

Department of Environment and Heritage Protection

Permit¹

Environmental Protection Act 1994

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

Permit¹ number: EPPG02463414

Project Name: Scotia Interconnect Pipeline

Environmental authority takes effect 5 November 2015

The anniversary date of this environmental authority is **2 December**. An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holders(s)	Registered address
Santos GLNG Pty Ltd ACN: 131 271 648	Ground Floor, Santos Centre 60 Flinders Street ADELAIDE SA 5000
PAPL (Downstream) Pty Ltd ACN: 147 649 205	'ADDISONS' Level 12 60 Carrington Street SYDNEY NSW 2000
Total GLNG Australia ARBN: 146 680 524	BGC Centre Level 13, 28 The Esplanade PERTH WA 6000
KGLNG Liquefaction Pty Ltd ACN: 146 143 311	Level 11, 28 The Esplanade PERTH WA 6000

Environmentally relevant activity(ies)	Relevant Tenure
Resource activity that is a petroleum activity which includes the following: - Item 3, Schedule 2A of the Environmental Protection Regulation 2008 - a petroleum activity that is likely to have a significant impact on a category A or B environmentally sensitive area. - Item 8, Schedule 2A of the Environmental Protection Regulation 2008 - a petroleum activity or GHG storage activity, other than an activity	Petroleum Pipeline Licence (PPL) 193

¹ Permit includes licences, approvals, permits, authorisations, certificates, sanctions or equivalent/similar as required by legislation

mentioned in any of items 1 to 7, that includes 1 or more activities mentioned in schedule 2 for which an aggregate environmental score is stated, namely: - 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 if treated effluent is discharged from works to an infiltration trench or through an irrigation scheme.	
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Additional information for applicants

Environmentally relevant activities

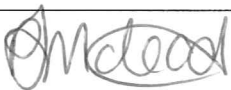
The description of any environmentally relevant activity (ERA) for which an environmental authority is issued is a restatement of the ERA as defined by legislation at the time the approval is issued. Where there is any inconsistency between that description of an ERA and the conditions stated by an environmental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

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

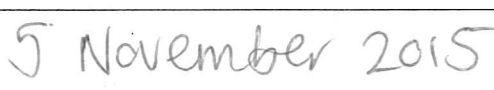
Contaminated land

It is a requirement of the EP Act that if an owner or occupier of land becomes aware a notifiable activity (as defined in Schedule 3 and Schedule 4) is being carried out on the land, or that the land has been, or is being, contaminated by a hazardous contaminant, the owner or occupier must, within 22 business days after becoming so aware, give written notice to the chief executive.



Signature

Pippa McLeod
Delegate of the administering authority
Environmental Protection Act 1994



Date

Enquiries:
Petroleum and Gas
GPO Box 2454
BRISBANE QLD 4000
Phone: (07) 3330 5715
Fax: (07) 3330 5634
Email: PetroleumandGas@ehp.qld.gov.au

ENVIRONMENTAL AUTHORITY CONDITIONS

This environmental authority consists of the following Schedules:

Schedule A – Authorised activities	4
Schedule B – Protecting environmental values	6
Schedule C – General conditions	8
Schedule D – Pipeline planning	10
Schedule E – Construction conditions	11
Schedule F – Post-construction conditions including operations, maintenance and decommissioning ..	13
Schedule G – Monitoring and reporting conditions	14
Appendix 1 - Definitions	15

Schedule A – Authorised activities

- 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
 - d) construction of power lines (either above or below ground) outside the right of way necessary for the pipeline.
- A2 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 (PPZ).
- A3 Despite condition (A2), the infrastructure specified in *Schedule A, Table 1 - Authorised disturbances to ESAs* is permitted in the location and maximum area of disturbance specified in *Schedule A, Table 1 – Authorised disturbances to ESAs*.

Schedule A, Table 1 – Authorised Disturbances to ESAs

Authorised Activity	Location of Development (GDA94)		Size of Development		ESA
	Latitude	Longitude	Length (m)	Area of Disturbance (ha)	
PPL193	-25.971608	150.123984	Length within Category B ESA 162 m	Area within Category B ESA 0.71 ha	Category B ESA (Endangered RE 11.9.5 Remnant)
	-26.005239	150.168262	Length within Category B ESA 119 m		
	-25.989809	150.153788	Length within Category B ESA 45 m	Area within Category B ESA 0.13 ha	Category B ESA (Endangered RE 11.9.5 Regrowth)
	-26.014156	150.187812	Length within Category B ESA 8 m		
	-25.970846	150.122257	Length within PPZ of Category B ESA 205 m	Area within PPZ of Category B ESA 0.51 ha	PPZ of Category B ESA (Endangered RE 11.9.5)
	-25.97224	150.12569	Length within PPZ of Category B ESA 205 m	Area within PPZ of Category B ESA 0.51 ha	PPZ of Category B ESA (Endangered RE 11.9.5)
	-25.99876	150.16217	Length within PPZ of Category B ESA 414 m	Area within PPZ of Category B ESA 1.04 ha	PPZ of Category B ESA (Endangered RE 11.9.5)
	-26.004271	150.167017	Length within PPZ of Category B ESA 200 m	Area within PPZ of Category B ESA 0.5 ha	PPZ of Category B ESA (Endangered RE 11.9.5)
	-26.006305	150.169621	Length within PPZ of Category B ESA 234 m	Area within PPZ of Category B ESA 0.59 ha	PPZ of Category B ESA (Endangered RE 11.9.5)
	-26.010523	150.175009	Length within PPZ	Area within PPZ	PPZ of Category B

Authorised Activity	Location of Development (GDA94)		Size of Development		ESA
	Latitude	Longitude	Length (m)	Area of Disturbance (ha)	
PPL193			of Category B ESA 558 m	of Category B ESA 1.42 ha	ESA (Endangered RE 11.9.5)
	-26.014168	150.188076	Length within PPZ of Category C ESA 42 m	Area within PPZ of Category C ESA 0.11 ha	PPZ of Category C ESA (Of Concern RE 11.9.7)

- 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.

Schedule B – Protecting environmental values

- 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 298 of the *Environmental Protection Act 1994*.
- 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 (C9), (C13), (C14), (C15), (C16), (E4), (E8), (E11), (E12) and (F3).
- B4 For petroleum activities to be carried out in a wild river area, the activities must comply with the conditions stated for relevant petroleum activities in the wild river declaration for that area.
- B5 Petroleum activities must:
- firstly, avoid, then minimise, then mitigate any negative impacts on areas of vegetation or other areas of ecological value
 - minimise disturbance to land that may otherwise result in land degradation
 - 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
 - minimise clearing of mature or hollow bearing trees.
- B6 Where significant disturbance to land is to occur, records demonstrating compliance with condition (B5) must be kept.

Biodiversity

- B7 Prior to undertaking activities that result in significant disturbance to land in areas of native vegetation, confirmation of on-the-ground biodiversity values of the native vegetation communities at that location must be undertaken by a suitably qualified person.
- B8 A suitably qualified person must develop and certify a methodology so that condition (B7) can be complied with and which is appropriate to confirm on-the-ground biodiversity values. The confirmation and methodology must be recorded in a biodiversity values assessment report.

Impacts to prescribed environmental matters

- B9 Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority unless the impact(s) is specified in *Schedule B, Table 1 – Significant residual impacts to prescribed environmental matters*.

Schedule B, Table 1 – Significant residual impacts to prescribed environmental matters

Prescribed environmental matter	Location of impact		Maximum extent of impact
Regulated vegetation	Latitude	Longitude	Hectares
Endangered regional ecosystem – RE 11.9.5	-25.971608	150.123984	0.71ha
	-26.005239	150.168262	

- B10 An environmental offset made in accordance with the *Environmental Offsets Act 2014* and the Queensland Environmental Offsets Policy must be undertaken for the maximum extent of impact to each prescribed environmental matter authorised in *Schedule B, Table 1 – Significant residual impacts*

to prescribed environmental matters, unless a lesser extent of the impact has been approved by the administering authority.

- B11 The notice of election for the environmental offset required by condition (B10) must be provided to the administering authority no less than three months before the proposed commencement of the significant residual impacts for which the environmental offset is required.



Schedule C – General conditions

Documentation

- C1 All plans, procedures and reports 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 must be implemented.

Plant and equipment

- C3 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.

Contingency and emergency response

- C6 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.

Soil management

- C8 Measures must be implemented and maintained to minimise stormwater entry onto significantly disturbed land.
- C9 Sediment and erosion control measures to prevent soil loss and deposition beyond significantly disturbed land must be implemented and maintained.
- C10 The measures required by conditions (C8) and (C9) 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).

Chemical storage

- C11 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.

Waste management

- C12 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.
- C13 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.
- C14 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 (C15), (C16), (E8) and (F3) to be disposed of or used on-site.
- C15 Green waste may be used on-site for rehabilitation and/or sediment and erosion control purposes.

Treated sewage effluent

- C16 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
 - d) run-off or aerosols or spray drift or vegetation die-off.

Financial assurance

- C17 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

Site planning

- D1 Pipeline planning 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 2885.1:2012.

Planning for land disturbance

- D2 Notwithstanding condition (D1), pipeline construction corridors must:
- a) be minimised in width to the greatest practicable extent
 - b) not exceed 40m in width
 - c) not include turn around and work areas associated with pipeline construction that exceed 50m in width
 - d) be preferentially located alongside existing linear infrastructure.



Schedule E – Construction conditions

- E1 Pipeline construction 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 2885.1:2012.

Activities in watercourses, wetlands, lakes and springs

- E2 Petroleum activities that require earthworks, vegetation clearing and/or placing fill, other than that associated with the construction of linear infrastructure, are not permitted in or within:
- a) 200 metres of any wetland, lake or spring; or
 - b) 100 metres of the outer bank of any other watercourse.
- E3 The construction and/or maintenance for linear infrastructure that will result in significant disturbance to a wetland, lake, spring or watercourse must be conducted in accordance with the following order of preference. Conducting works:
- 1. firstly, in times where there is no water present
 - 2. secondly, in times of no flow
 - 3. thirdly, in times of flow, but in a way that does not impede low flow.
- E4 Petroleum activities must not result in water turbidity increases of more than 10% in high ecological value waters outside contained construction or maintenance areas.
- E5 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.
- E6 The construction and/or maintenance for linear infrastructure that will result in significant disturbance to a wetland must be designed and undertaken by a suitably qualified person taking into consideration sections 5 and 6 of the guideline Activities in a watercourse, lake or spring associated with a resource activity or mining operations.

Fauna management

- E7 Measures to prevent fauna entrapment must be implemented during the construction of pipelines in pipe sections and pipeline trenches and operation of dams.

Waste

- E8 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
 - b) is released in a way that does not cause visible scouring or erosion.
- E9 If hydrostatic testing water quality does not or cannot be treated to meet the requirements of condition (E8), it must be managed in accordance with conditions (C13) or (C14).

Blasting

- E10 A Blast Management Plan must be developed for each blasting activity in accordance with Australian Standard 2187.



- E11 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.
- E12 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.

Structures that are dams or levees

- E13 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*.
- E14 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.
- E15 All low hazard dams must be monitored for early signs of loss of structural or hydraulic integrity as specified in the initial hazard assessment.
- E16 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

- E17 Pipeline trenches must be backfilled and topsoils reinstated within 3 months after pipe laying.
- E18 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.
- E19 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
 - d) vegetated with groundcover which is not a declared pest species, and which is established and self-sustaining.

Schedule F – Post-construction conditions including operations, maintenance and decommissioning

- F1 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.
- 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 (E8).

Final acceptance criteria for rehabilitation

- F4 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
 - d) for land that is to be cultivated by the landholder, cover crop is revegetated, unless the landholder will be preparing the site for cropping within 3 months of petroleum activities being completed.

Final acceptance criteria for rehabilitation in environmentally sensitive areas

- F5 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 (B7) and (B8)) must be met:
- (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 declared plant pest species;
 - (d) greater than or equal to 50 per cent of organic litter cover;
 - (e) greater than or equal to 50 per cent 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.
- F6 Monitoring of performance indicators must be carried out on rehabilitation activities until final acceptance criteria in conditions (F4) and (F5) have been met for the rehabilitated area.

Schedule G – Monitoring and reporting conditions

Monitoring

- 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.
- 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.

Sampling

- G5 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.

Notification

- G9 In addition to the requirements under section 320A of the *Environmental Protection Act 1994*, 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.

Reporting

- G10 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
 - d) the results of all monitoring undertaken.

Appendix 1 - Definitions

Term	Definition
acceptable standards for release to land	is defined as: (i) electrical conductivity (EC) not exceeding 3000µS/cm (ii) sodium adsorption ratio (SAR) not exceeding 8 (iii) 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 <i>Australian National Committee on Large Dams</i> (ANCOLD), guidelines published by Queensland government departments and relevant Australian and New Zealand Standards.
acid sulfate soil(s)	means a soil or soil horizon which contains sulfides or an acid soil horizon affected by oxidation of sulfides.
administering authority	has the meaning in Schedule 4 of the <i>Environmental Protection Act 1994</i> .
alternative arrangement	means a written agreement about the way in which a particular 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 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.
analyte(s)	means a chemical parameter determined by either physical measurement in the field or by laboratory analysis.
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.
Australian Standard	

Term	Definition
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 2885.0-2008/Amdt 1-2012 Pipelines - Gas and Liquid Petroleum General Requirements, Australian Standard 2885.1:2012 Pipelines – Gas and Liquid Petroleum Design and Construction and Australian Standard 2885.3:2012 Pipelines – Gas and Liquid Petroleum Operation and Maintenance, or any updated versions that become available from time to time.
bed	of any waters, has the meaning in Schedule 12 Part 2 of the Environmental Protection Regulation 2008.
biodiversity values	for the purposes of this environmental authority, means environmentally sensitive areas, prescribed environmental matters and wetlands.
business day	has the meaning in section 36 of the <i>Acts Interpretation Act 1954</i> .
Category A ESA	means any area listed in Schedule 12, Section 1 of the Environmental Protection Regulation 2008.
Category B ESA	means any area listed in Schedule 12, Section 2 of the Environmental Protection Regulation 2008.
Category C ESA	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 resources reserves) under the <i>Nature Conservation Act 1992</i> • an area validated as 'essential habitat' or 'essential regrowth 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
certified	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

Term	Definition
	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> .
coastal waters	has the meaning in section 440ZH of the <i>Environmental Protection Act 1994</i> 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.
cultivated	means used for cropping or gardening.
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 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.
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.
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.
documents	has the meaning in section 36 of the <i>Acts Interpretation Act 1954</i> .
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

Term	Definition
	connectivity by stepping stone or contiguous bioregional/local corridor networks.
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 functioning	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.
eligibility criteria	for an environmentally relevant activity, has the meaning in section 112 of the <i>Environmental Protection Act 1994</i> .
environmental harm	has the meaning in section 14 of the <i>Environmental Protection Act 1994</i> .
environmental nuisance	has the meaning in section 15 of the <i>Environmental Protection Act 1994</i> .
environmental value	has the meaning in section 9 of the <i>Environmental Protection Act 1994</i> .
environmentally relevant activity or ERA	has the meaning in section 18 of the <i>Environmental Protection Act 1994</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.
financial assurance	for an environmental authority, means financial assurance given for the authority under Chapter 5, part 12, division 2 of the <i>Environmental Protection Act 1994</i> .
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.

Term	Definition
greywater	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 <i>Manual for Assessing Hazard Categories and Hydraulic Performance of Dams</i> , published by the Queensland Government, as amended from time to time.
high ecological value waters	means Queensland waters that are scheduled waters under the Environmental Protection (Water) Policy 2009 as high value ecological waters.
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.
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.
linear infrastructure	means powerlines, pipelines, roads and access tracks.
low hazard dam	means any dam that is not classified as high or significant as assessed using the <i>Manual for Assessing Hazard Categories and Hydraulic Performance of Dams</i> , 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.
maximum extent of impact	means the total, cumulative, residual extent and duration of impact to a prescribed environmental matter that will occur over a project's life after all reasonable avoidance and reasonable on-site mitigation measures have been, or will be, undertaken.



Term	Definition
month	has the meaning in section 36 of the <i>Acts Interpretation Act 1954</i> .
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
notice of election	has the meaning in section 18(2) of the <i>Environmental Offsets Act 2014</i> .
outer bank	has the meaning in section 5A of the <i>Water Act 2000</i>
performance indicator(s)	means a quantitative measure against which success can be assessed and audited in a consistent, objective and repeatable manner.
predominant species	has the meaning in the <i>Methodology for Surveying and Mapping of Regional Ecosystems and Vegetation Communities in Queensland</i> (Version 3.2 August 2012) and means a species that contributes most to the overall above-ground biomass of a particular stratum.
prescribed environmental matter	has the meaning in section 10 of the <i>Environmental Offsets Act 2014</i> , limited to the matters of State environmental significance listed in schedule 2 of the <i>Environmental Offsets Regulation 2014</i> .
primary protection zone	means an area within 200 metres from the boundary of any Category A, B or C environmentally sensitive area.
regulated dam(s)	means any dam in the significant or high hazard category as assessed using the <i>Manual for Assessing Hazard Categories and Hydraulic Performance of Dams</i> , published by the Queensland Government, 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

Term	Definition
	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 topography, watercourses, culverts, fences and gates and other landscape(d) features) and is detailed in the APIA <i>Code of Environmental Practice: Onshore Pipelines</i> (2009).
release, releases, released	has the meaning in Schedule 4 of the <i>Environmental Protection Act 1994</i> .
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.

Term	Definition
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.
significant residual impact	has the meaning in section 8 of the <i>Environmental Offsets Act 2014</i> .
significantly disturbed or significant disturbance or significant disturbance to land or areas	means disturbance to land as defined in Schedule 12, section 4 of the Environmental Protection Regulation 2008.
species diversity	means the diversity within an ecological community that incorporates both species richness and the evenness of species' abundances.
species richness	means the number of different species in a given area.
spring(s)	has the meaning in Schedule 4 of the <i>Water Act 2000</i> .
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.
structure	means a dam or levee.
suitably qualified person	means a person who has qualifications, training, skills and 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.
top soil	means the surface (top) layer of a soil profile, which is more fertile, darker in

Term	Definition
	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 10 cm diameter per hectare and number of logs on the ground greater than or equal to 10cm diameter per hectare.
trench spoil	means soil from the pipeline trench.
valid complaint	means a complaint that is not considered by the administering authority or holder of the environmental authority to be frivolous, vexatious or based on mistaken belief.
waste and resource management hierarchy	has the meaning provided in section 9 of the <i>Waste Reduction and Recycling Act 2011</i> .
waste and resource management principles	has the meaning provided in section 4(2)(b) of the <i>Waste Reduction and Recycling Act 2011</i> .
waters	means 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 Schedule 4 of the <i>Environmental Protection Act 1994</i> .
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 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 petroleum activities, wetlands do not include springs and watercourses and those wetlands that are defined in the <i>Wetland Mapping and Classification Methodology</i> (2005) published by the Queensland Government as:

Term	Definition
	• 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(s)	has the meaning in s36 of the <i>Acts Interpretation Act 1954</i> .