.
G6	Reinstatement and revegetation of the pipeline right of way must commence within 6 months after cessation of petroleum activities for the purpose of pipeline construction.
G7	Backfilled, reinstated and revegetated pipeline trenches and right of ways 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 prohibited or restricted pest species, and which is established and growing.
Land and Waterway Management	
G8	Upon completion of construction of the pipeline, on any land identified as being good quality agricultural land (GQAL), the holder of the environmental authority must: (a) remove temporary access tracks, unless otherwise agreed in writing with the affected landholder; (b) lightly rip disturbed areas, replace topsoil and return the surface to a land use condition that serves the preconstruction use; and (c) implement and maintain land management and erosion control measures.
Final Rehabilitation Acceptance Criteria	
G9	All significantly disturbed areas caused by petroleum activities which are not being or intended to be utilised by the landholder or overlapping tenure holder, must be rehabilitated to meet the following final acceptance criteria measured either against the highest ecological value adjacent land use or the pre-disturbed land use: (a) greater than or equal to 70 per cent of native ground cover species richness (b) greater than or equal to the total per cent ground cover (c) less than or equal to the per cent species richness of prohibited or restricted pest species (d) where the adjacent land use contains, or the pre-clearing land use contained, one or more regional ecosystem(s), then at least one Regional Ecosystem(s) from the same broad vegetation group, and with the equivalent biodiversity status or a biodiversity status with a higher conservation value as any of the regional ecosystem(s) in either the adjacent land or pre-disturbed land, must be present.
Final Rehabilitation Acceptance Criteria in Environmentally Sensitive Areas	
G10	Where significant disturbance to land has occurred in an environmentally sensitive area, the following final rehabilitation criteria as measured against the pre-disturbance biodiversity values assessment (required by conditions (D1) and (D2)) must be met: (a) greater than or equal to 70% of native ground cover species richness (b) greater than or equal to the total per cent ground cover (c) less than or equal to the per cent species richness of Prohibited or restricted pest species (d) greater than or equal to 50% of organic litter cover (e) greater than or equal to 50% of total density of coarse woody material; and (f) all predominant species in the ecologically dominant layer, that define the pre-disturbance regional ecosystem(s) are present.
Schedule K – Notification	

K1	In addition to the requirements under Chapter 7, Part 1, Division 2 of the <i>Environmental Protection Act 1994</i>, the administering authority must be notified through the Pollution Hotline and in writing, as soon as possible, but within 48 hours of becoming aware of any of the following events: (a) any unauthorised significant disturbance to land; (b) a potential or actual loss of structural or hydraulic integrity of a dam; (c) when the level of the contents of any regulated dam reaches the mandatory reporting level; (d) when a regulated dam will not have available storage to meet the design storage allowance on the 1 November of any year; (e) unauthorised releases of any volume of prescribed contaminants to waters; (f) unauthorised releases of volumes of contaminants, in any mixture, to land greater than: (i) 200 L of hydrocarbons; or (ii) 5,000 L of coal seam gas water; (iii) 5 000 L of raw sewage; or (iv) 10 000 L of treated sewage effluent. (g) monitoring results where two out of any five consecutive samples do not comply with the relevant limits in the environmental authority.
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Definitions

Key terms and/or phrases used in this document are defined in this section. Where a term is not defined, the definition in the *Environmental Protection Act 1994*, its regulations or environmental protection policies must be used. If a word remains undefined it has its ordinary meaning.

Term	Definition
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
acceptable standards for release to land	means wastewater of the following quality as determined by monitoring results or by characterisation: (a) electrical conductivity (EC) not exceeding 3000µS/cm (b) sodium adsorption ratio (SAR) not exceeding 8 (c) pH between 6.0 and 9.0 (d) heavy metals (measured as total) meets the respective short term trigger value in section 4.2.6, Table 4.2.10—Heavy metals and metalloids in Australian and New Zealand Guidelines for Fresh and Marine Water Quality (e) does not contain biocides.
acid sulfate soil(s)	means a soil or soil horizon which contains sulfides or an acid soil horizon affected by oxidation of sulfides.
adjacent land use(s)	means the ecosystem function adjacent to an area of significant disturbance, or where there is no ecosystem function, the use of the land. An adjacent land use does not include an adjacent area that shows evidence of edge effect.
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 <i>Environmental Protection Act 1994</i>—the local government; or (b) for all other matters—the Chief Executive of the Department of Environment and Heritage Protection; or (c) another State Government Department, Authority, Storage Operator, Board or Trust, whose role is to administer provisions under other enacted legislation.
alternative arrangement	means a written agreement about the way in which a particular environmental nuisance impact will be dealt with at a sensitive place, and may include an agreed period of time for which the arrangement is in place. An alternative arrangement may include, but is not limited to, a range of nuisance abatement measures to be installed at the sensitive place, or provision of alternative accommodation for the duration of the relevant nuisance impact.
analogue site(s)	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, vegetation community attributes 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.
appropriately qualified person / suitably qualified person	means a person who has professional qualifications, training or skills or experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis about performance relevant to the subject matters using relevant protocols, standards, methods or literature.
associated works	in relation to a dam, means: (a) operations of any kind and all things constructed, erected or installed for that dam; and (b) any land used for those operations.
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 3580	means any of the following publications: • AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter—Gravimetric method. • AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 high volume sampler with size-selective inlet—Gravimetric method • AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM10 low volume sampler—Gravimetric sampler.
Australian Standard 4323	means Australian Standard 4323.1:1995 Stationary source emissions method 1: Selection of sampling positions.
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% of the measurement time period T of not less than 15 minutes (or $L_{A90, adj, 15 mins}$), using Fast response.
bankfull	means the channel flow rate that exists when the water is at the elevation of the channel bank above which water begins to spill out onto the floodplain. The term describes the condition of the channel relative to its banks (e.g. overbank, in-bank, bankfull, low banks, high bank).
bed	of any waters, has the meaning in Schedule 12 of the Environmental Protection Regulation 2008 and— (a) includes an area covered, permanently or intermittently, by tidal or non-tidal waters; but (b) does not include land adjoining or adjacent to the bed that is from time to time covered by floodwater.

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.
biodiversity values	for the purposes of this environmental authority, means environmentally sensitive areas, prescribed environmental matters and wetlands.
Category A Environmentally Sensitive Area	means any area listed in Schedule 12, Section 1 of the Environmental Protection Regulation 2008.
Category B Environmentally Sensitive Area	means any area listed in Schedule 12, Section 2 of the Environmental Protection Regulation 2008.
Category C Environmentally Sensitive Area	means any of the following areas: • nature refuges as defined in the conservation agreement for that refuge under the <i>Nature Conservation Act 1992</i> • koala habitat areas as defined under the Nature Conservation (Koala) Conservation Plan 2006 • state forests or timber reserves as defined under the <i>Forestry Act 1959</i> • regional parks (previously known as resource reserves) under the <i>Nature Conservation Act 1992</i> • an area validated as 'essential habitat' from ground-truthing surveys in accordance with the <i>Vegetation Management Act 1999</i> for a species of wildlife listed as endangered or vulnerable under the <i>Nature Conservation Act 1992</i> • 'of concern regional ecosystems' that are remnant vegetation and identified in the database called 'RE description database' containing regional ecosystem numbers and descriptions.
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 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.
certified or certification	in relation to any matter other than a design plan, 'as constructed' drawings or an annual report regarding dams means, a Statutory Declaration by a suitably qualified person or suitably qualified third party accompanying the written document stating: • 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	has the meaning in the dictionary of the <i>Vegetation Management Act 2000</i> and for vegetation— (a) means remove, cut down, ringbark, push over, poison or destroy in any way including by burning, flooding or draining; but (b) does not include destroying standing vegetation by stock, or lopping a tree.
closed-loop systems	means using waste on site in a way that does not release waste or contaminants in the waste to the environment.
control measure	has the meaning in section 47 of the <i>Environmental Protection Regulation 2008</i> and means a device, equipment, structure, or management strategy used to prevent or control the release of a contaminant or waste to the environment.
coal seam gas water	means underground water brought to the surface of the earth, or moved underground in connection with exploring for, or producing coal seam gas.
daily peak design capacity	for sewage treatment works, has the meaning in Schedule 2, section 63(4) of the <i>Environmental Protection Regulation 2008</i> as the higher equivalent person (EP) for the works calculated using each of the formulae found in the definition for EP.
dam(s)	means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works.
declared pest species	has the meaning in the <i>Land Protection (Pest and Stock Route Management) Regulation 2003</i> 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.
design plan	is the documentation required to describe the physical dimensions of the dam, the materials and standards to be used for construction of the dam, and the criteria to be used for operating the dam. The documents must include design and investigation reports, specifications and certifications, together with the planned decommissioning and rehabilitation works and outcomes. A design plan may include 'as constructed' drawings.
design storage allowance or DSA	means an available volume, estimated in accordance with the <i>Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/19337)</i> , published by the administering authority, as amended from time to time, that must be provided in a dam to an annual exceedance probability specified in that Manual.
document	has the meaning in the <i>Acts Interpretation Act 1954</i> and means: - any paper or other material on which there is writing; and - any paper or other material on which there are marks; and - 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).
ecologically dominant layer	has the meaning in the Methodology for Surveying and Mapping of Regional Ecosystems and Vegetation Communities in Queensland (Version 3.2 August 2012) and means the layer making the greatest contribution to the overall biomass of the site and the vegetation community (NLWRA 2001). This is also referred to as the ecologically dominant stratum or the predominant canopy in woody ecosystems.
ecosystem function	means the interactions between and within living and nonliving components of an ecosystem and generally correlates with the size, shape and location of the vegetation community.
environmental harm	has the meaning in section 14 of the <i>Environmental Protection Act 1994</i> and means any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance. Environmental harm may be caused by an activity— (a) whether the harm is a direct or indirect result of the activity; or (b) whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
environmental nuisance	has the meaning in section 15 of the <i>Environmental Protection Act 1994</i> and means unreasonable interference or likely interference with an environmental value caused by— (a) aerosols, fumes, light, noise, odour, particles or smoke; or (b) an unhealthy, offensive or unsightly condition because of contamination; or (c) another way prescribed by regulation.
environmental offset	has the meaning in section 7 of the <i>Environmental Offsets Act 2014</i> .
environmentally sensitive area	means Category A, B or C environmentally sensitive areas (ESAs)
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.
floodplains	has the meaning in the <i>Water Act 2000</i> 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 of the watercourse.
flowable substance	means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.
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.
greywater	means wastewater generated from domestic activities such as laundry, dishwashing, and bathing. Greywater does not include sewage.
growing	means to increase by natural development, as any living organism or part thereof by assimilation of nutriment; increase in size or substance.
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 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.
hydraulic performance	means the capacity of a regulated dam to contain or safely pass flowable substances based on a probability (AEP) of performance failure specified for the relevant hazard category "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.
hydraulic integrity	refers to the capacity of a dam to contain or safely pass flowable substances based on its design.
impulsive (for 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 activity(ies) 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 (e.g. evaporation dams), pipelines and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.
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.
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.
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.
land degradation	has the meaning in the <i>Vegetation Management Act 1999</i> and means the following: • soil erosion • rising water tables • the expression of salinity • mass movement by gravity of soil or rock • stream bank instability • a process that results in declining water quality.
linear infrastructure	means powerlines, pipelines, flowlines, roads and access tracks.
liquid	means a substance which is flowing and offers no permanent resistance to changes of shape.
long term noise event	means 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 in the low hazard category as assessed using the “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.
Max L _{pA} , 15 min	means the absolute maximum instantaneous A-weighted sound pressure level, measured over 15 minutes.
Max L _{pZ} , 15 min	means the maximum value of the Z-weighted sound pressure level measured over 15 minutes.

mandatory reporting level or MRL	means a warning and reporting level determined in accordance with the criteria in the Manual for Assessing Hazard Categories and Hydraulic Performance of Dams published by the Department of Environment and Resource Management, as amended from time to time.
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.
methodology	means the science of method, especially dealing with the logical principles underlying the organisation of the various special sciences, and the conduct of scientific inquiry.
month	has the meaning in the <i>Acts Interpretation Act 1954</i> 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.
pest or declared pest species”	has the meaning in the <i>Land Protection (Pest and Stock Route Management) Regulation 2003</i> and is a live animal or plant declared to be a declared pest under section 36 (Declaring Pests by Regulation) or 37(2) (Declaring Pest under Emergency Pest Notice) of that Act and includes reproductive material of the animal or plant.
pipeline waste water	means hydrostatic testing water, flush water or water from low point drains.
pre-disturbed land use	means the function or use of the land as documented prior to significant disturbance occurring at that location.
predominant species	has the meaning in the Methodology for Surveying and Mapping of Regional Ecosystems and Vegetation Communities in Queensland (Version 3.2 August 2012) and means a species that contributes most to the overall above-ground biomass of a particular stratum.
produced water	has the meaning in Section 15A of the <i>Petroleum and Gas (Production and Safety) Act 2004</i> and means CSG water or associated water for a petroleum tenure.
regional ecosystem	has the meaning in the Methodology for Surveying and Mapping of Regional Ecosystems and Vegetation Communities in Queensland (Version 3.2 August 2012) and means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil. Regional ecosystems of Queensland were originally described in Sattler and Williams (1999). The Regional Ecosystem Description Database (Queensland Herbarium 2013) is maintained by Queensland Herbarium and contains the current descriptions of regional ecosystems.
regulated dam	means any dam in the significant or high consequence category as assessed using the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (ESR/2016/19339), published by the administering authority, as amended from time to time.

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.
reinstate or reinstatement	for pipelines, means the process of bulk earth works and structural replacement of pre-existing conditions of a site (i.e. soil surface topography, watercourses, culverts, fences and gates and other landscape(d) features) and is detailed in the Australian Pipeline Industry Association (APIA) Code of Environmental Practice: Onshore Pipelines (2013).
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 site. 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.
secondary treated class A 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, 100cfu per 100mL, maximum 1000cfu per 100mL.
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 10 000cfu 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, 10 000cfu per 100mL, maximum 100 000cfu 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) • a library, childcare centre, kindergarten, school, university or other educational institution • a medical centre, surgery or hospital • a protected area • 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 • a work place used as an office or for business or commercial purposes, which is not part of the petroleum activity(ies) and does not include employees accommodation or public roads • for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.
sensitive receptor	is defined in Schedule 2 of the <i>Environmental Protection (Noise) Policy 2019</i> , and means an area or place where noise is measured.
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 or significant disturbance or significant disturbance to land or areas	has the meaning in Schedule 12, section 4 of the <i>Environmental Protection Regulation 2008</i>. Land is significantly disturbed if— (i) to a condition required under the relevant environmental authority; or (ii) if the environmental authority does not require the land to be rehabilitated to a particular condition—to the condition it was in immediately before the disturbance.
species richness	means the number of different species in a given area.
spring	means the land to which water rises naturally from below the ground and the land over which the water then flows.
stable	has the meaning in Schedule 8 of the <i>Environmental Protection Regulation 2019</i> and, for a site, means the rehabilitation and restoration of the site is enduring or permanent so that the site is unlikely to collapse, erode or subside.
structure	means a dam or levee.
suitably qualified person	means a person who has professional qualifications, training or skills or experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis about performance relevant to the subject matters using relevant protocols, standards, methods or literature.
suitably qualified third party	means a person who:

	(a) has qualifications and experience relevant to performing the function including but not limited to: i. a bachelor's degree in science or engineering; and ii. 3 years' experience in undertaking soil contamination assessments; and (b) is a member of at least one organisation prescribed in Schedule 8 of the Environmental Protection Regulation 2008; and (c) not be an employee of, nor have a financial interest or any involvement which would lead to a conflict of interest with the holder(s) of the environmental authority.
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 activity(ies) covered by this environmental authority.
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 300mm in depth from the natural surface.
total density of coarse woody material	means the total length of logs on the ground greater than or equal to 10cm diameter per hectare and number of logs on the ground greater than or equal to 10cm diameter per hectare.
valid complaint	means all complaints unless considered by the administering authority to be frivolous, vexatious or based on mistaken belief.
void	means any constructed, open excavation in the ground.
waste and resource management hierarchy	has the meaning provided in section 9 of the <i>Waste Reduction and Recycling Act 2011</i> and is the following precepts, listed in the preferred order in which waste and resource management options should be considered— (a) AVOID unnecessary resource consumption (b) REDUCE waste generation and disposal (c) RE-USE waste resources without further manufacturing (d) RECYCLE waste resources to make the same or different products (e) RECOVER waste resources, including the recovery of energy (f) TREAT waste before disposal, including reducing the hazardous nature of waste (g) DISPOSE of waste only if there is no viable alternative.
waste and resource management principles	has the meaning provided in section 4(2)(b) of the <i>Waste Reduction and Recycling Act 2011</i> and means the: (a) polluter pays principle (b) user pays principle (c) proximity principle (d) product stewardship principle.
waste fluids	has the meaning in section 13 of the <i>Environmental Protection Act 1994</i> in conjunction with the common meaning of "fluid" which is "a substance which is capable of flowing and offers no permanent resistance to changes of shape". Accordingly, to be a waste fluid,

	the waste must be a substance which is capable of flowing and offers no permanent resistance to changes of shape.
watercourse	has the meaning in Schedule 4 of the <i>Environmental Protection Act 1994</i> and means: 1) a river, creek or stream in which water flows permanently or intermittently— (a) in a natural channel, whether artificially improved or not; or (b) in an artificial channel that has changed the course of the watercourse. 2) Watercourse includes the bed and banks and any other element of a river, creek or stream confining or containing water.
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.
wetland	for the purpose of this environmental authority, wetland means: • areas shown on the Map of referable wetlands which is a document approved by the chief executive on 4 November 2011 and published by the department, as amended from time to time by the chief executive under section 144D of the Environmental Protection Regulation 2008; and • areas defined under the Queensland Wetlands Program as 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, and possess 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. The term wetland includes riverine, lacustrine, estuarine, marine and palustrine wetlands; and it does not include a Great Artesian Basin Spring or a subterranean wetland that is a cave or aquifer.
year	means a period of 12 months

END OF ENVIRONMENTAL AUTHORITY