

Permit

Environmental Protection Act 1994

Environmental authority EPPG00711513

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

Environmental authority number: EPPG00711513

Environmental authority takes effect on 13 April 2021

Environmental authority holder(s)

| Name(s) | Registered address |
|---------------------------------|--|
| QCLNG OPERATING COMPANY PTY LTD | Level 30 275 George Street BRISBANE CITY QLD 4000 Australia |

Environmentally relevant activity and location details

| Environmentally relevant activity/activities | Location(s) |
|--|-------------|
| Ancillary 15 - Fuel burning Using fuel burning equipment that is capable of burning at least 500kg of fuel in an hour | PFL11 |
| Non-Scheduled Petroleum Activity Petroleum Facility Licence - PFL | PFL11 |
| Schedule 3 03: A petroleum activity that is likely to have a significant impact on a category A or B environmentally sensitive area | PFL11 |
| Ancillary 08 - Chemical Storage 4: storing 200t or more of chemicals that are solids or gases, other than chemicals mentioned in items 1 to 3, under subsection (1)(d) | PFL11 |

| Environmentally relevant activity/activities | Location(s) |
|---|-------------|
| Ancillary 47 - Timber Milling and Woodchipping Milling, in a year, the following total quantity of timber (c) more than 20,000t but not more than 100,000t | PFL11 |
| Ancillary 09 - Hydrocarbon gas refining 1: Hydrocarbon gas refining (the relevant activity) consists of refining natural gas or coal seam methane gas (c) Coal seam gas | PFL11 |
| 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 | PFL11 |
| Ancillary 14 - Electricity Generation 2: Generating electricity by using a fuel, other than gas, at a rated capacity of (a) 10MW electrical to 150MW electrical | PFL11 |
| Ancillary 64 - Water treatment 2: Desalinating, in a day, the following quantity of water, allowing the release of waste to waters other than seawater (a) 0.5ML to 5ML | PFL11 |
| Ancillary 10 - Gas Producing Manufacturing, processing or reforming 200t or more of hydrocarbon gas in a year | PFL11 |
| Ancillary 33 - Crushing, milling, grinding or screening Crushing, grinding, milling or screening more than 5000t of material in a year | PFL11 |

Additional information for applicants

Environmentally relevant activities

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

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

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

Contaminated land

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

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

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

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

Take effect

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

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

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

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

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

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

Date issued: 13 April 2021

Enquiries:
Energy and Extractive Resources
Department of Environment and Science
GPO Box 2454
Brisbane QLD 4001
Phone: (07) 3330 5715
Email: energyandextractive@des.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)

This environmental authority consists of the following schedules and appendices:

Schedule A — General Conditions

Schedule B — Air Emissions

Schedule C — Water Management

Schedule D — Noise Management

Schedule E — Waste Management

Schedule F — Land Management

Schedule G — Storage and Handling of Chemicals, Flammable and Combustible Substances

Schedule H — Petroleum Infrastructure

Schedule I — Monitoring Programs

Schedule J — Community Issues

Schedule K — Notification Procedures

APPENDIX 1 — Definitions

APPENDIX 2 — PFL 11 Boundary and Spoil Disposal Areas

APPENDIX 3 – Sample Points

SCHEDULE A — GENERAL CONDITIONS

Prevent and/or Minimise Likelihood of Environmental Harm

- (A1) This authority does not authorise environmental harm unless a condition contained within this authority explicitly authorises that harm. Where there is no condition or the authority is silent on a matter, the lack of a condition or silence shall not be construed as authorising harm.
- (A2) In carrying out petroleum activities, the holder of this authority must prevent and/or minimise the likelihood of environmental harm being caused.

Maintenance of Measures, Plant and Equipment

- (A3) The holder of this authority must:
- install all measures, plant and equipment necessary to ensure compliance with the conditions of this authority; and
 - maintain such measures, plant and equipment in a proper and efficient condition; and
 - operate such measures, plant and equipment in a proper and efficient manner.
- (A4) All instruments, equipment and measuring devices used for measuring or monitoring in accordance with any condition of this authority must be calibrated, appropriately operated and maintained.
- (A5) The holder of this authority must ensure that daily operation and maintenance of all plant and equipment relating to the authorised petroleum activities are carried out by suitability qualified, competent and experienced person(s).
- (A6) No change, replacement or alteration of any plant or equipment is permitted if the change, replacement or alteration increases the risk of environmental harm from the petroleum activities.
- (A7) All analyses and tests required to be conducted under this authority must be carried out by a laboratory that has NATA certification for such analyses and tests, except as otherwise authorised by the **administering authority**.

Environmental Management Plan

- (A8) An Environmental Management Plan (EM Plan) must be implemented that provides for the effective management of the actual and potential impacts resulting from the carrying out of the petroleum activities. Documentation relating to the EM Plan must be kept.
- (A9) The EM Plan required by Condition (A8) must address, at least, the following:
- Describe each of the following:
 - each relevant resource authority for the environmental authority;
 - all relevant petroleum activities;
 - the land on which the activities including associated accommodation and recreational activities are to be carried out;
 - the environmental values likely to be affected by the activities including associated accommodation and recreational activities; and
 - the potential adverse and beneficial impacts of the activities including associated accommodation and recreational activities on the environmental values.

- b) State the environmental protection commitments the applicant proposes for the activities, including associated accommodation and recreational activities, to protect or enhance the environmental values under best practice environmental management;
 - c) Include a **rehabilitation** program for land proposed to be disturbed under each relevant resource authority for the application; and
 - d) State a proposed amount of financial assurance for the environmental authority as part of the **rehabilitation** program.
 - e) Training staff in the awareness of environmental issues related to carrying out the petroleum activities, which must include at least:
 - i) the environmental policy of the authority holder, so that all persons that carry out the petroleum activities are aware of all relevant commitments to environmental management;
 - ii) any relevant environmental objectives and targets, so that all staff are aware of the relevant performance objectives and can work towards these;
 - iii) control procedures to be implemented for routine operations for day to day activities including associated accommodation and recreational activities, to minimise the likelihood of environmental harm, however occasioned or caused;
 - iv) contingency plans and emergency procedures to be implemented for non-routine situations to deal with foreseeable risks and **hazards**, including corrective responses to prevent and mitigate environmental harm (including any necessary **site rehabilitation**);
 - v) organisational structure and responsibility to ensure that roles, responsibilities and authorities are appropriately defined to ensure effective management of environmental issues;
 - vi) effective communication procedures to ensure two-way communication on environmental matters between operational staff and higher management;
 - vii) obligations with respect to monitoring, notification and record keeping obligations under the EM plan and relevant approvals; and
 - viii) monitoring of the release of contaminants into the environment including procedures, methods and record keeping.
 - f) The conduct of periodic reviews of environmental performance and procedures adopted, not less frequently than annually; and
 - g) A program for continuous improvement.
- (A10) The EM Plan must not be implemented or amended in a way that contravenes or is inconsistent with any condition of this approval.
- (A11) Contingency plans and emergency procedures must be developed and implemented for non-routine situations to deal with foreseeable risks and **hazards** including corrective responses to prevent and mitigate environmental harm (including a contingency plan when plant shuts down for maintenance or other reasons).

Third Party Auditing

- (A12) An audit of compliance with the conditions of this authority must be undertaken upon request by the **administering authority**, at a frequency of no more than once every three years.
- (A13) The audit in Condition (A12) must be undertaken by an appropriately qualified **third party auditor**, nominated by the holder of this authority and accepted by the **administering authority**.
- (A14) Four weeks prior to the audit in Condition (A12) being undertaken, the holder of this environmental authority must submit a proposed scope for the audit to the **administering authority**. The audit must not commence until the **administering authority** has agreed to the scope.

Environmental authority EPPG00711513

- (A15) Within 15 business days of receiving the final third party audit report, the holder of this authority must submit a copy to the **administering authority**.
- (A16) The **third party auditor** must certify the findings of the audit in the report.
- (A17) The financial cost of the third party audit is borne by the holder of this authority.
- (A18) The holder of this authority must, within a reasonable period of time agreed in writing with the **administering authority**, act upon any recommendations arising from the audit report and:
- a) investigate any non-compliance issues identified; and
 - b) as soon as practicable, implement measures or take necessary action to ensure compliance with this authority.
- (A19) Subject to Condition (A18), and not more than three (3) months following the submission of the audit report, the holder of this authority must provide written advice to the **administering authority** addressing the:
- a) actions taken by the holder to ensure compliance with this authority; and
 - b) actions taken to prevent a recurrence of any non-compliance issues identified.

SCHEDULE B — AIR EMISSIONS

Nuisance

- (B1) The release of noxious or offensive odours or any other noxious or offensive airborne contaminants resulting from the activities must not cause an environmental nuisance at any nuisance **sensitive** or **commercial place**.
- (B2) The release of dust and/or particulate matter resulting from the activities must not cause an environmental nuisance at any nuisance **sensitive** or **commercial place**.
- (B3) Dust and particulate matter must not exceed any of the following levels when measured at any nuisance **sensitive** or **commercial place**:
- a) dust deposition of 120 milligrams per square metre per day over a 30-days averaging period, when monitored in accordance with Australian Standard AS 3580.10.1 of 2003 (or more recent editions); or
 - b) a concentration of particulate matter with an aerodynamic diameter of less than 2.5 micrometres (PM_{2.5}) suspended in the atmosphere of 25 micrograms per cubic metre over a 24-hour averaging time, at a dust **sensitive place** downwind of the licensed place, when monitored in accordance with the most recent version of:
 - i) Australian Standard AS AS/NZS3580.9.10 Methods for sampling and analysis of ambient air— Determination of suspended particulate matter—PM (sub)2.5(/sub) low volume sampler— Gravimetric method; or
 - ii) any alternative method of monitoring PM_{2.5} which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the **administering authority**.
 - c) a concentration of particulate matter with an aerodynamic diameter of less than 10 micrometre (µm) (PM₁₀) suspended in the atmosphere of 50 micrograms per cubic metre (with five one day exceedances allowed in any one year period); and over a 24 hour averaging time, at a dust **sensitive place** downwind of the licensed place, when monitored in accordance with:
 - i) Australian Standard AS 3580.9.6 of 2003 (or more recent editions) 'Ambient air - Particulate matter - Determination of suspended particulate PM₁₀ high-volume sampler with size-selective inlet - Gravimetric method'; or
 - ii) any alternative method of monitoring PM₁₀ which may be permitted by the 'Air Quality Sampling Manual' as published from time to time by the **administering authority**.

Note: The above 5 days exceedances per year are based on the expected exceedances from the natural events such as bushfires and dust storm.

The Release of Contaminants to the Atmosphere

- (B4) The release of contaminants to the atmosphere from a point source must only occur from those release points identified in *Schedule B, Table 1 – Contaminant Release Points* and must be directed vertically upwards without any impedence or hindrance.
- (B5) Contaminants requiring on-going monitoring must be released to the atmosphere from a release point at a height and a flow rate not less than the corresponding height and velocity stated for that release point in *Schedule B, Table 2 – Contaminant Release Limits to Air*.
- (B6) Contaminants must not be released to the atmosphere from a release point at a mass emission rate/concentration, as measured at a monitoring point, in excess of that stated in *Schedule B, Table 2 – Contaminant Release Limits to Air*.

Environmental authority EPPG00711513

- (B7) Contaminants must be monitored not less frequently than specified in *Schedule B, Table 2 – Contaminant Release Limits to Air*.
- (B8) Monitoring of any releases to the atmosphere required by a condition of this approval must be carried out in accordance with the following requirements:
- a) monitoring provisions for the emission sources listed in *Schedule B, Table 2 – Contaminant Release Limits to Air* must comply with the Australian Standard AS 4323.1 - 1995 'Stationary source emissions, Method 1: Selection of sampling positions' (or more recent editions).
 - b) the following tests must be performed for each determination specified in *Schedule B, Table 2 – Contaminant Release Limits to Air*:
 - i) gas velocity and volume flow rate;
 - ii) temperature;
 - iii) water vapour concentration (moisture content).
 - c) samples must be taken when emissions are expected to be at maximum rates.
 - d) during the sampling period the following additional information must be gathered:
 - i) production rate at the time of sampling;
 - ii) raw materials and fuel used;
 - iii) number of plant or equipment and operating units operating;
 - iv) reference to the actual test methods and accuracy of the methods.
- (B9) All emission sources requiring monitoring must be conspicuously marked with the corresponding release point number and equipment number as identified in *Schedule B, Table 2 – Contaminant Release Limits to Air*.

Schedule B, Table 1 – Contaminant Release Points

| Emission Source | |
|---|--------------------------------------|
| Train 1 Emission Sources | Train 1 Compressor Gas Turbines (x8) |
| | Acid Gas Removal Unit 1 |
| | Nitrogen Rejection Unit 1 |
| Train 2 Emission Sources | Train 2 Compressor Gas Turbines (x8) |
| | Acid Gas Removal Unit 2 |
| | Nitrogen Rejection Unit 2 |
| Train 3 Emission Sources | Train 3 Compressor Gas Turbines (x8) |
| | Acid Gas Removal Unit 3 |
| | Nitrogen Rejection Unit 3 |
| Other LNG Facility Emission Sources | Gas Turbine Power Generators (x4) |
| | Marine Flare |
| | Process Flares (Wet and Dry Gas) |
| | Regeneration Gas Heaters 1 & 2 |
| | Hot Oil Heaters 1 & 2 |
| | Fire Water Pumps (diesel x3) |
| | Back-Up Power Generators (diesel x6) |
| | Emergency Air Compressor (diesel x2) |
| Standby Generator at Marine Terminal Building (diesel x1) | |

Schedule B, Table 2 – Contaminant Release Limits to Air

| Emission Sources | Equipment Number | Contaminant Release | Release Height Above Grade (m) | Emission Velocity (m/s) | Maximum Release Limit | Monitoring Frequency |
|--|------------------|---------------------|--------------------------------|-------------------------|-----------------------|-------------------------|
| Train 1 Gas Compressor Turbines | | | | | | |
| Propane Compressors | 1TC-1411 | NO _x | 34 | 25 | | One stack per year on a |
| | 1TC-1421 | | | | | |

| Emission Sources | Equipment Number | Contaminant Release | Release Height Above Grade (m) | Emission Velocity (m/s) | Maximum Release Limit | Monitoring Frequency |
|--|---|---------------------|--------------------------------|-------------------------|--|--|
| Ethylene Compressors | 1TC-1511 1TC-1521 | NO _x | 34 | 25 | 61 mg/Nm ³ (dry) @ 15% O ₂ and 4.0 g/s ^{Note 2} | rotational basis ^{Note 1} |
| Methane Compressors | WHR* Unit Stacks 1TC-1611 (1H-3411) 1TC-1621 (1H-3421) | NO _x | 49.2 | 8.2 | | |
| | Bypass Stacks 1TC-1611 (1H-3411-K01) 1TC-1621 (1H-3421-K01) | | | N/A | | |
| Train 2 Gas Compressor Turbines | | | | | | |
| Propane Compressors | 2TC-1411 2TC-1421 | NO _x | 34 | 25 | 61 mg/Nm ³ (dry) @ 15% O ₂ and 4.0 g/s ^{Note 2} | One stack per year on a rotational basis ^{Note 1} |
| Ethylene Compressors | 2TC-1511 2TC-1521 | NO _x | 34 | 25 | | |
| Methane Compressors | WHR* Unit Stacks 2TC-1611 (2H-3411) 2TC-1621 (2H-3421) | NO _x | 49.2 | 8.2 | | |
| | Bypass Stacks 2TC-1611 (2H-3411-K01) 2TC-1621 (2H-3421-K01) | | | N/A | | |
| Train 3 Gas Compressor Turbines | | | | | | |
| Propane Compressors | 3TC-1411 3TC-1421 | NO _x | 34 | 25 | 61 mg/Nm ³ (dry) @ 15% O ₂ and 4.0 g/s ^{Note 2} | All stacks during commissioning (see Note 1) of the facility and one stack per year thereafter on rotational basis |
| Ethylene Compressors | 3TC-1511 3TC-1521 | NO _x | 34 | 25 | | |
| Methane Compressors | WHR* Unit Stacks 3TC-1611 (3H-3411) 3TC-1621 (3H-3421) | NO _x | 49.2 | 8.2 | | |
| | Bypass Stacks 3TC-1611 (3H-3411-K01) 3TC-1621 (3H-3421-K01) | | | N/A | | |
| Power Generation Turbines | | | | | | |
| Gas Turbine Power Generators | 1TG-3101 1TG-3102 1TG-3103 1TG-3104 | NO _x | 25 | 8.2 | 61 mg/Nm ³ (dry) @ 15% O ₂ and 4.0 g/s | All stacks during commissioning (see Note 1) of the facility and one stack per year thereafter on rotational basis |

* WHR = Waste Heat Recovery

Note 1: The above NO_x release limits are applicable during all timings except start-up, shut-down and calibration of emission monitoring devices. The start-up duration is allowed up to 30 minutes.

Note 2: The total mass emission rate from the WHR Unit and bypass stack from each methane gas turbine compressor must not exceed 4.0 g/s NO_x.

- (B10) Within 3 months of commissioning the facility, the holder of this environmental authority must conduct air emission monitoring to demonstrate compliance with air emission limits listed in *Schedule B, Table 2 – Contaminant Release Limits to Air* and submit report to the **administering authority**.

Flare

- (B11) **Visible smoke** must not be produced from the flares except for a total of 5 minutes in any two hour period during **normal operating conditions**.
- (B12) **Flaring events**, except for those resulting from an emergency, occurring outside of **normal operating conditions** must not exceed:
- 7 hours per annum during **daylight hours**; and
 - 14 times per annum during **daylight hours**; and
 - 30 minutes of continuous **visible smoke** during **daylight hours** except as authorised under condition (B13).
- (B13) Notwithstanding condition (B12)(c), individual **flaring events** must not exceed 90 minutes of continuous **visible smoke** in the following circumstances:
- A **flaring event** associated with a **plant maintenance activity** that was planned to be completed outside of **daylight hours**, but was required to be undertaken during **daylight hours** to ensure the safe operation of the plant; or
 - A **flaring event** associated with a plant maintenance activity that was not planned and was required to be undertaken during **daylight hours** to ensure the safe operation of the plant.
- (B14) The holder of this authority must keep records of each **flaring event** to determine compliance with condition (B12) and (B13) and provide these records to the **administering authority** on request. Records must include, but not be limited to:
- The duration of each **flaring event**; and
 - The operational planning that was implemented to minimise flaring; and
 - The operational controls that were implemented during flaring; and
 - If the **flaring event** exceeds 30 minutes, the circumstance under condition (B13) which caused this exceedance.
- (B15) The holder of this authority must monitor and record all **flaring events** in accordance with *Schedule B, Table 3 – Recording during flaring events* and Condition (I3).

Schedule B – Table 3 – Recording during flaring events

| Table 3 – Monitoring of point source emissions to air | | | | | |
|--|----------------------|--------------|--|------------------------|-------------------------------------|
| Emission point references | Parameter | Units | Frequency | Method | Commencement of Recording |
| Process Flares (Wet and Dry Gas) and Marine Flare | Visual recording | seconds | Continuously during a flaring event | Digital Video Recorder | Commencing 29 January 2016 |
| | Temperature | °C | Continuously during a flaring event | CEMS | |
| | Vent gas flow rate | m/s | Continuously during a flaring event | CEMS | |
| | Vent gas composition | Multiple | Continuously during a flaring event | CEMS | Within 18 months of 29 January 2016 |

- (B16) Contingency plans and emergency procedures must be developed and implemented for non-routine situations to deal with foreseeable risks and **hazards** including corrective responses to prevent and mitigate environmental harm (including a contingency plan when plant shuts down for maintenance or other reasons).

Fugitive Emissions

- (B17) The holder of this environmental authority must ensure that all reasonable and practicable measures are taken in the design and operation of the plant to minimise fugitive VOC emissions. Reasonable and practicable measures include but are not limited to:
- implementation of a monitoring program to regularly leak test all units/components including pumps, piping and controls, vessels and tanks; and
 - operating, maintenance and management practices to be implemented to mitigate fugitive VOC sources.
- (B18) The ducting and extraction systems that transfer effluent gases from one location to another must be constructed, operated and maintained so as to minimise any leakage of VOCs and vapours to the atmosphere occurring from these sources.
- (B19) In the event of emissions of contaminants occurring from industrial plant or ducting systems that transfer effluent gases from one location to another, the fault or omission that resulted in that emission must be corrected as soon as practicable.

Fuel Burning

- (B20) This authority only permits the burning of natural gas and diesel fuel in the fuel burning equipment under **normal operating conditions** at the rate of the design capacity of the equipment.
- (B21) For commissioning and operation of the LNG Plant diesel fuel must only be used in the specified diesel fuel burning equipment in *Schedule B, Table 1 – Contaminant Release Points*, under backup, standby, start up and/or emergency situations.
- (B22) The sulphur content of fuel burned in the power generators must not exceed 0.5 percent by weight.

Greenhouse Gas Emissions

- (B23) The holder of this authority must develop and implement a greenhouse gas reduction strategy for the LNG Facility. The strategy must include, but not limited to, the company's policy on greenhouse gas emissions, an energy efficiency program, a continuous improvement program, better control systems and a CO₂ recovery plan.

SCHEDULE C — WATER MANAGEMENT

Release to Waters

Permitted Contaminant Release and Discharge Point(s)

- (C1) The holder of the environmental authority must ensure that the management of surface water and wastewater streams to be discharged to Port Curtis is conducted and implemented in accordance with a **relevant water management plan** for each phase of the project.
- (C2) In the event of any inconsistency between the conditions of this authority and any **relevant water management plan**, the conditions of this environmental authority prevail.
- (C3) The only contaminant(s) permitted to be released to Port Curtis are:
- stormwater and **firewater system testing water** from the LNG Facility **site** and inlet air chill condensate via the stormwater discharge points to Port Curtis, prescribed in the **relevant water management plan** required by Condition (C1);
 - Demineralisation Plant reject water**, process area stormwater and water from the Treated Oily Water Holding Tank via the LNG Jetty outfall as prescribed in the LNG Operations *Water Management Plan*; and
 - firewater system testing water** from the LNG jetty.
- (C4) The release of contaminants authorised in Condition (C3) must not:
- produce any visible discolouration of receiving **waters**; or
 - produce any slick or other visible or odorous evidence of oil, grease or petrochemicals nor contain visible floating oil, grease, scum, litter or other objectionable matter.

Monitoring Volumes and Quality Characteristics of Release to Waters

- (C5) The total quantity of **Demineralisation Plant reject water** released to **waters** on any one day must not exceed 0.302 megalitres during operation.
- (C6) The daily volume and daily average flow rate in m³/s of the **Demineralisation Plant reject water** discharged to marine **waters** must be determined or estimated by an appropriate method with an accuracy of +/- 5%, and records kept of such determinations.
- (C7) The release of contaminants to **waters** must be in accordance with *Schedule C, Table 1 – Release Quality Characteristic Limits* and the associated requirements.

Schedule C, Table 1 – Release Quality Characteristic Limits

| Release point description | Release points | Quality Characteristics | Limit | Limit/ Trigger Value Type | Minimum Monitoring Frequency |
|---------------------------|----------------|-------------------------------|---------|---------------------------|------------------------------|
| Sediment Ponds | SP1, SP2, SP4 | Turbidity (NTU) | 68 | 80th percentile | Upon each release |
| | | pH (units) | 6.0–8.5 | Range | Upon each release |
| | | Temperature (°C) ¹ | - | - | Upon each release |

| Release point description | Release points | Quality Characteristics | Limit | Limit/ Trigger Value Type | Minimum Monitoring Frequency |
|---|----------------|---|---------|--|------------------------------|
| Treated Oily Water Holding Tank (Unit 29) | T2903 | pH (units) | 6.0–8.5 | Range | Continuous |
| | | Total Residual Hydrocarbons (mg/L) C6-C36 | 10 | Maximum | Monthly (grab sample) |
| Demineralisation Plant reject water (Unit 36) | Q3601 | pH (units) | 6.0–8.5 | Range | Continuous |
| | | Total Residual Chlorine (mg/L) | 1.0 | 95 th percentile calculated daily | Continuous |
| | | DO (mg/L) | 4.0 | Minimum | Continuous |
| | | Turbidity (NTU) | 20 | Maximum | Continuous |
| | | Electrical Conductivity (µS/cm) | - | - | Continuous |

Associated requirements

1. Notwithstanding condition (A7), in-situ and continuous measurements are not required to be undertaken at or by a laboratory that has NATA accreditation for the relevant tests. These in-situ and continuous measurements must be undertaken in accordance with the latest version of the **administering authority's** Monitoring and Sampling Manual.
 2. Release points must be situated and maintained in accordance with Appendix 3 – Sample Points.
 3. An exceedance of a limit is an 'unauthorised release of any volume of a contaminant to **waters**' in accordance with Condition (K2).
 4. Continuous monitoring must achieve 90% worth of data capture. Daily grab samples must be collected when continuous monitoring is not operational.
- (C8) The turbidity limit for releases from the sediment ponds (from release points SP1, SP2 and SP4) in *Schedule C, Table 1 – Release Quality Characteristic Limits* only applies to rainfall events measured onsite up to 42.1 mm rainfall over a period of consecutive 120 hours.
- (C9) The release to **waters** permitted under Condition (C3) must not contain any other properties at a concentration capable of causing environmental harm.
- (C10) From the commencement of discharge of contaminants to **waters** as permitted by Condition C3 water quality characteristics must be monitored in the receiving environment at locations and at a frequency identified by a **suitably qualified person**.

Stormwater Management

- (C11) The holder of this environmental authority must ensure that the management of stormwater is conducted and implemented in accordance with a **relevant water management plan** for the phase of the project. The **relevant water management plan** must address at least the following:
- a) the location of discharge points;
 - b) prevention of incident storm water and storm water run-off from contacting wastes or contaminants, or appropriate treatment of stormwater from process areas;

- c) diversion of upstream run-off away from areas where it may be contaminated by bulk products being loaded or unloaded, wastes, contaminants or other materials; and
 - d) collection, treatment and disposal of all contaminated storm water run-off.
- (C12) The holder of this environmental authority must ensure that sediment and erosion control is conducted and implemented in accordance with Conditions (F1) and (F2) of this environmental authority.
- (C13) A copy of the **relevant water management plans** must be kept at the licensed place and be provided to the **administering authority** on request.

Performance Monitoring

- (C14) The **relevant water management plan** for the phase of the project must be reviewed, updated and implemented for each stage of the project, then reviewed annually for 2 years following construction, and every five years thereafter, and updated as required.
- (C15) Stormwater released off-**site** must not result in a build-up of sediment in **waters**, a roadside gutter, stormwater drain or land.
- (C16) Stormwater released off-**site** must not cause scouring to the bed or banks of any **watercourse** or land.

Maintenance of Stormwater Management Devices

- (C17) Suitable banks and/or diversion drains must be installed and maintained to exclude stormwater runoff from entering the LNG facility footprint.
- (C18) All stormwater management devices must be installed and maintained to ensure they are working properly at all times, including the following:
- a) oil and grit separator devices;
 - b) detention basin(s);
 - c) grass swales; and
 - d) trash racks and protected risers.

Contaminant Releases to Groundwater

- (C19) There must be no release of contaminants to groundwater.

Over-water Abrasive Blasting and Surface Coating

- (C20) Where abrasive blasting or surface coating activities are to be carried out over water, on land below the highest astronomical tide or on land subject to 1:10 year flood regime, the holder of this authority must carry out the activity in accordance with the requirements and procedures outlined in the following EHP guidelines to prevent the release of contaminants to **waters**:
- a) over-water abrasive blasting in marine and other aquatic environments (guideline); and
 - b) over-water abrasive blasting – environmental risk assessment (information sheet).

SCHEDULE D — NOISE MANAGEMENT

- (D1) Noise from the construction or operation of LNG plant activities must not cause environmental nuisance at any **sensitive place** or **commercial place**.
- (D2) When requested by the **administering authority**, noise monitoring must be undertaken within a reasonable and practicable timeframe nominated by the **administering authority** to investigate any complaint (which is neither frivolous nor vexatious nor based on mistaken belief in the opinion of the authorised officer) of environmental nuisance at any **sensitive place** or **commercial place**, and the results must be notified within 14 days to the **administering authority** following completion of monitoring.
- (D3) If the authority holder can provide evidence through monitoring that the limits defined in Schedule D, Table 1 – *Noise Component Limits for the LNG Plant* are not being exceeded then the holder is not in breach of Condition (D1). Monitoring and subsequent analysis must provide:
- the location (and relevant noise limits) prescribed in *Schedule D, Table 1 – Noise Component Limits for the LNG Plant*, that is closest to the noise **sensitive place** or **commercial place** that will be used to determine compliance with Condition (D1);
 - a determination of:
 - $L_{A_{Max, adj, 15 mins}}$ for construction noise at the noise **sensitive place** or **commercial place**; or,
 - $L_{A_{eq, 15 mins}}$ for the LNG plant noise (operational) at the noise **sensitive place** or **commercial place**
 - a narrow band analysis and the noise ‘signature’ of the LNG plant to determine the contribution from the LNG plant to the total noise level at the noise **sensitive place** or **commercial place**;
 - the level and frequency of occurrence of impulsive or tonal noise;
 - taking measurements of the low frequency noise below 200Hz;
 - atmospheric conditions including temperature, wind speed and direction; and
 - location, date and time of recording.
- (D4) If monitoring indicates exceedance of the limits in *Schedule D, Table 1 – Noise Component Limits for the LNG Plant* due to the contribution from the construction activities or the LNG plant activities, then the holder of this authority must:
- resolve the complaint with the use of appropriate dispute resolution techniques to the satisfaction of the **administering authority**; or
 - consider Best Practice Environmental Management in instigating noise abatement measures to comply with noise emission limits in *Schedule D, Table 1 – Noise Component Limits for the LNG Plant*.
- (D5) The method of measurement and reporting of noise levels must comply with the latest edition of the **administering authority**’s “Noise Measurement Manual”.

Schedule D, Table 1 – Noise Component Limits for the LNG Plant

| | | Gladstone Marina | Lot 2, Fishermans Rd, Yarwun | Turtle St, South End, Curtis Island | 71 Flinders Parade, Gladstone | Tide Island | 12 Lord St, Gladstone | Smith St, Targinie |
|--|------------|------------------|------------------------------|-------------------------------------|-------------------------------|-------------|-----------------------|--------------------|
| Construction Noise Criteria dB(A), (L_AMax, adj, 15 mins) | | | | | | | | |
| Monday - Friday | 7am – 6pm | - | - | - | - | - | - | - |
| | 6pm – 10pm | 57 | 46 | 45 | 46 | 41 | 55 | 42 |
| | 10pm – 7am | 43 | 37 | 27 | 36 | 29 | 36 | 31 |
| Saturday | 7am – 12pm | - | - | - | - | - | - | - |
| | 12pm – 6pm | 57 | 46 | 45 | 46 | 41 | 55 | 42 |
| | 6pm – 7am | 43 | 37 | 27 | 36 | 29 | 36 | 31 |
| Sunday/ Public Holidays | 7am – 6 pm | 55 | 46 | 42 | 50 | 40 | 52 | 42 |
| | 6pm – 7am | 43 | 37 | 27 | 36 | 29 | 36 | 31 |
| NOTE: (-) Means no criteria apply during this time period | | | | | | | | |
| Operations Noise Criteria dB(A) (L_Aeq, 1 hour) | | | | | | | | |
| Monday – Sunday / Public Holidays | 7am – 6pm | 48 | 39 | 35 | 43 | 33 | 45 | 33 |
| | 6pm – 10pm | 47 | 39 | 25 | 39 | 34 | 35 | 35 |
| | 10pm – 7am | 40 | 40 | 27 | 39 | 32 | 38 | 33 |

Low Frequency Noise

- (D6) Notwithstanding Condition (D1) and the limits specified in *Schedule D, Table 1 – Noise Component Limits for the LNG Plant*, emission of any noise below 200Hz must not cause an environmental nuisance.
- (D7) Low frequency noise from the LNG plant is NOT considered to be a nuisance under Condition (D6) if monitoring shows that noise emissions do not exceed the following limits:
- 50 dB(Z) measured inside the noise **sensitive place** or **commercial place**; and
 - the difference between the internal A-weighted and Z-weighted noise levels is no greater than 15 dB.

SCHEDULE E — WASTE MANAGEMENT

- (E1) A Waste Management Program (WMP) in accordance with Part 5 of the *Environmental Protection (Waste Management) Policy 2000* must be developed, implemented within 3 (three) months from the date of this authority, and maintained for the authorised petroleum activities.
- (E2) Waste generated in the carrying out the activities must be stored, handled and transferred in a proper and efficient manner. Waste must not be released to the environment, stored, transferred or disposed contrary to any condition of this authority.
- (E3) The holder of this authority must ensure that activities authorised under this environmental authority do not result in the release or likely release of a **hazardous** contaminant to land or **waters**.
- (E4) The holder of this authority must ensure that all general waste produced from the conducting of the activities under this environmental authority is removed and disposed of at a facility that is permitted to accept such waste.
- (E5) All regulated waste removed from the **site** must be removed 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 facility that is permitted to accept such waste.
- (E6) When regulated waste is removed from within the boundary of the authorised facility and transported by the holder of this authority, a record must be kept of the following:
- date of waste transport;
 - quantity of waste removed and transported;
 - type of waste removed and transported;
 - quantity of waste delivered; and
 - any incidents (e.g. spillage) that may have occurred en route.
- (E7) Regulated waste is not permitted to be disposed on **site**, including untreated septic waste, untreated sewage, and concentrate and back wash water from the reverse osmosis plant.

SCHEDULE F — LAND MANAGEMENT

Erosion and Sediment Control Plans

- (F1) An Erosion and Sediment Control Plan must be developed and implemented for all stages of the petroleum activities and which has been certified by a Certified Professional in Sediment and Erosion Control, or a professional with appropriate experience and or qualifications accepted by the **administering authority**.
- (F2) Appropriate measures to achieve compliance with Condition (F1) for the petroleum activity must be described in the EM plan and include:
- diverting uncontaminated stormwater run-off around areas disturbed by petroleum activities or where contaminants or wastes are stored or handled that may contribute to stormwater;
 - contaminated stormwater runoff and incident rainfall is collected; and treated, reused, or released in accordance with the conditions of this environmental authority;
 - roofing or minimising the size of areas where contaminants or wastes are stored or handled;
 - revegetating disturbed areas as soon as practicable after the completion of works;
 - using alternate materials and or processes (such as dry absorbents) to clean up spills that will minimise the generation of contaminated **waters**;
 - erosion and sediment control structures are placed to minimise erosion of disturbed areas and prevent the contamination of any **waters**;
 - an inspection and maintenance program for the erosion and sediment control features;
 - provision for adequate access to maintain all erosion and sediment control measures especially during the wet season months from November to April; and
 - surface water monitoring program designed to detect erosion and sediment runoff into **watercourses**; and
 - identification of remedial actions that would be required to ensure compliance with the conditions of this environmental authority.
- (F3) Erosion protection measures and sediment control measures must be implemented and maintained to minimise erosion and the release of sediment and contamination of stormwater.
- (F4) Except where authorised under condition (C3)(a) and (c), the maintenance and cleaning of any vehicles, plant or equipment must not be carried out in areas from which contaminants can be released into any **waters**, roadside gutter or a stormwater drainage system.
- (F5) Any spillage of wastes, contaminants or other materials must be cleaned up as quickly as practicable. Such spillages must be cleaned up using dry methods that minimise the release of wastes, contaminants or materials to any stormwater drainage system, roadside gutter or **waters**.

Acid Sulfate Soils

- (F6) The holder of this authority must conduct an acid sulfate soils (ASS) investigation prior to construction and in accordance with the requirements of the State Planning Policy 2/02 Development involving Acid Sulfate Soils and relevant guidelines such as the *Guidelines for Sampling and Analysis of Lowland Acid Sulfate Soils in Queensland 1998*.
- (F7) Acid sulfate soils must be managed in accordance with:
- the *Queensland Acid Sulfate Soil Technical Manual, Soil Management Guidelines 2002* such that contaminants are not directly or indirectly released, as a result of the activity, to any **waters** or the **bed and banks** of any **waters**; and,

- b) an Acid Sulfate Soil Management Plan (ASSMP), implemented over the full period of construction, and for a period after completion of construction as defined by the ASSMP, for land above the mean high water springs tide; and
 - c) Acid Sulfate Soil Management Plans (ASSMP), implemented over the full period of construction, and for a period after completion of construction as defined by the ASSMP for works below the mean high water springs tide.
- (F8) The holder of the environmental authority must submit the Acid Sulfate Soil Management Plans required by Condition (F7), to the **administering authority** for its review and comment and have due regard to that comment in the finalisation of the plan.
- (F9) As soon as practicable and within 3 (three) months of cessation of authorised activities that cause any **significant disturbance to land**, the holder of this authority must investigate contaminated land status in accordance with *Environmental Protection Act 1994* requirements and the NEPM where land has been subject to contamination caused by activities authorised under this authority;

Pest and Weed Species

- (F10) **Pest** and weed species must be managed to prevent their growth and proliferation.

Land Disturbance

- (F11) The holder of this authority, when carrying out petroleum activities must:
- a) avoid, minimise or mitigate (in order of preference) any impacts on areas of vegetation or other areas of ecological value;
 - b) minimise the risk of injury, harm, or entrapment to wildlife and stock;
 - c) minimise disturbance to land that may otherwise result in land degradation;
 - d) ensure that for land that is to be significantly disturbed by petroleum activities:
 - i) the top layer of the soil profile is removed;
 - ii) stockpiled in a manner that will preserve its biological and chemical properties; and
 - iii) used for **rehabilitation** purposes;
 - e) prior to carrying out field based activities, make all relevant staff, contractors or agents carrying out those activities, aware of the location of any **category A, B or C ESAs** and the requirements of this environmental authority.

Note: This environmental authority does not authorise the taking of protected animals or the tampering with an animal breeding place as defined under the Nature Conservation Act 1992 and Regulations.

Vegetation Clearing

- (F12) A total area of 191 hectares of vegetation can be cleared within the boundary of PFL11, comprising:
- a) a maximum cleared area of 45 hectares of vegetation with an 'endangered' biodiversity status as follows:
 - i) regional ecosystem (RE) 12.3.3 (45 ha);
 - b) a maximum cleared area of 49 hectares of vegetation with an 'of concern' biodiversity status as follows:
 - i) RE 12.3.11 (2 ha);
 - ii) RE 12.11.14 (2 ha);
 - iii) RE 12.11.6/12.11.14 (45 ha);
 - c) a maximum cleared area of 97 hectares of vegetation with a 'no concern at present' biodiversity status as follows:
 - i) RE 12.1.2 (9 ha);
 - ii) RE 12.1.3 (5 ha); and

iii) RE 12.11.6 (83 ha).

(F13) Cleared vegetation is not authorised to be burnt on-site.

Spoil Disposal

(F14) Excess cleared and/or mulched vegetation, cut material and stripped soils must only be disposed of in the two (2) designated spoil areas (refer Appendix 2).

(F15) The height of the spoil areas must not exceed the highest natural topographical point in each spoil area.

(F16) Designated spoil areas must be rehabilitated as soon as possible after construction has been completed and should be carried out in accordance with the QGC "*Spoil Disposal Re-vegetation and Rehabilitation Plan*".

Management of Fauna

(F17) The holder of this authority must develop and implement a species management plan for affected endangered, vulnerable and rare listed species (both terrestrial and marine) for PFL11 including, construction, operation and decommissioning phases. The plan shall be developed to:

- a) address the impacts to the species;
- b) provide for the survival of the species in the wild; and
- c) achieve a net conservation benefit for the species.

(F18) The holder of this authority must ensure any protected animals injured by **clearing** activities under this permit are referred to an appropriate wildlife carer group or veterinarian (to be predetermined prior to **clearing**) and the **administering authority** must be notified within 24 hours of any injuries or deaths.

(F19) Unless required for the safe construction and operation of the LNG Plant, the holder of this authority must minimise lighting disturbance to marine turtles by:

- a) physically shielding lights and directing the lights onto work areas;
- b) keeping light heights as low as practicable;
- c) using long wave length lights instead of short wavelength lights unless required for the safe operation of the LNG Facility;
- d) minimising reflective surfaces; and
- e) fitting motion detectors and light timers where practicable.

SCHEDULE G — STORAGE AND HANDLING OF CHEMICALS, FLAMMABLE AND COMBUSTIBLE SUBSTANCES

- (G1) All explosives, **hazardous** chemicals, corrosive substances, toxic substances, gases, dangerous goods, flammable and combustible liquids (including petroleum products and associated piping and **infrastructure**) must be stored and handled in accordance with the relevant Australian Standard where such is available.
- (G2) Notwithstanding the requirements of any Australian Standard and any other relevant Australian or State legislation, any liquids stored on **site** that have the potential to cause environmental harm must be stored in or serviced by an effective containment system that is impervious to the materials stored and managed to prevent the release of liquids to **waters** or land. Where no relevant Australian Standard is available, the following must be applied:
- a) storage tanks must be **bunded** so that the capacity and construction of the **bund** is sufficient to contain at least 110% of a single storage tank or 100% of the largest storage tank plus 10% of the second largest storage tank in multiple storage areas; and
 - b) drum storages must be **bunded** so that the capacity and construction of the **bund** is sufficient to contain at least 25% of the maximum design storage volume within the **bund**.
- (G3) All containment systems must be designed to minimise rainfall collection within the system.

SCHEDULE H — PETROLEUM INFRASTRUCTURE

- (H1) All **infrastructure** (including buildings, structures, petroleum equipment and plant erected and/or used for the authorised activities) but excluding the Material Offload Facility and haul road, authorised under this authority must be removed from the relevant environmental authority prior to surrender of this authority, except where agreed in writing by the **administering authority** and the current landowner.
- (H2) Prior to the commencement of decommissioning or abandonment activities, the scope of work for decommissioning or abandonment of project **infrastructure** shall be developed and agreed to with the **administering authority**.

SCHEDULE I — MONITORING PROGRAMS

- (11) The holder of this authority must:
- a) develop and implement a monitoring program, within six (6) months from the date of this approval or three (3) months from commencement of construction activities, that will demonstrate compliance with the conditions in this authority; and
 - b) document the monitoring and inspections carried out under the program and any actions taken.
- (12) The holder of this authority must ensure that a suitably qualified, experienced and competent person(s) conducts all monitoring required by this authority.
- (13) The holder of this authority must record, compile and keep for a minimum of five (5) years all monitoring results required by this authority and make available for inspection all or any of these records upon request by the **administering authority**. Monitoring results relating to **rehabilitation** should be kept until the **administering authority** has accepted surrender of the environmental authority.
- (14) Any management or monitoring plans, systems or programs required to be developed and implemented by a condition of this authority must be reviewed for performance and amended if required on a biennial basis.
- (15) An annual monitoring report must be prepared at the **end of the reporting period** and presented in the format requested (including electronic), to the **administering authority** when requested. Information and results held by the administering authority in relation to this approval may be used for any purpose including supply to third parties. This report shall include but not be limited to:
- a) a summary of the previous twelve (12) months monitoring results obtained under any monitoring programs required under this authority and, a comparison of the previous twelve (12) months monitoring results to both this authority limits and to relevant prior results; and
 - b) an evaluation/explanation of the data from any monitoring programs; and
 - c) a summary of any record of quantities of releases required to be kept under this authority; and
 - d) a summary of the record of equipment failures or events recorded for any **site** under this approval; and
 - e) an outline of actions taken or proposed to minimise the environmental risk from any deficiency identified by the monitoring or recording programs.

SCHEDULE J — COMMUNITY ISSUES

- (J1) When the **administering authority** advises the holder of a complaint alleging environmental nuisance, the holder must investigate the complaint and advise the **administering authority** in writing of the action proposed or undertaken in relation to the complaint.
- (J2) When requested by the **administering authority**, the holder of this authority must undertake monitoring specified by the **administering authority**, within a reasonable and practicable timeframe nominated by the **administering authority**, to investigate any complaint of environmental harm at any **sensitive or commercial place**.
- (J3) The results of the investigation (including an analysis and interpretation of the monitoring results) and abatement measures implemented must be provided to the **administering authority** within fourteen (14) days of completion of the investigation, or receipt of monitoring results, whichever is the latter.
- (J4) If monitoring in accordance with Condition (J2), indicates that emissions exceed the limits set by this authority or are causing environmental nuisance, then the holder of this authority must:
- address the complaint including the use of appropriate dispute resolution if required; and/or
 - as soon as practicable implement abatement or attenuation measures so that noise, dust, particulate or odour emissions from the authorised activities do not result in further environmental nuisance.
- (J5) Maintain a record of complaints and incidents causing environmental harm, and actions taken in response to the complaint or incident; and
- (J6) The holder of this authority must record the following details for all complaints received and provide this information to the **administering authority** on request:
- name, address and contact number for complainant;
 - time and date of complaint;
 - reasons for the complaint;
 - investigations undertaken;
 - conclusions formed;
 - actions taken to resolve complaint;
 - any abatement measures implemented; and
 - person responsible for resolving the complaint.
- (J7) The holder of this authority must retain the record of complaints required by this condition for five (5) years.

SCHEDULE K — NOTIFICATION PROCEDURES

- (K1) The holder of this authority must telephone the **administering authority's** Pollution Hotline (1300 130 372) as soon as possible, but within 24 hours of becoming aware of any release of contaminants or any event where environmental harm has been caused or may be threatened not in accordance with the conditions of this authority.
- (K2) In addition to Condition (K1), the holder of this authority must provide notification to the **administering authority** as soon as possible within 24 hours of becoming aware of any of the following events:
- Unauthorised release of any volume of a contaminant to **waters**;
 - Unauthorised release of any volume of contaminants to land, which then enters **waters**; and
 - Unauthorised release of the following contaminants to land at volumes greater than:
 - 200 L for hydrocarbons or hydrocarbon emulsions; or
 - 5 000 L for raw sewage; or
 - 10 000 L for treated sewage effluent.
- (K3) The notification of emergencies or incidents as required by Conditions (K1) and (K2) must include but not be limited to the following:
- the authority number and name of holder;
 - the name and telephone number of the designated contact person;
 - the location of the emergency or incident;
 - the date and time of the release;
 - the time the holder of the authority became aware of the emergency or incident;
 - the estimated quantity and type of any substances involved in the incident;
 - the actual or potential suspected cause of the release;
 - a description of the effects of the incident including the environmental harm caused, threatened, or suspected to be caused by the release;
 - any sampling conducted or proposed, relevant to the emergency or incident; and
 - actions taken to prevent any further release and mitigate any environmental harm caused by the release.
- (K4) Within fourteen (14) days following initial notification of an emergency or incident or receipt of monitoring results, whichever is the later, further written advice must be provided to the **administering authority**, including the following:
- results and interpretation of any samples taken and analysed;
 - outcomes of actions taken at the time to prevent or minimise environmental harm; and
 - proposed actions to prevent a recurrence of the emergency or incident.
- (K5) As soon as practicable, but not more than six (6) weeks following the conduct of any environmental monitoring performed in relation to the emergency or incident, which results in the release of contaminants not in accordance, or reasonably expected to be not in accordance with the conditions of this authority, written advice must be provided of the results of any such monitoring performed to the **administering authority**.
- (K6) Written notification must be provided to the **administering authority** (24) hours prior to a planned **flaring event** or within (24) hours following an unplanned **flaring event**.

APPENDIX 1 — DEFINITIONS

*Note: Terms which are defined in this environmental authority are **bolded** at the beginning of each condition. Where a term is not defined in this environmental authority the definition in the Environmental Protection Act 1994, its regulations and Environmental Protection Policies or the Petroleum and Gas (Production and Safety) Act 2004 and its regulations must be used in that order.*

“**administering authority**” means the Department of Environment and Science or its successors or predecessors.

“**aggregation dam**” means a **dam** that is used to aggregate and contain **CSG water** prior to use, treatment or disposal of that water (by means other than evaporation). The primary purpose of the **dam** must not be to evaporate the water even though this will naturally occur.

“**associated works**” in relation to a **dam**, means:

- operations of any kind and all things constructed, erected or installed for that **dam**; and
- any land used for those operations.

“**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, using Fast response.

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

“**beneficial use**” means

- with respect to **dams**, that the current or proposed owner of the land on which a **dam** stands, has found a use for that **dam** that is:
 - of benefit to that owner in that it adds real value to their business or to the general community,
 - in accordance with relevant provisions of the *Environmental Protection Act 1994*,
 - sustainable by virtue of written undertakings given by that owner to maintain that **dam**, and
 - the transfer and use have been approved or authorised under any relevant legislation. Or
- with respect to coal seam gas water, refer the DERM’s Operational Policy *Management of water produced in association with petroleum activities (CSG water)* and *Notice of decision to approve a resource for beneficial use – CSG water* which can be accessed on DERM’s website at www.derm.qld.gov.au.

“**brine**” means either saline water with a total dissolved solid concentration greater than 40 000 mg/L or **CSG water** after it has been concentrated through water treatment processes and/or evaporation.

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

“**category A ESA**” means any area listed in Section 25 of the *Environmental Protection Regulation 2008*.

“**category B ESA**” means any area listed in Section 26 of the *Environmental Protection Regulation 2008*.

“**category C ESA**” means any of the following areas:

- Nature Refuges as defined under the *Nature Conservation Act 1992*;
- Koala Habitat Areas as defined under the *Nature Conservation Act 1992*;
- State Forests or Timber Reserves as defined under the *Forestry Act 1959*;
- Declared catchment areas under the *Water Act 2000*;
- Resources reserves under the *Nature Conservation Act 1992*
- An area identified as “Essential Habitat” for a species of wildlife listed as endangered, vulnerable, rare or near threatened under the *Nature Conservation Act 1992*;
- Any **wetland** shown on the Map of Referable **Wetlands** available from DERM’s website; or
- “Of concern” regional ecosystems identified in the database maintained by DERM called ‘Regional ecosystem description database’ containing regional ecosystem numbers and descriptions.

“**CEMS**” means continuous emissions monitoring system. This includes a virtual continuous emissions monitoring system, which is a method used to determine flare gas composition by utilising the existing monitoring data available for gas temperature and pressure and the use of engineering calculations to determine the flare gas composition. The calculation methodology must be adopted from *ISA-75.01.01-2007 Flow Equations for Sizing Control Valves*.

“**certification or clearing**” in relation to a **design plan** or an annual report regarding **dams**, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

- exactly what is being certified and the precise nature of that certification.
- the relevant legislative, regulatory and technical criteria on which the certification has been based;
- the relevant data and facts on which the certification has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- the reasoning on which the certification has been based using the relevant data and facts, and the relevant criteria.

“**clearing**” means:

- in relation to grass, scrub or bush—the removal of vegetation by disturbing root systems and exposing underlying soil (including burning), but does not include—
 - the flattening or compaction of vegetation by vehicles if the vegetation remains living; or
 - the slashing or mowing of vegetation to facilitate access tracks; or
 - the **clearing** of noxious or introduced plant species; and
- in relation to trees—cutting down, ringbarking, pushing over, poisoning or destroying in any way.

“**commercial place**” means a work place used as an office or for business or commercial purposes, which is not part of the petroleum activities and does not include employees accommodation or public roads.

“**construction**” in relation to a **dam** includes building a new **dam** and modifying or lifting an existing **dam**.

“**CSG water**” means groundwater that is necessarily or unavoidably brought to the surface in the process of coal seam gas exploration or production. **CSG water** typically contains significant concentrations of salts, has a high sodium adsorption ratio (SAR) and may contain other contaminants that have the potential to cause environmental harm if released to land or **waters** through inappropriate management. **CSG water** is a waste, as defined under s13 of the EP Act.

“**CSG water dams**” include any type of **dam** (storage or evaporation) used to contain groundwater that is necessarily or unavoidably brought to the surface in the process of coal seam gas exploration or production.

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

“**daylight hours**” means those between sunrise and sunset times as shown on the Australian Government Geoscience Australia webpage < <http://www.ga.gov.au/geodesy/astro/sunrise.jsp>>.

“**Deminerisation Plant reject water**” means reverse osmosis concentrate (ROC) and other wastewater inputs including ultrafiltration wastewater, backwash, electrode ionisation (EDI) concentrate and electrode flush water from within the process area of the QCLNG facility flows.

“**design plan**” means the documentation required to describe the physical dimensions of the **dam**, the materials and standards to be used for construction of the **dam**, and the criteria to be used for operating the **dam**. The documents must include design and investigation reports, specifications and **certifications**, together with the planned decommissioning and **rehabilitation** works and outcomes. A **design plan** may include ‘as constructed’ drawings.

“**discharge area**” means:

- (a) that part of the land surface where groundwater discharge produces a net movement of water out of the groundwater; and
- (b) identified by an assessment process consistent with the document: Salinity Management Handbook, Queensland Department of Natural Resources, 1997; or
- (c) identified by an approved salinity **hazard** map held by the **Administering authority**.

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

“**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 activities such as **rehabilitation**. In other words, it does not refer to the ‘completion’ of the petroleum activity, the time at which the petroleum authority ends or the time that the land in question ceases to be part of an authority.

“**equivalent person or EP**” 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.

“**evaporation dam**” means a **dam** where **CSG water** or **brine** is contained until the water content has been removed by evaporation.

“**fill**” means any kind of material in solid form (whether or not naturally occurring) capable of being deposited at a place but does not include material that forms a part of, or is associated with, a structure constructed in a **watercourse**, **wetland** or **spring** including a bridge, road, causeway, pipeline, rock revetment, drain outlet works, erosion prevention structure or fence.

“**firewater system testing water**” means water sourced from the Gladstone Area Water Board and used for testing of the firewater system.

“**flaring event**” means an event where flammable gas is combusted through a flare and produces **visible smoke** continuously for more than 5 minutes.

“**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.

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

“**hazard**” in relation to a **dam** as defined, means the potential for environmental harm resulting from the collapse or failure of the **dam** to perform its primary purpose of containing, diverting or controlling **flowable substances**.

“**hazard category**” means a category, either low significant or high, into which a **dam** is assessed as a result of the application of tables and other criteria in DERM’s *Manual for Assessing Hazard Categories and Hydraulic performance of Dams* (Version 1.0, 2008) or any updated version of the Manual that becomes available from time to time

“**heritage place**” means any place that may be of cultural heritage significance, or any place with potential to contain archaeological artefacts that are an important source of information about Queensland’s history.

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

“**highly erodible soils**” means very unstable soils that are generally described as Sodosols with hard –setting, fine sandy loam to silty clay loam surfaces (solodics, solodised solonetz and solonetz) or soils with a dispersible layer located less than 25 cm deep or soils less than 25 cm deep.

“**hydraulic performance**” means the capacity of a **regulated dam** to contain or safely pass **flowable substances** based on a probability (AEP) of performance failure specified for the relevant **hazard category** in the *Manual for Assessing Hazard Categories and Hydraulic performance of Dams* (Version 1.0, 2008) published by the Environmental Protection Agency on its website.

“**impulsive sound**” 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 water storage **dams**, roads and tracks, equipment, buildings and other structures built for the purpose and duration of the conduct of the petroleum activities, but does not include other facilities required for the long term management of the impact of those activities or the protection of potential resources. Such other facilities include **dams** other than water storage **dams** (e.g. **evaporation dams**), pipelines and assets, that have been decommissioned, rehabilitated, and lawfully recognised as being subject to subsequent transfer with ownership of the land.

“**itinerant activities**” means [to be defined through the noise consultation process].

“**lake**” means:

- (a) a lagoon, swamp or other natural collection of water, whether permanent or intermittent; and
- (b) the **bed and banks** and any other element confining or containing the water.

“**landfill monocell**” means a specialised, isolated landfill facility where a single specific waste type is exclusively disposed (i.e. salt).

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

“**levee**” means 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.

“**limited petroleum activities**” mean activities including geophysical surveys (including seismic activities), well sites, well pads, sumps, flare pits, flow lines and supporting access tracks. **Limited petroleum activities** do not include the construction of production **infrastructure** for processing or storing petroleum or by-products, **dams**, compressor stations, campsites/workforce accommodation, power supplies, waste disposal or other supporting **infrastructure** for the project.

“**max LPZ_{15 min}**” means the maximum value of the Z-weighted sound pressure level measured over 15 minutes.

“**mg/L**” means milligrams per litre.

“**normal operating conditions**” means the ongoing operation of the LNG plant, excluding start-up, shut down, maintenance and upset conditions, and LNG ship management.

“**overland flow water**” means water, including floodwater, flowing over land, otherwise than in a **watercourse** or **lake**:

- after having fallen as rain or in any other way; or
- after rising to the surface naturally from underground.

“**particulate emissions**” means emitted particulate matter including both solid fragments of material and miniscule droplets of liquid which includes PM2.5 and PM10.

“**permanent infrastructure**” includes any **infrastructure** (roads, tracks, bridges, culverts, **dams**, bores, buildings, fixed machinery, hardstand areas, airstrips, helipads, pipelines etc), which is to be left by agreement with the landowner.

“**pest**” means species:

- (a) declared under the *Land Protection (Pest and Stock Route Management) Act 2002*;
- (b) declared under Local Government model local laws; and
- (c) which may become invasive in the future.

“**plant maintenance activities**” means the major maintenance shutdowns (and subsequent start-ups) where equipment at the plant is inspected and, if needed, repaired or replaced to ensure the ongoing safe operation of the plant.

“**ppt**” means parts per thousand.

“**regulated dam**” means any **dam** in the significant or high **hazard category** as assessed using the *Manual for Assessing Hazard Categories and Hydraulic performance of Dams (Version 1.0, 2008)* or any updated version of the Manual that becomes available 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

“**relevant water management plan**” refers to:

Construction:

- *Queensland Curtis LNG Project, Construction Environmental Control Plan, Storm Water Quality Management Plan*
- *Queensland Curtis LNG Project, Construction Environmental Control Plan, Soil Erosion and Sedimentation Management Plan*

Commissioning:

- *Queensland Curtis LNG Project, Commissioning and Start-up Environmental Management Plan*

Operation:

- *LNG Operations – Environment, Water Management Plan*

“**remnant unit**” means a continuous area of remnant vegetation representative of a single Regional Ecosystem type or a single heterogeneous unit (multiple Regional Ecosystem types that cannot be distinguished individually due to the scale of mapping).

“**reporting period**” means the most current 12-month period between two anniversary dates.

“**Ringelmann number**” means a visually comparative scale used to define levels of opacity, where clear is 0, black is 5 and 1 through 4 are increasing levels of grey as used in describing smoke from combustion of hydrocarbons.

“**River Improvement Trust Asset Area**” means an area within a River Improvement Area declared under the *River Improvement Trust Act 1940* that is or has been subject to restoration or flood mitigation works. The locations and details of these areas can be obtained from the relevant River Improvement Trust.

“**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.

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

“**site**” means the petroleum authority(ies) to which the environmental authority relates.

“**spring**” means the land to which water rises naturally from below the ground and the land over which the water then flows.

“**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 heritage place**” means a place entered in the Queensland heritage register under Part 4 of the *Queensland Heritage Act 1992*.

“**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.

“**suitably qualified and experienced person**” in relation to a hazard assessment of a dam, means that a statutory declaration has been made by that person and, when taken together with any attached or appended documents referenced in that declaration, all of the following aspects are addressed and are sufficient to allow an independent audit at any time:

- exactly what has been assessed and the precise nature of that assessment;
- the relevant legislative, regulatory and technical criteria on which the assessment has been based;
- the relevant data and facts on which the assessment has been based, the source of that material, and the efforts made to obtain all relevant data and facts; and
- the reasoning on which the assessment has been based using the relevant data and facts, and the relevant criteria.

“**suitably qualified and experienced person**” in relation to dams means one who is a Registered Professional Engineer of Queensland (RPEQ) under the provisions of the Professional Engineers Act 1988, OR registered as a National Professional Engineer (NPER) with the Institution of Engineers Australia, OR holds equivalent professional qualifications to the satisfaction of the **administering authority** for the Act; AND the **administering authority** for the Act is satisfied that person has knowledge, suitable experience and demonstrated expertise in relevant fields, as set out below:

- knowledge of engineering principles related to the structures, geomechanics, hydrology, hydraulics, chemistry and environmental impact of **dams**; and
- a total of five years of suitable experience and demonstrated expertise in the geomechanics of **dams** with particular emphasis on stability, geology and geochemistry, and
- a total of five years of suitable experience and demonstrated expertise each, in three of the following categories:
 - investigation and design of **dams**;
 - construction, operation and maintenance of **dams**;
 - hydrology with particular reference to flooding, estimation of extreme storms, water management or meteorology;
 - hydraulics with particular reference to sediment transport and deposition, erosion control, beach processes;
 - hydrogeology with particular reference to seepage, groundwater;
 - solute transport processes and monitoring thereof; and
 - **dam** safety.

“**third party auditor**” means a **suitably qualified person** who is either a certified **third party auditor** or an internal auditor employed by the holder of the environmental authority and the person is independent of the day to day management and operation of activities covered by this environmental authority

“**threatening processes**” means processes, features and actions that can have a detrimental effect upon the health and viability of an area of vegetation. For example altered hydrology, land use practices, invasion by **pest** and weed species, land degradation, edge effects and fragmentation.

“**tolerable limits**” means a range of parameters regarded as being sufficient to meet the objective of protecting relevant environmental values. For example, a range of settlement for a tailings capping, rather than a single

value, could still meet the objective of draining the cap quickly, preventing **damage** and limiting infiltration and percolation.

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

“**visible smoke**” means a visible suspension of carbon or other particles in air measured by a **Ringelmann number** greater than 2.

“**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, **dam**, swamp, **wetland**, **spring**, unconfined surface water, unconfined water in natural or artificial **watercourses**, **bed and bank** of any **waters**, **dams**, non-tidal or tidal **waters** (including the sea), stormwater channel, stormwater drain, roadside gutter, stormwater run-off, and underground water.

“**watercourse**” means 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**;
- but, in any case, only:
- (c) unless a regulation under paragraph (d), (e) or (f) declares otherwise-at every place upstream of the point (point A) to which the high **spring** tide ordinarily flows and reflows, whether due to a natural cause or to an artificial barrier; or
 - (d) if a regulation has declared an upstream limit for the **watercourse**-the part of the river, creek or stream between the upstream limit and point A; or
 - (e) if a regulation has declared a downstream limit for the **watercourse**-the part of the river, creek or stream upstream of the limit; or
 - (f) if a regulation has declared an upstream and a downstream limit for the **watercourse**-the part of the river, creek or stream between the upstream and the downstream limits.

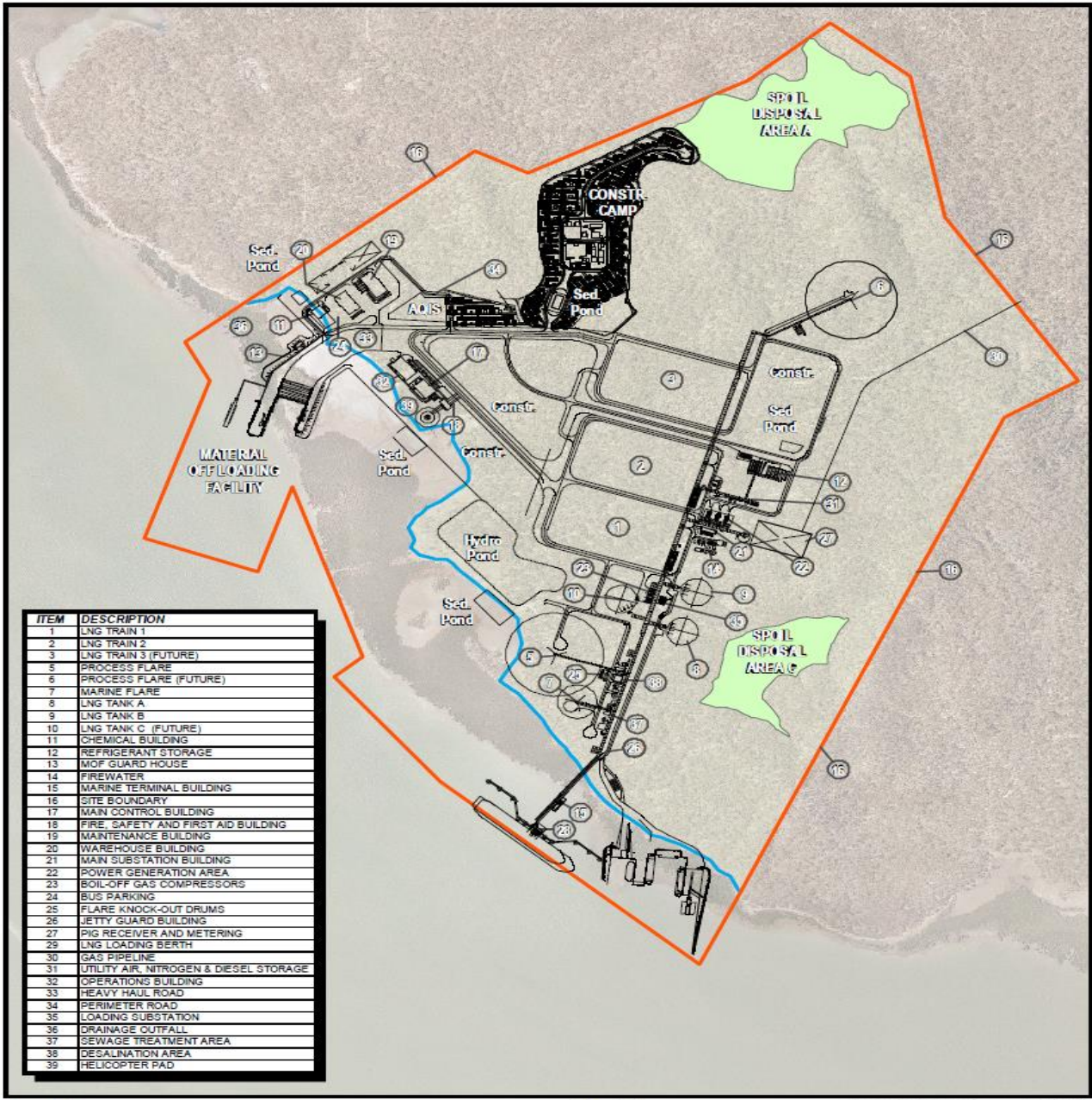
Watercourse includes the **bed and banks** and any other element of a river, creek or stream confining or containing water.

“**wetland**” means an area shown as a **wetland** on a ‘Map of Referable **Wetlands**’, a document approved by the chief executive (environment). A map of referable **wetlands** can be viewed at www.ehp.qld.gov.au.

“**wild river declaration**” means a statutory instrument under the *Wild Rivers Act 2005*. A declaration lists the relevant natural values to be preserved and delineates certain parts of the wild river area and the different constraints that may apply in these areas. With reference to environmental authorities for petroleum, each declaration also specifies conditions to be included in a new authority if the activity is to be located within the wild river area.

“**80th percentile limit**” means in relation to stormwater release limits not more than one (1) exceedance of the stated release limit out of any five (5) release events.

APPENDIX 2 — PFL11 BOUNDARY AND SPOIL DISPOSAL AREAS



| ITEM | DESCRIPTION |
|------|--|
| 1 | LNG TRAIN 1 |
| 2 | LNG TRAIN 2 |
| 3 | LNG TRAIN 3 (FUTURE) |
| 5 | PROCESS FLARE |
| 6 | PROCESS FLARE (FUTURE) |
| 7 | MARINE FLARE |
| 8 | LNG TANK A |
| 9 | LNG TANK B |
| 10 | LNG TANK C (FUTURE) |
| 11 | CHEMICAL BUILDING |
| 12 | REFRIGERANT STORAGE |
| 13 | MOP GUARD HOUSE |
| 14 | FIREWATER |
| 15 | MARINE TERMINAL BUILDING |
| 16 | SITE BOUNDARY |
| 17 | MAIN CONTROL BUILDING |
| 18 | FIRE, SAFETY AND FIRST AID BUILDING |
| 19 | MAINTENANCE BUILDING |
| 20 | WAREHOUSE BUILDING |
| 21 | MAIN SUBSTATION BUILDING |
| 22 | POWER GENERATION AREA |
| 23 | BOIL-OFF GAS COMPRESSORS |
| 24 | BUS PARKING |
| 25 | FLARE KNOCK-OUT DRUMS |
| 26 | JETTY GUARD BUILDING |
| 27 | PIG RECEIVER AND METERING |
| 29 | LNG LOADING BERTH |
| 30 | GAS PIPELINE |
| 31 | UTILITY AIR, NITROGEN & DIESEL STORAGE |
| 32 | OPERATIONS BUILDING |
| 33 | HEAVY HAUL ROAD |
| 34 | PERIMETER ROAD |
| 35 | LOADING SUBSTATION |
| 36 | DRAINAGE CUTFALL |
| 37 | SEWAGE TREATMENT AREA |
| 38 | DESALINATION AREA |
| 39 | HELICOPTER PAD |

- Legend**
- QCLNG Site Boundary
 - Wet Lease Boundary
 - QCLNG Footprint Plant Layout

Source Note: Aerial Photo - Department of Infrastructure and Planning for QCLNG Project
 Plant Layout - Section SK001-MOPW-00A

Projection: UTM MGA Zone 56 Datum: GDA94

0 100 200 400 m



| | | |
|---|---|---|
| <p>QUEENSLAND CURTIS LNG A BG Group business</p> | Project Queensland Curtis LNG Project | Title QCLNG Facility Layout |
| | Client QGC - A BG Group business | |
| <p>ERM Environmental Resources Management Australia Pty Ltd</p> | Drawn KP Figure 2 | Disclaimer: Maps and Figures contained in this Report may be based on Third Party Data, may not be to scale and are intended as Guides only. ERM does not warrant the accuracy of any such Maps and Figures. |
| | Approved DS File No: 0008_CLGIS051_R3 | |
| | Date 01.07.10 Revision 3 | |



APPENDIX 3 — SAMPLE POINTS

