Permit

Environmental Protection Act 1994

Environmental authority EA0001608

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

Environmental authority number: EA0001608

Environmental authority takes effect on 30 December 2019.

The anniversary date of this environmental authority is 30 January. The payment of the annual fee will be due each year on this day.

An annual return will be due each year on 01 April.

Environmental authority holder(s)

Name(s)	Registered address
JEMENA ATLAS PROCESSING PTY LTD	Level 16 567 Collins Street MELBOURNE VIC 3000

Environmentally relevant activity and location details

Environmentally relevant activity/activities	Location(s)
Schedule 3 - 08 - A petroleum or GHG storage activity, other than items 1 to 7, that includes an activity from Schedule 2 with an AES	PFL29
Ancillary 15 - Fuel burning - Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour	PFL29

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

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

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

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

Take effect

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

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

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

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

However, if the EA is authorising an activity that requires an additional authorisation (a relevant tenure for a resource activity, a development permit under the *Planning Act 2016* or an SDA Approval under the *State Development and Public Works Organisation Act 1971*), this EA will not take effect until the additional authorisation has taken effect.

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

The anniversary day of this environmental authority is 30 January. The payment of the annual fee will be due each year on this day. An annual return will be due each year on 01 April.

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

Department of the Environment, Tourism, Science and Innovation
This environmental authority has been automatically issued by an electronic system that is approved by the chief executive under section 555 of the *Environmental Protection Act 1994*

Enquiries:
Energy and Extractive Resources
Department of the Environment, Tourism, Science, and Innovation
Phone: 07 3330 5715
Email: EnergyandExtractive@detsi.qld.gov.au

Obligations under the *Environmental Protection Act 1994*

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

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

Other permits required

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

Obligations under the *Mining and Quarrying Safety and Health Act 1999*

If you are operating a quarry, other than a sand and gravel quarry where there is no crushing capability, you will be required to comply with the *Mining and Quarrying Safety and Health Act 1999*. For more information on your obligations under this legislation contact Mine Safety and Health at www.nrmmrrd.qld.gov.au, or phone 13 QGOV (13 74 68) or your local Mines Inspectorate Office.

Development Approval

This permit is not a development approval under the *Planning Act 2016*. The conditions of this environmental authority are separate, and in addition to, any conditions that may be on the development approval. If a copy of this environmental authority is attached to a development approval, it is for information only, and may not be current. Please contact the Department of the Environment, Tourism, Science and Innovation to ensure that you have the most current version of the environmental authority relating to this site.

CONDITIONS OF ENVIRONMENTAL AUTHORITY

<table>
<tr><th colspan="2">General conditions</th></tr>
<tr><th>Condition number</th><th>Condition</th></tr>
<tr><td colspan="2">Authorised activities</td></tr>
<tr><td>General 1</td><td>This environmental authority authorises the carrying out of the following resource activities:
(a) The petroleum activities[1] and specified relevant activities listed in General, Table 1 - Authorised Petroleum Activities to the extent they are carried out in accordance with the activity's corresponding scale and intensity (or both, where applicable); and
(b) Incidental activities[2] that are not otherwise specified relevant activities.

General, Table 1 – Authorised Petroleum Activities
<table><tr><th rowspan="2">Petroleum activities and infrastructure</th><th colspan="2">Scale</th></tr><tr><th>Total Number of Authorised Petroleum Activities</th><th>Maximum Disturbance area</th></tr><tr><td>Gas Compression Facility</td><td>1</td><td>10 ha</td></tr><tr><td>Temporary Construction Area</td><td>1</td><td>1 ha</td></tr><tr><td>Access</td><td>1</td><td>1.02ha</td></tr></table></td></tr>
<tr><td>General 2</td><td>This environmental authority does not authorise environmental harm unless a condition contained in this environmental authority explicitly authorises that harm. Where there is no condition, the lack of a condition shall not be construed as authorising harm.</td></tr>
<tr><td colspan="2">Monitoring standards</td></tr>
<tr><td>General 3 (PESCD 1)[3]</td><td>All monitoring must be undertaken by a suitably qualified person.</td></tr>
<tr><td>General 4</td><td>If requested by the administering authority in relation to investigating a complaint, monitoring must be commenced within 10 business days.</td></tr>
<tr><td>General 5</td><td>All laboratory analyses and tests must be undertaken by a laboratory that has NATA accreditation for such analyses and tests.</td></tr>
</table>

[1] The petroleum activities are authorised petroleum activities for the purposes of the Petroleum and Gas (production and Safety) Act 2004 and the Petroleum Act 1923.

[2] Words underlined are currently defined in **Schedule K – Definitions** or the ***Environmental Protection Act 1994*** and/or its subordinate legislation.

[3] Conditions that include 'SC' are an existing approved and published standard condition.

General 6	Notwithstanding condition (General 5), where there are no NATA accredited laboratories for a specific analyte or substance, then duplicate samples must be sent to at least two separate laboratories for independent testing or evaluation.
General 7	Monitoring and sampling must be carried out in accordance with the requirements of the following documents (as relevant to the sampling being undertaken), as amended from time to time: (a) for waters and aquatic environments, the Queensland Government's Monitoring and Sampling Manual 2018 ***– Environmental Protection (Water) Policy 2009*** (b) for groundwater, ***Groundwater Sampling and Analysis – A Field Guide*** (2009:27 GeoCat #68901) (c) for noise, the Environmental Protection Regulation 2008 (d) for air, the ***Queensland Air Quality Sampling Manual*** and/or Australian Standard 4323.1:1995 ***Stationary source emissions method 1: Selection of sampling positions***, as appropriate for the relevant measurement (e) for soil, the ***Guidelines for Surveying Soil and Land Resources, 2nd edition*** (McKenzie ***et al.*** 2008), and/or the ***Australian Soil and Land Survey Handbook, 3rd edition*** (National Committee on Soil and Terrain, 2009) (f) for dust, Australian Standard AS3580.
Notification	
General 8	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 (d) monitoring results where two out of any five consecutive samples do not comply with the relevant limits in the environmental authority.
Contingency procedures for emergency environmental incidents	

General 9	Petroleum activities involving significant disturbance to land cannot commence until the development of written contingency procedures for emergency environmental incidents which include, but are not necessarily limited to: (a) a clear definition of what constitutes an environmental emergency incident or near miss for the petroleum activity. (b) consideration of the risks caused by the petroleum activity including the impact of flooding and other natural events on the petroleum activity. (c) response procedures to be implemented to prevent or minimise the risks of environmental harm occurring. (d) the practices and procedures to be employed to restore the environment or mitigate any environmental harm caused. (e) procedures to investigate causes and impacts including impact monitoring programs for releases to waters and/or land. (f) training of staff to enable them to effectively respond. (g) procedures to notify the administering authority, local government and any potentially impacted landholder.
Maintenance of plant and equipment	
General 10 (PESCC 4)	All plant and equipment must be maintained and operated in their proper and effective condition.
General 11	The following infrastructure must be signed with a name or number in such a way that it is clearly observable: (a) water treatment facilities (b) specifically authorised discharge points to air (c) any chemical storage facility associated with the environmentally relevant activity of chemical storage (d) compressor stations
General 12	Measures to prevent fauna being harmed from entrapment must be implemented during the construction and operation of well infrastructure, dams and pipeline trenches.
Erosion and sediment control	
General 13	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).
Complaints	
General 14	Petroleum activities must not cause environmental nuisance at a sensitive place, other than where an alternative arrangement is in place.
Documentation	
General 15	A certification must be prepared by a suitably qualified person within 30 business days of completing every plan, procedure, program and report required to be developed under this environmental authority, which demonstrates that: (a) relevant material, including current published guidelines (where available) have been considered in the written document; (b) the content of the written document is accurate and true; and (c) the document meets the requirements of the relevant conditions of the environmental authority.
General 16	All plans, procedures, programs, reports and methodologies required under this environmental authority must be written and implemented.
General 17	All documents required to be developed under this environmental authority must be kept for five years.
General 18	All documents required to be prepared, held or kept under this environmental authority must be provided to the administering authority upon written request within the requested timeframe.
General 19	A record of all complaints must be kept including the date, complainant's details, source, reason for the complaint, description of investigations and actions undertaken in resolving the complaint.
Environmental harm	
General 20 (PPSCB 2)	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.
General 21	Contaminants must not be directly or indirectly released to land, air or waters except for those releases authorised by this environmental authority.
Waste conditions	
Condition number	**Condition**
General waste management	

Waste 1 (PESCC 24)	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.
Waste 2	Waste, including waste fluids, but excluding waste used in closed-loop systems, must be transported off-site for lawful re-use, remediation, recycling or disposal, unless the waste is specifically authorised to be disposed of or used on site under this environmental authority.
Waste 3	Waste fluids, other than flare precipitant stored in flare pits, must be contained in either: (a) an above ground container; or (b) a structure which contains the wetting front.
Waste 4	Green waste may be used on-site for either rehabilitation or sediment and erosion control, or both.
Waste 5	Vegetation waste may be burned if it relates to a state forest, timber reserve or forest entitlement area administered by the ***Forestry Act 1959*** and a permit has been obtained under the ***Fire and Rescue Service Act 1990***.
Pipeline wastewater	
Waste 6	Pipeline waste water, may be released to land provided that it: (a) can be demonstrated it meets the acceptable standards for release to land; and (b) is released in a way that does not result in visible scouring or erosion or pooling or run-off or vegetation die-off.
Waste 7	If pipeline waste water quality does not or cannot be treated to meet the requirements of condition (Waste 6), it must be managed in accordance with conditions (Waste 2) and (Waste 3).
Noise conditions	
Condition number	**Condition**
Protecting Acoustic Values	

<table>
<tr><td>Noise 1</td><td>Notwithstanding condition (General 14), emission of noise from the petroleum activity(ies) at levels less than those specified in Protecting acoustic values, Table 1—Noise nuisance limits are not considered to be environmental nuisance.
Protecting acoustic values, Table 1—Noise nuisance limits
<table>
<tr><th>Time period</th><th>Metric</th><th><u>Short term noise event[1]</u></th><th><u>Medium term noise event[1]</u></th><th><u>Long term noise event[1]</u></th></tr>
<tr><td>7:00am—6:00pm</td><td><u>$L_{Aeq,adj,15\ min}$</u></td><td>45 dBA</td><td>43 dBA</td><td>40 dBA</td></tr>
<tr><td>6:00pm—10:00pm</td><td>$L_{Aeq,adj,15\ min}$</td><td>40 dBA</td><td>38 dBA</td><td>35 dBA</td></tr>
<tr><td rowspan="2">10:00pm—6:00am</td><td>$L_{Aeq,adj,15\ min}$</td><td>28 dBA</td><td>28 dBA</td><td>28 dBA</td></tr>
<tr><td><u>Max $L_{pA,\ 15\ mins}$</u></td><td>55 dBA</td><td>55 dBA</td><td>55 dBA</td></tr>
<tr><td>6:00am—7:00am</td><td>$L_{Aeq,adj,15\ min}$</td><td>40 dBA</td><td>38 dBA</td><td>35 dBA</td></tr>
</table>
1. The noise limits in Table 1 have been set based on the following deemed <u>background noise levels</u> (L_{ABG}):
7:00am—6:00 pm: 35 dBA
6:00pm—10:00 pm: 30 dBA
10:00pm—6:00 am: 25 dBA
6:00am—7:00 am: 30 dBA</td></tr>
<tr><td>Noise 2</td><td>If the noise subject to a <u>valid complaint</u> is tonal or <u>impulsive</u>, the adjustments detailed in Protecting acoustic values, Table 2—Adjustments to be added to noise levels at <u>sensitive receptors</u> are to be added to the measured noise level(s) to derive $L_{Aeq,\ adj,\ 15\ min}$.
Protecting acoustic values, Table 2—Adjustments to be added to noise levels at sensitive receptors
<table>
<tr><th>Noise characteristic</th><th>Adjustment to noise</th></tr>
<tr><td>Tonal characteristic is just audible</td><td>+ 2 dBA</td></tr>
<tr><td>Tonal characteristic is clearly audible</td><td>+ 5 dBA</td></tr>
<tr><td>Impulsive characteristic is just audible</td><td>+ 2 dBA</td></tr>
<tr><td>Impulsive characteristic is clearly audible</td><td>+ 5 dBA</td></tr>
</table></td></tr>
<tr><td>Noise 3</td><td>Notwithstanding condition (Noise 1), emission of any low frequency noise must not exceed either (Noise 3(a)) and (Noise 3(b)), or (Noise 3(c)) and (Noise 3(d)) in the event of a valid complaint about low frequency noise being made to the administering authority:
(a) 60 dB(C) measured outside the sensitive receptor; and
(b) the difference between the external A-weighted and C-weighted noise levels is no greater than 20 dB; or
(c) 50 dB(Z) measured inside the sensitive receptor; and
(d) the difference between the internal A-weighted and Z-weighted (<u>Max $L_{pZ,\ 15\ min}$</u>) noise levels is no greater than 15 dB.</td></tr>
<tr><td colspan="2">Air conditions</td></tr>
<tr><td>Condition number</td><td>Condition</td></tr>
<tr><td colspan="2">Venting and flaring</td></tr>
</table>

Air 1	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.
Fuel burning and combustion facilities—authorised point sources	
Air 2	A fuel burning or combustion facility must not be operated unless it is listed in Protecting air values, ***Table 1– Authorised point sources***.

Protecting air values, Table 1—Authorised point sources

Release Point Reference	Equipment Description	Minimum Release Height (m)	Minimum Efflux Velocity (m/sec)	NOx as NO2	Carbon Monoxide
				Maximum Mass Emission Rate (g/sec)	Maximum Mass Emission Rate (g/sec)
A1	Compressor 1	8	20	6.5	2.0
A2	Compressor 2	8	20	6.5	2.0
A3	Compressor 3	8	20	6.5	2.0
A4	Compressor 4	8	20	6.5	2.0
A5	Compressor 5	8	20	6.5	2.0
A6	Compressor 6	8	20	6.5	2.0
A7	Compressor 7	8	20	6.5	2.0
A8	Compressor 8	8	20	6.5	2.0
A9	Compressor 9	8	20	6.5	2.0
A10	Compressor 10	8	20	6.5	2.0

	A11	Compressor 11	8	20	6.5	2.0
	A12	Compressor 12	8	20	6.5	2.0
	A13	Generator 1	7	10	1.0	2.0
	A14	Generator 2	7	10	1.0	2.0
	A15	Generator 3	7	10	1.0	2.0
	A16	Generator 4	7	10	1.0	2.0
Air 3	If a fuel burning or combustion facility is listed in ***Protecting air values, Table 1— Authorised point sources***, the fuel burning or combustion facility must be operated so that the releases to air do not exceed the limits specified in ***Protecting air values, Table 1— Authorised point sources*** at the specified release point reference.					
Point source air monitoring						
Air 4	Point source air monitoring for each fuel burning or combustion facility listed in ***Protecting air values, Table 1– Authorised point sources*** must: a) be undertaken once: i. in the first three months after each facility is first commissioned, and then ii. every year thereafter b) be carried out when the facility the subject of the sampling is operating under maximum operating conditions for the annual period; and c) demonstrate compliance with the limits listed in ***Protecting air values, Table 1– Authorised point sources*** at each release point reference.					
Land conditions						
Condition number	**Condition**					
General						
Land 1	Contaminants must not be directly or indirectly released to land except as permitted under this environmental authority.					
Top soil management						
Land 2	Top soil must be managed in a manner that preserves its biological and chemical properties.					
Land management						
Land 3	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.					

Chemical storage	
Land 4	Chemicals and fuels stored, must be effectively contained and where relevant, meet Australian Standards, where such a standard is applicable.
Biodiversity conditions	
Condition number	**Condition**
Confirming biodiversity values	
Biodiversity 1	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.
Biodiversity 2	A suitably qualified person must develop and certify a methodology so that condition (Biodiversity 1) can be complied with and which is appropriate to confirm on-the-ground biodiversity values.
Biodiversity 3	For conditions (Biodiversity 4) to (Biodiversity 6), where mapped biodiversity values differ from those confirmed under conditions (Biodiversity 1) and (Biodiversity 2), petroleum activities may proceed in accordance with the conditions of the environmental authority based on the confirmed on-the-ground biodiversity value.
Planning for land disturbance	
Biodiversity 4	The location of the petroleum activity(ies) must be selected in accordance with the following site planning principles: (a) maximise the use of areas of pre-existing disturbance (b) in order of preference, avoid, minimise or mitigate any impacts, including cumulative impacts, on areas of native vegetation or other areas of ecological value (c) minimise disturbance to land that may result in land degradation (d) in order of preference, avoid then minimise isolation, fragmentation, edge effects or dissection of tracts of native vegetation; and (e) in order of preference, avoid then minimise clearing of native mature trees.
Authorised disturbance to Environmentally Sensitive Areas	
Biodiversity 5	Petroleum activities are not permitted in Category A, B or C environmentally sensitive areas.
Biodiversity 6	The gas compression facility, associated access and temporary construction area necessary for construction, operation, maintenance and monitoring of the facilities are permitted within the protection zones of Category B and C Environmentally Sensitive Areas.

Impacts to prescribed environmental matters	
Biodiversity 7	Significant residual impacts to prescribed environmental matters are not authorised under this environmental authority or the ***Environmental Offsets Act 2014***.
Biodiversity 8	Records demonstrating that each impact to a prescribed environmental matter did not, or is not likely to, result in a significant residual impact to that matter must be: (a) completed by an appropriately qualified person; and (b) kept for the life of the environmental authority.
Water conditions	
Condition number	**Condition**
Authorised impacts to waters	
Water 1	Contaminants must not be directly or indirectly released to any waters.
Authorised activities in waters	
Water 2	Petroleum activities must not occur in or within 200m of a: (a) wetland of high ecological significance (b) Great Artesian Basin Spring (c) subterranean cave GDE (d) watercourses
Water 3	Despite condition (Water 2), the infrastructure specified in ***Water, Table 1 – Authorised petroleum activities and infrastructure within 200 metres of a watercourse*** is authorised within 200 m of a watercourse. ***Water, Table 1 – Authorised petroleum activities and infrastructure within 200 m of a watercourse***

Petroleum activities and infrastructure	**Scale**	
	Number	Maximum disturbance area
Gas Compression Facility	1	10 ha
Temporary Construction Area	1	1 ha
Access	1	1.02 ha

Rehabilitation conditions	
Condition number	**Condition**
Rehabilitation planning	

Rehabilitation 1	A Rehabilitation Plan must be developed by a suitably qualified person and must include the: (a) rehabilitation goals; and (b) procedures to be undertaken for rehabilitation that will: i. achieve the requirements of conditions (Rehabilitation 2) to (Rehabilitation 3), inclusive; and ii. provide for appropriate monitoring and maintenance.
Transitional rehabilitation	
Rehabilitation 2	Significantly disturbed areas that are no longer required for the on-going petroleum activities, must be rehabilitated within 12 months (unless an exceptional circumstance in the area to be rehabilitated (e.g. a flood event) prevents this timeframe being met) and be maintained to meet the following acceptance criteria: (a) contaminated land resulting from petroleum activities is remediated and rehabilitated (b) the areas are: i. non-polluting ii. a stable landform iii. re-profiled to contours consistent with the surrounding landform (c) surface drainage lines are re-established (d) top soil is reinstated; and (e) either: i. groundcover, that includes suitable native species of vegetation for the location and not pest species, is growing; or ii. an alternative soil stabilisation methodology that achieves effective stabilisation is implemented and maintained.
Final rehabilitation acceptance criteria	
Rehabilitation 3	All significantly disturbed areas caused by petroleum activities, which are not being or intended to be utilised by the landholder or overlapping tenure holder, must be rehabilitated to meet the following final acceptance criteria measured either against the highest ecological value adjacent land use or the pre-disturbed land use: (a) greater than or equal to 70% of native ground cover species richness (b) greater than or equal to the total per cent of ground cover (c) less than or equal to the per cent species richness of plant pest species; and (d) where the adjacent land use contains, or the pre-clearing land use contained, one or more regional ecosystem(s), then at least one regional ecosystem(s) from the same broad vegetation group, and with the equivalent biodiversity status or a biodiversity status with a higher conservation value as any of the regional ecosystem (s) in either the adjacent land or pre-disturbed land, must be present.

Definitions

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

Term	Definition
acceptable standards for release to land	means wastewater of the following quality as determined by monitoring results or by characterisation: (a) electrical conductivity (EC) not exceeding 3000µS/cm (b) sodium adsorption ratio (SAR) not exceeding 8 (c) pH between 6.0 and 9.0 (d) heavy metals (measured as total) meets the respective short term trigger value in section 4.2.6, Table 4.2.10—Heavy metals and metalloids in Australian and New Zealand Guidelines for Fresh and Marine Water Quality (e) does not contain biocides.
adjacent land use(s)	means the ecosystem function adjacent to an area of significant disturbance, or where there is no ecosystem function, the use of the land. An adjacent land use does not include an adjacent area that shows evidence of edge effect.
administering authority	means: (a) for a matter, the administration and enforcement of which has been devolved to a local government under section 514 of the ***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 about the way in which a particular environmental nuisance impact will be dealt with at a sensitive place, and may include an agreed period of time for which the arrangement is in place. An alternative arrangement may include, but is not limited to, a range of nuisance abatement measures to be installed at the sensitive place, or provision of alternative accommodation for the duration of the relevant nuisance impact.
annual return period	means the most current 12-month period between two anniversary dates.
appropriately qualified person / suitably qualified person	means a person who has professional qualifications, training or skills or experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis about performance relevant to the subject matters using relevant protocols, standards, methods or literature.
areas of pre-existing 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 AS3580	means any of the following publications: • AS3580.10.1 Methods for sampling and analysis of ambient air—Determination of particulate matter—Deposited matter—Gravimetric method. • AS3580.9.6 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter—PM10 high volume sampler with size-selective inlet—Gravimetric method • AS3580.9.9 Methods for sampling and analysis of ambient air—Determination of suspended particulate matter— PM10 low volume sampler—Gravimetric sampler.
background noise level	means the sound pressure level, measured in the absence of the noise under investigation, as the $L_{A90,T}$ being the A-weighted sound pressure level exceeded for 90% of the measurement time period T of not less than 15 minutes (or $L_{A\ 90,\ adj,\ 15\ mins}$), using Fast response.
being or intended to be utilised by the landholder or overlapping tenure holder	for significantly disturbed land, means there is a written agreement (e.g. land and compensation agreement) between the landholder or the overlapping tenure holder and the holder of the environmental authority identifying that the landholder or the overlapping tenure holder has a preferred use of the land such that rehabilitation standards for revegetation by the holder of the environmental authority are not required. For dams, means there is a written agreement (e.g. land and compensation agreement) between the landholder or the overlapping tenure holder and the holder of the environmental authority identifying that the landholder or the overlapping tenure holder has a preferred use for the dam such that rehabilitation standards for revegetation by the holder of the environmental authority are not required.
biodiversity values	for the purposes of this environmental authority, means environmentally sensitive areas, prescribed environmental matters and wetlands.
Category A Environmentally Sensitive Area	means any area listed in Schedule 12, Section 1 of the Environmental Protection Regulation 2008.
Category B Environmentally Sensitive Area	means any area listed in Schedule 12, Section 2 of the Environmental Protection Regulation 2008.
Category C Environmentally Sensitive Area	means any of the following areas: • nature refuges as defined in the conservation agreement for that refuge under the ***Nature Conservation Act 1992*** • koala habitat areas as defined under the Nature Conservation (Koala) Conservation Plan 2006 • state forests or timber reserves as defined under the ***Forestry Act 1959*** • regional parks (previously known as resource reserves) under the ***Nature Conservation Act 1992*** • an area validated as 'essential habitat' from ground-truthing surveys in accordance with the ***Vegetation Management Act 1999*** for a species of wildlife listed as endangered or vulnerable under the ***Nature Conservation Act 1992***

	• *'*of concern regional ecosystems' that are remnant vegetation and identified in the database called 'RE description database' containing regional ecosystem numbers and descriptions.
certified or certification	in relation to any matter other than a design plan, 'as constructed' drawings or an annual report regarding dams means, a Statutory Declaration by a suitably qualified person or suitably qualified third party accompanying the written document stating: • the person's qualifications and experience relevant to the function • that the person has not knowingly included false, misleading or incomplete information in the document • that the person has not knowingly failed to reveal any relevant information or document to the administering authority • that the document addresses the relevant matters for the function and is factually correct; and • that the opinions expressed in the document are honestly and reasonably held.
clearing	has the meaning in the dictionary of the ***Vegetation Management Act 2000*** and for vegetation— (a) means remove, cut down, ringbark, push over, poison or destroy in any way including by burning, flooding or draining; but (b) does not include destroying standing vegetation by stock, or lopping a tree.
closed-loop systems	means using waste on site in a way that does not release waste or contaminants in the waste to the environment.
control measure	has the meaning in section 47 of the 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.
dam(s)	means a land-based structure or a void that contains, diverts or controls flowable substances, and includes any substances that are thereby contained, diverted or controlled by that land-based structure or void and associated works.
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.
environmental harm	has the meaning in section 14 of the ***Environmental Protection Act 1994*** and means any adverse effect, or potential adverse effect (whether temporary or permanent and of whatever magnitude, duration or frequency) on an environmental value, and includes environmental nuisance. Environmental harm may be caused by an activity—

	(a) whether the harm is a direct or indirect result of the activity; or (b) whether the harm results from the activity alone or from the combined effects of the activity and other activities or factors.
environmental nuisance	has the meaning in section 15 of the ***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.
environmental offset	has the meaning in section 7 of the ***Environmental Offsets Act 2014.***
environmentally sensitive area	means Category A, B or C environmentally sensitive areas (ESAs)
flare pit	has the meaning in the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures (EM635), and means containment area where any hydrocarbon that is discovered in an over-pressured reservoir during a drilling operation is diverted to, and combusted, The flare pit is only used during the drilling and work over process on a petroleum well.
flare precipitant	means waste fluids which result from the operation of a flare.
floodplains	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 of the watercourse.
flowable substance	means matter or a mixture of materials which can flow under any conditions potentially affecting that substance. Constituents of a flowable substance can include water, other liquids fluids or solids, or a mixture that includes water and any other liquids fluids or solids either in solution or suspension.
fuel burning or combustion facility	means a permanent fuel burning or combustion equipment which in isolation, or combined in operation, or which are interconnected, is, or are capable of burning more than 500 kg of fuel in an hour.
Great Artesian Basin (GAB) spring	means an area protected under the ***Environment Protection and Biodiversity Conservation Act 1999*** because it is considered to be a Matter of National Environmental Significance and identified as a: • community of native species dependent on natural discharge of groundwater from the Great Artesian Basin; or • Great Artesian Basin spring; or • Great Artesian Basin discharge spring wetland. A GAB spring includes a spring vent, spring complex or watercourse spring and includes the land to which water rises naturally from below the ground and the land over which the water then flows.

	Note: The Australian Government's Protected Matters Search Tool should be used to get an indication of whether the area of interest may contain an MNES spring. ***Note: The GAB springs dataset can be requested from the Queensland Government Herbarium***
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 pest species.
groundwater dependent ecosystem (GDE)	means ecosystems which require access to groundwater on a permanent or intermittent basis to meet all or some of their water requirements so as to maintain their communities of plants and animals, ecological processes and ecosystem services. For the purposes of the environmental authority, groundwater dependent ecosystems do not include those mapped as "unknown".
growing	means to increase by natural development, as any living organism or part thereof by assimilation of nutriment; increase in size or substance.
impulsive (for noise)	means sound characterised by brief excursions of sound pressure (acoustic impulses) that significantly exceed the background sound pressure. The duration of a single impulsive sound is usually less than one second.
incidental activity	for this environmental authority means an activity that is not a specified relevant activity and is necessary to carry out the activities listed in ***General, Table 1 – Authorised Petroleum Activities.***
$L_{A\ 90,\ adj,\ 15\ mins}$	means the A-weighted sound pressure level, adjusted for tonal character that is equal to or exceeded for 90% of any 15 minutes sample period equal, using Fast response.
$L_{Aeq,\ adj,\ 15\ mins}$	means the A-weighted sound pressure level of a continuous steady sound, adjusted for tonal character, that within any 15 minute period has the same square sound pressure as a sound level that varies with time.
land degradation	has the meaning in the ***Vegetation Management Act 1999*** and means the following: • soil erosion • rising water tables • the expression of salinity • mass movement by gravity of soil or rock • stream bank instability • a process that results in declining water quality.
landholder's active groundwater bore	means bores that are able to continue to provide a reasonable yield of water in terms of quantity for the bores authorised purpose or use. This term does not include monitoring bores owned by the administering authority of the ***Water Act 2000***.
long term noise event	means a noise exposure, when perceived at a sensitive receptor, persists for a period of greater than five (5) days, even when there are respite periods when the noise is inaudible within those five (5) days.
Max $L_{pA,\ 15\ min}$	means the absolute maximum instantaneous A-weighted sound pressure level, measured over 15 minutes.

Max $L_{pZ, 15\ min}$	means the maximum value of the Z-weighted sound pressure level measured over 15 minutes.
medium term noise event	is a noise exposure, when perceived at a sensitive receptor, persists for an aggregate period not greater than five (5) days and does not re-occur for a period of at least four (4) weeks. Re-occurrence is deemed to apply where a noise of comparable level is observed at the same receptor location for a period of one hour or more, even if it originates from a difference source or source location.
methodology	means the science of method, especially dealing with the logical principles underlying the organisation of the various special sciences, and the conduct of scientific inquiry.
month	has the meaning in the ***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 environmental matters	has the meaning in section 10 of the ***Environmental Offsets Act 2014***, limited to the matters of State environmental significant listed in schedule 2 of the Environmental Offsets Regulation 2014.
pipeline waste water	means hydrostatic testing water, flush water or water from low point drains.
pre-disturbed land use	means the function or use of the land as documented prior to significant disturbance occurring at that location.
prescribed contaminants	has the meaning in section 440ZD of the ***Environmental Protection Act 1994*** and means:
primary protection zone	means an area within 200m from the boundary of any Category A, B or C ESA.
produced water	has the meaning in Section 15A of the ***Petroleum and Gas (Production and Safety) Act 2004*** and means CSG water or associated water for a petroleum tenure.
protection zone	means the primary protection zone of any Category A, B or C ESA or the secondary protection zone of any Category A or B ESA.
regional ecosystem	has the meaning in the Methodology for Surveying and Mapping of Regional Ecosystems and Vegetation Communities in Queensland (Version 3.2 August 2012) and means a vegetation community in a bioregion that is consistently associated with a particular combination of geology, landform and soil. Regional ecosystems of Queensland were originally described in Sattler and Williams (1999). The Regional Ecosystem Description Database (Queensland Herbarium 2013) is maintained by Queensland Herbarium and contains the current descriptions of regional ecosystems.
rehabilitation or rehabilitated	means the process of reshaping and revegetating land to restore it to a stable landform and in accordance with acceptance criteria and, where relevant, includes remediation of

	contaminated land. For the purposes of pipeline rehabilitation, rehabilitation includes reinstatement, revegetation and restoration.
reinstate or reinstatement	means the process of bulk earth works and structural replacement of preexisting conditions of a site (i.e. soil surface topography, watercourses, culverts, fences and gates and other landscape(d) features) and is detailed in the APGA ***Code of Environmental Practice: Onshore Pipelines Revision 4*** (2017).
residual drilling material	means waste drilling materials including muds and cuttings or cement returns from well holes and which have been left behind after the drilling fluids are pumped out.
restoration	means the replacement of structural habitat complexity, ecosystem processes, services and function from a disturbed or degraded site to that of a pre-determined or analogue site. For the purposes of pipelines, restoration applies to final rehabilitation after pipeline decommissioning.
revegetation or revegetating or revegetate	means to actively re-establish vegetation through seeding or planting techniques in accordance with site specific management plans.
secondary protection zone	in relation to a Category A or Category B ESA means an area within 100 metres from the boundary of the primary protection zone.
sensitive place	means: • a dwelling (including residential allotment, mobile home or caravan park, residential marina or other residential premises, motel, hotel or hostel) • a library, childcare centre, kindergarten, school, university or other educational institution • a medical centre, surgery or hospital • a protected area • a public park or garden that is open to the public (whether or not on payment of money) for use other than for sport or organised entertainment • a work place used as an office or for business or commercial purposes, which is not part of the petroleum activity(ies) and does not include employees accommodation or public roads • for noise, a place defined as a sensitive receptor for the purposes of the Environmental Protection (Noise) Policy 2008.
sensitive receptor	is defined in Schedule 2 of the Environmental Protection (Noise) Policy 2008, and means an area or place where noise is measured.
short term noise event	is a noise exposure, when perceived at a sensitive receptor, persists for an aggregate period not greater than eight hours and does not re-occur for a period of at least seven (7) days. Re-occurrence is deemed to apply where a noise of comparable level is observed at the same receptor location for a period of one hour or more, even if it originates from a different source or source location.
significant residual impact	has the meaning in section 8 ***Environmental Offsets Act 2014***.
significantly disturbed or significant disturbance or	has the meaning in Schedule 12, section 4 of the Environmental Protection Regulation 2008. Land is significantly disturbed if— (i) to a condition required under the relevant environmental authority; or

significant disturbance to land or areas	(ii) if the environmental authority does not require the land to be rehabilitated to a particular condition—to the condition it was in immediately before the disturbance.
species richness	means the number of different species in a given area.
stable	has the meaning in Schedule 5 of the Environmental Protection Regulation 2008 and, for a site, means the rehabilitation and restoration of the site is enduring or permanent so that the site is unlikely to collapse, erode or subside.
statement of compliance	for a condition in an environmental authority has the meaning in section 208 of the ***Environmental Protection Act 1994*** and is a condition that requires the holder to give the administering authority a statement of compliance about a document or work relating to a relevant activity. The condition must also state— (a) the criteria (the compliance criteria) the document or work must comply with; and (b) that the statement of compliance must state whether the document or work complies with the compliance criteria; and (c) the information (the supporting information) that must be provided to the administering authority to demonstrate compliance with the compliance criteria; and (d) when the statement of compliance and supporting information must be given to the administering authority.
stimulation	means a technique used to increase the permeability of natural underground reservoir that is undertaken above the formation pressure and involves the addition of chemicals. It includes hydraulic fracturing / hydrofraccing, fracture acidizing and the use of proppant treatments. **Explanatory note:** This definition is restricted from that in the ***Petroleum and Gas (Production and Safety) Act 2004*** in order to only capture the types of stimulation activities that pose a risk to environmental values of water quality in aquifers.
structure	means a dam or levee.
subterranean cave GDE	• means an area identified as a subterranean cave in the mapping produced by the Queensland Government and identified in the Queensland Government Information System, as amended from time to time; and • means a cave ecosystem which requires access to groundwater on a permanent or intermittent basis to meet all or some of their water requirements so as to maintain its communities of plants and animals, ecological processes and ecosystem services. Subterranean cave GDEs are caves dependent on the subterranean presence of groundwater. Subterranean cave GDEs have some degree of groundwater connectivity and are indicated by either high moisture levels or the presence of stygofauna, or both, referred to in the Queensland Government WetlandsInfo mapping program, as amended from time to time. ***Note: the Subterranean GDE (caves) dataset can be displayed through the Queensland Government WetlandInfo mapping program.*** ***Note: the Subterranean GDE (caves) dataset can be obtained from the Queensland Government Information System.***
suitably qualified person	means a person who has professional qualifications, training or skills or experience relevant to the nominated subject matters and can give authoritative assessment, advice and analysis about performance relevant to the subject matters using relevant protocols, standards, methods or literature.

suitably qualified third party	means a person who: (a) has qualifications and experience relevant to performing the function including but not limited to: i. a bachelor's degree in science or engineering; and ii. 3 years' experience in undertaking soil contamination assessments; and (b) is a member of at least one organisation prescribed in Schedule 8 of the Environmental Protection Regulation 2008; and (c) not be an employee of, nor have a financial interest or any involvement which would lead to a conflict of interest with the holder(s) of the environmental authority.
sump	means a pit in which waste residual drilling material or drilling fluids are stored only for the duration of drilling activities.
top soil	means the surface (top) layer of a soil profile, which is more fertile, darker in colour, better structured and supports greater biological activity than underlying layers. The surface layer may vary in depth depending on soil forming factors, including parent material, location and slope, but generally is not greater than about 300mm in depth from the natural surface.
valid complaint	means all complaints unless considered by the administering authority to be frivolous, vexatious or based on mistaken belief.
void	means any constructed, open excavation in the ground.
waste and resource management hierarchy	has the meaning provided in section 9 of the ***Waste Reduction and Recycling Act 2011 and*** is the following precepts, listed in the preferred order in which waste and resource management options should be considered— (a) AVOID unnecessary resource consumption (b) REDUCE waste generation and disposal (c) RE-USE waste resources without further manufacturing (d) RECYCLE waste resources to make the same or different products (e) RECOVER waste resources, including the recovery of energy (f) TREAT waste before disposal, including reducing the hazardous nature of waste (g) DISPOSE of waste only if there is no viable alternative.
waste and resource management principles	has the meaning provided in section 4(2)(b) of the ***Waste Reduction and Recycling Act 2011*** and means the: (a) polluter pays principle (b) user pays principle (c) proximity principle (d) product stewardship principle.
waste fluids	has the meaning in section 13 of the ***Environmental Protection Act 1994*** in conjunction with the common meaning of "fluid" which is "a substance which is capable of flowing and offers no permanent resistance to changes of shape". Accordingly, to be a waste fluid, the waste must be a substance which is capable of flowing and offers no permanent resistance to changes of shape.
watercourse	has the meaning in Schedule 4 of the ***Environmental Protection Act 1994*** and means:

	1) a river, creek or stream in which water flows permanently or intermittently— (a) in a natural channel, whether artificially improved or not; or (b) in an artificial channel that has changed the course of the watercourse. 2) Watercourse includes the bed and banks and any other element of a river, creek or stream confining or containing water.
waters	includes all or any part of a creek, river, stream, lake, lagoon, swamp, wetland, spring, unconfined surface water, unconfined water in natural or artificial watercourses, bed and bank of any waters, non-tidal or tidal waters (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and underground water.
wetland	for the purpose of this environmental authority, wetland means: • areas shown on the Map of referable wetlands which is a document approved by the chief executive on 4 November 2011 and published by the department, as amended from time to time by the chief executive under section 144D of the Environmental Protection Regulation 2008; and • areas defined under the Queensland Wetlands Program as permanent or periodic / intermittent inundation, with water that is static or flowing fresh, brackish or salt, including areas of marine water, the depth of which at low tide does not exceed six (6) metres, and possess one or more of the following attributes: o 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 o the substratum is predominantly undrained soils that are saturated, flooded or ponded long enough to develop anaerobic conditions in the upper layers, or o the substratum is not soil and is saturated with water, or covered by water at some time. The term wetland includes riverine, lacustrine, estuarine, marine and palustrine wetlands; and it does not include a Great Artesian Basin Spring or a subterranean wetland that is a cave or aquifer.
wetland of high ecological significance	means a wetland that meets the definition of a wetland and that is shown as a wetland of 'high ecological significance' or wetland of 'high ecological value' on the Map of referable wetlands.

END OF ENVIRONMENTAL AUTHORITY