

# Project Approval

## Section 75J of the *Environmental Planning & Assessment Act 1979*

As delegate of the Minister for Planning and Infrastructure, under delegation from the Minister enforced from 1 October 2011, the Planning Assessment Commission of NSW (the Commission) approves the project application referred to in Schedule 1, subject to the conditions in Schedule 2.

These conditions are required to:

- prevent, minimise, and/or offset adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the project.

Member of the Commission	Member of the Commission	Member of the Commission
Sydney	2012	File No: 11/08788

### SCHEDULE 1

<b>Application No.:</b>	MP 10_0133
<b>Proponent:</b>	AGL Energy Limited
<b>Approval Authority:</b>	Minister for Planning and Infrastructure
<b>Land:</b>	Lot 105 DP 1125747 (Tomago Aluminium Company Pty Limited) – Part Lot 105 DP 1125747 (gas storage facility) Lot 1 DP 813606 (Hexham receiving station) Old Punt Road reserve (Port Stephens Council) Land beneath the bed of the Hunter River Lot 2 DP 46729, Lot 142 DP 605461, (Forgacs Engineering Pty Ltd) Old Maitland Road reserve (Newcastle City Council) Lot 2 DP 813606 (Mehan Finance Pty Ltd) Lot 101 DP 499013 (Jemena Gas Networks NSW Ltd) Lot 143 in Deposited Plan 605461 (Bendlink Pty Ltd) Lot 42 in Deposited Plan 558481 (PA Rains and PV Rains)
<b>Proposal:</b>	The Newcastle Gas Storage Project as described in the EA and PPR, including: <ul style="list-style-type: none"><li>• the gas plant site, including subdivision (Surveyor's Reference 10195DPA_07);</li><li>• an access road and utility corridor;</li><li>• a gas pipeline access corridor;</li><li>• a pipeline corridor including temporary construction areas;</li><li>• the Hexham receiving station;</li><li>• a gas pipeline connection to the existing Jemena Gate Station at Hexham; and</li><li>• associated and ancillary infrastructure.</li></ul>

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## DEFINITIONS

BCA	Building Code of Australia
CEMP	Construction Environmental Management Plan
Construction	All pre-operation activities associated with the project other than survey; acquisitions; fencing; investigative drilling or excavation; building/road dilapidation surveys; minor clearing or translocation (except where heritage, threatened species, populations or endangered ecological communities would be affected, unless otherwise approved by the Director General in consultation with the OEH); or other activities determined by the Environmental Representative to have minimal environmental impact (e.g. minor access roads and adjustments for services/utilities)
Councils	Port Stephens Shire Council and Newcastle City Council
Department	Department of Planning and Infrastructure
Director-General	Director-General of the Department of Planning and Infrastructure (or delegate)
DPI	Department of Primary Industries
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
EA	<i>Environmental Assessment: Newcastle Gas Storage Facility Project</i> , prepared by Coffey Natural Systems Pty Ltd and dated May 2011
Environmental Representative	Independent person engaged by the Proponent in accordance with condition B55.
EP&A Act	<i>Environmental Planning and Assessment Act 1979</i>
EP&A Regulation	<i>Environmental Planning and Assessment Regulation 2000</i>
EPA	Environment Protection Authority
EPL	Environment Protection Licence issued under the POEO Act
Feasible	Feasible relates to engineering considerations and what is practical to build or carry out
HWC	Hunter Water Corporation
Incident	A set of circumstances that causes or threatens to cause material harm to the environment, and/or breaches or exceeds the limits or performance measures/criteria in this approval
Material harm to the environment	Actual or potential harm to the health or safety of human beings or to ecosystems that is not trivial
Minister	Minister for Planning and Infrastructure (or delegate)
Negligible	Small and unimportant, such as to be not worth considering
NOW	NSW Office of Water
OEH	Office of Environment and Heritage
OEMP	Operation Environmental Management Plan
Operation	Operation activities associated with the project, not including commissioning trials of equipment or temporary use of parts of the project during construction
POEO Act	<i>Protection of the Environment Operations Act 1997</i>
PPR	<i>Preferred Project Report and Response to Submissions Report: Newcastle Gas Storage Facility Project</i> , prepared by Coffey Environments Australia Pty Ltd and dated September 2011
Project	The development described in the project application, the EA and the PPR
Project Approval	Approval granted for a project in accordance with section 75J of the Act
Proponent	AGL Energy Limited and its successors and assigns
Publicly Available	Available for inspection by a member of the general public (for example available on an internet site or at a display centre)
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Rehabilitation	The treatment or management of land disturbed by the project for the purpose of establishing a safe, stable and non-polluting environment, and includes remediation
RMS	Roads and Maritime Services – formerly Roads & Traffic Authority (RTA)
Site	The land referred to in Schedule 1
Statement of Commitments	The Statement of Commitments included in the PPR

## **SCHEDULE 2**

### **PART A - ADMINISTRATIVE CONDITIONS**

#### **TERMS OF APPROVAL**

- A1 The Proponent shall carry out the project generally in accordance with the:
- (a) Environmental Assessment;
  - (b) Preferred Project Report;
  - (c) Statement of Commitments; and
  - (d) conditions of this approval.

*Note: the general layout of the project is shown in Appendix 1*

- A2 If there is any inconsistency between the documents in condition A1, the most recent document shall prevail to the extent of the inconsistency. However, the conditions of this approval shall prevail to the extent of any inconsistency with the documents listed under condition A1.
- A3 The Proponent shall comply with any reasonable requirement(s) of the Director-General arising from the Department's assessment of:
- (a) any reports, strategies, plans, programmes, reviews, audits or correspondence that are submitted in accordance with this approval; and
  - (b) the implementation of any actions or measures contained in these documents.

#### **LIMITS ON APPROVAL**

- A4 This project approval shall lapse five years after the date on which it is granted, unless any works the subject of this approval have physically commenced before that time.
- A5 The gas pipeline component for the project shall follow corridor option 2 as shown in Figure 1.2 – Conceptual Project Layout in the EA. To avoid any doubt, other corridor options shown in that figure are not approved.

#### **STAGING**

- A6 Construction of the project may be undertaken in discrete work packages or stages. Where that occurs, these conditions of approval need only be complied with to the extent that they are relevant to that discrete work package or stage. Prior to the commencement of relevant construction or operation activities, the Proponent shall submit a Staging Report to the Director-General which:
- (a) describes the stages; and
  - (b) identifies the relevant conditions of approval for each stage and how these will be addressed across and between the stages of the project.
- A7 With the approval of the Director-General, the Proponent may submit any strategy, plan or programme required by this approval on a progressive basis for discrete work packages or stages.

#### **STATUTORY REQUIREMENTS**

- A8 The Proponent shall ensure that all necessary licences, permits and approvals are obtained and maintained as required throughout the life of the project. No condition of this approval removes the obligation of the Proponent to obtain, renew or comply with such licences, permits or approvals. The Proponent shall ensure that a copy of this approval and all relevant environmental approvals are available on the site at all times during the project.

#### **COMPLIANCE**

- A9 The Proponent shall ensure that employees, contractors and sub-contractors, and visitors are aware of, and comply with, the conditions of this approval relevant to their respective activities.

## **PUBLICLY AVAILABLE INFORMATION**

- A10 Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request.

## **STRUCTURAL ADEQUACY**

- A11 The Proponent shall ensure that all new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the relevant requirements of the BCA. For the purpose of section 75S(2)(b) of the Act, the *relevant provisions*, as defined in section 75S(1A) of the Act apply to this approval.

## **SUBDIVISION**

- A12 In undertaking the subdivision approved under this approval, the Proponent must comply with the requirements of the *Environmental Planning and Assessment Act 1979* relating to the issue of a Subdivision Certificate (the relevant provisions referred to under section 75S(2)(b) of the Act, which continues to apply to the project).
- A13 The Proponent shall consult with and address all reasonable requirements of Port Stephens Council in preparing its application for a Subdivision Certificate for the project.

## **OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT**

- A14 The Proponent shall implement all reasonable and feasible measures to prevent and/or minimise any material harm to the environment that may result from the construction, operation or rehabilitation of the project.

## **INCIDENT REPORTING**

- A15 The Proponent shall notify the Director-General and any other relevant agencies of any incident associated with the project as soon as practicable after the Proponent becomes aware of the incident. Within seven days of becoming aware of the incident, the Proponent shall provide the Director-General and any relevant agencies with a detailed report on the incident.
- A16 The Proponent shall meet the requirements of the Director-General to address the cause or impact of any incident, as it relates to this approval, reported in accordance with condition A15 of this approval, within such period as the Director-General may require.
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## PART B – PRIOR TO AND DURING CONSTRUCTION

### BIODIVERSITY

- B1 The Proponent shall employ a suitably-qualified ecologist to attend site clearing and vegetation removal works, and any activities with the potential to directly or indirectly impact on the biodiversity of the project site or surrounding land during construction. The ecologist shall be employed for the purpose of identifying and advising on potential ecological impacts, including appropriate mitigation and management, as required under these conditions of approval.

#### Management of Impacts on Flora

- B2 The Proponent shall take reasonable and feasible steps to minimise the area of native vegetation clearing required for the project. Areas of vegetation to be cleared as part of the project shall be clearly demarcated prior to the commencement of clearing activities. Procedures for the minimisation and management of vegetation clearing shall be detailed in the Flora and Fauna Management Plan required under condition B57.
- B3 The Proponent shall construct the project in a manner that avoids direct and indirect impacts to those areas mapped as “(4) – Freshwater Wetland Complex” and “(7) – Phragmites Rushland” in Figure 7 – Vegetation Communities in *Ecological Assessment: Newcastle Gas Storage Facility Project* (ecobiological, May 2011), included as Appendix 7 to the EA. The suitably-qualified ecologist required under condition B1 shall be engaged for the purpose of advising on measures to avoid potential direct or indirect impacts.
- B4 Prior to the commencement of construction, appropriately timed and targeted surveys should be undertaken to determine the absence/presence of the following taxa for which general baseline vegetation surveys are not considered appropriate:
- (a) Tall Knot-weed (*Persicaria elatior*);
  - (b) Small Water-ribbons (*Maundia triglochoides*); and
  - (c) Horned Pondweed (*Zannichellia palustris*).

Any impacts on these taxa must be included in the Biodiversity Offset Strategy under condition B13 and Biodiversity Offset Package under condition C2.

- B5 Prior to the commencement of vegetation clearing works, the site shall be subject to further confirmatory survey work to determine the number of Earp’s Gum individuals to be removed. The number, quality and extent of these individuals shall be used to inform the Biodiversity Offset Strategy under condition B13 and Biodiversity Offset Package under condition C2.
- B6 Prior to the commencement of vegetation clearing works, the site shall be subject to further confirmatory survey work to determine the hollow-bearing trees to be removed. The number and quality of these tree hollows shall be used to inform the Biodiversity Offset Strategy under condition B13 and Biodiversity Offset Package under condition C2.
- B7 With the exception of clearing necessary for the gas pipeline access corridor, and access road and utility corridor, on the site, the Proponent shall ensure that vegetation mapped as “Preferred Koala Habitat” in Figure 12 – Revised Koala Habitat Mapping in *Ecological Assessment: Newcastle Gas Storage Facility Project* (ecobiological, May 2011), included as Appendix 7 to the EA, is not directly or indirectly affected in the carrying out of the project.

#### Riparian Areas

- B8 Prior to the commencement of works with the potential to directly or indirectly affect riparian areas, the Proponent shall engage a suitably-qualified ecologist (required under condition B1) to survey and record the condition of those potentially-affected areas.
- B9 Within six months of the conclusion of construction activities directly or indirectly affecting riparian areas, the Proponent shall implement a programme to rehabilitate those areas to a standard of equal or better condition than surveyed under condition B8, unless otherwise agreed by the Director-General. Riparian rehabilitation works shall be undertaken in consultation with NOW and DPI (Fisheries).

- B10 Unless otherwise agreed by the Director-General, the Proponent shall monitor and maintain the condition of rehabilitated riparian areas until such time as those areas have been verified by a suitably-qualified ecologist (required under condition B1) as being well-established, in good health and self-sustaining.

#### **Management of Impacts on Fauna**

- B11 Prior to the commencement of vegetation clearing works in the site, the site shall be subject to survey work to identify the presence of Koala (*Phascolarctos cinereus*) individuals. All Koala individuals identified on the site shall be allowed to self-translocate in the first instance prior to any other translocation methods being considered. If self-translocation proves impracticable, human-assisted translocation will be conducted and the Koalas located on the gas storage facility site shall be translocated to an appropriate, safe location off-site. Survey and translocation of Koala individuals shall be conducted in accordance with the Port Stephens Comprehensive Koala Plan of Management and to meet the requirements of the OEH. If human-assisted translocation is conducted, it shall be undertaken by a suitably qualified and experienced ecologist in Koala management and in accordance with *Policy for the Translocation of Threatened Fauna in NSW* (NPWS, 2001).
- B12 Prior to the commencement of vegetation clearing and construction works, the Proponent shall demonstrate that it has undertaken a programme of trapping on the the gas storage facility site with the aim of collecting any New Holland Mouse (*Pseudomys novaehollandiae*) individuals. All New Holland Mouse individuals shall be translocated to an appropriate, safe location off-site. Trapping, collection and translocation of New Holland Mouse individuals shall meet the requirements of any guidelines issued by DSWEPAc.

#### **Biodiversity Offsets**

- B13 Prior to the commencement of vegetation clearing or construction works, the Proponent shall prepare a **Biodiversity Offset Strategy** in consultation with the OEH and Port Stephens Council, and for the approval of the Director-General. The purpose of the Strategy shall be to provide high-level direction to guide the development of the Biodiversity Offset Package required under condition C2. The Biodiversity Offset Strategy shall be prepared by a suitably-qualified ecologist consistent with the Biobanking Methodology under the Biobanking and Offsets Scheme outlined in *Biobanking Assessment Methodology and Credit Calculator Operational Manual* (DECC, 2009), and shall include:
- (a) consideration of all native vegetation losses and the adequacy of the proposed offset;
  - (b) an offset area for the Earp's Gum commensurate with the area occupied by the Earp's Gum individuals to be removed from the site, and including successful planting of *Eucalyptus parramattensis* subsp. *decadens* trees at a ratio of at least 3:1 and the maintaining of these trees until established.
  - (c) an offset ratio for tree hollows of no less than 1:1, to be delivered through nest boxes or other measures agreed with the OEH;
  - (d) habitat offset measures for Koalas (*Phascolarctos cinereus*) and New Holland Mouse (*Pseudomys novaehollandiae*);
  - (e) demonstration of how the offset would 'improve or maintain' biodiversity values;
  - (f) the proposed offset ratios and connectivity improvements;
  - (g) proposed management actions;
  - (h) demonstration of how the strategy was prepared in accordance with the OEH's Principles for the Use of Biodiversity Offsets in NSW; and
  - (i) measures to ensure in-perpetuity the conservation commitment.

*Note: The Biodiversity Offset Strategy is intended to provide an initial, high-level direction for the identification of potential offsets, including details of quantified offset requirements. The Biodiversity Offset Package is intended to detail the delivery of the required offsets, in practical terms.*

#### **HAZARDS AND RISK**

- B14 The Proponent shall establish and maintain Asset Protection Zones around the project, being no less than 25 metres around the gas plant site and no less than 31 metres around the processing plant and storage tank. The Earp's Gum individuals are to be retained within the asset protection zones where appropriate canopy distances exist. The understory in the vicinity of

retained Earp's Gum individuals is to be appropriately managed to minimise fire risk. Details shall be incorporated into the Fire Safety Study required under B16(a).

- B15 During construction, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:
- (a) all relevant Australian Standards; and
  - (b) DECC's *Environment Protection Manual Technical Bulletin – Bunding and Spill Management*.

In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.

- B16 At least one month prior to the commencement of construction of the project, except for construction of those preliminary works that are outside the scope of the hazard studies (including such works as vegetation clearing and site preparation which would not influence or pre-empt the outcomes of the hazards studies), or within such further period as the Director-General may agree, the Proponent shall prepare and submit for the approval of the Director-General the following studies:
- (a) A **Fire Safety Study** prepared in accordance with and covering the relevant aspects in *Hazardous Industry Planning Advisory Paper No. 2 - Fire Safety Study Guidelines* (DoP, 2011) and Best Practice Guidelines for Contaminated Water Retention and Treatment Systems (NSW Government, 1994). The study shall also be submitted for approval to Fire and Rescue NSW and to the Rural Fire Service;
  - (b) A **Hazard and Operability Study** for the project, chaired by a qualified person, independent of the project, approved by the Director-General prior to the commencement of the study. The study shall be consistent with the Department of Planning and Infrastructure's *Hazardous Industry Planning Advisory Paper No. 8 – HAZOP Guidelines* (DoP, 2011). The study report shall be accompanied by a programme for the implementation of all recommendations made in the report. If the Proponent intends to defer the implementation of a recommendation, reasons must be documented and justified; and
  - (c) A **Final Hazard Analysis** of the project, consistent with *Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis* (DoP, 2011). The FHA shall report on the implementations of the recommendations of the Preliminary Hazard Analysis.

Construction, other than of preliminary works (including such works as vegetation clearing and site preparation which would not influence or pre-empt the outcomes of the hazards studies), shall not commence until approval under this condition has been given by the Director-General and, with respect to the Fire Safety Study, approval has also been given by Fire and Rescue NSW and the Rural Fire Service.

- B17 Prior to the commencement of the detailed design of the project, the Proponent shall consult with WorkCover with regard to complying with the regulations applicable to Major Hazard Facilities and shall obtain requirements for the preparation of the **Site Risk Assessment** and the **Safety Case**. The Proponent shall comply with all requirements issued by WorkCover.
- B18 The **Safety Case** shall be prepared by the Proponent under the Major Hazard Facilities legislation and shall be submitted to WorkCover no later than six months prior to the commissioning of the project, or as otherwise agreed by WorkCover.

## DESIGN PRINCIPLES

- B19 Buildings and car parking associated with the proposed development should be designed with consideration to the general principles and objectives of *Crime Prevention through Environmental Design* (Australian Institute of Criminology, 1989).

## SOILS, WATER AND HYDROLOGY

- B20 Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997* during construction of the project.



- B21 Erosion and Sediment controls consistent with *Managing Urban Stormwater: Soils and Construction Manual* (Landcom, 2004, or its latest version) shall be installed prior to the commencement of soil disturbing works and shall be maintained until such time as the disturbed areas have been rehabilitated.
- B22 The Proponent shall carry out rehabilitation of disturbed areas progressively, and as soon as reasonably practicable following disturbance.

#### **Construction Method**

- B23 The Proponent shall apply the gas pipeline corridor construction methods generally in accordance with Table 2.2 of the PPR, at the locations specified.

#### **Flooding**

- B24 The Proponent shall ensure that all structures to be constructed below known flood planning levels are constructed of materials and with finishes that are resistant to floodwaters/ tides. Construction of the project shall be undertaken in accordance with the *NSW Flood Plain Development Manual* (DIPNR, 2005).

#### **Groundwater Monitoring Programme**

- B25 Prior to the commencement of construction, the Proponent shall develop a **Groundwater Monitoring Programme** in consultation with NOW and HWC and to the satisfaction of the Director-General. The programme shall detail the monitoring strategy that would be implemented to monitor the water quality impacts of the project on beneficial aquifers (including associated groundwater users, surface waters and groundwater dependent ecosystems). The programme shall:
- (a) identify surface and groundwater monitoring locations demonstrating their appropriateness for obtaining representative water quality and water level data on construction and operational impacts in relation to beneficial aquifers, groundwater users and surface waters;
  - (b) provide details of the monitoring points (including location, depth of monitoring, duration and frequency of monitoring and parameters to be monitored);
  - (c) identify performance criteria, including monitoring criteria to detect early indicators of drawdown impacts or water quality impacts to beneficial aquifers;
  - (d) identify the frequency of reporting on monitoring results;
  - (e) identify procedures for contingency or remedial action where adverse impacts are identified, such that the adverse impacts are remediated prior to any impact to other groundwater users, and/ or rehabilitation measures applied where the project is identified as adversely affecting any groundwater dependent ecosystems/ communities; and
  - (f) identify mechanisms for the regular review and update of the programme in consultation with NOW and HWC as required.

In submitting the programme for the Director General's approval, the Proponent shall provide written evidence of consultation with NOW and HWC on the robustness and acceptability of the monitoring programme, including issues raised by these agencies and how these have been addressed. The programme shall be reviewed and updated at the conclusion of construction activities.

#### **Stormwater Management**

- B26 Prior to the commencement of construction, the Proponent shall engage an independent and suitably qualified expert to the satisfaction of HWC, to undertake peer reviews of the design, construction and ongoing maintenance of the stormwater management system. The reviews shall:
- (a) provide HWC with a peer review of the detailed design of the stormwater management system;
  - (b) investigate the constructability, effectiveness and durability of the stormwater management system;
  - (c) be undertaken to ensure that the system is constructed as designed to the schedule agreed between the Proponent and HWC; and
  - (d) provide HWC with inspection reports on the adequacy of the stormwater management system in accordance with the inspections identified in the schedule referred to in (c).

The review reports shall be incorporated into the compliance tracking programme required under condition B54 and shall include, but not necessarily be limited to: annual reports of Stormwater systems Performance supplied to HWC.

Any faults identified as a result of the inspection reports identified in (d) shall be rectified and reinspected at the Proponent's expense.

## **NOISE**

### **Construction Hours**

B27 Subject to conditions B28 and B29, construction works (other than horizontal directional drilling (HDD)) that would generate audible noise at any sensitive receiver shall only be undertaken during the following hours:

- (a) 7:00 am to 6:00 pm, Mondays to Fridays, inclusive;
- (b) 8:00 am to 1:00 pm on Saturdays; and
- (c) at no time on Sundays or public holidays.

This condition does not apply in the event of a direction from police or other relevant authority for safety reasons or emergency work to avoid the loss of lives, property and/or to prevent environmental harm.

B28 Any work generating high noise that has impulsive, intermittent, low frequency or tonal characteristics, including jack hammering, pile driving, rock hammering, rock breaking, saw cutting, sheet piling or vibratory rolling, shall only be undertaken:

- (a) between the hours of 8.00 am and 6.00 pm Monday to Friday;
- (b) between the hours of 8.00 am and 1.00 pm Saturday; and
- (c) in continuous blocks of no more than three hours, with at least one hour respite between each block of work generating high noise impact, where the location of the work is likely to impact the same receivers;

except as otherwise approved by the Director-General. For the purposes of this condition "continuous" includes any period during which there is less than a one hour respite between ceasing and recommencing any of the work the subject of this condition.

B29 Construction outside of the hours specified under condition B27 or B28 may be varied for works as approved through the out-of-hours work protocol required as part of the Construction Noise Management Plan under condition B57 of this approval. Any request to alter the hours of construction shall:

- (a) be considered on a case-by-case basis;
- (b) be accompanied by details of the nature and need for activities to be conducted during the varied construction hours and any other information necessary to reasonably determine that activities undertaken during the varied construction hours will not adversely impact on the acoustic amenity of receptors in the vicinity of the site; and
- (c) require that affected residential receivers are informed of the timing and duration of any construction activities approved under this condition at least 48 hours before that work commences.

### **Construction Noise Criteria**

B30 The Proponent shall implement all reasonable and feasible noise mitigation measures to minimise noise generated by construction of the project, consistent with the requirements of the *Interim Construction Noise Guidelines (DECC, July 2009)*.

B31 Prior to the commencement of construction, the Proponent shall undertake a noise assessment to identify all sensitive receivers where the construction noise management goals, exceed the ICNG construction noise goals for that receiver. The results shall be included in the Construction Noise Management Plan required under condition B57 of this approval.

## **TRAFFIC AND TRANSPORT**

- B32 Prior to the commencement of construction of the project, the Proponent shall commission a suitably qualified road infrastructure specialist to assess the condition of all public roads proposed to be traversed by construction traffic associated with the project (including over-mass or over-dimensional vehicles) in consultation with Council and the RMS, and to identify any upgrade requirements to accommodate project traffic for the duration of construction (including culvert, bridge and drainage design; intersection treatments; vehicle turning requirements; and site access), having regard to peak traffic volumes. The **Pre-Construction Road Inspection Report** shall be submitted to the Director-General prior to the commencement of construction works, clearly identifying recommendations made by the Council and the RMS and how these have been addressed. The Proponent shall ensure that all upgrade measures identified in the report are implemented to meet the reasonable requirements of Council and the RMS, prior to the commencement of construction.
- B33 A commercial-type vehicular crossing shall be constructed across the public footway at the proposed driveway entrance/ exit to the Hexham receiving station site at the expense of the Proponent. The crossing shall be designed and constructed in accordance with Newcastle City Council's *A017 Series (Concrete Vehicular Crossings)* design specifications.
- B34 Redundant existing vehicular crossings at the Hexham receiving station site shall be removed at the expense of the Proponent and the public footway and kerb shall be restored to be consistent with existing infrastructure.

## AIR QUALITY

### Odour

- B35 During construction, the Proponent shall ensure no offensive odour as defined under the *Protection of the Environment Operations Act 1997* is emitted from the project site.

### Dust

- B36 The Proponent shall employ reasonable and feasible measures to ensure that construction activities associated the project are undertaken in a manner that minimises or prevents the emission of dust.

## METEOROLOGY

- B37 Prior to the commencement of construction works, the Proponent shall establish a meteorological monitoring station on the site, or at a representative location off-site, for the purpose of continuously monitoring meteorological conditions on the site for the life of the project. The meteorological monitoring station shall be located, operated and maintained to meet the requirements of the OEH. The Proponent may satisfy this condition by demonstrating to the satisfaction of the OEH that it has access to data from an existing meteorological monitoring station, representative of conditions on this site, and operated by a third party.

## HERITAGE

- B38 The Proponent shall employ a suitably-qualified archaeologist to attend site clearing and vegetation removal works within the gas storage facility site and within riparian areas of the Hunter River, and any activities with the potential to directly or indirectly impact on subsurface heritage items. The archaeologist shall be employed for the purpose of identifying and advising on potential Aboriginal heritage impacts, including appropriate mitigation and management, as required under these conditions of approval. Items of heritage significance that may be uncovered during construction of the project shall be managed in accordance with the approved Cultural Heritage Management Plan under condition B57.
- B39 Registered Aboriginal stakeholders shall be invited to attend site clearing and soil disturbance work to assist in the identification of heritage items, including potential mitigation and management measures.
- B40 Where reasonable and feasible, the Proponent shall remove vegetation from the site with the aim of avoiding or minimising the need to disturb the underlying soil.

## **WASTE MANAGEMENT**

- B41 The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site during construction, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*, if such a licence is required in relation to that waste.
- B42 The Proponent shall maximise the reuse and/or recycling of construction waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.
- B43 The Proponent shall ensure that all liquid and/or non-liquid construction waste generated by the project is assessed and classified in accordance with the *Waste Classification Guidelines* (DECC 2008, or any future guideline that may supersede that document) and where removed from the site is only directed to a waste location lawfully permitted to accept those materials.

## **VISUAL AMENITY**

- B44 The Proponent shall:
- (a) take all reasonable and feasible measures to mitigate off-site lighting impacts from the construction of the project; and
  - (b) ensure that all external lighting associated with construction of the project complies with *Australian Standard AS4282 – 1997 – Control of the Obtrusive Effects of Outdoor Lighting*.

This condition does not apply to lighting required for aviation safety.

## **AIR SAFETY**

- B45 At least one month prior to the commencement of construction, the Proponent shall notify the RAAF Aeronautical Information Service of the location and heights of tall structures that are 30 metres or more above ground level within 30 kilometres of an aerodrome, or 45 metres or more above ground level elsewhere.

## **INFRASTRUCTURE, SERVICES AND ANCILLARY FACILITIES**

- B46 The Proponent shall undertake all necessary alterations to existing public utility installations to meet the reasonable requirements of, and at no expense to, the relevant public utility authority.
- B47 The Proponent shall ensure that road surfaces – and any other road-related infrastructure including drainage, street lighting, street furniture or underground facilities – disturbed or damaged during construction, are restored to meet the reasonable requirements of, and at no expense to, the relevant road authority.
- B48 The Proponent shall design and provide on-site carparking, driveways, parking bays, vehicular turning areas, letterboxes, landscaping and drainage in consultation with and to meet the reasonable requirements of the relevant local council.

## **COMMUNITY INFORMATION, CONSULTATION AND INVOLVEMENT**

### **Provision of Electronic Information**

- B49 Prior to the commencement of construction, the Proponent shall establish a dedicated website or maintain dedicated pages within its existing website for the provision of electronic information associated with the project. The Proponent shall publish and maintain up-to-date information on this website or dedicated pages including, but not necessarily limited to:
- (a) the status of the project;
  - (b) a copy of this approval and any future modification to this approval;
  - (c) a copy of each relevant environmental approval, licence or permit required and obtained in relation to the project;
  - (d) a copy of each plan, report, or monitoring programme required by this approval; and
  - (e) details of the outcomes of compliance reviews and audits of the project.

### **Community Information Plan**

B50 Prior to the commencement of construction, the Proponent shall prepare and implement a **Community Information Plan** which sets out the community communication and consultation processes to be implemented during construction and operation of the project. The Plan shall include, but not be limited to:

- (a) procedures to inform the local community of planned investigations and construction activities, including blasting works (if any);
- (b) procedures to inform the relevant community of construction traffic routes and any potential disruptions to traffic flows and amenity impacts;
- (c) procedures to inform the community where work outside the construction hours specified in condition 0, in particular noisy activities, has been approved; and
- (d) procedures to inform and consult with affected landowners to rehabilitate impacted land.

### **Complaints Procedure**

B51 Prior to the commencement of construction, the Proponent shall ensure that the following are available for community complaints for the life of the project (including construction and operation) or as otherwise agreed by the Director-General:

- (a) a 24-hour telephone number on which complaints about construction and operational activities at the site may be registered;
- (b) a postal address to which written complaints may be sent; and
- (c) an email address to which electronic complaints may be transmitted.

The telephone number, postal address and email address shall be advertised in a newspaper circulating in the area of the project, on at least one occasion prior to the commencement of construction; and at six-monthly intervals during construction and for a period of two years following commencement of operation of the project. These details shall also be provided on the Proponent's internet site required by condition B49. The telephone number, the postal address and the email address shall be displayed on a sign near the entrance to the construction site(s), in a position that is clearly visible to the public.

B52 The Proponent shall record details of all complaints received through the means listed in condition B51 of this approval in an up-to-date Complaints Register. The Register shall record, but not necessarily be limited to:

- (a) the date and time of the complaint;
- (b) the means by which the complaint was made (telephone, mail or email);
- (c) any personal details of the complainant that were provided, or if no details were provided, a note to that effect;
- (d) the nature of the complaint;
- (e) any action(s) taken by the Proponent in relation to the complaint, including timeframes for implementing the action; and
- (f) if no action was taken by the Proponent in relation to the complaint, the reason(s) why no action was taken.

The Complaints Register shall be made available for inspection by the Director-General upon request.

B53 The Proponent shall provide an initial response to any complaints made in relation to the project during construction or operation within 48 hours of the complaint being made. The response and any subsequent action taken shall be recorded in accordance with condition B52. Any subsequent detailed response or action is to be provided within two weeks, or as otherwise agreed by the complainant/ Director-General.

### **COMPLIANCE TRACKING PROGRAMME**

B54 Prior to the commencement construction, the Proponent shall develop and implement a **Compliance Tracking Programme**, to track compliance with the requirements of this approval during the construction and operation of the project and shall include, but not necessarily be limited to:

- (a) provisions for periodic reporting of compliance status to the Director-General including at least prior to the commencement of construction of the project, prior to the

- commencement of operation of the project and within two years of operation commencement;
- (b) a programme for independent environmental auditing in accordance with *AS/NZ ISO 19011:2003 - Guidelines for Quality and/or Environmental Management Systems Auditing*;
- (c) procedures for rectifying any non-compliance identified during environmental auditing or review of compliance;
- (d) mechanisms for recording environmental incidents and actions taken in response to those incidents;
- (e) provisions for reporting environmental incidents to the Director-General during construction and operation; and
- (f) provisions for ensuring all employees, contractors and sub-contractors are aware of, and comply with, the conditions of this approval relevant to their respective activities.

## **CONSTRUCTION ENVIRONMENTAL MANAGEMENT**

### **Environmental Representative**

B55 Prior to the commencement of pre-construction or construction activities, the Proponent shall nominate for the approval of the Director-General a suitably qualified and experienced Environmental Representative(s) who is independent of the design, construction and operation personnel. The Proponent shall engage the Environmental Representative(s) prior to construction until at least six months after commencement of operation, or as otherwise agreed by the Director-General. The Environmental Representative(s) shall:

- (a) monitor the implementation of all environmental management plans and monitoring programmes required under this approval;
- (b) monitor the outcome of all environmental management plans and advise the Proponent upon the achievement of all project environmental outcomes;
- (c) have responsibility for considering and advising the Proponent on matters specified in the conditions of this approval, and all other licences and approvals related to the environmental performance and impacts of the project;
- (d) ensure that environmental auditing is undertaken in accordance with the requirements of condition B54 and the project Environmental Management System(s);
- (e) be consulted in responding to the community concerning the environmental performance of the project; and
- (f) have the authority and independence to recommend to the Proponent reasonable steps to be taken to avoid or minimise unintended or adverse environmental impacts, and, failing the effectiveness of such steps, to recommend to the Proponent that relevant activities are to be ceased as soon as reasonably practicable if there is a significant risk that an adverse impact on the environment will be likely to occur, until reasonable steps are implemented to avoid such impact.

### **Construction Environmental Management Plan**

B56 The Proponent shall prepare and implement a Construction Environmental Management Plan (CEMP) to outline environmental management practices and procedures to be followed during construction of the project. The Plan shall be consistent with the *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004 or its latest revision). The Plan shall be prepared in consultation with Councils, NOW and HWC and include, but not necessarily be limited to:

- (a) a description of all relevant activities to be undertaken on the site during construction including an indication of stages of construction, where relevant;
- (b) identification of the potential for cumulative impacts with other construction activities occurring in the vicinity and how such impacts would be managed;
- (c) details of any construction sites and mitigation, monitoring, management and rehabilitation measures specific to the site compound(s) that would be implemented;
- (d) statutory and other obligations that the Proponent is required to fulfil during construction including all relevant approvals, consultations and agreements required from authorities and other stakeholders, and key legislation and policies;
- (e) evidence of consultation with relevant public authorities required under this condition and how issues raised by the agencies have been addressed in the plan;
- (f) a description of the roles and responsibilities for all relevant employees involved in the construction of the project including relevant training and induction provisions for ensuring

- that all employees, contractors and sub-contractors are aware of their environmental and compliance obligations under these conditions of approval;
- (g) details of how the environmental performance of construction would be monitored, and what actions would be taken to address identified potential adverse environmental impacts;
- (h) specific consideration of relevant measures to address any requirements identified in the documents referred to under condition A1 of this approval;
- (i) a complaints handling procedure during construction as identified in conditions B51 to B53; and
- (j) a matrix of construction work method statements (or similar) to be prepared and the anticipated level of risk associated with each to be determined.

The Construction Environmental Management Plan shall be submitted for the approval of the Director-General no later than one month prior to the commencement of relevant construction works associated with the project, or within such lesser period otherwise agreed by the Director-General. Construction works shall not commence until written approval of the CEMP has been received from the Director-General.

B57 As part of the Construction Environmental Management Plan required under condition B56 of this approval, the Proponent shall prepare and implement the following:

- (a) a **Flora and Fauna Management Plan**, prepared in consultation with the relevant Council and with reference to the OEH requirements, to outline measures to protect and minimise loss of native vegetation and native fauna habitat as a result of construction of the project. The Plan shall include, but not necessarily be limited to:
  - (i) plans showing terrestrial vegetation communities; important flora and fauna habitat areas; locations where EECs, native grasses are to be cleared. The plans shall also identify vegetation adjoining the site where this contains important habitat areas and/or threatened species, populations or ecological communities;
  - (ii) methods to manage impacts on flora and fauna species and their habitat which may be directly or indirectly affected by the project, such as location of fencing, procedures for vegetation clearing or soil removal/stockpiling and procedures for re-locating hollows or installing nesting boxes and managing weeds;
  - (iii) procedures to accurately determine the total area, type and condition of vegetation community to be cleared; and
  - (iv) a procedure to review management methods where they are found to be ineffective.
- (b) a **Cultural Heritage Management Plan**, developed in consultation with registered local Aboriginal stakeholders, to outline mitigation and management strategies for items of heritage significance that may be uncovered during construction of the project;
- (c) a **Groundwater Management Plan** prepared in consultation with NOW and HWC to detail how impacts to groundwater will be avoided and mitigated during the construction and operation of the project. The Plan shall integrate data from groundwater monitoring undertaken as required by condition B25 to set baseline and to establish targets and thresholds for the duration of the project. A contingency plan shall be developed as part of the Groundwater Management Plan in the event that groundwater is compromised during construction, such as through drawdown from horizontal directional drilling;
- (d) a **Surface Water Management Plan** prepared in consultation with NOW, HWC and the Port Stephens Council (particularly in regard to stormwater being conveyed from the gas storage facility site to Old Punt Road), to detail how surface water and stormwater will be managed on the site during construction and operation of the project. The plan shall include detailed design of all watercourse crossings, culverts and in-stream works, a programme to monitor and manage, and notification and mitigation of identified impacts of watercourse crossings, culverts and instream crossings. In particular, the design for the horizontal directional drilling under the Hunter River shall be provided, including an assessment of the depth of scour for the Hunter River, and demonstration that the HDD will be undertaken below this depth. The plan shall also include use of appropriately sized stormwater controls, in accordance with *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004). The plan shall include specific measures to avoid sediment-laden stormwater from entering the Hunter River, a monitoring programme for stormwater leaving the site (including the requirements for inspection reports required

- under condition B26) details of how hydrostatic test water would be disposed, and measures to mitigate contamination of soils and water;
- (e) a **Flood Emergency Response Plan** prepared in consultation with and to meet the reasonable requirements of Newcastle City Council and Port Stephens Shire Council;
  - (f) a **Noise Management Plan** to manage noise impacts during construction and to identify all feasible and reasonable noise mitigation measures. The Plan shall include, but not necessarily be limited to:
    - (i) details of construction activities and an indicative schedule for construction works;
    - (ii) identification of construction activities that have the potential to generate noise impacts on surrounding land uses, particularly residential areas;
    - (iii) details of the requirements for Noise Impact Statement(s) for discrete work areas, including construction site compounds;
    - (iv) identify all sensitive receivers where construction noise goals are predicted to be exceeded;
    - (v) detail what reasonable and feasible actions and measures would be implemented to minimise noise impacts;
    - (vi) consultation with the owner/occupiers of sensitive receivers (including receivers R4 (Tomago Village Caravan Park) and R5 (217 Maitland Road), where construction noise goals are expected to be exceeded, with the aim of identifying and implementing reasonable and feasible noise mitigation and management measures, including where necessary, the consideration of respite periods and alternative accommodation arrangements;
    - (vii) procedures for notifying sensitive receivers of construction activities that are likely to affect their noise amenity, as well as procedures for dealing with and responding to noise complaints;
    - (viii) an out-of-hours work (OOHW) protocol for the assessment, management and approval of works outside of standard construction hours as defined under this approval, including a risk assessment process under which the Environmental Representative may approve out-of-hour construction activities deemed to be of low environmental risk and refer high risk works for the Director-General's approval. The OOHW protocol shall detail standard assessment, mitigation and notification requirements for high and low risk out-of-hour works, and detail a standard protocol for referring applications to the Director-General; and
    - (ix) a description of how the effectiveness of these actions and measures would be monitored during the proposed works, clearly indicating how often this monitoring would be conducted, the locations where monitoring would take place, how the results of this monitoring would be recorded and reported; and, if any exceedence is detected, how any non-compliance would be rectified;
  - (g) a detailed **Acid Sulphate Soil Management Plan** prepared in consultation with DPI (Aquatic Habitat Protection Unit), and NOW prior to any construction activity in areas mapped as Potential Acid Sulphate Soils or Actual Acid Sulphate Soils. The plan shall include reference to the water quality monitoring programme contained in the Groundwater and Surface Water Management Plans. The plan shall be prepared in accordance with the Acid Sulphate Soils Manual (ASSMC, 1998). As part of the plan, a Contingency Plan to deal with the unexpected discovery of actual or potential acid sulphate soils shall be prepared in consultation with NOW; and
  - (h) a **Traffic Management Plan** to manage traffic conflicts that may be generated during construction. The Plan shall address the requirements of the relevant road authority and shall include, but not necessarily be limited to:
    - (i) details of how construction of the project will be managed in proximity to local and regional roads;
    - (ii) details of traffic routes for heavy vehicles, including any necessary route or timing restriction for oversized loads;
    - (iii) measures to minimise and manage traffic noise;
    - (iv) an assessment of sufficient access for emergency vehicles to ensure the proposed traffic arrangements meet the requirements detailed in *Guidelines for Emergency Vehicle Access Policy No 4* (NSW Fire Brigades, 2010);
    - (v) demonstration that all statutory responsibilities with regard to road traffic impacts have been complied with;
    - (vi) details of measures to minimise interactions between the project and other users of the roads such as the use of fencing, lights, barriers, traffic diversions etc;



- (vii) procedures for informing the public where any road access will be restricted as a result of the project;
  - (viii) procedures to manage construction traffic to ensure the safety of livestock and to minimise disruption to livestock;
  - (ix) speed limits to be observed along routes to and from the site and within the site; and
  - (x) details of the expected behavioural requirements for vehicle drivers travelling to and from the site and within the site.
-

## PART C – PRIOR TO AND DURING OPERATION

### BIODIVERSITY

- C1 The Proponent shall design, install and maintain all fencing – other than operational site security fencing – in a manner that does not impede the passage of koalas or other native fauna.

#### Biodiversity Offset Package

- C2 The Proponent shall develop and implement a **Biodiversity Offset Package** in consultation with the OEH and Port Stephens Council, consistent with the Biodiversity Offset Strategy approved under condition B13 of this approval. The package shall be consistent with the Biobanking Methodology under the Biobanking and Offsets Scheme outlined in *Biobanking Assessment Methodology and Credit Calculator Operational Manual* (DECC, 2009). The Package shall result in the establishment of one or more offset sites to give effect to the requirements of the Biodiversity Offset Strategy, which shall be underpinned by a Plan of Management and an appropriate mechanism to ensure long-term conservation and financial security of the offset site(s). The Package shall be submitted for the approval of the Director-General at least one month prior to the commencement of operation of the project.

### HAZARDS AND RISK

- C3 During operation, the Proponent shall store and handle all dangerous goods, as defined by the Australian Dangerous Goods Code, strictly in accordance with:
- (a) all relevant Australian Standards; and
  - (b) DECC's *Environment Protection Manual Technical Bulletin – Bunding and Spill Management*.

In the event of an inconsistency between the requirements listed from (a) to (b) above, the most stringent requirement shall prevail to the extent of the inconsistency.

#### Operational Hazards Studies

- C4 At least two months prior to commissioning the project, or as otherwise agreed by the Director-General, the Proponent shall prepare and submit the following plans for the approval of the Director-General:
- (a) A comprehensive **Emergency Plan** and detailed emergency procedures for the proposed project. This plan shall include consideration of the safety of all people outside of the project who may be at risk from the project. The plan shall be consistent with the *Hazardous Industry Planning Advisory Paper No. 1 – Industry Emergency Planning Guideline* (DoP, 2011); and
  - (b) A document setting out a comprehensive **Safety Management System**, covering all on-site operations and associated transport activities involving hazardous materials. The document shall clearly specify all safety related procedures, responsibilities and policies, along with details of mechanisms for ensuring adherence to the procedures. Records shall be kept on-site and shall be available for inspection by the Director-General upon request. The Safety Management System shall be consistent with the *Hazardous Industry Planning Advisory Paper No. 9 – Safety Management* (DoP, 2011).

Commissioning shall not commence until approval has been given by the Director-General.

#### Pre-Startup Compliance Report

- C5 At least one month prior to the commencement of operation of the project, or as otherwise agreed by the Director-General, the Proponent shall submit to the Director-General, a report detailing compliance with conditions B16 and C4 of this approval, including:
- (a) dates of study/plan/system submission, approval, commencement of construction and commissioning;
  - (b) actions taken or proposed, to implement recommendations made in the studies/plans/systems; and
  - (c) responses to each requirement that may be imposed by the Director-General under condition A3.

#### Post-Startup Compliance Report

- C6 Within three months of the commencement of operation of the project, or as otherwise agreed by the Director-General, the Proponent shall submit to the Director-General, a report verifying that:
- (a) the Emergency Plan required under condition C4 is effectively in place and that at least one emergency exercise has been conducted; and
  - (b) the Safety Management System required under condition C4 has been fully implemented and that records required by the system are being kept.

#### Hazard Audit

- C7 Within 12 months of the commencement of operation of the project and every three years thereafter, or at such intervals as the Director-General may agree, the Proponent shall carry out a comprehensive Hazard Audit of the project and within one month of each audit submit a report to the Director-General. The audits shall be carried out at the Proponent's expense by a qualified person or team, independent of the project, approved by the Director-General prior to commencement of each audit. Hazard Audits shall be consistent with *Hazardous Industry Planning Advisory Paper No. 5 Hazard Audit Guidelines* (DoP, 2011). Each audit report must be accompanied by a programme for the implementation of all recommendations made in the audit report. If the Proponent intends to defer the implementation of a recommendation, reasons must be documented.

## NOISE

### Operational Noise Criteria

- C8 The Proponent shall design, construct, operate and maintain the project to ensure that the noise contribution from the project at each receiver location does not exceed the noise limits specified in Table C1.

**Table C1: Maximum Allowable Noise Limits (dB(A))**

Location	Day 7:00am to 6:00pm Mondays to Saturdays 8:00am to 6:00pm Sundays and public holidays	Evening 6:00pm to 10:00pm on any day	Night 10:00pm to 7:00am Mondays to Saturdays 10:00pm to 8:00am Sundays and public holidays	
	L <sub>Aeq</sub> (15-minute)	L <sub>Aeq</sub> (15-minute)	L <sub>Aeq</sub> (15-minute)	L <sub>A1</sub> (1-minute)
217 Old Maitland Road	49	42	42	55
Hunter Botanical Gardens	50	50	50	N/A
5 Graham Drive	35	35	35	45
185 Old Maitland Road	35	35	35	45
45 School Drive	35	35	35	45
Tomago Caravan Park	35	35	35	45

The receiver locations set out in Table C1 are those identified in Table 7.39 and Figure 7.29 of the EA.

If noise from the project is substantially tonal, intermittent or impulsive in nature or contains major components within the low frequency range (as described in Chapter 4 of the *NSW Industrial Noise Policy* (EPA, 2000)), 5 dB(A) shall be added to the measured noise level when comparing the measured noise with the limits specified in Table C1, in accordance with the requirements of the *NSW Industrial Noise Policy*.

The noise limits set out in Table C1 do not apply under: wind speeds greater than 3 m/s at 10 metres above ground level; or under stability category F temperature inversion conditions when wind speeds are greater than 2 m/s at 10 metres above ground level; or under stability category G temperature inversion conditions. Stability category temperature inversion conditions shall be determined by the sigma-theta method referred to in Part 4E of Appendix E of the *NSW Industrial Noise Policy*. The meteorological data to be used for determining meteorological conditions shall be those recorded by monitoring station referred to under condition B37.

- C9 The Proponent shall develop and implement a **Noise Monitoring Programme** in consultation with and to meet the requirements of the OEH. The Programme shall aim to demonstrate compliance with the noise limits under condition C8 of this approval during operation of the project.

## AIR QUALITY

### Odour

- C10 During operation, the Proponent shall ensure no offensive odour as defined under the *Protection of the Environment Operations Act 1997* is emitted from the project site, which impacts on any sensitive receiver.

### Dust

- C11 The Proponent shall employ reasonable and feasible measures to ensure that the project is operated in a manner that minimises or prevents the emission of dust.

### Operational Air Quality Criteria

- C12 The Proponent shall design, construct, operate and maintain the project to ensure that the discharge concentration limits specified in Table C2 are not exceeded at the nominated discharge point at the listed reference conditions. For the purpose of this condition, discharge locations are as identified in Figure 2.1 of *Air Quality and Greenhouse Gas Assessment – Newcastle Gas Storage Facility* (Coffey Natural Systems Pty Ltd, February 2011), provided as Appendix 14 to the EA.

**Table C2: Maximum Allowable Air Discharge Limits**

Discharge Point	Pollutant	Limit	Reference Conditions
Stack associated with the Gas Liquefaction System (Point 9 in the EA)	Nitrogen oxides (as NO <sub>2</sub> )	250 mg/m <sup>3</sup>	273K, 101.3kPa
	Volatile organic compounds (VOCs, as n-propane) or carbon monoxide (CO)	5 mg/m <sup>3</sup> (VOCs) 100 mg/m <sup>3</sup> (CO)	Dry, 273K, 101.3kPa, 3% O <sub>2</sub>
	Solid particles	5 mg/m <sup>3</sup>	273K, 101.3kPa
	Sulphur oxides (includes SO <sub>2</sub> and SO <sub>3</sub> or sulphuric acid mist)	60 mg/m <sup>3</sup>	273K, 101.3kPa
Stack associated with the Regassifier or LNG Vaporiser (Point 4 in the EA)	Nitrogen oxides (as NO <sub>2</sub> )	190 mg/m <sup>3</sup>	273K, 101.3kPa
	Volatile organic compounds (VOCs, as n-propane) or carbon monoxide (CO)	20 mg/m <sup>3</sup> (VOCs) 125 mg/m <sup>3</sup> (CO)	Dry, 273K, 101.3kPa, 3% O <sub>2</sub>
	Solid particles	40 mg/m <sup>3</sup>	273K, 101.3kPa
	Sulphur oxides (includes SO <sub>2</sub> and SO <sub>3</sub> or sulphuric acid mist)	5 mg/m <sup>3</sup>	273K, 101.3kPa

- C13 For the purpose of demonstrating compliance with discharge limits specified under condition C12 of this approval, the Proponent shall monitor the pollutants listed in Table C3 at each of the discharge points listed under condition C12, and applying the sampling methods and units of measure specified. Monitoring shall be undertaken quarterly for the first year following commissioning, and thereafter as may be agreed by the OEH. Two consecutive non-detectable results may be the basis for discontinuation of monitoring of that particular pollutant at any time.

**Table C3: Discharge Monitoring Requirements**

Pollutant	Units of Measure	Sampling Method
Nitrogen oxides	mg/m <sup>3</sup>	TM-11
Volatile organic compounds (VOCs)	mg/m <sup>3</sup>	OM-2
Solid particles	mg/m <sup>3</sup>	TM-15
Sulphuric acid mist and sulphur dioxide	mg/m <sup>3</sup>	TM-3
Sulphur dioxide	mg/m <sup>3</sup>	TM-4
Dry gas density	kg/m <sup>3</sup>	TM-23
Moisture	%	TM-22
Molecular weight of stack gas	g/gmol	TM-23
Oxygen	%	TM-25
Carbon dioxide	%	TM-25
Temperature	K	TM-2
Velocity	m/s	TM-2
Volumetric flow rate	m <sup>3</sup> /s	TM-2
Selection of sampling points	N/A	TM-1

## SOILS, WATER AND HYDROLOGY

- C14 Except as may be expressly provided by an Environment Protection Licence for the project, the Proponent shall comply with section 120 of the *Protection of the Environment Operations Act 1997* during operation of the project.
- C15 Prior to the commencement of operation of the project, the Proponent shall arrange for and implement a **Flood Emergency Response Plan**. The Plan shall be prepared by an independent, qualified flood engineer experienced in flood management. The Plan shall be updated and maintained where appropriate and include an education and awareness component for the workforce and detailed evacuation procedures to interface with the Bureau of Meteorology's flood warning system and the local State Emergency Services Plan (where appropriate) and to include provisions for any third parties likely to be involved. The Plan shall include the following components:
- likely flood behaviour;
  - flood warning systems;
  - education awareness programmes;
  - evacuation and evasion procedures;
  - evacuation routes and flood refuges;
  - flood preparedness and awareness procedures for staff and visitors; and
  - means to minimise risk and damage to gas plant infrastructure.

Consideration shall include the full range of flood risks (including climate change associated risks), the proposed use of the site, site access constraints and local area evacuation routes to high ground.

## TRAFFIC AND TRANSPORT

- C16 Prior to the commencement of operation of the project, the Proponent shall commission a suitably qualified road infrastructure specialist to assess the condition of all public roads traversed by construction traffic associated with the project (including over-mass or over-dimensional vehicles) in consultation with Council and the RMS and taking into account the Pre-Construction Road Inspection Report prepared under the requirements of B32. Should the Pre-Operational Road Inspection Report identify any damage to roads attributable to construction traffic associated with the project, the Proponent shall repair the roads consistent with the recommendations of the report, within such time as agreed to with the relevant Council and the RMS and to meet the reasonable requirements of the relevant Council and the RMS. The **Pre-Operation Road Inspection Report** shall be submitted to the Director-General prior to the commencement of operation, clearly identifying recommendations made by relevant Councils and the RMS and how these have been addressed, to the satisfaction of the Director-General.

## WASTE MANAGEMENT

- C17 The Proponent shall not cause, permit or allow any waste generated outside the site to be received at the site for storage, treatment, processing, reprocessing, or disposal on the site during operation, except as expressly permitted by a licence under the *Protection of the Environment Operations Act 1997*, if such a licence is required in relation to that waste.
- C18 The Proponent shall maximise the reuse and/or recycling of operation waste materials generated on site, to minimise the need for treatment or disposal of those materials outside the site.
- C19 The Proponent shall ensure that all liquid and/or non-liquid operation waste generated by the project is assessed and classified in accordance with the *Waste Classification Guidelines* (DECC 2008, or any future guideline that may supersede that document) and where removed from the site is only directed to a waste management facility lawfully permitted to accept those materials (unless otherwise permitted by an applicable Environment Protection Licence under the *Protection of the Environment Operations Act 1997*).
- C20 The Proponent must seek prior approval under the *Local Government Act 1993* for the installation and operation of a human waste storage facility.

## VISUAL AMENITY

- C21 The Proponent shall:
- (a) take all reasonable and feasible measures to mitigate off-site lighting impacts from the operation of the project; and
  - (b) ensure that all external lighting associated with operation of the project complies with *Australian Standard AS4282 – 1997 – Control of the Obtrusive Effects of Outdoor Lighting*.

This condition does not apply to lighting required for aviation safety.

## ENVIRONMENTAL MANAGEMENT

### Operation Environmental Management Plan

- C22 The Proponent shall prepare and implement an Operation Environmental Management Plan (OEMP) for the project, in accordance with *Guideline for the Preparation of Environmental Management Plans* (DIPNR, 2004) or its latest version. The Plan shall be prepared in consultation with Councils, NOW and HWC and include, but not necessarily be limited to:
- (a) identification of all statutory and other obligations that the Proponent is required to fulfil in relation to the operation of the development, including all consents, licences, approvals and consultations;
  - (b) specific consideration of relevant measures to address any requirements identified in the documents referred to under condition A1;
  - (c) a management organisational chart identifying the roles and responsibilities for all relevant employees involved in the operation of the project;
  - (d) overall environmental policies and principles to be applied to the operation of the project;
  - (e) management policies to ensure that environmental performance goals are met and to comply with the conditions of this approval;
  - (f) standards and performance measures to be applied to the project, and means by which environmental performance can be periodically reviewed and improved (where appropriate), including what actions will be taken to address identified potential adverse environmental impacts. In particular, the following environmental performance issues shall be addressed in the Plan:

- (i) noise emissions, including measures for regular performance monitoring of noise generated by the project and measures to proactively respond to and deal with noise complaints;
- (ii) air quality impacts;
- (iii) operational traffic impacts, particularly during maintenance, and procedures to restore any damage attributable to the project during the operation phase;
- (iv) hazard and safety and emergency management measures, including measures to prevent and control bushfires;
- (v) groundwater management; and
- (vi) surface water management.
- (g) procedures for the periodic review and update of the Operation Environmental Management Plan as necessary; and
- (h) the environmental monitoring requirements outlined under this approval.

The OEMP shall be submitted for the approval of the Director-General no later than one month prior to the commencement of operation of the project or within such lesser period as otherwise agreed by the Director-General. Operation activities shall not commence until written approval of the OEMP has been received from the Director-General.

- C23 To avoid any doubt, the Groundwater Management Plan and the Surface Water Management Plan required under condition B57 shall continue to be applied during operation.
-