

Department of Environment and Heritage Protection

Permit¹

Environmental Protection Act 1994 Environmental authority

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

Permit¹ number: EPPG00885013

Project: Condamine 50TPD LNG Facility

Environmental authority takes effect: 12 January 2017

The anniversary date of this environmental authority is **22 March**. An annual return and the payment of the annual fee will be due each year on this day.

Environmental authority holder

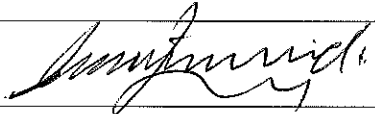
Name	Registered Address
BOC Limited	Riverside Corporate Park, 10 Julius Avenue NORTH RYDE NSW 2113

Environmentally relevant activity and location details

Environmentally Relevant Activity(ies)	Location(s)
Resource activity that is a petroleum activity which includes the following: - Item 8, Schedule 2A of the Environmental Protection Regulation 2008 – a petroleum activity or GHG storage activity, other than an activity mentioned in any of items 1 to 7, that includes one or more activities mentioned in schedule 2 for which an aggregate environmental score is stated.	Petroleum Facilities Licence (PFL) 21

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





Signature

12/01/2017

Date

William Inonda

Delegate of the administering authority
Environmental Protection Act 1994

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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 and notifiable activities

It is a requirement of the *Environmental Protection Act 1994* (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.

Responsibilities under the *Environmental Protection Act 1994*

Separate to the requirements of standard conditions, the holder of the environmental authority must also meet their obligations under the *Environmental Protection Act 1994*, and the regulations made under that Act. For example, the holder must be aware of the following provisions of the *Environmental Protection Act 1994*.

General environmental duty

Section 319 of the *Environmental Protection Act 1994* states that we all have a general environmental duty. This means that we are all responsible for the actions we take that affect the environment. We must not carry out any activity that causes or is likely to cause environmental harm unless we take all reasonable and practicable measures to prevent or minimise the harm. To decide what meets your general environmental duty, you need to think about these issues:

- the nature of the harm or potential harm
- the sensitivity of the receiving environment
- the current state of technical knowledge for the activity
- the likelihood of the successful application of the different measures to prevent or minimise environmental harm that might be taken
- the financial implications of the different measures as they would relate to the type of activity.

It is not an offence not to comply with the general environmental duty, however maintaining your general environmental duty is a defence against the following acts:

- (a) an act that causes serious or material environmental harm or an environmental nuisance
- (b) an act that contravenes a noise standard

(c) a deposit of a contaminant, or release of stormwater run-off, mentioned in section 440ZG.

More information is available on the Department of Environment and Heritage Protection website www.ehp.qld.gov.au.

Duty to notify

Section 320 of the *Environmental Protection Act 1994* explains the duty to notify. The duty to notify applies to all persons and requires a person or company to give notice where serious or material environmental harm is caused or threatened. Notice must be given of the event, its nature and the circumstances in which the event happened. Notification can be verbal, written or by public notice depending on who is notifying and being notified.

The duty to notify arises where:

- a person carries out activities or becomes aware of an act of another person arising from or connected to those activities which causes or threatens serious or material environmental harm
- while carrying out activities a person becomes aware of the happening of one or both of the following events:
 - the activity negatively affects (or is reasonably likely to negatively affect) the water quality of an aquifer
 - the activity has caused the unauthorised connection of 2 or more aquifers.

For more information on the duty to notify requirements refer to the guideline *Duty to notify of environmental harm (EM467)*.

Some Relevant Offences under the *Environmental Protection Act 1994*

Non-compliance with a condition of an environmental authority (section 430)

Section 430 of the *Environmental Protection Act 1994* requires that a person who is the holder of, or is acting under an environmental authority must not wilfully contravene, or contravene a condition of the environmental authority.

Environmental authority holder responsible for ensuring conditions complied with (section 431)

Section 431 of the *Environmental Protection Act 1994* requires that the holder of an environmental authority must ensure everyone acting under the environmental authority complies with the conditions of the environmental authority. If another person acting under the environmental authority commits an offence against section 430, the holder also commits an offence, namely, the offence of failing to ensure the other person complies with the conditions.

Causing serious or material environmental harm (sections 437–39)

Material environmental harm is environmental harm that is not trivial or negligible in nature. It may be great in extent or context or it may cause actual or potential loss or damage to property. The difference between material and serious harm relates to the costs of damages or the costs required to either prevent or minimise the harm or to rehabilitate the environment. Serious environmental harm may have irreversible or widespread effects or it may be caused in an area of high conservation significance. Serious or material environmental harm excludes environmental nuisance.

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Causing environmental nuisance (section 440)

Environmental nuisance is unreasonable interference with an environmental value caused by aerosols, fumes, light, noise, odour, particles or smoke. It may also include an unhealthy, offensive or unsightly condition because of contamination.

Depositing a prescribed water contaminant in waters (section 440ZG)

Prescribed contaminants include a wide variety of contaminants listed in Schedule 9 of the *Environmental Protection Act 1994*.

It is your responsibility to ensure that prescribed contaminants are not left in a place where they may or do enter a waterway, the ocean or a stormwater drain. This includes making sure that stormwater falling on or running across your site does not leave the site contaminated. Where stormwater contamination occurs you must ensure that it is treated to remove contaminants. You should also consider where and how you store material used in your processes onsite to reduce the chance of water contamination.

Placing a contaminant where environmental harm or nuisance may be caused (section 443)

A person must not cause or allow a contaminant to be placed in a position where it could reasonably be expected to cause serious or material environmental harm or environmental nuisance.

Some Relevant Offences under the *Waste Reduction and Recycling Act 2011*

Littering (section 103)

Litter is any domestic or commercial waste and any material a person might reasonably believe is refuse, debris or rubbish. Litter can be almost any material that is disposed of incorrectly. Litter includes cigarette butts and drink bottles dropped on the ground, fast food wrappers thrown out of the car window, poorly secured material from a trailer or grass clippings swept into the gutter. However, litter does not include any gas, dust, smoke or material emitted or produced during, or because of, the normal operations of a building, manufacturing, mining or primary industry.

Illegal dumping of waste (section 104)

Illegal dumping is the dumping of large volumes of litter (200L or more) at a place. Illegal dumping can also include abandoned vehicles.

Responsibilities under Other Legislation

An environmental authority pursuant to the *Environmental Protection Act 1994* does not remove the need to obtain any additional approval for the activity that might be required by other State and/or Commonwealth legislation. Other legislation for which a permit may be required includes but is not limited to the:

- *Aboriginal Cultural Heritage Act 2003*
- contaminated land provisions of the *Environmental Protection Act 1994*
- *Fisheries Act 1994*
- *Forestry Act 1959*
- *Nature Conservation Act 1992*
- *Petroleum and Gas (Production and Safety) Act 2004 / Petroleum Act 1923*
- *Queensland Heritage Act 1992*
- *Sustainable Planning Act 2009*

- *Water Supply (Safety and Reliability) Act 2008*
- *Water Act 2000*

Applicants are advised to check with all relevant statutory authorities and comply with all relevant legislation.

An environmental authority for petroleum activities is not an authority to impact on water levels or pressure heads in groundwater aquifers in or surrounding formations. There are obligations to minimise or mitigate any such impact under other Queensland Government and Commonwealth Government legislation.

This environmental authority consists of the following schedules:

Schedule A	General Conditions
Schedule B	Water
Schedule C	Regulated Structures
Schedule D	Land
Schedule E	Environmental Nuisance
Schedule F	Air
Schedule G	Waste
Schedule H	Rehabilitation
Schedule I	Community Issues
Schedule J	Notification
Schedule K	Definitions

SCHEDULE A — GENERAL CONDITIONS

Authorised Petroleum Activities

- (A1) In the carrying out of the petroleum activity(ies), the number and maximum size for each of the specified petroleum activities listed in *Schedule A, Table 1 – Authorised Petroleum Activities* for each petroleum tenure must not be exceeded.

Schedule A, Table 1 – Authorised Petroleum Activities

Resource Authority Number	Petroleum Activity	Number of Petroleum Activities	Maximum Size (where applicable)
PFL21	Water treatment facilities	1	0.048 ML/day
	Sewage treatment plants	1	2 KL/day 10 equivalent person (EP)
	Gas processing facilities (for each facility)	1	50 tonnes per day

Maintenance of Measures, Plant and Equipment

- (A2) The holder of the environmental authority must:
- (a) install all measures, plant and equipment necessary to ensure compliance with the conditions of this environmental authority;
 - (b) maintain such measures, plant and equipment in their proper and effective condition; and
 - (c) operate such measures, plant and equipment in a proper and effective manner.
- (A3) No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration materially increases, or is likely to increase, the environmental harm caused by the petroleum activity(ies).

Financial Assurance

- (A4) 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*.
- (A5) Prior to any changes in petroleum activities which would result in an increase to the maximum significant disturbance since financial assurance was last given to the administering authority, the holder of the environmental authority must amend the financial assurance and give the administering authority the increased amount of financial assurance.
- (A6) If the amount of financial assurance held by the administering authority has been discounted and either the nominated period of financial assurance has ended, or an event or change in circumstance has resulted in the holder of the environmental authority no longer being able to meet one or more of the mandatory pre-requisites or applicable discount criteria, the holder of the environmental authority must amend the financial assurance and give the administering authority the increased amount of financial assurance as soon as practicable.

Contingency Plan for Emergency Environmental Incidents

- (A7) A Contingency Plan for Emergency Environmental Incidents must be developed prior to the carrying out of the petroleum activity(ies).
- (A8) The Contingency Plan for Emergency Environmental Incidents must include, but not necessarily be limited to:
- (a) a clear definition of what constitutes an environmental emergency incident or near miss for the petroleum activity(ies) authorised to be carried out under this environmental authority;
 - (b) identification of the types of environmental incidents that may occur, including but not limited to flooding impacts, relevant to the petroleum activity(ies) authorised to be carried out under this environmental authority;
 - (c) response procedures to minimise the extent and duration of environmental harm caused by environmental emergency incidents;
 - (d) the resources to be used in response to environmental emergency incidents;
 - (e) procedures to investigate the cause of any incidents including releases or near misses, and where necessary, the remedial actions to be implemented to reduce the likelihood of recurrence of similar events;
 - (f) the practices and procedures to be employed to restore the environment or mitigate any environmental harm caused;
 - (g) procedures for accessing monitoring locations during emergency environmental incidents;
 - (h) communication procedures and lines of communication within and beyond the organisation, including but not limited to local government, to be employed in responding to environmental emergency incidents;
 - (i) the provision and availability of documented procedures to staff attending any emergency environmental incident to enable them to effectively respond;
 - (j) training of staff that will be called upon to respond to emergency environmental incidents to enable them to effectively respond;
 - (k) timely and accurate reporting of the circumstance and nature of emergency environmental incidents to the administering authority and any affected landholder, occupier and/or their nominated representative in accordance with conditions of this environmental authority.

Underground Gas Storage

- (A9) Testing, evaluating, developing and using natural underground reservoirs for petroleum storage or to store **prescribed storage gases** is not authorised under this environmental authority.

Infrastructure

- (A10) The following **infrastructure** must be clearly and permanently marked for the life of the petroleum activity(ies) with a unique reference name/number in such a way that it is clearly observable:
- (a) water treatment facilities;
 - (b) sewage treatment facilities;
 - (c) authorised discharge points to air;
 - (d) any chemical storage facility associated with the environmentally relevant activity of chemical storage;
 - (e) compressor stations; and
 - (f) gas processing facilities.

Monitoring

- (A11) All monitoring required under this environmental authority must be undertaken by a suitably qualified person.
- (A12) All laboratory analyses and tests required to be conducted under this environmental authority must be carried out by a laboratory that has **NATA accreditation** for such analyses and tests, except as otherwise authorised by the administering authority.
- (A13) Any management or monitoring plans, systems, programs or procedures required to be developed and implemented by a condition of this environmental authority must be reviewed for performance and amended as required but not less than once every three (3) years in accordance with the requirements for the particular plans, systems, programs and procedures in the conditions of this environmental authority.
- (A14) If monitoring conducted in accordance with this environmental authority indicates a circumstance, condition or contaminant level has caused, or has potential to cause, environmental harm, the holder of this environmental authority must, as soon as is practicable, take the necessary actions to rectify the circumstance, condition or contaminant level so as to avoid or minimise environmental harm.
- (A15) An annual report must be prepared each year and submitted to the administering authority in the form requested by the administering authority. This report must include but not necessarily be limited to:
 - (a) a comparison of the previous 12 **months** monitoring results to both the limits set in this environmental authority and to relevant prior results including data analyses and interpretation to assess the nature and extent of any contamination and the level of environmental harm caused as a result of the contamination and the environmentally relevant activity(ies);
 - (b) details of any exceedances with the conditions of this environmental authority and the dates and times these exceedances were reported to the administering authority; and
 - (c) an outline of actions taken to minimise the risk of environmental harm from any circumstance, condition or elevated contaminant level identified by the monitoring or recording programs as required by condition (A14).

Noise Sampling Methodology

- (A16) Noise must be measured in accordance with the prescribed standards in the *Environmental Protection Regulation 2008*.

Documentation and Records Management

- (A17) A record of all documents required by this environmental authority must be kept for a minimum of five (5) years.
- (A18) All plans and monitoring programs required by this environmental authority must be certified by a suitably qualified person.
- (A19) All plans and monitoring programs required under this environmental authority must be implemented.

SCHEDULE B — WATER

Contaminant Release

- (B1) Contaminants must not be directly or indirectly released to any waters except as permitted under this environmental authority.

Erosion and sediment control

- (B2) 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) 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).

Floodplains

- (B3) Where the petroleum activity(ies) is carried out on **floodplains**, the petroleum activity(ies) must be carried out in a way that does not:
- (a) concentrate flood flows in a way that will or may cause or threaten an adverse environmental impact; or
 - (b) divert flood flows from natural drainage paths and alter flow distribution; or
 - (c) increase the local duration of floods; or
 - (d) increase the risk of detaining flood flows; or
 - (e) pose an **unacceptable risk** to the safety of persons from flooding; or
 - (f) pose an **unacceptable risk** of damage to property from flooding.

SCHEDULE C — REGULATED STRUCTURES

(C1) Regulated structures are not permitted.

SCHEDULE D — LAND

General

- (D1) Contaminants must not be directly or indirectly released to land except as permitted under this environmental authority.

Land Management

- (D2) Land that has been significantly disturbed by the petroleum activities must be managed to ensure that mass movement, gully erosion, rill erosion, sheet erosion and tunnel erosion do not occur on that land.

Impacts to State Significant Biodiversity Values

- (D3) **Impacts to State Significant Biodiversity values** are not permitted.

Vegetation Clearing

- (D4) A maximum area of 2.6 hectares of vegetation may be cleared within the PFL21 boundary.

Fauna Management

- (D5) Measures must be employed to prevent fauna entrapment during construction and operation of the petroleum facility.

Chemical Storage

- (D6) All chemical storages must be:
- (a) be stored in, or serviced by, an effective containment system that is impervious to the materials stored therein; and
 - (b) be stored and handled in accordance with the relevant Australian Standard where such Standard is available; and
 - (c) be managed to prevent the release of substances to waters or land.

Hydrostatic Test Water

- (D7) Hydrostatic test water from pipelines may be released to land provided that it meets the limits specified in *Schedule D, Table 1 – Limits for the Release of Hydrostatic Test Water from Pipelines* for each of the water quality characteristics.

Schedule D, Table 1 – Limits for the Release of Hydrostatic Test Water from Pipelines

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

SCHEDULE E — ENVIRONMENTAL NUISANCE

Complaints

- (E1) Petroleum activities must not cause **environmental nuisance** at a sensitive place, other than where an alternative arrangement is in place.

Nuisance Monitoring

- (E2) When the administering authority advises of a complaint alleging nuisance, the holder must investigate the complaint as soon as practicable. The investigation is to include monitoring of environmental nuisance at any sensitive place within a reasonable and practical timeframe as specified by the administering authority.
- (E3) The administering authority must be advised in writing of the results of the investigation (including an analysis and interpretation of the monitoring results) and actions proposed or undertaken to resolve the complaint within five (5) business days of completing the complaint investigation, unless a longer time is agreed to in writing by the administering authority.
- (E4) If the investigation or monitoring in accordance with condition 0 indicates that emissions exceed the limits set in this environmental authority or are causing environmental nuisance, then:
- (a) the complaint must be addressed including the use of alternative dispute resolution services if required; and/or
 - (b) abatement or attenuation measures must be implemented so that the authorised petroleum activity(ies) does not result in further environmental nuisance.
- (E5) Noise monitoring and recording required under this environmental authority must include, but not necessarily be limited to:
- (a) LAN,T (where N equals the statistical levels of 1, 10 and 90 and T=15 mins);
 - (b) LAeq adj, 15 mins;
 - (c) background noise level as LA 90, 15 mins;
 - (d) Max LpA, 15 mins ;
 - (e) the level and frequency of occurrence of impulsive or tonal noise and any adjustment and penalties to measured noise levels levels;
 - (f) atmospheric conditions including temperature, relative humidity and wind speed and directions;
 - (g) effects due to any extraneous factors such as traffic noise;
 - (h) location, date and time of monitoring;
 - (i) if the complaint concerns low frequency noise, Max LpZ, 15 mins; and
 - (j) if the complaint concerns low frequency noise, one third octave band measurements in dB(LIN) for centre frequencies in the 10 – 200 Hz range for both the noise source and the background noise in the absence of the noise source.
- (E6) The emission of noise from the petroleum activity(ies) authorised under this environmental authority must not result in levels greater than those specified in *Schedule E, Table 1 – Noise Limits at Sensitive Receptors* in the event of a **valid complaint** about noise being made to the administering authority.

Schedule E, Table 1 – Noise Limits at Sensitive Receptors

Time Period	Metric	Short Term Noise Event	Medium Term Noise Event	Long Term Noise Event
7:00 am – 6:00 pm	LAeq,adj,15 min	45 dBA	43 dBA	40 dBA

6:00 pm – 10:00 pm	L _{Aeq,adj,15 min}	40 dBA	38 dBA	35 dBA
10:00 pm – 6:00 am	L _{Aeq,adj,15 min}	28 dBA	28 dBA	28 dBA
	Max L _{pA, 15 mins}	55 dBA	55 dBA	55 dBA
6:00 am – 7:00 am	L _{Aeq,adj,15 min}	40 dBA	38 dBA	35 dBA

Note: The noise limits in Schedule E, Table 1 have been set based on the following deemed background noise levels (L_{ABG}):

- 7:00 am – 6:00 pm: 35 dBA
- 6:00 pm – 10:00 pm: 30 dBA
- 10:00 pm – 6:00 am: 25 dBA
- 6:00 am – 7:00 am: 30 dBA

- (E7) If the noise subject to a complaint is tonal or impulsive, the adjustments detailed in *Schedule E, Table 2 – Adjustments to be Added to Noise Levels at Sensitive Receptors* are to be added to the measured noise level(s) to derive L_{Aeq, adj, 15 min}.

Schedule E, Table 2 – Adjustments to be Added to Noise Levels at Sensitive Receptors

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

- (E8) Where alternative arrangements are in place with an affected person(s) at a sensitive receptor as referred to by condition **Error! Reference source not found.**(j), the noise limits in *Schedule E, Table 1 – Noise limits at Sensitive Receptors* do not apply at that sensitive receptor for the duration for which the alternative arrangements are in place.

Low Frequency Noise

- (E9) Notwithstanding condition 0, emission of any low frequency noise must not exceed the following limits in the event of a valid complaint about low frequency noise being made to the administering authority:
- (a) 60 dB(C) measured outside the sensitive receptor; and
 - (b) the difference between the external A-weighted and C-weighted noise levels is no greater than 20 dB; or
 - (c) 50 dB(Z) measured inside the sensitive receptor; and
 - (d) the difference between the internal A-weighted and Z-weighted noise levels is no greater than 15 dB.

SCHEDULE F — AIR

Venting and Flaring

- (F1) Unless venting is authorised under the *Petroleum and Gas (Production and Safety) Act 2004* or the *Petroleum Act 1923*, waste gas must be flared in a manner that complies with all of (Air 1(a)) and (Air 1(b)) and (Air 1(c)), or with (Air 1(d)):
- (a) an automatic ignition system is used; and
 - (b) a flame is visible at all times while the waste gas is being flared; and
 - (c) there are no visible smoke emissions other than for a total period of no more than 5 minutes in any 2 hours; or
 - (d) it uses an enclosed flare.
- (F2) This environmental authority does not authorise fuel burning and/or combustion equipment capable of burning at least 500kg of fuel in an hour.

SCHEDULE G — WASTE

General

- (G1) All general waste must only be removed from the site and sent to a recycling facility or disposal facility licensed to accept the waste under the *Environmental Protection Act 1994*.
- (G2) All regulated waste must only be removed from the site by a person who holds a current authority to transport such waste under the provisions of the *Environmental Protection Act 1994* and sent to a recycling facility or disposal facility licensed to accept the waste.
- (G3) Waste must not be burned on the site, unless it is vegetation and is authorised in writing under the *Forestry Act 1959*.

Sewage Treatment Works

- (G4) Treated sewage effluent may only be released to land by irrigation at designated, fenced contaminant release area(s).
- (G5) The release of contaminants to land authorised under this environmental authority must be carried out in a manner such that:
 - (a) vegetation is not damaged;
 - (b) soil quality is not adversely impacted;
 - (c) there is no surface ponding or runoff to waters;
 - (d) there is no aerosols or odours;
 - (e) deep drainage below the root zone of any vegetation is minimised;
 - (f) the quality of shallow aquifers is not adversely affected.

SCHEDULE H — REHABILITATION

Decommissioning of Buried Pipelines

- (H1) All buried pipelines must be decommissioned in accordance with the requirements of *Australian Standard 2885*, as amended from time to time.

Progressive Rehabilitation of Significantly Disturbed Land

- (H2) Progressive rehabilitation of significantly disturbed land caused by the carrying out of the petroleum activity(ies) must be undertaken in accordance with the Schedule of Disturbance as submitted to the administering authority as part of the financial assurance calculations required by condition (A5).
- (H3) Progressive rehabilitation of significantly disturbed land caused by the carrying out of the petroleum activity(ies) must:
- (a) remediate any contaminated land (e.g. contaminated soils);
 - (b) reshape all significantly disturbed land to a stable landform;
 - (c) reprofile all significantly disturbed land to original contours;
 - (d) on all significantly disturbed land:
 - (i) re-establish surface drainage lines;
 - (ii) reinstate the top layer of the soil profile;
 - (iii) establish groundcover to ensure that erosion is minimised;
 - (iv) establish vegetation of floristic species composition found in analogue sites and which are not weed species;

Final Acceptance Criteria for Significantly Disturbed Land

- (H4) 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) For all land use(s):
 - (i) all significantly disturbed land is reinstated to the pre-disturbed soil suitability class;
 - (ii) the landform is safe for humans and fauna;
 - (iii) the landform is stable with no subsidence or erosion gullies for at least three (3) years;
 - (iv) all significantly disturbed land is reinstated so that the distribution of vegetation communities represents the analogue site and which are not weed species;
 - (v) there is no ongoing contamination to waters; and
 - (vi) the maintenance requirements for rehabilitated land is no greater than that required for the land prior to its disturbance caused by carrying out the petroleum activity(ies).
 - (b) Additional requirements for sites that are being reinstated to native ecosystems:
 - (i) each vegetation community must be re-established so that each of the following rehabilitation parameters are maintained for at least three (3) years:
 - (a) the rehabilitated site shows distinct and progressive re-establishment of the various strata which characterise the vegetation community in the analogue site;
 - (b) all dominant species within each strata are re-established at densities equivalent to that of the analogue site;

- (c) notwithstanding (H4)(b)(i)(a) and (H4)(b)(i)(b), a minimum of 70 per cent **species richness** and **species diversity** is observed when compared to the relevant analogue site;
- (d) a minimum of 50 per cent **foliage cover** is observed when compared to the relevant analogue site;
- (e) each vegetation community must be rehabilitated and maintained until it can be demonstrated that it is resilient and self-sustaining (demonstrated by reproduction and colonisation); and
- (f) percent organic litter cover, count and density of hollow bearing logs and nest boxes (as replacement for trees with hollows ≥ 10 cm diameter) and fallen woody material (total length of logs ≥ 10 cm diameter per hectare and number of logs ≥ 10 cm per hectare) have been installed at numbers and densities no lower than the analogue site.

Monitoring of Progressive Rehabilitation

- (H5) Regular maintenance and at least yearly monitoring of rehabilitated areas must take place to measure compliance with condition (H2) and (H3).

Monitoring of Final Rehabilitation Success

- (H6) Final acceptance criteria are deemed to be met when monitoring of rehabilitated areas demonstrate compliance with the requirements of condition (H4) for three (3) consecutive years.

SCHEDULE I — COMMUNITY ISSUES

- (I1) A record of all valid complaints and incidents causing environmental harm, and actions taken in response to the valid complaint or incident must be kept.
- (I2) The following details for all valid complaints received must be recorded:
 - (a) name, address and contact number for valid complainant;
 - (b) time and date of valid complaint;
 - (c) reasons for the complaint as stated by the valid complainant;
 - (d) investigations undertaken in response to the valid complaint;
 - (e) conclusions formed;
 - (f) actions taken to resolve the valid complaint;
 - (g) any abatement measures implemented to mitigate the cause of the valid complaint; and
 - (h) name and contact details of the person responsible for resolving the valid complaint.

SCHEDULE J — NOTIFICATION

Notification

- (J1) In addition to the requirements under Chapter 7, Part 1, Division 2 of the *Environmental Protection Act 1994*, 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) unauthorised releases of any volume of **prescribed contaminants** to waters
 - (c) unauthorised releases of volumes of contaminants, in any mixture, to land greater than:
 - i. 200 L of hydrocarbons; or
 - ii. 5 000 L of raw sewage; or
 - iii. 10 000 L of treated sewage effluent.
 - (d) monitoring results where two out of any five consecutive samples do not comply with the relevant limits in the environmental authority.

SCHEDULE K — DEFINITIONS

administering authority means:

- (a) for a matter, the administration and enforcement of which has been devolved to a local government under section 514 of the *Environmental Protection Act 1994* – the local government; or
- (b) for all other matters – the Chief Executive of the Department of Environment and 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 between the holder of this environmental authority and an affected or potentially affected person at a sensitive receptor for a defined noise nuisance impact and may include an agreed period of time for which the arrangement is in place. An agreement for alternative arrangement may include, but not necessarily be limited to a range of noise abatement measures to be installed at a sensitive receptor and/or provision of alternative accommodation for the duration of the defined noise nuisance impact.

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

aquifer means an identifiable stratigraphic formation that has the potential to produce useful flows of water and may include formations where due to hydraulic fracturing activity a changed hydraulic conductivity allows such water flows

areas of pre-disturbance means areas where environmental values have been negatively impacted as a result of anthropogenic activity and these impacts are still evident. Areas of pre-disturbance may include areas where legal clearing, logging, timber harvesting, or grazing activities have previously occurred, where high densities of weed or pest species are present which have inhibited re-colonisation of native regrowth, or where there is existing infrastructure (regardless of whether the infrastructure is associated with the authorised petroleum activities). The term 'areas of pre-disturbance' does not include areas that have been impacted by wildfire/s, controlled burning, flood or natural vegetation die-back.

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 become available from time to time.

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 per cent of the measurement time period T of not less than 15 minutes, using Fast response.

business day has the meaning in the *Acts Interpretation Act 1954* and means a day that is not:

- a Saturday or Sunday; or
- a public holiday, special holiday or bank holiday in the place in which any relevant act is to be or may be done.

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

- all relevant material has been considered in the written document; and
- that the content of the written document is accurate and true; and
- that the written document meets the requirements of the relevant conditions of the environmental authority.

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

construction in relation to a dam includes building a new dam and modifying or lifting an existing dam but does not include investigations and testing necessary for the purposes of preparing a design plan.

control measure has the meaning in section 47 of the Environmental Protection Regulation 2008 and means a device, equipment, structure, or management strategy used to prevent or control the release of a contaminant or waste to the environment.

decommissioning in relation to pipelines means the action undertaken to prepare the pipeline and peripheral facilities for pending suspension or abandonment.

document has the meaning in the *Acts Interpretation Act 1954* and means:

- any paper or other material on which there is writing; and
- any paper or other material on which there are marks; 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).

enclosed flare means a device where the residual gas is burned in a cylindrical or rectilinear enclosure that includes a burning system and a damper where air for the combustion reaction is admitted.

end means the stopping of the particular activity that has caused a significant disturbance in a particular area. It refers to, among other things, the end of a seismic survey or the end of a drilling operation. It does not refer to the end of all related petroleum activities such as rehabilitation. In other words, it does not refer to the 'completion' of the petroleum activity(ies), the time at which the petroleum authority ends or the time that the land in question ceases to be part of an authority. **environmental nuisance** has the meaning in section 15 of the *Environmental Protection Act 1994* 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.

equivalent person or **EP** means an equivalent person under volume 1, section 2 of the *Guidelines for Planning and Design of Sewerage Schemes*, October 1991, published by the Water Resources Commission, Department of Primary Industries, Fisheries and Forestry.

floodplain has the meaning in the *Water Act 2000* and means an area of reasonably flat land adjacent to a watercourse that:

- is covered from time to time by floodwater overflowing from the watercourse; and
- does not, other than in an upper valley reach, confine floodwater to generally follow the path of the watercourse; and
- has finer sediment deposits than the sediment deposits of any bench, bar or in-stream island in the watercourse.

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

impacts to State significant biodiversity values means to have a negative effect on a State Significant Biodiversity Value as identified by the *Queensland Biodiversity Offset Policy* (Department of Environment and Resource Management, 2011). Examples may include, but are not necessarily limited to:

- clearing, removal or fragmentation of vegetation;

- interference or disturbance of fauna habitat.

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

infrastructure means plant or works including for example, communication systems, compressors, powerlines, pumping stations, reservoirs, roads and tracks, water storage dams, evaporation or storage ponds and tanks, equipment, buildings and other structures built for the purpose and duration of the conduct of the petroleum 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, pipelines and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

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

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

levee means a dyke or bund that is designed only to provide for the containment and diversion of stormwater or flood flows from a contributing catchment, or containment and diversion of flowable materials resulting from unplanned releases from other works of infrastructure, during the progress of those stormwater or flood flows or those unplanned releases; and does not store any significant volume of water or **flowable substances** at any other times.

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

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

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

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

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

month has the meaning in the *Acts Interpretation Act 1954* and means a calendar month and is a period starting at the beginning of any day of one (1) of the 12 named months and ending:

- immediately before the beginning of the corresponding day of the next named month; or
- if there is no such corresponding day—at the end of the next named month.

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

prescribed contaminants has the meaning in section 440ZD of the *Environmental Protection Act 1994*.

prescribed storage gases has the meaning provided in section 12 of the *Petroleum and Gas (Production and Safety) Act 2004*.

regulated structure means any dam or levee in the significant or high hazard category as assessed using 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.

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

sensitive place means:

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

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

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

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

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

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

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

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

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

structure means a dam or levee.

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

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

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

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

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.

year means a period of 12 months.

End of Environmental Authority

