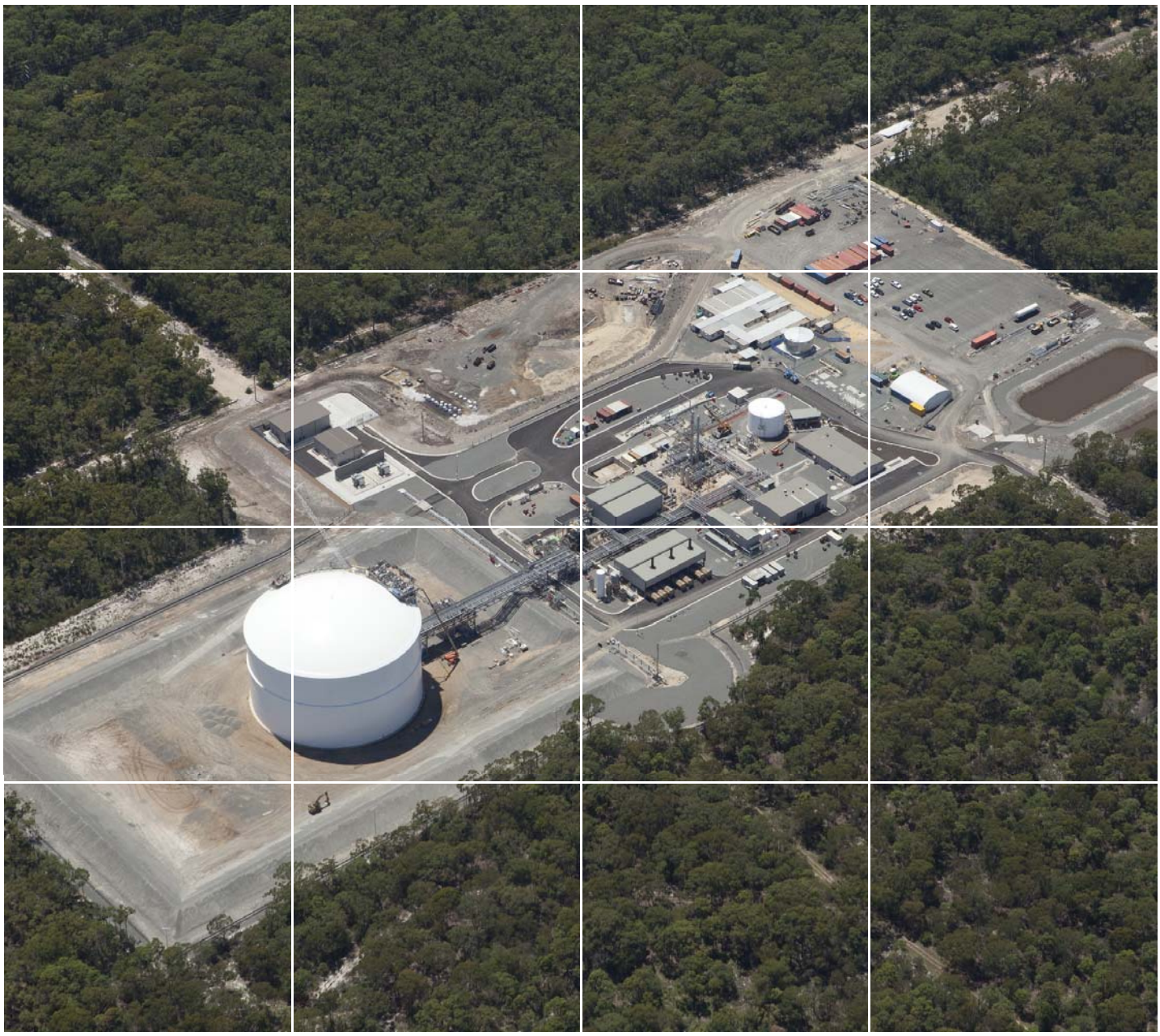

Newcastle Gas Storage Facility

6th Six Monthly Compliance Report (Final Construction Report) June 2015

AGL Energy Limited

June 2015

0169504 Final

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Newcastle Gas Storage Facility

6 Monthly Construction Compliance Report
28 February 2015 to 4 June 2015

June 2015

Reference: 0169504_5th SMCR

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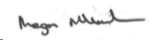
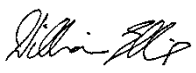
Newcastle Gas Storage Facility

6 Monthly Construction Compliance Report

28 February 2015 to 4 June 2015

AGL Energy Limited

June 2015

Approved by:	*Megan McLachlan*
Position:	Project Manager
Signed:	
Date:	*22 June, 2015*
Approved by:	*William Ellis*
Position:	Partner Director
Signed:	
Date:	*22 June, 2015*

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ABBREVIATIONS

Term	Description
AGL	AGL Energy Limited
ASS	acid sulphate soil
ASSMSP	Acid Sulfate Soil Management Sub Plan
BTEX	benzene, toluene, ethylbenzene and xylenes
C	Conformance
CB&I	CB&I Constructers Pty Ltd
CEMP	Construction Environment Management Plan
CHM SP	Cultural Heritage Management Sub Plan
CTP	Compliance Tracking Program
DECC	Department of Environment and Climate Change
DG	Dangerous Good
DGMP	Dangerous Goods Management Sub Plan
DPI	Department of Primary Industries
DP&I	Department of Planning and Infrastructure
DSEWPaC	Department of Sustainability, Environment, Water, Population and Communities
ECN	Electrical Connection Works in Primary Project Area
EPA	Environment Protection Authority
EP&A Act	*Environmental Planning and Assessment Act 1979*
EPBC Act	*Environment Protection and Biodiversity Conservation Act 1999*
EPL	Environment Protection Licence
ER	Environmental Representative
ERM	Environmental Resources Management Australia Pty Ltd
ERP	Emergency Response Plan
ESCP	Erosion and Sediment Control Plans
EWMA	Exponentially Weighted Moving Average
HDD	Horizontal Directional Drilling
HPW	High Pressure Pipeline Works
HWC	Hunter Water Corporation
HRBG	Hunter Region Botanical Gardens
HV	High Voltage
IO	Improvement Opportunity
HRS	Hexham Receiving Station
JBS&G	JBS&G (NSW & WA) Pty Ltd
JRS	Jemena Receiving Station
LEP	Local Environmental Plan (LEP)
LNG	Liquid Nitrogen Gas
LOR	level of reporting
LPW	Low Pressure Pipeline Works
LV	Low Voltage
Lucas Engineering	Lucas Engineering and Construction Pty Ltd
MCoA	Ministers Conditions of Approval
MEIP	Miscellaneous Environmental Impacts Plan
MSDS	Material Safety Data Sheet
NC-1	Non-conformance Category 1
NC-2	Non-conformance Category 2
NCC	Newcastle City Council
NEPM	National Environment Protection Measure (Assessment of Site Contamination)
NGSF	Newcastle Gas Storage Facility (the 'Project')
NOW	New South Wales Office of Water
NVMSP	Noise and Vibration Management Sub Plan
OCP	Organochlorine pesticides
OEH	Office of Environment and Heritage
OOHW	Out of Hours Work

Term	Description
PAH	Polycyclic aromatic hydrocarbons
PASS	potential acid sulfate soil
PCB	polychlorinated biphenyls
PoEO Act	*Protection of the Environment Operations Act 1997*
PPA	Primary Project Area
PSC	Port Stephens Council
SDS	Safety Data Sheet
SEPP	State Environmental Planning Policy
SMSP	Soil Management Sub Plan
SoC	Statement of Commitments
SWMS	Safe Work Method Statement
SQE	Safety Quality Environment
SWMSP	Surface Water Management Sub Plan
TDS	total dissolved solids
TPH	total petroleum hydrocarbons
UGOH	Underground Supply to Overhead Structures
WAL	Water Access Licence

1 INTRODUCTION

1.1 PROJECT DESCRIPTION

AGL Energy Limited (AGL) is developing the Newcastle Gas Storage Facility (NGSF) in Tomago New South Wales to meet AGL's peak gas market requirements over winter and to provide additional security of gas supply during supply disruption events. New South Wales currently has no reliable gas storage capacity.

Construction of the Newcastle Gas Storage Facility (the Project) includes the following components by various contractors:

- Primary Project Area (PPA) - gas storage facility site, access road and utility corridor and gas pipeline access corridor by CB&I Constructers Pty Ltd (CB&I). These works have now been completed;
- Primary Project Area – Electrical Connection (ECN) - construction of the main power supply by PowerServe until June 2014 with Downer EDI commencing July 2014 to complete the works. These works were completed prior to this reporting period;
- High Pressure Pipeline Works (HPW) - construction of the gas pipeline to connect the existing Jemena Gate Station at Hexham with the NGSF by Lucas Engineering. These works were completed prior to this reporting period;
- Low Pressure Pipeline Works (LPW) - construction of the Low Pressure Pipeline between the NGSF and the existing gas piping system which includes the Tomago Aluminium Company (TAC) Easement and the Main Access Road to the NGSF by Lucas Engineering. These works have now been completed;
- Jemena Receiving Station (JRS) – connection of pipeline to receiving station located in Hexham by Downer EDI. These works were completed prior to this reporting period.

1.2 PROJECT APPROVAL

The Minister for Planning approved the Project (11/08788), on 10 May 2012 subject to the conditions recommended in the Director General's report. On 5 February 2013 a modification of the Conditions of Approval (CoA) was issued under Part 75W of the *Environment Planning and Assessment Act 1979* (EP&A Act).

1.3 PURPOSE AND SCOPE OF THIS COMPLIANCE REPORT

This Compliance Report has been developed for the purpose of satisfying CoA B54 (a) which requires "*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*".

The Project commenced on 27 August 2012. The Compliance Tracking Program (CTP) for the project requires a review of the compliance status of the project against the CoA and Statement of Commitments (SoC) to be conducted every six months during the construction phase of the project and prior to the commencement of operation. This review is to be subsequently reported to the Director General. As such, and in accordance with the CTP, this construction compliance report covers the construction period from 28 February 2015 to 4 June 2015 inclusive. Construction was finalised 29 May 2015 with practical completion expected in mid-June 2015.

As described in the CTP, AGL and the Construction Contractors are all responsible for compliance with the requirements of the CoA however; AGL will be responsible for maintaining the CTP for the Project and for the preparation of the periodic compliance tracking reports. The Construction Contractors will provide input to AGL, as required, to enable AGL to complete these reports.

Table 1.1 identifies information required to satisfy CoA B54 and where this information is presented.

Table 1.1 Compliance Tracking Program Commitments

AGL Commitment	Section of Compliance Report
At six monthly intervals throughout construction, subsequent to reviewing the compliance status of the project as discussed in *Section 2*, AGL will provide the compliance status to the Director-General in the form of a compliance tracking report. AGL will retain responsibility for preparing this report for the duration of the Project. The Construction Contractors will provide input to enable AGL to complete the compliance tracking reports as required. AGL will ensure that compliance tracking reports include the following information:	This report
• Scope of the activities undertaken during the reporting period;	*Section 2*
• Performance of environmental controls that have been implemented;	*Section 3*

• Evaluation of compliance against the CoA and SoCs in tabular format. These tables establish a format for recording compliance and include:
  • Description of the environmental obligation;
  • Timing (i.e. project stage);
  • Responsibility;
  • Compliance status; and
  • Evidence of compliance.
	Section 7 and *Annex A*

• Non-compliances during the reporting period;	*Section 8*
• Outcomes of monitoring undertaken over the reporting period and review of compliance against relevant criteria;	*Section 4*

AGL Commitment	Section of Compliance Report
• Significant outcomes of audits and inspections undertaken during the reporting period; and	*Section 5*
• Substantiated environmental complaints received; AGL's response and current status.	*Section 6*

2 SCOPE OF CONSTRUCTION ACTIVITIES UNDERTAKEN

A summary of the major construction activities undertaken during the reporting period is provided in *Table 2.1*.

Table 2.1 Construction Activities Undertaken during Reporting Period

Month	CB&I (PPA)	Lucas Engineering (LPW/HPW)
March 2015	• Commissioning of LNG tank, WPG vaporizing, pre-treatment and cooling WPG systems • Commissioning of utilities including Fire Water system • Continue piping and equipment insulation and punch listing • Electrical & Instrumentation works • Piping nitrogen purging completed • Continue commissioning of systems • First gas on site 31/3/2015	• Primary Project Area - Electrical and Instrumentation (E&I): Installation of cables, cable tray, earthing, instruments, and terminations continued • Low Pressure (LP) Line: pipeline tie in works at Tomago Aluminium Company site (TAC)
April 2015	• Commissioning of LNG tank, WPG vaporizing, Pre-treatment and cooling WPG systems • Commissioning of utilities including: o Pumps Compressors and drivers; o Demineralised water system; o Sumps; o Fire Water Suppression o Fuel Gas, Flare, Diesel Fuel, VSG Driver & Fire Water Pump o Instrument Air; o Nitrogen; o Fire water, potable water & demineralised water o Pre-treatment Polypropylene Glycol. o Vaporizer Propylene Glycol o Cooling Propylene Glycol o Storm Water System • Continue piping and equipment insulation and punch listing • Electrical & Instrumentation installation completion & punch listing.	• Minor tie in works in Primary Project Area continuing • Low Pressure (LP) Line: pipeline tie in works at Tomago Aluminium Company site (TAC) completed and area reinstated

Month	CB&I (PPA)	Lucas Engineering (LPW/HPW)
May 2015	• Construction 100% completed • Site demobilisation and clean up	• Tie in works Primary Project Area completed
June 2015	• Site commenced operations	• Site commenced operations

3 ENVIRONMENTAL CONTROLS

3.1 SUMMARY OF ENVIRONMENTAL CONTROLS

The environmental controls implemented by CB&I and Lucas Engineering during the reporting period and their effectiveness are listed in *Table 3.1* to *3.2* respectively.

Table 3.1 CB&I (PPA) Environmental Controls Implemented

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
General	• Construction Environment Management Plan (CEMP) implemented and complied with • All approvals and licences obtained and/maintained • Works undertaken in accordance with licence requirements • Environmental awareness, inductions and CEMP requirement training undertaken • Incidents managed in accordance with management procedures • Works conducted in a manner so as to not cause community complaints • Qualified and experienced environmental personnel on-site full-time	• Checks against implementation of CEMP completed during ER inspections and audits • 10th quarter environmental audit by the ER identified 11 non-conformances and 1 improvement opportunity • Environment Protection License transferred to AGL for operations phase 4 May 2015 • EPL annual return completed • EPL requirements met • No complaints regarding noise, dust or odour from the community • Areas requiring bunding are bunded • Plant and equipment inspected for environmental compliance before entry to site • Plant and equipment maintained or removed from site for repair as required • Environmental awareness training in the form of inductions, pre starts and specific issue training carried out as required • Incidents involving minor leaks and spills occurred during the reporting period and were managed as per license conditions and procedures • No complaints received from the community during the reporting period • Daily and weekly environment inspections completed
Groundwater Monitoring	• Monitor and assess groundwater quality with respect to background concentrations • Appropriate vehicle maintenance checks and spill containment equipment will also be adopted to mitigate potential risks of groundwater contamination • Ensure suitable protection of AGL groundwater monitoring bores during construction • All amenities wastewater will be collected and stored before transporting off-site for treatment or disposal	• Six monthly groundwater monitoring conducted by third party consultants • Groundwater license under Part 5 of Water Act 1912 for drilling into Tomago aquifer not required as per consultation with NOW • Plant and vehicles inspected and deemed free of leaks, weeds, excessive noise and smoke before being permitted onto site • Daily prestart checks completed on all stationary and mobile plant which include check for leaks • Spill kit available on plant including stationary spill kits located across all areas • Groundwater bores flagged to prevent accidental damage in field

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
	• Install groundwater monitoring piezometer downstream of the holding tank for wastewater and regularly sampled for pathogens and nutrients	• Amenities wastewater collected by licensed contractor and disposed at a licensed facility • Groundwater piezometers (MW5 and MW15) used to monitor for pathogens and nutrients in groundwater down gradient of the wastewater holding tank • Pathogens not present in MW15
Surface Water	• Maintain dedicated refuelling and chemical storage areas • Test and treat water generated by dewatering of trenches or excavations if required, and infiltrate back into the groundwater table at designated infiltration areas, or alternatively transport offsite to a licensed disposal facility • Regularly inspect erosion control structures and bunded areas • Ensure silt fences are in a vertical position and securely fixed and remove sediment or residue behind sediment control barriers • Store potentially contaminating chemicals in bunded areas capable of capturing 110% of the maximum spill volume	• Refuelling areas and chemical stores are bunded • Dedicated refuelling areas and chemical stores area bunded • Water quality monitoring undertaken prior to the release of the water into receiving environment, conducted in accordance with the Surface Water Management Plan • Water released from process area sump and hardstand near firewater tank • There are no areas of significant sediment accumulation behind silt fences • CB&I maintains chemical stores – now removed • Chemical stores regularly inspected
Cultural Heritage	• Identified Aboriginal or Heritage sites will be identified on constraints maps with relevant protection measures detailed in the sub plan • Site personnel will be made aware of heritage issues during toolbox talks and inductions • Maintain aboriginal cultural heritage artefacts in a Temporary Keeping Place on site	• Previously inspected heritage areas are now covered by construction works • Site personnel are made aware of aboriginal cultural heritage finds during the initial site induction • All artefacts are securely stored in the CB&I office located in the Primary Project Area – now transferred to AGL administration building for final burial
Vegetation Rehabilitation	• Weed control will be achieved by a combination of slashing, mowing and herbicide application • Use native vegetation grown from local seed banks for revegetation where appropriate • During-construction, stockpiles should be inspected for the presence of weed species which may require herbicide application to prevent the contamination of top soil which could increase the risk of weed infestation following topsoil re-spreading	• Weeds were removed by hand around construction areas and the perimeter of the site • Fireweed noted as the predominant species on site • Flatweed is the second most predominant species on site • Slopes were stabilised with mulch and hydroseeded in 2013 • No other plantings have taken place • There are no weed species identified on topsoil stockpiles within the CB&I project area

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
Flora and Fauna	• Monitor trenches and excavations daily for trapped animals such as reptiles and small ground-dwelling mammals • Inspect open excavations and trenches for fauna ramps to allow animals that have fallen into the trench to make their way out • Trim vegetation where possible rather than removing it	• No trapped animals retrieved from holding ponds • There are no open excavations on site • No trapped animals were found • No open trenches during reporting period • No trimming of vegetation was required during the reporting period
Soil Management	• Stockpiles of topsoil (which are likely to contain a viable seedbank) are to have a maximum height of 1 m • Soils imported to site must be either VENM or be a material that has a Site Specific Exemption approved by EPA • Soil that is to be disposed to landfill must be assessed in accordance with the NSW DECCW (2009) Waste Classification Guidelines (superseded by EPA (2014) Waste Classification Guidelines • Unexpected finds	• All topsoil stockpiles are at or below 1m in height • No further topsoil stockpiles generated during reporting period • No soil was removed to landfill during the reporting period • There were no unexpected finds during the reporting period
Acid Sulfate Soil	• Store excavated ASS in conditions that simulate its natural state, or treat and store away from water bodies and drainage lines	• There were no activities requiring the excavation and or storage of ASS during the reporting period
Noise and Vibration	• Restrict noise generating construction activities to daytime hours (7.00 a.m. to 6.00 p.m. Monday to Friday and 8.00 a.m. to 1.00 p.m. Saturday). In special circumstances, if noise generating evening or night work is required, a consultation process will be undertaken to ensure noise impacts can be adequately controlled • Schedule high noise generating activities for less sensitive times of the day (including periodic respite breaks from noise) • Consult potential noise receptors (particularly those within 500 m of the gas pipeline works) about the nature of the noise emissions and avoidance and mitigation practices to be adopted. Complaints and feedback and will be recorded and addressed where practical • Spot check construction noise on the property boundary of HRBG	• Inaudible out of hours work notifications were approved for day works for subcontractors • There were no activities considered to be high noise generating in normal working hours • Potential noise receptors are informed of construction activities during community meetings chaired by AGL • There were no complaints from the public regarding CB&I's work during or outside of standard construction hours • Auditory noise check of plant and equipment indicates it is operating within the specified noise range • No plant was suspected of being noisy so attended monitoring was not conducted • Attended plant noise monitoring conducted in previous months has found no exceedance

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
Traffic	• Speed limits to be observed along routes to and from the site and within the site • Inform transport operators of details of traffic routes for heavy vehicles, including any necessary route or timing restriction for oversized loads • Convey expected behavioural requirements for vehicle drivers travelling to and from the site and within the site	• Subcontractors informed of traffic route at pre-tender stage • Workers informed of giving way to animals and reporting site road kill during induction • Heavy vehicle traffic is following designated route from Pacific Highway to Old Punt Road • Posted speed limits being followed • Workers involved in transport informed of restricted traffic routes in contract agreements and during site induction • No road kill reported during reporting period
Air Quality	• Discussion on dust sources, impacts and mitigation measures incorporated into Project Induction • Water sprays and/or water carts will be used as required for dampening stockpiles, cleared areas and other exposed surfaces to control dust generation • Construction speed limits established and enforced to ensure dust generation from vehicle movements are minimised • Construction plant, vehicles and machinery maintained to minimise exhaust emissions. Records of maintenance to be kept for all plant, vehicles and machinery used on the project	• Project inductions and tool box talks include dust mitigation measures • Water carts in use daily to control dust during dry periods • There were no offsite complaints of dust generated from construction work • Water trucks spraying roads regularly • Posted site speed limit is 10kph • Construction speed limits strictly adhered to • There were no issues with excessive exhaust emissions during the reporting period • All plant undergoes a safety and environmental inspection before use on site
Waste Management	• Recyclable plastics will be placed into a recycling skip bin for collection by a recycling contractor • Inductions to construction personnel outline measures on how to deal with suspected contaminated soil • Non-recyclable plastic and domestic waste to be placed into skip bins for collection by a waste contractor • Concrete mixers and pump trucks are washed at the site in the designated concrete washout area • Cardboard boxes will be placed in a paper recycling skip bin for collection by a recycling contractor • A waste register will be maintained	• Comingled waste is collected from work fronts and crib areas and placed in recycling skip bins for removal by a licensed waste contractor • Unexpected find included in environmental induction • Recyclable and general waste is segregated collected by a licensed waste contractor • Minor use of lined and bunded concrete washout area for grout waste – since been removed from site • Cardboard generated on site is recycled • Waste is recorded in a register based on invoices from waste removal contractors

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
	• If the material appears to contain asbestos or other potentially hazardous materials, it will be covered and access to the material restricted • The construction site will be fenced and locked to prevent access by others • If any evidence of illegal dumping of wastes on the Project area is observed the dumped material will be removed immediately • Materials Tracking will be completed	• No potentially hazardous material unexpectedly found on site during the reporting period • Security gates in place at entrance to the Main Access Road are locked on weekends and night shift • Security patrols the site on a 24 hour basis • Security fencing around the main site compound is locked at the end of shift • There was no evidence of illegal dumping during the reporting period
Dangerous Goods	• Regularly inspect dangerous goods containment facilities to ensure their integrity • Check that hazardous materials area stored according to their safety data sheet (SDS)	• DG stores inspected weekly • Workers using DG stores as required • Hazardous materials area stored according to their SDS generally
Bush Fire	• Regularly monitor RFS web site during high fire danger days • Regularly inspect to ensure fire trails crossing access roads are passable by firefighting equipment	• No high fire danger warnings posted on RFS web site during the reporting period • Fire trail access ramps are accessible by fire services
Flood	• Monitor the potential for flooding by observing weather reports and river levels during potential flood events	• Monitor BOM website during rain events • Localised flooding occurred around site during reporting period. Site remained above flood water
Pollution Prevention	• Regularly inspect for spills and leaks • Inspect construction equipment daily for leaks • Check to ensure construction equipment is parked in designated areas to limit area of risk of soil contamination due to leaks • Inspect to confirm that spill kits are supplied and maintained on site where chemicals are stored or used • Ensure that spills are cleaned up immediately	• Minor spillage cleaned up from car park area • Minor leaks cleaned up from plant and equipment in construction areas • Support vehicles are parked in designated areas • Plant on work fronts is left in place for the next shift • All other vehicles are parked in designated areas where practical • Spill stations situated around the site • Transport spill kits are situated on mobile plant • All spill kits are inspected regularly and restocked • Daily inspection of plant and equipment identifies minor leaks which are reported to maintenance personnel • Leaking plant is repaired within reasonable time

Table 3.2 Lucas Engineering (LPW) Environmental Controls Implemented

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
General	• CEMP implemented and complied with • All approvals and licences obtained and/maintained • Works undertaken in accordance with licence requirements • Environmental awareness, inductions and CEMP requirement training undertaken • Incidents managed in accordance with management procedures • Works conducted in a manner so as to not cause community complaints • Qualified and experienced environmental personnel on-site full-time	• Checks against implementation of CEMP completed during Environmental Representative (ER) inspections with minor issues noted and closed out • Incidents managed in accordance with procedures including notification to AGL, Department of Planning and Infrastructure (DP&I), Hunter Water Corporation, Port Stephens Council, ER and EPA as required
Groundwater Monitoring	• Appropriate vehicle maintenance checks and spill containment equipment adopted to mitigate potential risks of groundwater contamination • Test and treat water generated by dewatering of trenches or excavations as required, and infiltrate back into the groundwater table at designated infiltration areas, or alternatively transport offsite to a licensed disposal facility	• Vehicles inspected before entering site for leaks, weeds and appropriate maintenance • Daily prestart checks completed on all vehicles which include check for leaks. • Spill kit available on plant • No groundwater encountered in excavations completed during reporting period
Surface Water	• Sediment fencing used across the site • Test and treat water generated by dewatering of trenches or excavations if required, and infiltrate back into the groundwater table at designated infiltration areas or alternatively transport offsite to a licenced disposal facility • Construction water supplies sourced from an authorised and reliable supply • Regularly inspect erosion control structures and bunded areas • Ensure silt fences are in a vertical position and securely fixed and remove sediment or residue behind sediment control barriers • Store potentially contaminating chemicals in bunded areas capable of capturing 110% of the maximum spill volume	• Spill kits are carried on all light vehicles and machinery • AGL Environmental Advisor conducts daily and weekly inspection of sediment controls and bunded areas including frequent inspections with the Environmental Manager • Sediment accumulated behind silt fences is regularly removed
Cultural Heritage	• Lucas Engineering site not in vicinity of expected cultural heritage finds	• No Cultural Heritage finds to date

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
Vegetation Rehabilitation	• Stripped material or stockpiles formed into small windrows adjacent to the disturbance areas in preparation for replacement during the post development stage • Windrows of mulch kept as low as possible and have a large surface area, which will maximise the retention of a living seed bank and any associated microbes • Where possible, hollow logs and dead timber stockpiled for future use. Project Ecologist determined the suitability of logs to be retained • During-construction, stockpiles inspected for the presence of weed species which may require herbicide application to prevent the contamination of top soil which could increase the risk of weed infestation following topsoil re-spreading	• Weed control achieved by a combination of slashing, mowing and herbicide application • No mulch produced during reporting period • Stockpiles of excavated material formed beside excavations and reinstated at end of works
Flora and Fauna	• Trenches and excavations monitored daily for trapped animals such as reptiles and small ground-dwelling mammals • Open excavations and trenches inspected for fauna ramps to allow animals that have fallen into the trench to make their way out • Vegetation trimmed where possible rather than removing it • Flagging tape, parawebbing or fencing erected to mark "no-go zones" to ensure areas to be protected are clearly defined, identified and avoided	• No incidents were recorded involving flora and fauna • No animals were found trapped in trenches or excavations during daily inspections
Soil Management	• Topsoil and subsoil stored separately • Soil/mulch re-spread on Gas Access Track as requested by AGL • Stockpiles of topsoil (which are likely to contain a viable seed bank) to have a maximum height of 1 m • Stockpiles covered/vegetated where material remained exposed for a long period of time • Stockpiles placed so that they do not block waterways • In the event contaminated soil is discovered during excavation, work is to cease until the appropriate management has been undertaken	• All topsoil stockpiles are at or below 1m in height • Stockpiles placed away from waterways • There were no unexpected finds during the reporting period

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
Acid Sulfate Soil	• Excavated ASS treated using agricultural lime with machinery sufficient to perform adequate mixing, where practicable • In areas where ASS is exposed, bunding to be installed to prevent leachate entering the wider environment • Daily visual inspections • Samples taken when required • Trench backfilled within 24 hours	• No ASS soil encountered during reporting period
Noise and Vibration	• Sound attenuating enclosures used on HDD equipment • HDD 2 site designed to limit noise received at local caravan park • Noise monitoring conducted prior to conducting works to ensure limited impact to local sensitive receivers • Potential noise receptors consulted (particularly those within 500 m of the gas pipeline works) about the nature of the noise emissions and avoidance and mitigation practices to be adopted. Complaints and feedback and will be recorded and addressed where practical • Noise emissions monitored during construction and operations to ensure equipment is meeting noise certification and criteria requirements and detect any faulty or damaged equipment	• Noise generating construction activities restricted to daytime hours (7.00 a.m. to 6.00 p.m. Monday to Friday and 8.00 a.m. to 1.00 p.m. Saturday). In special circumstances, if noise generating evening or night work is required, a consultation process will be undertaken to ensure noise impacts can be adequately controlled • No high noise generating activities completed during reporting period • HDD works completed
Air Quality	• Dust control measures include use of water cart • Plant turned off when not in use • Loads covered on public roads • Plant maintained in accordance with manufacturer specifications to minimise exhaust emissions • Disturbed areas stabilised as soon as practicable after completion of construction works • Construction speed limits established and enforced to ensure dust generation from vehicle movements are minimised	• Trucks followed posted site speed limits • Project inductions included dust mitigation measures • Water carts in use to control dust during dry periods • There were no issues with excessive exhaust emissions during the reporting period
Waste Management	• Waste tracking register maintained and updated • Waste Classification conducted • Waste disposal dockets maintained and archived	• Recyclables are generally correctly segregated • Waste is segregated and disposed of appropriately via licensed contractors or directly to licensed landfills

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
	• Recyclable plastics placed into a recycling skip bin for collection by a recycling contractor • Inductions to construction personnel outline measures on how to deal with suspected contaminated soil • Waste stored in a protected area away from vermin and inclement weather. • Non-recyclable plastic and domestic waste placed into skip bins for collection by a waste contractor • Cardboard boxes placed in a paper recycling skip bin for collection by a recycling contractor • If the material appears to contain asbestos or other potentially hazardous materials, it is covered and access to the material restricted • If any evidence of illegal dumping of wastes on the Project area is observed the dumped material will be removed immediately	• Waste adequately stored in approved sealed containers in all areas • Waste register maintained for all wastes generated by the Project • No potentially hazardous material found on site during the reporting period • There was no evidence of illegal dumping during the reporting period
Traffic	• Traffic management utilised when working near or on roads • Signs maintained • Barriers between road and worksite installed and maintained • Speed limits to be observed along routes to and from the site and within the site • Convey expected behavioural requirements for vehicle drivers travelling to and from the site and within the site	• Speed limit signs posted within the project footprint working effectively • Workers involved in transport informed of restricted traffic routes in contract agreements and during site induction
Dangerous Goods	• Hazardous Materials register maintained and updated to include volumes • Hazardous materials onsite located in DG container • Dangerous goods containment facilities inspected regularly to ensure their integrity	• All DG containers have floor bunding and signage to indicate contents • Hazardous materials stored according to their SDS • All goods received were stored immediately
Bush Fire	• Water trailer positioned nearby to welding locations • RFS web site regularly monitored during high fire danger days	• There were no periods of high fire danger and total fire ban during the reporting period • Fire trail access ramps passable by fire services Gates to fire trails are usually locked but have been opened to allow fire crews access to bushfires. This is being managed by an AGL representative

Potential Environmental Impact	Controls Implemented	Effectiveness of Controls
Flood	• Potential for flooding monitored by observing weather reports and river levels during potential flood events	• Monitoring of conditions considered effective in planning to manage forecast inclement weather events
Spill Incident Response	• Spill Kits installed in mobile plant • Bunds installed near fuel cells • Toolbox talks conducted on spill response • Regularly inspect for spills and leaks • Construction equipment inspected daily for leaks • Construction equipment is parked in designated areas to limit area of risk of soil contamination due to leaks • Spill kits inspected to ensure they are supplied and maintained on site where chemicals are stored or used • Spills are cleaned up immediately	• No spills reported during the reporting period • Construction equipment checked daily at prestart • Mobile construction plant parked in designated areas at the end of the day • Mobile plant stocked with spill kits • Stationary spill kits stocked and well maintained in all areas

3.2 CB&I ENVIRONMENTAL INITIATIVES

During the reporting period, CB&I have implemented numerous environmental initiatives and innovations.

- environmental inspection of construction equipment;
- recycling and waste management;
- daily inspection of ablutions for running water to avoid tank full shut off or overflow;
- removal of weeds from construction areas; and
- environmental inspection of construction plant and equipment before use on site.

3.3 LUCAS ENGINEERING ENVIRONMENTAL INITIATIVES

No environmental initiatives have been implemented by Lucas Engineering during the reporting period.

3.4 TRAINING

3.4.1 CB&I Training and Inductions

The CB&I induction covers environment, safety and quality information. Attendance is compulsory prior to working on-site. The induction concentrates on the high risk environmental issues that are described in the CEMP and relate to the works being undertaken by the inductees.

During the reporting period, a total of 32 personnel were inducted. Since the commencement of the project, the total number of inductees is 1237.

3.4.2 CB&I Toolbox Talks

Toolbox talks allow for regular communication of relevant environmental issues to the construction staff. There were no environmental toolboxes completed during the reporting period

3.4.3 Other Training provided by CB&I

No other environmental training has been provided by CB&I during the reporting period.

3.4.4 Lucas Engineering Training and Inductions

During the reporting period, Lucas Engineering did not induct any contractors/visitors to site as only minor works were completed by existing staff.

Since the commencement of this component of the project, the total number of inductees is 154.

3.4.5 Lucas Engineering Toolbox Talks

There were no toolbox talks completed by Lucas Engineering during the reporting period.

3.4.6 Other Training provided by Lucas Engineering

No other environmental training has been provided by Lucas Engineering during the reporting period.

4 ENVIRONMENTAL MONITORING

4.1 SUMMARY OF ENVIRONMENTAL MONITORING

4.1.1 CB&I Environmental Monitoring

CB&I undertook the following environmental monitoring:

- daily and weekly inspections which includes checks on erosion and sediment controls, weeds, spot checks on machinery for leaks and levels of exhaust emissions, dust; and
- stormwater sampling and testing prior to discharge to surface and/or groundwater.

4.1.2 Lucas Engineering Environmental Monitoring

Lucas Engineering undertook the following environmental monitoring:

- Lucas Engineering daily inspections; and
- Lucas environmental weekly inspections.

4.2 DETAILS AND ANALYSIS OF RESULTS

4.2.1 Noise Monitoring

There were no nose monitoring events completed during the reporting period with the exception of the any incidences of excessive noise checked during daily and weekly site inspections.

4.2.2 Blasting

No blasting was undertaken during the reporting period.

4.2.3 Air Quality

No air quality monitoring was undertaken during the reporting period with the exception of visual checks for levels of dust during daily and weekly inspections by the contractors.

4.2.4 *Surface Water Monitoring*

CB&I

One surface water monitoring event was completed by CB&I March 2015 to June 2015 to assess water quality prior to discharge to surface water. Monitoring was undertaken at the Wetlands Holding Pond. There were no exceedances of the adopted thresholds for the analytes monitored. Full results are provided in *Annex B.*

4.2.5 *Groundwater and Surface Water Monitoring*

Groundwater and surface water monitoring is undertaken quarterly at the NGSF, including the access road and the utility and pipeline corridor by Coffey Geotechnics.

There are eleven groundwater monitoring bores and five surface water monitoring sites at the NGSF. The locations of the sampling sites are shown in Figure in *Annex B*.

Sampling of surface water at monitoring locations SW1 and SW2 was not possible as the sampling sites were dry.

The results of the laboratory analysis are provided in *Annex B* and summarised in *Table 4.1*.

Table 4.1 Summary of Groundwater and Surface Water Monitoring Results

Date	Number of Locations	Outcome	Action Taken
Groundwater			
March 15	NGSF – 11 wells	Measured concentrations of analytes where within the adopted threshold criteria	NA
Surface Water			
March 15	5	Measured concentrations of analytes where within the adopted threshold criteria	NA

In order to differentiate petroleum hydrocarbons from polar organic compounds (i.e. decomposing plant material), TPH silica gel clean up tests were carried out for the March 2015 sampling event. Results from the silica gel clean up tests have consistently showed concentrations of TPH below the adopted thresholds, which indicate that the TRH identified in previous sampling events is derived from naturally occurring polar organic sources.

Exponentially weighted moving average (EWMA) graphs for electrical conductivity, arsenic, total phosphorous, total nitrogen, TPH C6-C9 and TRH C10-C36 show the following trends for the quarterly reporting period from December 2014 to March 2015:

- electrical conductivity values of groundwater in MW3A show an increase while MW2, MW4, MW5 and MW6 shows a decrease;
- total nitrogen concentrations of groundwater in MW7 show an increase while MW3A and MW4 show a decrease;
- total phosphorous concentrations of groundwater in MW1 and MW7 show an increase while MW4 shows a decrease; and
- pre silica gel clean up TRH C10-C36 concentrations of groundwater in MW2, MW6 and MW7 show a decrease in naturally occurring polar organic compounds.

No trends are shown in the graphs for TPH C6-C9 and arsenic, with concentrations equal to or less than the laboratory limit of reporting.

Since construction began at the site in September 2012 the following trends are shown in the EWMA graphs:

- increases in electrical conductivity values of groundwater collected from monitoring bore MW6;
- increases in total nitrogen concentrations of groundwater collected from monitoring bores MW2, MW3A, MW4, MW6 and MW7;
- increases in total phosphorous concentrations of groundwater collected from monitoring bores MW3A, MW4 and MW7; and
- increases in pre silica gel clean up TRH C10-C36 concentrations of groundwater collected from monitoring bores MW2, MW6 and MW7 show an increase in naturally occurring polar organic compounds.

The trend in elevated nutrients for the longer term monitoring results (particularly previous nitrogen compound results) may be influenced by vegetation clearing on the site and stockpiling of vegetation/mulch during early phases of construction. AGL advises that there are no diffuse sources of nitrogen or phosphorous (or derivative analytes) located within the site.

An assessment of nitrogen concentrations in groundwater at the Gas Storage Site was conducted by Arris Pty Ltd (Arris, 2014). The study showed that the observed spikes in groundwater nitrogen concentrations are likely to be due to a combination of site clearing/construction activities and natural processes that occur in uncleared land. Although the spikes appear larger since clearing, there is minimal data to indicate clearing as the main cause. Dewatering and re-infiltration events did show correlation with nitrate and TKN levels. Other

factors influencing nutrient levels may include climatic conditions such as rainfall and temperature variations which influence soil mineralisation and infiltration rates.

Monitoring bores MW2, MW3A and MW7 can be considered background bores as groundwater in these areas flows through undisturbed land rather than cleared land. Nitrogen spikes in baseline bores tend to be TKN, while spikes in bores down gradient from cleared land include nitrate (Arris, 2014). Since the spikes are short term and reduce to background levels, Arris concluded that long term impact on the ecosystem is unlikely, and there is no trend in the data that suggests a gradual increase in total nitrogen above the background range.

4.2.6 Hydrostatic Water Quality Testing

No hydrostatic testing was completed during the reporting period.

4.2.7 Erosion and Sediment Control

Works are substantially completed on many areas of the site with stabilisation works completed along the Gas Access Track, Main Access Road, Hexham Receiving Station, Tomago Aluminium Easement, Old Punt Rd, electrical connection area and approximately 80% of the primary project area.

Erosion and Sediment Control Plans (ESCPs) have been implemented and reviewed/adjusted to ensure they are adequate given the current, dynamic nature of the site.

Erosion and sediment controls are inspected weekly and following rainfall events by site environment officers, engineers and foremen.

4.2.8 Heritage

Aboriginal Heritage

Daily inspections for cultural heritage items are undertaken by site staff. No artefacts were discovered during the reporting period.

Non-Aboriginal Heritage

No areas of non-Aboriginal heritage are within the project area.

4.2.9 Flora and Fauna

No clearing activities were undertaken during the reporting period. No further nest boxes have been installed in the reporting period.

Daily inspections for fauna and weekly inspections for flora, including weeds are undertaken by site staff.

5 ENVIRONMENTAL AUDITS AND INSPECTIONS

5.1 AUDITS

Seven external audits and two internal audits were completed during the reporting period. The details of the audits are outlined in *Table 5.1*

Table 5.1 Audits during the Reporting Period

Type	Date	Undertaken by	Description	NCs /IOs
External	24/03/15	Project ER	CB&I Audit – The audit included a review of the implementation of the following plans: • Soil Management Sub Plan; • Surface Water Management Sub Plan; • Groundwater Management Sub Plan; and • Vegetation Rehabilitation Management Sub Plan.	11/1
NC = Non-conformance; IO = improvement opportunities				

5.2 ENVIRONMENTAL INSPECTIONS

Regular inspections undertaken by the ER generate actions that are communicated to subcontractor environmental personnel for completion. These inspections are usually completed with subcontractor staff. A report is issued at the end of each inspection with a list of actions to be addressed. A total of 6 inspections were completed by the ER during the reporting period.

In addition to inspections undertaken by the ER, daily and weekly site inspections are undertaken by CB&I personnel whilst Lucas Engineering undertake daily inspections.

Actions arising from the CB&I site inspections are entered in an Action Register, which are tracked until completion.

6 *ENVIRONMENTAL COMPLAINTS*

No complaints relating to the project were made to the EPA Pollution Hotline during the reporting period.

7 *COMPLIANCE STATUS*

Monitoring of compliance is required in accordance with CoA B54a. The tracking of compliance occurs throughout the reporting period through internal and external audits as described in the CEMP.

CB&I have recorded zero non – compliances against the project EPL during the applicable reporting period.

Compliance tracking tables are maintained to monitor compliance with the following:

- Ministers Conditions of Approval MP10_0133 issued 10 May 2012;
- Statement of Commitments from the Preferred Project Report CR 6023_1-_v3 issued September 2011; and
- EPBC 2010/5752 issued 18 July 2012.

These tables are attached as *Annex A* to this Compliance Report.

Findings resulting from external audits are divided into five categories as follows:

- **Conformance (C)**: Adequate and appropriate implementation against audit requirements.
- **Non-conformance Category 1 (NC-1)**: Failure to meet the requirements of the audit criteria in terms of legislative requirements, failure to achieve the management performance outcomes identified in documentation, or ineffective environmental management of the activity that represent an ***immediate risk*** to the environment or reputation of the company.
- **Non-conformance Category 2 (NC-2)**: Failure to achieve the management performance outcomes identified in documentation, or ineffective environmental management of the development that does not represent an immediate risk to the environment. These will generally be associated with documentation, records or administrative requirements.
- **Improvement Opportunity (IO)**: A finding which does not strictly relate to the scope of the audit and which could lead to performance improvement.
- **Not Applicable (NA):** requirement was not applicable to project operations during the audit as requirement or control was not applicable to the activities underway at the time.

In addition to the above, the status of the item or approval condition is divided into the following categories:

- **Open –** item has yet to be completed with actions continuing.
- **Closed –** item has been completed and the audit criteria satisfied with no further actions outstanding.
- **Outstanding –** action is to be completed.

8 SUMMARY OF NON-COMPLIANCES

8.1 NON CONFORMANCES AND CORRECTIVE ACTIONS

Table 8.1 provides a summary of the non-conformances and the response undertaken by the contractors to close-out the actions.

Table 8.1 Summary of Non-Conformances Outstanding/Received During the Reporting Period

Audit Details	NC Description	Response
ER (Sept) – CB&I	Permanent sewage holding tank installed near new office. Confirmation to be obtained from AGL that current groundwater bores installed is adequate for detecting leaks in a timely manner from permanent holding tank.	AGL is investigating the installation of a shallow ground water monitoring bore approximately 20m to the north of the holding tank scheduled for June 2015.
ER (Sept) – CB&I	Speed limits on traffic using access roads should be compatible with the Port Stephens CKPoM 2002 which is less than 40km/h. Speed limits along the Main Access Road are sign posted at 50km/h. (SoC 147 and 169)	The PSC KPoM notes that "where appropriate" motor vehicle speeds to be restricted to 40 kph or less. In the context of the NGSF, once operational it will have low traffic flows, excellent vision due to road alignment (straight) and the entry road and road verge are wide and well maintained. AGL considers that a lower speed limit is not appropriate, nor warranted.
ER (Dec) – CB&I	Silt fence along northern boundary near entrance to the site, along the central southern area to the east of the site entrance, and along sections of the western boundary all require maintenance.	CB&I are investigation options for stabilising northern boundary near entrance to site from Gas Access Track.
ER (Dec) – CB&I	Scouring of batter on road leading to laydown area along northern boundary. Some sediment is beginning to flow over silt fence.	CB&I are investigating options to stabilise area.
ER (Mar) – CB&I	Silt fence along northern boundary near entrance to the site from Gas Access Track and fence along the western boundary of the carpark requires maintenance.	CB&I are investigation options for stabilising northern boundary near entrance to site from Gas Access Track.
ER (Mar) – CB&I	Whiskey grass is present along northern boundary of primary project area and some areas along the Main Access Road (AGL control). Consider the control of this weed before it falls within APZ.	AGL will investigate weeding options for these areas.

Audit Details	NC Description	Response
ER (Mar) – CB&I	Chain fencing has been installed around the gas storage facility on all sides outside the APZ with the exception of the south boundary of the main gas tank. The current fencing is within the APZ with the cleared area marking the edge of the APZ. Consider the installation of permanent markers along this boundary to meet the plan commitment.	Will be arranged prior to operations.
ER (Mar) – CB&I	Drums of amine (Class 8) stored inside permanent storage area – does not appear adequate for containing spills form multiple drums i.e. not to AS3833-2007 Storage and Handling of Mixed Classes of DG in Packages and IBCs. Temporary storage only with only minor amounts to be stored in bund inside building during operations. Confirm volumes of chemicals to be stored inside stores shed during operations will be compliant with AS3833-2007 i.e. bund size is adequate for planned storage volumes.	Pre-treatment flushing completed. Amine added to the process over the period 11 to 15 April 2015. A number of empty barrels are stored in the stores area in the event that plant needs to be emptied during the commissioning phase. Volume of drums now reduced substantially and moved to bunded area.
ER (Mar) – CB&I	170596-EN-R24 Mobile Plant Inspection Register lists all inspections. Environment Manager also completes ad hoc inspections using form 170596-EN-F14 (last completed 24 July 2014). Continue random inspections and completion of form 170596-EN-F14 Operation Plant and Equipment Leak Inspection Form.	Inspections to be completed.
ER (Mar) – CB&I	Northern laydown area has had subsoil emplaced. AGL to rehabilitate northern laydown area – subsoil has been spread out. Consider emplacement of topsoil to encourage natural regrowth.	AGL to complete
ER (Mar) – CB&I	CB&I now registered on the on-line waste tracking system. AES is no longer an authorised agent for CB&I therefore any regulated wastes removed off site will require CB&I to raise the Waste Tracking Certificate. This will also eliminate the discrepancy of waste volumes produced from site and the volumes finally disposed to the final waste destination.	No further tracked waste has been removed from site. CBI will raise Tracking certificate for final removal of trackable waste.
ER (Mar) – CB&I	SMSP diversion drain not installed along western boundary of car park area. Sandbags installed instead and rock placed in area to prevent erosion. Controls require maintenance – area to be permanently	AGL to complete

Audit Details	NC Description	Response
	stabilised.	
ER (Mar) – CB&I	Sandbags placed along western boundary of car park to divert water now require maintenance. Western boundary of carpark to be permanently stabilised	AGL to complete
ER (Mar) – CB&I	No EWMS observations completed during audit period. Consider the completion of any EWMS audits where there is a risk of spills from the activity.	Observation will be done for Amine filling against work method statements.
ER (Mar) – CB&I	Mulch has been spread at a rate greater than 5cm along the northern side of the gas access track. This area is under AGL control. AGL to consider reshaping the mulch in the rehabilitated area.	AGL to respond

8.2 ENVIRONMENTAL INCIDENTS

8.2.1 CB&I Environmental Incidents

CB&I did not report any environmental incidents during the reporting period.

8.2.2 Lucas Engineering Environmental Incidents

Lucas Engineering did not report any environmental incidents during the reporting period.

REFERENCES

Coffey Geotechnics (2015) Gas Storage Site Construction Groundwater and Surface Water Monitoring Program Newcastle Gas Storage Facility Project March 2015 Quarterly Report

Annex A

Compliance Tracking Tables

Table A1.1 Compliance with Ministers Conditions of Approval MP10_0133 (dated 10 May 2012)

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
TERMS OF APPROVAL					
PART A – ADMINISTRATIVE CONDITIONS					
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	All	All	Open	Noted – quarterly audits completed against implementation of management plans developed to reflect conditions and commitments.
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.	All	All	Open	Noted
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	All	All	Open	Noted

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
LIMITS OF 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.	All	AGL	Compliance Closed	Project approval date 10 May 2012 Notification letter issued to Anna Timbrell on 28 Aug 12 to advise that clearing has commenced on 27 Aug 12.
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.	Design	AGL	Compliance Closed	Option 2 has been adopted
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.	Pre-construction Construction	AGL	Compliance Closed	Staging Plan (Document No: NGSF-WPOE-NAS-PM-PLN-0001). Correspondence to DG submitting report a) 10 stages described (Section 3) b) Appendix 1 includes spread sheet which identifies which approvals apply to each stage
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.	Pre-construction Construction	AGL & CB&I	Compliance Closed	Noted – update on submissions to be obtained from AGL as they occur. Plans to be submitted as required for each stage.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	All	AGL & CB&I	Compliance Open	EPBC Approval obtained (2010-5752) 18 July 2012 EPL20130 issued to CB&I for chemical storage and petroleum and fuel production 10 July 2012 – transferred to AGL for operations phase 4 May 2015. Construction Certificate received Friday 29th September 2012. Copies of EPL and MCoA in site office (CB&I). Occupation certificate 14-107 issued 10 December 2014.
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.	All	CB&I Lucas Engineering	Compliance Open	General induction for CB&I attended 15 August 2012 includes some aspects of approval – refer CEMP and Sub-Plan Induction and Training commitments for further details. CB&I and Lucas Engineering completed inductions for all staff on Project. Review of Daily prestarts and toolbox register confirms primary environmental aspects for project are discussed including waste management, spills, erosion and sediment control, awareness of site fauna. All contractors developed Safe Work Method Statements (SWMS), which include commitments and relevant approval conditions for work tasks, which are issued to sub-contractors.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
PUBLICLY AVAILABLE INFORMATION					
A10	Subject to confidentiality, the Proponent shall make all documents required under this approval available for public inspection on request	Pre-construction Construction	AGL CB&I Lucas Engineering	C Open	Plans approved by DP&I – CB&I and Lucas Engineering CEMP and sub plans uploaded onto website. Compliance reports and audit reports loaded onto website.
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.	Pre-construction Construction	CB&I	Compliance Closed	Schedule 3, Basis of Design, Appendix C Section 75S(2)(b) requires private certifier to sign off on buildings/structures. AGL has engaged the services of Barker Ryan Stewart a Newcastle-based multidisciplinary town planning, engineering and private certification consultancy to assist AGL in satisfying the certification requirements for the project. Barker Ryan Stewart has in turn engaged the local firm NewCert as the Principal Certifying Authority. Stage 1 Site Preparation by NewCert (12-059) received 23-Aug-12. Stages 2 & 3 (12-106) received 6-Nov-12. Stage 4A (13-032) received 27-Mar-13. Stage 4B (13-053) received 29-May-13. Stage 4C (13-096) received 8-Oct-13. Stage 4D (13-122) received 4-Dec-13. Stages 5 & 6 (13-106) received 1-Nov-13.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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).	Pre-construction	AGL	Compliance Closed	Survey Plan – Subdivision of Lot 105 DP 1125747 and easement over Lot 4 DP 1043561 – survey dated 27 March 2012
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.	Pre-construction	AGL	Compliance Closed	Email to PSC 29 Dec 2012 with subdivision plan and Section 88B instrument attached. PSC reply from Amanda Gale 6 January 2012 stating 88B instrument and Linen Plan provide an easement, which legally satisfies Council's concern.
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.	All	AGL – operation and rehabilitation stage All subcontractors– construction stage	Compliance Open	Noted – all management plans with implementation to be monitored during activities. Quarterly ER audits include assessment of implementation of plans.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	All	Construction subcontractors to notify immediately as per POEO Act requirements AGL to liaise with agencies after initial notification and to report incidents to DP&I	Compliance Open	No notifiable incidents occurred during the reporting period
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.	All	CB&I, , Lucas Engineering – implementation AGL – active governance over corrective actions taken by CB&I	Compliance Open	No notifiable incidents occurred during the reporting period

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	AGL All construction subcontractors	NC-1 Closed	Shawn Capararo from ecoBiological appointed. Fauna spotter and reports issued for clearing works on PPA. Minor clearing was completed at the end of the Gas Access Track near Old Punt Rd (HDD1), at the rear of the Hexham site (HDD3) and end of Main Access Road to site by Lucas Engineering. NC-1 Pre-clearance inspection reports indicated no endangered flora to be cleared for works however a fauna spotter was not used as per condition by Lucas Engineering. No further clearing required for the project.
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.	Pre clearing	AGL to engage ecologist CB&I	Compliance Closed – CB&I Closed – Lucas Engineering	AGL received letter from ecoBiological on 14-May-12 outlining steps taken to comply with the condition. The Flora & Fauna Management Sub Plan contains details on clearing. The CB&I FFMSP has been submitted to the Director□ General as part of the CEMP and approved for all subcontractors Clearing limited to marked areas. No further clearing required for the project.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction – Stage 2 Construction	AGL CB&I	Compliance Closed	Letter from EcoBiological dated 01-Dec-12 confirming work has been completed for Stage 1. Vegetation communities map included as Figure 1 in FFMSP The areas referred to in this condition are relevant to the pipeline construction and crossing over the Hunter River which is part of Stage 2 – pipeline was installed by HDD to avoid any impacts to these communities.
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 triglochinoides*); and (c) Horned Pondweed (*Zannichellia palustris*). Any impacts on these taxa must be included the Biodiversity Offset Strategy under condition B13 and Biodiversity Offset Package under condition C2.	Pre-construction	AGL	Compliance Closed	Letter from ecoBiological on 14-February-12 confirming the survey work undertaken and compliance with this condition. Offset Strategy report prepared by ecoBiological dated May 2012, Medowie Conservation Area Offset Monitoring Protocol prepared by ecoBiological dated May 2012, Also refer to correspondence to OEH and PSC dated 1-Jun-12 as evidence of consultation with both OEH and PSC. 20-June: Refer to additional correspondence from PSC as evidence of consultation. 15-Aug-12: Approval received from the Director General.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-clearing	AGL CB&I	Compliance Closed	Letter from ecoBiological on 14-May-12 confirming the survey work undertaken and compliance with this condition. FFMSP - Table 8-10
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.	Pre-clearing	AGL CB&I	Compliance Closed	Letter from ecoBiological on 14-May-12 confirming the survey work undertaken and compliance with this condition. FFMSP - Table 8-7
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.	Pre-construction Construction	AGL CB&I	Compliance Closed	CEMP – Appendix A6 includes environmental constraints map. FFMSP –Appendix B, Tables 8-9 & 8-12 Site inspections confirm construction area delineated with temporary fencing. Clearing works now completed for Stage 1 with all clearing within Project Footprint

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-clearing – Stage 2	AGL CB&I Lucas Engineering	Compliance Closed	Primarily refers to Stage 2 of the Project. There is one culvert crossing for this stage therefore reference to this condition is required. Shawn Capararo from Ecobiological engaged for all pre construction works including riparian works. Letter from Ecobiological on 14-May-12 confirming the survey work undertaken and compliance with this condition. HDD under riparian areas therefore no riparian areas to be cleared/impacted under current project design.
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).	Pre-construction Construction	AGL	Compliance Closed	VRMSP includes requirement in Table 8-5 No riparian areas cleared. Stage 2 works – pipe installed under Hunter River.
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.	Pre-construction Construction	AGL CB&I Lucas Engineering	Compliance Closed	VRMSP includes requirement in Table 8-5 Stage 2 works completed using HDD under and near Hunter River- no riparian areas disturbed. No riparian areas to be cleared under current project design

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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).	Pre-clearing	AGL CB&I Lucas Engineering	Compliance Closed	FFMSP – Appendix B Table 8-12 No koalas reported to be encountered during clearing works (Report: Vegetation Clearing for Newcastle Gas Storage Facility, Ecobiological (November 2012)). Clearing activities completed for Stage 1 Minor clearing completed at the end of the Gas Access Track near Old Punt Rd (HDD1) and at the rear of the Hexham site (HDD3) by Lucas Engineering. No koalas reported to be encountered during these works. No further clearing to be completed.
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 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 DSEWPaC.	Pre-clearing	AGL CB&I	Compliance Closed	Trapping program outlined in the FFMSP Appendix B Table 8-11 Trapping completed prior to clearing works at four locations covering three different periods. No New Holland Mouse individuals were trapped (Report: Vegetation Clearing for Newcastle Gas Storage Facility, Ecobiological (November 2012)).

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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	Pre-clearing Pre-construction	AGL	Compliance Closed	Offset Strategy report prepared by ecoBiological dated May 2012. Medowie Conservation Area Offset Monitoring Protocol prepared by ecoBiological dated May 2012 Draft Conservation Agreement for Lot 20 at 3 Old Swan Bay Road, Medowie Draft Conservation Agreement for Lot 16 at 218 Old Swan Bay Road, Medowie. Refer to following sections of the Offset Strategy Report as to where matters identified in B3 are considered: a) Refer Section 3.1 and 3.3 b) Refer Chapter 4. Four Earp's gums to be replaced. Target of 60 plants established with OEH. Hunter Region Botanic Gardens have identified areas suitable for planting c) As agreed by OEH two large offset areas identified have adequate hollow bearing trees available to mitigate need for nest boxes d) Koala – 11.8ha offset area provided to offset loss of 0.7ha. New Holland Mouse - 25 ha preferred habitat and 80ha sub optimal habitat to replace 12ha sub optimal habitat. e) Refer Chapter 5 – improvement of biodiversity values in offset areas f) Refer Chapter 3

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	accordance with the OEH's Principles for the Use of Biodiversity Offsets in NSW; and (i) measures to ensure in-perpetuity the conservation commitment.				g) Contained within Voluntary Conservation Agreements h) 13 principles addressed in Chapter 5 i) Refer Chapter 3 and Chapter 5. Correspondence from DP&I accepting Strategy AGL submitted Strategy to PSC via email on 01.06.12, and PSC emailed DP&I on 13.6.12 indicating that they had been consulted, and provided comments. OEH emailed DP&I on 01.06.12 advising that they had been consulted.
HAZARDS AND RISKS					
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).	Pre-construction Construction	CB&I – design AGL - review	Compliance Closed	Included in FFMSP Appendix B Table 8-5 Bush Fire Included in Fire Safety Study – Section 5.4.1

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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.	Construction	CB&I Lucas Engineering	Compliance Closed	CB&I Dangerous Goods and Hazardous Materials Handling Management Sub-Plan Section 1.5.2 Minor amounts of fuel and oils currently kept at all sites. Site inspections indicate small fuel cans are stored on self-contained bunds. Refuelling done primarily by licensed refuelling truck. Form completed prior to any chemicals coming onto Primary Project Area with approval by CB&I Environment Manager and Safety Manager required. SDSs and register maintained on ChemWatch. Register downloaded and added to MSDS folder. Operations to commence mid-June 2015
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;	Pre-construction	a) AGL b) CB&I c) AGL	Compliance Closed	Letter to DP&I dated 19 June 2012 requesting approval to stage Fire Safety Study (FSS), Hazard and Operability Study (HAZOP), Final Hazard Analysis (FHA). Stage 1 – HAZOP, FSS and FHA August 2012 based on final design Stage 2 – update based on final designs – January 2013 Letter from DP&I dated 6 August 2012 approving staged approach with following requirements: 1. The HAZOP for the second stage should cover the interaction with already installed equipment; 2. The FSS for the second stage should be an update on the FSS for the first stage. (The site must have a single FSS covering the whole site.) 3. The FHA for the second stage should be an update of

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	(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.				the FHA for the first stage. (As with the FSS, a single document must cover the whole site.) Meeting with RFS to discuss FSS scheduled 4 September 2012 Letter dated 19-June requesting for approval of a staged approach to the HAZOP Study, Fire Safety Study and Final Hazard Analysis Process 6-Aug-12: Approval received from Director General for the proposed staged submission approach. 28-Nov-12: Submission of Phase 1 Fire Safety Study and Hazop Report to DP&I. 10-Dec-12: Submission of Phase 1 Final Hazard Analysis to DP&I 19-Dec-12: Phase 1 Fire Safety Study approved by Rural Fire Service. 17-Jan-13: Phase 1 submission approved by DP&I. 5-Feb-13: Phase 1 Fire Safety Study approval by Fire & Rescue NSW 22-Apr-13: Approval of Hugh Howard as HAZOP facilitator for Jemena Connection Works. 6-Jun-13: Meeting held with FRNSW to discuss proposed mitigation to comments provided in February. 9-Sep-13: Submission of Phase 2 FSS to DoPI, FRNSW and RFS. 12-Sep-13: Phase 2 FSS approved by FRNSW.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
					16-Sep-13: Phase 2 HAZOP approval by DoPI. 19-Sep-13: Phase 2 FSS approved by RFS 27-Sep-13: Submission of Phase 2 FHA to DoPI 22-Oct-13: Phase 2 FSS approved by DoPI 31-Oct-13: Phase 2 FHA approved by DoPI 06-Dec-13: Approval of Chris Alexiou as HAZOP facilitator for LP Pipeline 12-Sep-14: Submission of Phase 3 FSS, FHA, HAZOP report 23-Sep-14: Submission of Phase 3 FSS to FRNSW Email to DP&I 20/04/2015 – sending Pre-Start-Up Safety Compliance Report Newcastle Gas Storage Facility (NGSF-WPOE-ISBL-PM-REP-0018) detailing compliance with this condition.
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.	Pre-detailed design	AGL CB&I to assist	Compliance Closed	Meeting held with WorkCover on 18-April-2012. Requirements to be checked and included in Site Risk Assessment and Safety Case six months prior to commissioning of project 15-Feb-13: Safety Case outline submitted to WorkCover. 10-May-13: Revision 1 of Safety Case Outline submitted to WorkCover 20-Aug-14: Safety Case submitted to WorkCover for review.

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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.	Construction Pre commissioning	AGL CB&I to assist	Compliance Closed	Safety Case to be prepared six months prior to commissioning 15-Feb-13: Safety Case outline submitted to WorkCover. 10-May-13: Revision 1 of Safety Case Outline submitted to WorkCover 20-Aug-14: Safety Case submitted to WorkCover for review.
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).	Design	CB&I	Compliance Closed	Final design includes following: • Security fence (with barbed wire) around the facility complying with AS 1725.1-2010 (drawing NGSF-CB&I-ISBL-CI-DWG-5001) • CCTV cameras strategically positioned around the security fence and at the plant entry gate (drawing NGSF-CB&I-ISBL-IC-DWG-9010) all communicating with the CCTV viewing station in the control building. All cameras are continuously recorded for up to 30 days. • Intrusion detection located all the way around the security fence (drawing NGSF-CB&I-ISBL-IC-DWG-9020) communicating with the control room. The intrusion system is divided into zones approximately 100 meters in length that can signal the cameras to focus on the active zone

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
					• Card operated sliding security gates at the plant entry on the main access road as well as at the main entrance gate with CCTV cameras monitoring all of these entry points. • Besides the vehicle entry sliding gates, there is only 1 personnel point of access into the admin building and this requires a key card to get beyond the reception area. • Car park is within sight from the admin/control building. • High pressure sodium roadway lighting will be provided for perimeter roads. High pressure sodium floodlights will be provided for the plant boundaries near the LNG tank. Both the roadway and floodlighting layouts will be designed to maintain an average illumination level of 2 lux at ground for the entire security fence line.
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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Open	Refer Surface Water Management Sub Plan and Soil Management Sub Plan. Included in EPL as Condition L1 No dewatering of excavations during reporting period. Potable water sourced from Hunter Water used on sites.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Open	Refer sub-contractors Soil Management Sub Plans Controls installed in all active areas – checks for integrity completed. Minor issues with maintenance of controls ongoing – noted in audit reports.
B22	The Proponent shall carry out rehabilitation of disturbed areas progressively, and as soon as reasonably practicable following disturbance.	Pre-construction Construction	AGL CB&I Lucas Engineering	Compliant Open	Refer to CB&I Vegetation Rehabilitation Management Sub Plan Appendix B – Table 8-5 Rehabilitation works have commenced. Logs for rehabilitation placed along cleared tracks, mulch retained and topsoil stored along gas access track. Logs emplaced, areas spray grassed and stabilised along Main Access Track on northern side. South side completed by Lucas Engineering. Northern and eastern sides of the electrical connection works bund wall stabilised. Main site civil works underway (90% stabilised) Hexham Receiving Area revegetated with grass seed and roads resurfaced. HDD1, HDD2, HDD3 works all completed – natural revegetation to occur. Gas Access track works completed with topsoil reinstated and mulch respread.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	AGL Lucas Engineering	Compliance Closed	Gas pipeline installation has commenced at locations as per PPR. Method has changed from trenching to underboring to avoid impacts on ecological communities and riparian areas. Gas pipeline installation now completed
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).	Pre-construction Construction	AGL	Compliance Closed	Gas Storage Facility Design and Jemena Receiving Station above 1 in 100 year flood levels. Roads and structures as constructed drawings confirm final levels are as per design (Main Gas Storage Facility site slightly final RLs slightly higher than design).
Groundwater Monitoring Program					
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	Pre-construction	AGL	Compliance Closed	Groundwater Management Sub Plan – sent in email to DP&I dated 11 July 2012 Groundwater Monitoring Program – letter from DP&I dated 10/08/2012 accepting GMP. Correspondence from HWC dated 3 August 2012 and NOW dated 9 August 2012 supporting consultation requirement. Email from HWC 31 October 2012 indicating satisfaction with GMSP. Email to DP&I 9 August 2012 with correspondence attached endorsing GMSP from NOW a) GMSP - Groundwater monitoring bore locations – Figure 3. Also refer to Table 2-1.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	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.				One background and 5 downstream locations (towards Tomago aquifer extraction site) 4 internal locations to obtain background for site. Surface water monitoring locations include in surface water management plan GMP – Section 4 b) GMSP - Appendix C includes baseline water quality, depth. Duration and frequency of monitoring include in Table 5-2 Groundwater Monitoring Requirements GMP – Section 4 c) GMSP - Performance criteria included in Section 5.1.1 for water quality and changes in water levels (using CUMSUM) GMP – Section 4.2 and Appendix A d) GMSP - Frequency of reporting include in Table 5-1 GMP - Section 4.1 e) GMSP - Contingency Plan Flowchart Figure 5 and Appendix E for spills GMP - Section 4.3 f) GMSP - Section 3 and Section 5 g) GMP – Section 4.4

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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 Open 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 re-inspected at the Proponent's expense.	Pre-construction	AGL	Compliance Closed	Confirmation email by Axel Hanson from Hunter Water Corporation dated 2-May-12 approving SMEC as the independent peer reviewer. Review of design completed with email received from HWC 2 May 2012 with recommendations. Meeting held with SMEC 20 July 2012 to discuss review and recommendations. Submitted to DP&I on 8 June 2012. Approval by SMEC of NGSF stormwater design received 19 April 2013. Annual inspection/review report issued 30 June 2014 by SMEC (available on project website). Report states that the standard of construction achieves requirements of the Approved Stormwater Management Philosophy and the reviewed Construction Documentation – outstanding item - establishment of vegetation in the wetland and holding pond (naturally underway).

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Closed	Noted - hours included in NVMSP. NVMSP sent to DP&I as part of CEMP EPL hours align with MCoA. Out of hours work completed – forms completed and noise levels checked to confirm inaudible at site boundary. HDD works 24hrs in accordance with condition. Works now completed Other works undertaken during standard work hours identified in Table 3-3 of NVMP. Construction now completed – commissioning underway.

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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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Closed	Daily checklists for CB&I includes check for activities and if noticeable at site boundary. HDD works likely to generate high noise identified undertaken in standard work hours as per consent condition. Noisiest equipment is associated with the HDD for which an exemption for 24 hour operation is provided for in consent condition B27. All HDD works now completed. Road works completed. No further 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 will be generated.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	a) CB&I b) CB&I c) CB&I to notify AGL >72 hrs prior to enable AGL to update website if any impacted residential receivers Lucas Engineering	Compliance Closed	CB&I NVMSP – Appendix B Table 8-2 Refer to MCoA B57(f) – OOHW protocol developed to include requirements. Forms completed detailing required information. Nearest potentially affected receiver Botanic Gardens – all notifications communicated to community group for notification as required. Checks completed for noise at boundary of site. Community newsletters and project updates notifying progress and expected works on website. Receptors located at Hexham and along pipeline route letterbox dropped prior to works commencing. OOHW protocol identified in NVMSP for Lucas. Not required in compliance period. Construction now completed – commissioning underway.
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).	Pre-construction Construction	CB&I Lucas Engineering	Compliance Open	NVMSP – Appendix B (all tables) Noise levels are monitored by CB&I environment staff and any issues noted in daily diary notes or the weekly report. ER site inspections note noise levels reasonable

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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.	Pre-construction – Stage 5	AGL	Compliance Closed	Note: This condition is only applicable to Stage 5 High Pressure Pipeline construction in July 2013 as confirmed by Ms Anna Timbrell (DP&I). NVMSP – Table 2-1 Sensitive Receivers. Predicted noise impacts included in Section 2.3 Noise and Vibration Assessment – NGSF, Atkins Acoustics and Associates Pty Ltd, May 2011 indicated no exceedances of ICNG construction noise management goals for the works at any receivers.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction	CB&I AGL – submission of report	Compliance Closed	Refer letter report from Better Transport Futures 6 July 2012 indicating the current road network in the vicinity of the subject site can accommodate the volume and size of the vehicles associated with the construction phase of the Gas Storage Facility and no road upgrades are required. RMS not contacted for Old Punt Rd component as Council Road. TAC Northern Access Road private therefore liaison with RMS or PSC not required. Submitted to DP&I 11 July 2012 Email from PSC (Michael Viola) dated 04/04/2013 confirming council requirements regarding any road upgrades.
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.	Pre-construction – Stage 2 Construction	AGL Lucas Engineering	Compliance Closed	Works now completed at Hexham. Crossing completed.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction – Stage 2 Construction	AGL	Compliance Closed	Works completed at Hexham.
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.	Pre-construction Construction	All	Compliance Closed	Noted – Project Air Quality Management Sub Plan includes best practise mitigation measures to minimise odour. AQMSP submitted to DP&I for approval with CEMP. No odour generating activities noted during ER site inspections to date. Construction now completed – commissioning underway.
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.	Pre-construction Construction	All	Compliance Closed	Noted – Project AQMSP includes best practise mitigation measures to minimise odour. AQMSP submitted to DP&I for approval with CEMP. Dust cart noted in use during inspections on CB&I site. Daily checklists include monitoring for dust levels Subsoil and topsoil movement primarily completed. Topsoil will be moved during rehabilitation activities. Construction activities now completed with open areas and roads sealed or stabilised.

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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.	Pre-construction	AGL	Compliance Closed	Refer to letter from TAC on 21-Mar-12 granting access to meteorological monitoring station. 5-Apr-13: Peter Jamieson (Head Regional Operations Unit - Hunter) of EPA confirmed TAC monitoring station is acceptable.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-clearing	AGL	Compliance Closed	RPS appointed archaeologists. Refer to MCoA B57 Report issued by RPS 21 November 2012 detailing site inspections and finds. Six cultural heritage items were recorded with GPS coordinates taken and photographed. They are being held onsite in the temporary administration office and once the NGSF works are completed will be managed in accordance with a Care and Control agreement developed between the Aboriginal community stakeholder groups and AGL (refer Section 5 CB&I CHMP 2012). The monitoring report includes a record of the monitoring units, documentation of Aboriginal sites, as well as assessment of significance. Further scans and finds have occurred since RPS report issued. Final register to be developed and issued once construction substantially completed. Finds will be registered with AIHMS/EPA once items are placed in final location which fulfils legislative requirements (verbal advice RPS, January 2013). No clearance of vegetation in the gas storage facility site or within riparian areas of Hunter River during the reporting period.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
					No further clearing works to be completed for Project. Meeting scheduled for June 2015 with heritage groups and RPS to place artefacts in final resting place.
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.	During clearing	AGL	Compliance Closed	CB&I Cultural Heritage Management Sub Plan – Section 5.3.1 Heritage inspections completed 30/08/2012, 07/09/2012, 24/09/2012, 15/10/2012, 24/10/2012, 23/01/2013, and 11/05/2011. No site clearing or vegetation removal works within the gas facility site or within riparian areas of Hunter River during period. Works in previously disturbed areas or areas of fill.
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.	Pre-construction Construction	CB&I	Compliance Closed	Requirement is detailed in following documents: • EWMS – Clearing and Grubbing • EWMS – Topsoil stripping and stockpiling • FFMSP – Appendix B Table 8-9 point 14 Site inspection during heritage scan after clearing commenced on 30/08/2012 indicates vegetation was removed with minimal disturbance to allow for heritage inspections to occur prior to land disturbance.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Open	Refer Waste Management Sub Plan (WMSP) Site does not accept waste. Gravel material used for onsite roads (pipeline track and main access road) sourced from Hanson's Brandy Hill Quarry – spot check of delivery dockets completed. Waste bins noted around sites. Port Stephens Council following up waste dumping along Old Punt Road.
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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Open	Refer Waste Management Sub Plan (WMSP) – all and Appendix A. All material tracked off site entered in waste register. Subsoil deemed unsuitable for reuse on-site has been screened to enable reuse. Bulk of mulch went to Austar mine for use in rehabilitation works. Extra mulch to Lake Macquarie Council. Excess logs to Newcastle Earthmoving for future use. Scrap metal and concrete recycled

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	CB&I Lucas Engineering	Compliance Open	Refer Waste Management Sub Plan (WMSP). Waste Register maintained recording all movements. Waste generated primarily dry waste. Soil contaminated from oil spills tracked under the regulated waste system and disposed to authorised waste facility. No excavated material removed from site during reporting period.
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.	Pre-construction Construction	CB&I	Compliance Closed	CB&I CEMP have been updated to refer to use of directional lighting. Refer Table 12-5 Flora and Fauna External lighting installed on site office – check indicates directional towards ground. Permanent lighting now installed on main site – lighting is directed towards ground
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 of more above ground level elsewhere.	Pre-construction	AGL	Compliance Closed	Notification letter sent to RAAF on 11 May 2012. Construction commence 27 August 2012 25-Feb-13: Detailed coordinates and height of tank provided to RAAF. Also requested air space restriction over NGSF, but rejected on 28-Jun-13.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	CB&I AGL	Compliance Open	Commitment is included in CB&I CEMP (p 37) No alterations to existing public utility installations have been completed to date.
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.	Pre-construction Construction	CB&I AGL Lucas Engineering	Compliance Closed	Commitment is included in CB&I CEMP (p 37) Existing road surfaces disturbed on Old Punt Rd have since been restored. HDD works completed along Old Punt Road. No other road surfaces etc. expected to be disturbed during remaining works
B48	The Proponent shall design and provide on-site car parking, driveways, parking bays, vehicular turning areas, letterboxes, landscaping and drainage in consultation with and to meet the reasonable requirements of the relevant local council.	Pre-construction Construction	CB&I AGL	Compliance Open	Commitment is included in CB&I CEMP (p 37). Applicable to pipeline scope of works. 5-Dec-13: Design of on-site parking, parking bays, vehicular turning areas, landscaping and drainage was submitted to PSC for comment. No comment was received.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction	AGL – update Lucas Engineering CB&I	C Open	http://agk.com.au/newcastle/index.php/the-project/ a) background for approvals and current status include on project page. b) Link to copy of approval included under Environment page c) copy of relevant approval includes link to DP&E website d) A copy of the CEMP and sub plans required under the MCoA have been loaded onto website – environment page e) All ER audits completed to date loaded onto website – environment page

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction	AGL to develop plan CB&I to implement	Compliance Closed	Provided in the Community Engagement Plan (Document no: NGSF-AGL-NAS-PM-PLN-0002) - Section 2 a) Section 6.1 b) Section 6.1 c) Section 6.1 d) Section 6.1

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction	AGL - to publicise availability of these communication channels to local community.	Compliance NC-2	Provided in the Community Engagement Plan (Document no: NGSF-AGL-NAS-PM-PLN-0002) Project signboards have been erected on site at Hexham and Tomago with contact details a, b, c advertised on project website – details also included in Newspaper advertisements published in Port Stephens Examiner and Newcastle Herald. All advertisements loaded onto website – news, publications and media page Signage located at entrance to site which includes contact details. Signs need replacement as faded.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction Construction	AGL - to record complaints using Consultation Manager.	Compliance Open	Requirements include in CB&I CEMP Section 5.2.3 Complaints Handling which was submitted to DP&I for approval. Community Engagement Plan refers to Section 6.5.5 for complaint protocol CEMP refers to Section 5.2.3 Protocol is for contractors to complete Complaints form and forward to AGL for inclusion in Complaints Database. Screen shots of complaints database confirm all requirements are recorded in the case of a complaint. No complaints received during reporting period
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.	Pre-construction Construction	AGL - to respond	Compliance Open	Complaints Handling section of CEMP indicates all complaints to be responded within 48 hours: • telephone complaints: verbal response is made within 4 hours; • written correspondence: acknowledged within 48 hours if a contact number is given and a written response within 5 days; • Email or fax: submission acknowledged within 24 hours No complaints received reporting period

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
COMPLIANCE TRACKING PROGRAM					
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.	Pre-construction	AGL - establish processes/procedures to ensure compliance	Compliance Open	Compliance Tracking Program (Document No: NGSF-AGL-NAS-PM-PLN-0016) Compliance Tracking Register (Document No: NGSF-WPPM-NAS-PM-REG-0004-XLS) The relevant section of the CTP which addresses the requirements are as follows: a) Section 2.1 – reporting to be completed every six months – reports completed b) Section 2.2 – programme includes 3 monthly audits by ER. Audits completed September 2014 and December 2014 during reporting period. c) Section 2.3 – Refers to Section 6.5 and 7.2 of Appendix A. CB&I Environment Action Register includes all actions arising from site inspections, audits. d) Section 2.4 – Refers to Section 6 of Appendix A. Includes need to report to AGL within 24 hours verbally and within 48hours a written report. e) Section 2.5 - Verbal advice will be provided as soon as practicable after AGL becomes aware of the incident and written advice will be provided within seven (7) working days. f) Section 2.6 - Project Requirements Register Doc No. NGSF-WPPM-NAS-PM-REG-0004 – lists requirements and stakeholder responsible

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
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.	Pre-construction	AGL	Compliance Closed	The Environmental Representative (Megan McLachlan) has been approved by the Director-General on 25/06/2012. The alternate ER (Hamish Campbell) was approved by the Director-General on 31/07/2012. Alternate ER Hamish Campbell replaced by Will Ellis and approved by DP&I in correspondence dated 29/11/2012. Additional alternate ER, Naomi Buchhorn approved by the Director-General in correspondence dated 23/02/2014. Construction activities commenced 27 August 2012
Construction Environment 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 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	Pre-construction	CB&I (a-c and f-j) (d) – CB&I / AGL as per Schedule 8 of Agreement	NC-2 Open	Construction Environment Management Plan sent to DP&I electronically on 23 July 2012 with hard copies sent via mail with letter dated 31 July 2012 Emails to Port Stephens Council dated 8 August 2012. CEMP sent to PSC 24 July 2012, to NOW 24 July 2012. 22/08/2012: Approval received from DP&I confirming conditions B56 and B57 have been satisfied for Stage 1 (CB&I). a) Section 2.7 Project Schedule

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	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				b) Section 5.4 Monitoring and Review c) Section 5.4 Monitoring and Review and Section 5.5 Incident Management d) Section 3: Legislative and Other Requirements e) Section 5.2.1: Consultation for CEMP f) Section 4.4: Roles and Responsibilities g) Section 5.4 Monitoring and Review and Section 5.5 Incident Management h) The CEMP and associated sub plans, environmental work method statements i) Section 5.2.3 Consultation with Stakeholders and Community Engagement Plan j) Section 4.3.4 EWMS and Appendix A8: EWMS Matrix Stage 2 CEMP for Main Power Supply (PowerServe) and Tomago to Hexham Pipeline (Lucas Engineering) accepted by DP&I in correspondence dated 21/11/2013. Downer EDI adopted PowerServe CEMP and associated plans for Electrical Connection works. Correspondence from DP&I accepting Lucas Engineering Low Pressure Pipeline works received. NC-2 - CEMP for works at JRS not submitted/approved. All works now completed

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	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.				

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
B57a	As part of the Construction Environmental Management Plan required under condition B56 of this approval, the Proponent shall prepare and implement the following: (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 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 inadequate.	Pre-construction	CB&I	Compliance Closed	Flora and Fauna Management Sub Plan a) Email date 8 August 2012 to Port Stephens Council re Fauna Hollow Management. Meeting 2 August discussing all environmental commitments. Email 31 July 2012 with FFMSP attached to PSC. Offset strategy also sent through to PSC i. Figure 1 includes ecological communities, Figure 2 species locations for project area and surrounds ii. Section 3.2, Section 4.1 Appendix B iii. Section 2.0 iv. CEMP Section 4.0

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
B57b	(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;	Pre-construction	CB&I Lucas Engineering	Compliance Closed	CB&I Cultural Heritage Management Sub Plan Correspondence received from Nur Run Gee 12 September 2011 confirming review of draft report with no comments Correspondence received form Mur-Roo-Ma 8 September 2011 acknowledging review of draft report. Correspondence received form ATOAC (Awabakal) 20 September 2011 acknowledging receipt of draft report. Recommended that groups attained site when current dense vegetation layer removed as well as a few minor edits which are now included in plan. CHMSP includes protocol to be followed during clearing and also if unexpected find encountered after clearing works. Sub plans developed by Lucas Engineering and based on the CB&I Plan.
B57c	(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;	Pre-construction	CB&I	Compliance Closed	Groundwater Management Sub Plan – sent in email to DP&I dated 11 July 2012. Approved 22/08/2013 Email from HWC 31 October 2011 indicating satisfaction with plan. Email to DP&I 9 August 2012 with correspondence attached endorsing GMSP from NOW Refer Condition B25 Sub plans developed by Lucas Engineering and based on the CB&I Plan.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
B57d	(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 in-stream 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	Pre-construction Construction	CB&I Other	Compliance Closed	Surface Water Management Sub Plan – sent in email to DP&I dated 11 July 2012. Approved 22/08/2013. Email from HWC 31 October 2011 indicating satisfaction with plan. Email to DP&I 9 August 2012 with correspondence attached endorsing GMSP from NOW Sub plans developed by Lucas Engineering and . HDD below Hunter River to prevent exposure from scouring and to prevent frac outs. Separate Hydrostatic Test Plan developed in liaison with NOW, HWC & PSC.

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
B57e	(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;	Pre-construction	CB&I	Compliance Closed	Flood Emergency Response Management Sub Plan sent to DP&I 24 July 2012. Approved 22/08/2012 Correspondence with PSC dated 26 July 2012, Email indicating plan sent through 27 July 2012. Email dated 16 August 2012 chasing up comments
B57f	(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;	Pre-construction	CB&I (i-iv)& AGL (v) & (vi)	Compliance Closed	Noise and Vibration Management Sub Plan approved 22/08/2012. i. Table 2-3 – Schedule currently aligns with actual works ii. Section 2.0, Table 2-6 lists main construction activities and predicted noise levels at various distances from site. iii. Section 2, Table 2-6. As no activities are predicted to impact the sensitive receptors the requirements for Noise Impact Statements is not considered necessary for the Project. Spot checks will be conducted during construction to confirm predicted levels. iv. Section 2.0, Table 2-1. No sensitive receivers are predicted to be impacted by the Project v. Appendix B – all tables vi. Section 3.0, Appendix B. R4 and R5 are not affected by the current stage of works. vii. Appendix B Table 8-1 viii. Appendix B – Table 8-2. Additional procedures developed post approval describing out of hours protocol. Out of Hours Procedure and associated sub plan to

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	(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 exceedance is detected, how any non-compliance would be rectified;				the NVMSP forwarded to DP&I 8 April 2013.. Variation to EPL submitted to EPA with approval obtained 04/03/2013. ix. Noise monitoring frequency, locations and results recording and reporting included in Section 5.2 of the CB&I NMSP. Management of any exceedances are discussed in Section 5.4. Baseline measurements taken at nearest receptor (Hunter Region Botanical Gardens) during period 20-27 November 2012. Spot checks completed throughout construction as detailed in plan. Lucas Engineering also complete spot checks on machinery as detailed in plan.
B57g	(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.	Pre-construction	AGL CB&I Lucas Engineering	Compliance Closed	Received confirmation email from Scott Carter (Senior Conservation Manager - Central Region, Aquatic Habitat Protection Unit, NSW DPI) on 28-Mar-12 accepting adequacy of ASS Management Plan Email with ASSMSP attached sent to DPI 22 March 2012, response received form DPI 28 March 2012

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	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;				CB&I ASSMSP Table 5-2 refer to additional monitoring GW and SW. Contingency states to stockpile material separately and advice sought. ASSMSP activated during works by CB&I on Old Punt Rd with assessment of implementation included in 3rd quarter ER audit. Lucas Engineering completed soil tests during trenching along Old Punt Rd, tested soil during excavations in Ausgrid easement.
B57h	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.;	Pre-construction	CB&I	Compliance Closed	Traffic Management Sub Plan approved by DP&I 22/08/2012 i. Section 2.8 ii. Appendix A iii. Table 9-4 iv. Appendix C Table 9-3 v. Section 1.6, Section 2.0 vi. Appendix B vii. Section 3.0 viii. Appendix C Table 9-2 ix. Appendix C Table 9-2 x. Section 3.2

Item	Assessment Requirement	Stage/ timing	Responsibility	Compliance Status	Reference/ Comment
	(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.				

Table A1.2 Compliance Assessment – Statement of Commitments

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.1 Soils					
7.1.1 Soil Contamination					
1	Include a spill response plan in the emergency response plan and ensure that there is adequate spill response equipment stored onsite. Personnel will be trained on the emergency response plan and correct use of the spill response equipment.	Preconstruction	All subcontractors	Compliance Open	Refer Appendix C of the Pollution Incident Response Management Plan All vehicles to carry spill kits with spot checks completed by CB&I staff and ER during site inspections. Spill response training included in Tool box talks for all contractors Spill response included in various plans – refer to audits of plans for details
2	Ensure concrete mixers and pump trucks are not washed on-site.	Construction	All subcontractors	Compliance Closed	Modification of Minister's Approval MP10_0133 issued 5 February 2013 allowing washout outside of bunded hardstand areas until concrete hardstand areas are installed on the site. Concrete washout decommissioned during reporting period.
3	Store PASS capable of producing leachate within lined bunds.	Construction	All subcontractors	Compliance Closed	ASSMP – refer Table 4-1 SMSP – refer Table 8-6 and Table 8-8 PASS encountered on Old Punt Rd previous reporting periods– treated in place with lime and restored in excavation. Excess material stored in lined bund area near entrance to site and disposed as solid waste. Treated PASS was stored in plastic lined bunded area.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
					Material classifies as solid waste and removed off site. Area decommissioned. Lucas and confirmed excavations did not encounter ASS/PASS during current reporting period
4	Contain excess construction materials, drill fluids and cuttings using appropriate methods such as plastic-lined pits, skips or holding tanks for appropriate reuse or off-site disposal. HDD fluids will be contained within the bunded HDD work area.	Construction – Stage 2	Lucas Engineering	Compliance Closed	HDD exit and entry points bunded with sediment and erosion controls; use of skips or holding tanks for pumped material. Excess muddy water in bunded area at rear of Hexham Site. Excess material mixed with mulch for disposal offsite. HDD works now completed with pads now rehabilitated.
5	Provide workforce inductions and training to ensure personnel have knowledge of the correct use of refuelling systems and chemical handling procedures.	Construction	All subcontractors	Compliance Open	Refer to SMSP Refuelling included in inductions. All refuelling done on site using mobile refuelling trucks. SWMS for refuelling checked. Site inspections indicate any pumps containing fuel contained within impervious container.
6	Restrict vehicle movements to sealed or dedicated areas and roadways, as far as practical.	Construction	All subcontractors	Compliance Closed	SMSP Site boundaries delineated initially with parawebbing. Road construction for main access road, gas track road completed. Permanent rural fencing installed and webbing removed. Movements are along Main Access Road or Gas Pipeline Track. Movements on PPA also confined to delineated areas. Permanent roads now in place.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7	Ensure drainage around vehicle and equipment servicing areas, workshops and chemical storage areas is directed to sumps.	Construction	All subcontractors	Compliance Open	SMSP No vehicle and equipment servicing areas, workshops and major chemical storage areas currently on site. Minor quantities stored in self bunded shipping containers.
8	Use licensed contractors to collect, transport and dispose of hazardous materials such as waste solvents, paints, mercury absorption medium and hydrocarbons to a licensed off-site facility in accordance with EPA guidelines.	Construction	All subcontractors	Compliance Open	WMSP, DG&HMMSP Regulated wastes tracked by CB&I with certificates issued – includes licence number of contractor. No other regulated waste removed off site.
9	Remove wastewater and sewage from site by an EPA licensed operator for treatment at an EPA-approved wastewater treatment facility.	Construction	All subcontractors	Compliance Open	WMSP. Amenities wastewater transported offsite with service dockets left at site office or included on invoices. Verbal confirmation received that disposal location is appropriately licenced Written confirmation of disposal location from transporter obtained. Checks completed and EPLs obtained for wastewater removal. Oily water removed by AES Pty Ltd and disposed to Environmental Treatment Solutions Pty Ltd
10	Regularly inspect hazardous material containment facilities to ensure their integrity.	Construction	All subcontractors	Compliance Open	SMSP DG&HMMSP Checks completed and recorded by CB&I on the daily and weekly site inspection checklists. Daily checks completed by Lucas and

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
11	Ensure potential contaminants at the Hexham receiving station are stored within flood-protected facilities.	Construction – Stage 2	Lucas Engineering	Compliance Closed	Stage 2 CEMP – SMSP All works at Hexham now completed with no contaminants stored on site.
12	Perform an assessment (in accordance with the SEPP 55 and NEPM 1999) to confirm the contaminant type, concentrations and extent of contamination in the event of unearthing historically contaminated soil. Action will then be undertaken in accordance with relevant EPA requirements and land use criteria to either remediate the impacted area or remove the contaminants.	Preconstruction	CB&I	Compliance Open	SMSP – Table 5-2 and Table 4-1 AGL to pay for any costs associated with contamination (if found) - CB&I must have appropriate management processes in place. Two finds of asbestos during bulk earthworks – removed by licensed contractor. No other contamination issues to date. Asbestos included in CB&I materials tracking register.
13	Investigate the current status of the existing sewage management system at the western boundary of the Hexham receiving station site.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Final design of system for operations – will remain the same as currently installed.
14	Include inductions to construction personnel that outline measures on how to deal with suspected contaminated soil.	Construction	All subcontractors	Compliance Open	SMSP Unexpected find procedure developed which includes contaminated soil. Unexpected soil contamination management included in CB&I induction

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.1.2 Soil Erosion					
15	A construction surface water management plan that describes erosion and sediment control will be prepared in accordance with NSW DECC Managing Urban Stormwater: Soils and Construction – Volume 2A Installation of Services 2008 (DECC, 2008) and Managing Urban Stormwater: Soils and Construction (The Blue Book) (Landcom, 2004). All erosion control and drainage works will be designed in accordance with Urban and Sediment Control Guidelines (DLWC, 1992).	Preconstruction	AGL	Compliance Closed	SWMSP developed in accordance with guidance documents. Controls and guidance on installation included in Appendix C of plan. Installation of controls as per guidance documents including drains along cuts on Main Access Road. Main Access Road handed back to AGL.
7.1.3 Acid Sulfate Soils					
16	Conduct a detailed ASS assessment at the Hexham receiving station site prior to construction at this site to determine the natural buffering capacity of the soil and ascertain that site works meet the requirements of clause 25 of the Newcastle Local Environmental Plan 2003 (Newcastle LEP 2003).	Preconstruction – Stage 2 Construction	Lucas Engineering	Compliance Closed	ASS assessment completed – area low risk
17	Minimise disturbance and exposure of ASS.	Preconstruction Construction	CB&I Lucas Engineering	Compliance Open	ASSMSP AGL studies to date indicate probability is low of encountering ASS in areas of primary excavation (Old Punt Rd). Site is low risk with exception of some areas of Old Punt Rd. Excavations completed with some ASS encountered and treated. No ASS encountered during reporting period.
18	Store excavated ASS in conditions that simulate its natural state, or treat and store away from waterbodies and drainage lines.	Preconstruction Construction	CB&I Lucas Engineering	Compliance Open	ASSMSP No PASS encountered during reporting period

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
19	Treat excavated ASS using agricultural lime with machinery sufficient to perform adequate mixing, where practicable.	Preconstruction Construction	CB&I Lucas Engineering	Compliance Open	ASSMSP No ASS material identified during project works.
20	Bund areas where ASS are exposed, including at the HDD entry and exit points for the pipeline beneath the Hunter River, to prevent leachate entering the wider environment.	Preconstruction Construction	All subcontractors	Compliance Closed	ASSMSP – Table 4-1 No ASS material identified during project works. HDD works completed
21	Undertake any potential ASS remediation works in accordance with clause 25 of the Newcastle LEP 2003, and the Acid Sulfate Soils Manual (ASSMAC, 1998).	Preconstruction Construction	All subcontractors	Compliance Open	ASSMSP ASSMSP and SWMS developed in accordance with clause 25 of the Newcastle LEP 2003. No ASS material identified during project works.
22	Undertake any potential ASS remediation works in accordance with, the Port Stephens Council Local Environmental Plan 2003, the Port Stephens Council Acid Sulfate Soils Policy, 2004 and the Acid Sulfate Soils Manual (ASSMAC, 1998).	Preconstruction Construction	All subcontractors	Compliance Open	ASSMSP No ASS material identified during project works.
7.1.4 Monitoring					
23	Inspecting and monitoring hazardous material containment facilities to ensure their integrity.	Preconstruction Construction	All subcontractors	Compliance Open	DG&HMMSP SMSP Checks completed and recorded
24	Inspecting and maintaining erosion and sedimentation control structures.	Preconstruction Construction	All subcontractors	Compliance Open	SMSP Daily and weekly checklists and summary reports

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
25	Inspecting and monitoring of all works to ensure soil erosion or contamination is not occurring.	Preconstruction Construction	All subcontractors	Compliance Open	SMSP Daily and weekly checklists and summary reports
26	Monitoring soil quality around Project works prior to and during construction to ascertain the presence of contaminated soil or ASS.	Preconstruction Construction	All subcontractors	Compliance Open	ASSMSP Sampling completed 28 February 2013 by Douglas Partners to characterise soil along Punt Rd prior to excavations. Douglas Partners also tested materials along southern portion of Old Punt Rd where ASS risk profile was high during works. Material tested as clear of PASS/ASS with no further testing required. Material was treated with lime regardless if removed to storage area. Visual examinations included in checklist. Soil sample collected by JBS&G from trench along Gas Access Track, field test indicated PASS. Sample sent for analysis. Trench excavated and backfilled on same day. Field tested soil for ASS/PASS during excavations in Ausgrid easement – nil encountered.
7.1.5 Modifications to Management and Mitigation Measures for Soils					
27	Conduct an ASS assessment of the Hexham Receiving Station site prior to construction at the site to check the natural buffering capacity of the soil and to satisfy the requirements under clause 25 of the Newcastle Local Environmental Plan 2003.	Preconstruction – Stage 2	AGL Lucas Engineering	Compliance Closed	Duplication with SoC 16

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
28	A hazardous material survey is carried out prior to demolition of the existing building at the Hexham receiving station site.	Preconstruction – Stage 2	AGL Lucas Engineering	NA Open	Lucas Engineering to complete survey - pending
29	A CEMP is prepared that includes procedures for the management and disposal of fill material, procedures for unexpected finds and an ASS management plan, if required.	Preconstruction	AGL	Compliance Closed	SMSP ASSMSP Unexpected finds procedure developed which includes contaminated soil and ASS etc.
30	Ensure that the banks of watercourses are not disturbed during construction.	Preconstruction	AGL	Compliance Closed	Included in Table 4-1 of CB&I ASSMSP Works within one water course on Old Punt Rd. Some disturbance in existing disturbed area (culverts). Further stabilisation using sandbags as per SoC 59. Horizontal Directional Drilling used under Hunter River and Old Punt Rd.
7.2 Surface Water					
31	A construction surface water management plan (SWMSP) is being prepared and implemented prior to construction commencing on site. The SWMSP will be prepared in consultation with HWC, NOW, OEH and PSC. The plan will describe best practice surface water control measures to reduce the risk of contamination of surface water and shallow groundwater, or the alteration of surface water flows. The plan will be supported by a surface water monitoring network as described in section 9.2.3 of the EA Main Report.	Preconstruction	AGL	Compliance Closed	Surface Water Management Sub Plan – sent in email to DP&I dated 11 July 2012 Email from HWC 31 October 2011 indicating satisfaction with plan. Email to DP&I 9 August 2012 with correspondence attached endorsing GMSP from NOW Additional SWMSP developed for pipeline works and electrical connection.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
32	The surface water management plan will be prepared and implemented as part of the CEMP and OEMP.	Preconstruction	All subcontractors	Compliance Open	SWMSP Implementation checked during site inspections – internal and external as well as ER quarterly audits Refer individual reports and audit reports for implementation.
Water Supply and Disposal					
33	Minimise water use.	Construction	All subcontractors	Compliance Open	SWMSP Refer also SoC91 Bulk of water use for dust suppression. Where possible, water from dewatering operations is used for dust suppression. Dust suppression water will be sourced from stormwater pond once installed. Toilets have half flush, taps in toilets have timer cut offs installed.
34	Source water from existing water supply infrastructure. Until the permanent water supply is available, it is currently proposed that this will be supplied to construction sites by either water tankers or from a standpipe such as a HWC metered standpipe along Old Punt Road.	Construction	All subcontractors	Compliance Closed	SWMSP Water supplied to site via from HWC metered standpipe near main entrance – pipeline installed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
35	Develop hydrostatic test management measures in consultation with HWC, OEH and NOW. The management measures will address: • Hydrostatic test water supply. This is likely to be potable water from existing HWC water supply infrastructure, untreated water from HWC Station 20 bores, groundwater locally abstracted from new bores or a combination of these; • Assessment of potential changes to groundwater levels if groundwater is abstracted from existing HWC and new AGL bores	Construction	AGL CB&I Lucas Engineering	Compliance Closed	SWMSP. Water for hydrostatic testing potable water – added to latest version of plan. Original plan developed in consultation with NOW and HWC. NOW and HWC consulted for the hydrostatic test management measures proposed in the SWMSP. Hydrostatic testing completed – no testing completed during reporting period.
36	Transport amenities wastewater offsite by a licensed operator to a licensed disposal facility.	Construction	All subcontractors	Compliance Open	WMSP, SWMSP, GWMSP Amenities wastewater transported off site with service dockets are left at site office or attached to invoices. Written confirmation of disposal location from transporter obtained previous reporting period.
37	Test and treat water generated by dewatering of trenches or excavations if required, and infiltrate back into the groundwater table at designated infiltration areas, or alternatively transport offsite to a licensed disposal facility.	Construction	All subcontractors	Compliance Closed	SWMSP– water to be infiltrated back into groundwater table if clean enough to do so. If water is suspected of being contaminated it will be tested and disposed of or used accordingly. 170596-EN-P22-Holding Pond Discharge Procedure completed and implemented 8 August 2013 to clarify monitoring requirements for CB&I. Trenching works completed

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
Surface Water Flow and Flooding					
38	Divert runoff from outside the work area to existing drainage lines to prevent the formation of new surface flow paths.	Construction	All subcontractors	Compliance Open	SWMSP Installation of diversion drains completed along eastern portion of Main Access Road. This water is diverted to culverts located on site.
39	Install culverts under new roads to maintain existing surface drainage flows.	Construction	All subcontractors	Compliance Closed	SWMSP Construction of culverts along Main Access Road completed – road works completed.
40	Restrict vehicle movements to formed access roads and sealed roads to avoid surface compaction where practicable.	Construction	All subcontractors	Compliance Closed	SWMSP Movements are along Main Access Road or Gas Pipeline Track. Movements on PPA also confined to delineated areas. Permanent roads now constructed.
41	Monitor the potential for flooding by observing weather reports and river levels during potential flood events.	Construction	All subcontractors	Compliance Open	SWMSP - Adverse weather forecasts are discussed in pre start meetings (prestart records) with weather reports posted on meeting room wall or notice boards where relevant. Potential for flooding occurred during audit period – 22 April extreme weather event flooded roads in area and restricted access to site – site remained above flood water.
42	Store equipment securely when not in use to prevent it being washed away in a flood.	Construction	All subcontractors	Compliance Open	SWMSP Site inspections indicate tools and other equipment is packed into storage containers –theft prevention additional driver.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
43	Avoid unnecessary clearing of vegetation and excavation works.	Construction	CB&I Lucas Engineering	Compliance Closed	CB&I SWMSP – Table 8-1 Vegetation cleared along delineated boundaries. Trees along boundary line retained as noted in ER site inspection reports. No further clearing and excavations planned.
44	The gas storage facility will have a minimum floor level equivalent to the 100-year ARI flood level (approximately 4.6 m AHD) plus a freeboard of 0.5 m (i.e., at least 5.1 m AHD). The preliminary design for the facility has a finished floor level of 6.3 m AHD.	Construction	AGL	Compliance Closed	SWMSP – Table 8-1 Main pad area average level at 6.3m AHD. Bunded area average level at 4.65m AHD. Design is compliant with this condition. As built drawings confirm final levels.
45	The design of the Hexham receiving station has a minimum floor level equivalent to the 100-year ARI flood level (approximately 3.9 m AHD) plus a freeboard of 0.5 m (i.e., at least 4.4 m AHD). No additions to the existing building are currently proposed.	Construction – Stage 2	AGL Lucas Engineering	Compliance Closed	The Hexham Receiving station floor level is 4.5mAHD based on as built drawing 201020-03390-HP-ST-DAL-0001_1.
Runoff, Erosion and Sediment Control					
46	Restrict construction traffic movement to formed access tracks to avoid excess disturbance to soil and creation of bare areas where practicable.	Construction	All subcontractors	Compliance Closed	SWMSP SMSP Vehicles noted during ER site inspections using formed access roads during site inspections. Permanent roads now constructed.
47	Select construction equipment to minimise the disturbance to soils.	Construction	All subcontractors	Compliance Open	SWMSP Majority of machines have rubber tyres with track vehicles only used when works require (not used during reporting period).

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
48	Minimise duration of subsoil (including stockpiles) exposure to weather.	Construction	All subcontractors	Compliance Open	SMSP Subsoil stockpile consisting of unsuitable material used to form bund wall in primary project area. Topsoil stockpiles seeded until required during rehabilitation works. Subsoil emplaced in final locations as soon as practicable.
49	Secure disturbed bare soils by re-spreading topsoil, re-vegetating or applying a geo-fabric (or similar), as soon as practicable after reinstatement of earthworks.	Construction	All subcontractors	Compliance Open	SMSP Works completed for the Main Access Road, Gas Access Track, high pressure pipeline, low pressure pipeline in TAC easement, electrical connection, Hexham and Jemena receiving station in Hexham. Reinstatement works completed in these areas with exception. Stabilisation works completed 90% in primary project area.
50	Re-vegetate exposed soils as soon as possible to reduce potential for sediment-laden runoff.	Construction	All subcontractors	Compliance Open	VRWMP SMSP Rehabilitation works completed along Main Access track, Gas Access Track, HDD pads, Hexham Receiving Station, TAC works. Old Punt Rd stabilised from CB&I and Lucas Engineering works. PPA remains active for commissioning phase.
51	Provide wind-breaks (or equivalent control measures) around exposed areas and stockpiles to prevent wind erosion.	Construction	All subcontractors	NA Open	SMSP Not applicable as material is sandy with minimal dust noted coming off stockpiles during site inspections – includes windy days.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
52	Place soil stockpiles upslope of excavations and not in drainage lines.	Construction	All subcontractors	Compliance Closed	SMSP Noted during site inspections topsoil stockpiles located along pipeline easement away from drainage lines. Excavations primarily in Primary Project Area which is relatively flat. Material excavated during low pressure pipeline works separated either side of pipeline – area relatively flat and material reinstated within 48 hours. No material noted in drainage lines during audit period. Excavation works now completed.
53	Construct roadside swales to capture runoff from the Primary Project Area access roads during construction.	Construction	CB&I	Compliance Closed	SMSP SWMSP Road side swales installed with rock checks to prevent erosion. Roads now stabilised with permanent surfaces installed.
54	Design drains to minimise water velocities.	Construction	All subcontractors	Compliance Closed	SWMSP SMSP Drains relatively flat with rock checks installed where necessary to slow flow. Roads now completed.
55	Install velocity reduction devices, such as sandbags, in drains and sloped drains to reduce erosion.	Construction	All subcontractors	Compliance Closed	SWMSP, SMSP Sandbags and rock checks installed along Main Access Road where required. Roads now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
56	Install sediment capture devices, such as silt fences and bunding, down-slope of exposed soils and soil stockpiles.	Construction	All subcontractors	Compliance Open	SWMSP SMSP Silt fences installed along site boundaries and downslope of active areas where required.
57	Construct suitably lined sediment control ponds down-slope of construction work areas upfront. These will subsequently be developed into permanent wetlands during the operations stage.	Construction	CB&I	Compliance Closed	SWMSP - Table 8-4 GWMSP – Table 8-1 Sediment control pond installed in Primary Project Area. Water tested prior to discharge.
58	Treat construction tracks to minimise surface degradation, e.g., compaction or topping with gravel.	Construction	All subcontractors	Compliance Closed	SWMSP, SMSP Gas Pipeline Track sealed with crushed gravel material. Main Access Road sealed with bitumen. PPA roads now sealed. No construction tracks remain.
59	Stabilise the banks of any disturbed watercourses adjacent to Old Punt Road using measures such as rock rip-rap, diversion berms, sediment fences, jute matting and reseeding.	Construction	CB&I	Compliance Closed	SMSP - Appendix C Section 4.2 Works adjacent to Old Punt Rd completed. Sediment controls now removed and area stabilised through natural revegetation. No further works in watercourses.
60	Divert runoff upstream of disturbed areas to existing drainage lines to prevent the risk of increasing erosion and requiring further sediment control measures.	Construction	All subcontractors	Compliance Open	SWMSP, SMSP Diversion drains installed as per SMSP with exception of car park area along western boundary. Sandbags installed instead and rock placed in area to prevent erosion during construction. Silt fences, additional rock and berms to divert water, installed for operations phase.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
61	Undertake daily inspections of all runoff, erosion and sediment control structures during the construction period.	Construction	All subcontractors	Compliance Open	SMSP, SWMSP. Checks completed daily (split into work areas with all areas covered over the week). All areas inspected after rainfall events.
62	Maintain runoff, erosion and sediment control structures according to appropriate standards.	Construction	All subcontractors	Compliance Open	SMSP CB&I Checklists reports on effectiveness if controls Site inspections indicate maintenance works are on-going.
63	Ensure silt fences are in a vertical position and securely fixed and remove sediment or residue behind sediment control barriers.	Construction	All subcontractors	Compliance Open	SWMSP Checks for erosion completed and recorded. Issues noted during site inspections and audits.
64	Monitor earthwork areas regularly for signs of erosion.	Construction	All subcontractors	Compliance Open	SWMSP. SMSP includes general requirement to check all strictures during all works Checks for erosion completed and recorded
65	Install and commission at the operations phase, runoff, erosion and sediment control measures as soon as practical.	Operations	AGL	Compliance Open	Included in OEMP developed for operations phase.
Discharge of Contaminated Water, Spills and Leaks					
66	Minimise the volume of hazardous chemicals stored on site.	Construction	All subcontractors	Compliance Open	SWMSP, DG&HMMSP Minor volumes of chemicals were stored on PPA site in self bunded shipping containers – primarily cleaning fluids, minor quantities of fuel, oils and lubricants. Now removed. Hexham site works now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
67	Store and transport hazardous materials according to their material safety data sheet (MSDS).	Construction	All subcontractors	Compliance Open	SWMSP – Table 8-11, DG&HMMSP – Table 8-2 Segregation charts posted in CB&I DG areas. Training on segregation distances to relevant staff through toolboxes completed.
68	Store potentially contaminating chemicals according to the appropriate standards, including measures such as impervious bunded areas capable of capturing 110% of the maximum spill volume.	Construction	All subcontractors	Compliance Open	SWMSP, DG&HMMSP Site inspections indicate material mostly stored correctly – some non-conformances noted and rectified - refer to individual site inspection reports.
69	Prepare a spill response plan and ensure adequate spill kits are available at all construction sites and personnel are trained in their use.	Construction	All subcontractors	Compliance Open	SWMSP, DG&HMMSP Spill kit located at site offices and in PPA area. Small spill kits are required by the site to be carried by all vehicles on PPA site. Random checks during site inspections by CB&I staff and ER confirm compliance with site requirement. Toolbox talks detailing spill response completed
70	Maintain all construction equipment appropriately and inspect machinery for leaks.	Construction	All subcontractors	Compliance Open	SWMSP All machinery checked daily and documented Inspections completed routinely
71	Bund HDD entry points to prevent the release of leachate from drill cuttings, drilling fluids, or spills entering the surrounding environment, including the Hunter River.	Construction – Stage 2	Lucas Engineering	Compliance Closed	Stage 2 CEMP – SWMSP Frac out near HDD exit point along Old Punt Road near Kennington Drive. Spill of mud along easement and onto Old Punt Road. HDD works now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
72	Implement hydrostatic test water management measures in consultation with HWC and NOW to determine and address requirements for testing and treating of this hydrostatic test water prior to re-use or disposal. Disposal options include infiltration to groundwater or discharge to an existing watercourse.	Construction	CB&I Lucas Engineering	Compliance Closed	SWMSP – Section 2.4. AGL completed development hydrostatic testing strategy and plan. Duplicates SoC 35 Audits against plans indicate compliance for CB&I. Lucas Engineering did not complete all monitoring as required, however CB&I results cover period for hydrostatic testing by Lucas. No further testing to be completed.
Frac-out					
73	A detailed geotechnical investigation will be undertaken prior to HDD under the Hunter River. This will include drilling investigation bore holes and shallow seismic surveys to provide detailed understanding of the geological strata under and adjacent to the river.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	AGL have completed geotechnical investigations prior to commencing works. This data has been used in planning construction works including frac-out mitigation measures as outlined in NGSF-LUC-HPW-PM-PLN-0010 Drilling Fluid Management Plan
7.2.2 Monitoring					
74	A surface water quality monitoring program will be developed as part of the CEMP and OEMP surface water management plan and in consultation with relevant authorities (OEH, NOW, and HWC). It will include preconstruction ('baseline'), construction and operations monitoring of water quality parameters. Monitoring will be undertaken within the primary project area and at surface runoff control facilities (such as sediment ponds). The following monitoring locations are proposed: • Sediment ponds (during construction only). • Holding and inspection tanks. • Outflow from the holding pond.	Preconstruction	AGL	Compliance Open	SWMSP Appendix A – Figures including monitoring locations Sediment ponds in ESCP – to be updated as required Targets included in Appendix C Sediment ponds installed. JBS&G engaged to undertake weekly inspection against surface water management plan for Lucas Engineering with testing as required. No testing completed during reporting period.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
	• Water Features 1 and 2. The proposed stormwater containment and treatment system will be designed to provide treatment of surface water runoff from the site through containing, treating and adequately disposing of this runoff. Maintenance and monitoring will need to be undertaken to ensure discharges satisfy regulatory requirements. Construction and operations monitoring results will be compared to target concentrations (trigger values) derived from baseline data. Where this is not possible due to insufficient data, the concentrations will be compared to recommended trigger value concentrations for protection of aquatic ecosystems (ANZECC, 2000). The plan will also require inspecting water levels in and the integrity of surface runoff control facilities (such as holding pond, bio-retention systems, drains, sumps and sediment fences) monthly and following significant rainfall.				
7.2.3 Modifications to Management and Mitigation Measures for Surface Water					
75	A surface water baseline monitoring program is carried out before construction commences.	Preconstruction	AGL	Compliance Closed	Completed – refer EA SWMSP lists base – Table line data results in Appendix C

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
76	During the construction program, holding and sediment pond areas on site will be monitored monthly following the initial 12-month construction period. It is envisaged that a report on a six-monthly basis will be produced; however final requirements will depend on the specific planning approvals (and associated reporting requirements to different agencies) for surface water and groundwater monitoring.	Construction	CB&I	Compliance Open	SWMSP – Table 5.1 details monitoring program requirement Holding and sediment pond areas completed – monitoring commenced as per SWMSP. 12 monthly sample events now completed. All parameters within trigger limits.
77	AGL will appoint a peer reviewer for the engineering design of the stormwater management system.	Pre-construction	AGL	Compliance Closed	Confirmation email by Axel Hanson from Hunter Water Corporation dated 2-May-12 approving SMEC as the independent peer reviewer. Review of design completed with email received from HWC 2 May 2012 with recommendations. Meeting held with HWC 20 July 2012 to discuss review and recommendations. Submitted to DP&I on 8 June 2012
78	Stormwater from the site will be treated in accordance with PSC's 'Urban Stormwater and Rural Water Quality Management Plan for New Developments' and will therefore be of equivalent (or better) quality than stormwater from other sites within the municipality.	Construction	CB&I	Compliance Open	This Mgt Plan has been referenced in design of stormwater controls on site. CEMP, EWMS, SWMSP Refer various commitments for specific controls
79	Holding pond will be sized to accommodate up to a 1 year ARI.	Construction	CB&I	Compliance Closed	SWMSP – refer Figure 5 Holding pond has been sized for up to 1 year ARI 24 hour storm.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
80	Disposal of hydrostatic test water will be managed under the surface water management plan in consultation with relevant agencies.	Construction	CB&I Lucas Engineering	Compliance Closed	SWMSP – Section 2.4. SWMSP has been submitted to agencies for review and accepted. Separate Hydrostatic Test Plan developed and approved by agencies. Audit against plans indicate compliance. No further hydrotesting to be completed.
81	AGL will prepare a stormwater management plan for the Project.	Preconstruction	CB&I AGL	Compliance Closed	SWMSP completed for CB&I and all Stage 2 contractors (Lucas, PowerServe).
82	A flood emergency response plan will be prepared for the Hexham receiving station.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed – Lucas Engineering	Included in Emergency Management Plan – Section 9.0
83	The surface water management plan will be prepared in consultation with HWC, OEH and NOW, and will include, but not be limited to: a) A description of the quantity and source of all surface water supplies relating to construction and operations; b) Detailed baseline data on surface water quality; c) Surface water quality impact assessment criteria and a protocol for the investigation, notification and mitigation of identified exceedances; d) A program to monitor surface water quality; e) Detailed design of all water crossings, culverts and in-stream works; f) A program to monitor and manage watercourse crossings, culverts and in stream works; g) A protocol for the investigation, notification and mitigation of identified impacts associated with watercourse crossings, culverts and in stream works.	Preconstruction	CB&I	Compliance Closed	SWMSP – refer CoA 57d a) Section 2.3 b) Baseline included in Section 5.2 and Appendix C c) Appendix C for assessment criteria. Table 8-15 for protocol to follow d) Monitoring program included in Section 5.1 e) Design of water crossings, culverts and in stream works included in ESCP as part of SMSP – Section 10.2 f) Program to monitor and manage watercourse crossings, culverts and in stream works added to plan g) Table 8-15 - protocol for investigation, notification and mitigation of identified impacts associated with watercourse crossings, culverts and in stream works to be included in plan

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
84	Water feature 4 is not disturbed by the access road corridor.	Preconstruction – Stage 2	CB&I	Compliance Closed	CEMP - SWMSP
85	When wastewater is tankered: The system will have a telemetered level sensor that alarms when over range. The tank will be included on the regular site inspection and reporting program.	Construction Operations	CB&I AGL	Compliance Open	WMSP All toilet blocks have visible and audible alarms installed. Alarm is not telemetered as generator turned off when site is not active. Wastewater pit located in the Primary Project Area is alarmed (visual and audible). Increased frequency of pump outs to twice weekly. Included visual and audible alarm inspection on daily check list. Created 170596-EN-C09-Daily Amenities Leak Inspection Checklist. Amenities checked for running water daily after cleaners leave site. Pump system is isolated after hours to ensure continuous flow is prevented. Permanent facilities have alarms installed. These have been installed as per PSC approval requirements which do not require a telemetered sensor. As the site is a major hazard facility it will be manned 24 hours per day and therefore any site alarms will be acted on.
86	There is a groundwater monitoring piezometer that is regularly sampled for pathogens and nutrients, downstream of the wastewater holding tank.	Construction Operations	CB&I	Compliance Open	GMSP – Table 8.1 Groundwater bore located to north (down gradient) of sewage holding tank (MW5). Analytes to be tested include nutrients and pathogens such as E. Coli, total or faecal coliforms to indicate sewage contamination. Bore required for permanent facilities – to be installed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
87	Ensure that the banks of watercourses are not disturbed during construction.	Construction	CB&I Lucas Engineering	Compliance Closed	GWMSP – Table 8-1 Works within one water course on Old Punt Rd. Some disturbance in existing disturbed area (culverts). Further stabilisation using sandbags as per SoC 59. Area now stabilised with vegetation regrowth. Sand bags removed. No other watercourses disturbed.
88	Those conditions 1 to 5 recommended by PSC are implemented for the Project. 1) Full details of stormwater drainage shall be approved by an accredited certifier or Council prior to issue of Construction Certificate. 2) Submission of Works-As-Executed plans and report prepared and certified by a suitably qualified drainage engineer confirming all drainage works (volume, discharge, levels, location etc.) are built in accordance with conditions of consent and the approved plan. The documents shall be submitted to, and accepted by the Certifying Authority prior to issue of the Occupation certificate. 3) The stormwater system, including any water quality or quantity components, shall be maintained in perpetuity for the life of the development. 4) Separate approval is required to occupy, close or partially close the road reserve adjacent to the property under the Roads Act. The storage of materials, placement of toilets and rubbish skips within the road reserve is not permitted.	Pre operations	AGL (1,3,5) CB&I (2,4)	Compliance Closed	1) Completed – construction certificate issued. 2) Completed – occupancy certificate issued. 3) Noted –included in OEMP for operations phase. OEMP and sub plans have been developed 4) Refer Surveyors Plan for DP1173564 – current location of buildings is on shoulder of TAC access road. Check of PSC LEP for area confirms road is not a Public Road 5) Completed

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
	5) Provide water quality report that shows that the system for removal of nutrients and other pollutants meets the targets set out in Council's 'Urban Stormwater and Rural Water Quality management Plan' (see section 8). Details to be provided to the certifying authority prior to issue of the Con Cert.				
7.3 Groundwater					
90	A groundwater management plan will be prepared in consultation with relevant agencies and implemented as part of the CEMP and OEMP. The groundwater management plan will describe best practice control measures to reduce the risk of contamination of shallow groundwater, or the substantial alteration of groundwater flows due to drawdown effects. The proposed (onsite) monitoring network will be effective in identifying any impacts during both the site construction and operation of the facility. The groundwater management plan will define the groundwater monitoring network, analytes and frequencies, include a spill response plan and a contingency plan to respond to any spills or measured groundwater contamination during Project construction or operations. Groundwater levels will also be monitored at a selection of sites. It will also include a contingency plan to respond to any drawdown caused by HDD based on groundwater monitoring described in section 7.4.6 of the EA Main Report.	Preconstruction Pre-operations	CB&I Lucas Engineering – Stage 2 AGL	Compliance Closed	Email from HWC 31 October 2011 indicating satisfaction with plan. Email to DP&I 9 August 2012 with correspondence attached endorsing GMSP from NOW Groundwater Management Sub Plan – sent in email to DP&I dated 11 July 2012. Letter from DP&I received 10/08/2012 approving plan for primary project area. Groundwater Management Sub Plan – refer CoA B25 and B57 Contingency plan to respond to any drawdown caused by HDD based on groundwater monitoring included Lucas Engineering GMSP – Appendix B (Stage 2). No further HDD works to be completed. OEMP includes groundwater management plan.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.3.1 Groundwater Levels and Flow					
91	Minimise groundwater use.	Preconstruction	CB&I	Compliance Closed	GMSP – Table 8-1 No groundwater pumped/used during reporting period. Site connected to HWC
92	Discharge excess groundwater pumped from trenches during construction where possible to minimise temporary changes in local groundwater levels.	Construction	All subcontractors	Compliance Closed	No groundwater pumped/used during reporting period. All trenching works now completed.
93	Replace material excavated from trenches to minimise changes to groundwater flows, as far as practical. Where possible, pipelines will be bedded on sand in the base of the trench.	Construction	All subcontractors	Compliance Closed	GMSP Excavations on Primary Project Area generally above water table – now completed Lucas Engineering pipeline excavations usually closed within 48 hours. Works now completed.
94	Undertake infiltration rate tests at the sites of proposed infiltration basins to determine local infiltration rates and the presence of indurated sand layers capable of inhibiting groundwater recharge.	Preconstruction	CB&I	Compliance Closed	Included in GMSP Infiltration basins were not installed during reporting period. Water from dewatering activities directed to sediment basin with visual monitoring completed. Infiltration tests not completed nor considered to be required.
95	Monitor groundwater levels within and at the boundaries of the gas plant site.	Preconstruction Construction	AGL	Compliance Open	GMSP – Section 5.0 Monthly groundwater monitoring completed first 24 months – now expanded to quarterly frequency.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.3.2 Groundwater Quality					
96	A groundwater baseline monitoring program has commenced and will continue during construction and operations. This includes measurement of groundwater levels and quality. Groundwater monitoring will be carried out throughout the life of the Project within the gas plant site. Measures for preventing contamination of surface water described in section 7.3.4 of the EA Main Report will assist in preventing the contamination of groundwater. Measures for preventing contaminated soils or ASS soils contaminating surface water are described in section 7.2.4 of the EA Main Report. These measures will prevent contamination of groundwater by negating the infiltration of contaminated surface water and the leaching of potential contaminants from the soil into the groundwater. A thorough geotechnical investigation will be completed prior to HDD commencing to ensure that it is designed to prevent groundwater contamination during construction. Water quality parameters to be monitored will be determined during development of the groundwater management plan and in consultation with HWC, OEH and NOW. A report presenting data and analysis of the six months of baseline water quality data (both groundwater and surface water) will be provided to HWC, OEH and NOW. The baseline report will review the interim thresholds and develop the final thresholds for water quality criteria for both the CEMP and OEMP.	Preconstruction Preconstruction – Stage 2	AGL	Compliance Closed	Baseline report completed and summary of results include in GWMP AGL have completed geotechnical investigations prior to commencing works. This data has been used in planning construction works including frac-out mitigation measures as outlined in NGSF-LUC-HPW-PM-PLN-0010 Drilling Fluid Management Plan

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
Spills and Leaks					
97	The measures for preventing direct contamination of surface water include measures to prevent spills at the gas plant reaching groundwater.	All stages	AGL All subcontractors	Compliance Open	SWMSP GMSP – spill response contingency plan flowchart, Appendix E Spill Response Procedure
7.3.3 Monitoring					
98	Groundwater monitoring will be undertaken in accordance with the groundwater management plan throughout the life of the Project in the PPA and during construction only at the Hexham receiving station site and adjacent to HDD entry and exit points, assuming no changes beyond expected natural variation are observed in these bores. Monitoring bores will be installed. There may be several phases of installation depending on the respective site and pipeline construction programs. A groundwater baseline will be established before construction commences (minimum six months at boundary locations). The final monitoring locations will be defined during development of the Groundwater Management Plan for the site and determined in consultation with HWC, OEH and NOW. A thorough geotechnical investigation will be completed prior to HDD commencing to ensure that it is designed to prevent groundwater contamination during construction.	Preconstruction Preconstruction – Stage 2	CB&I AGL	Compliance Open	GMSP – Section 5.0 Stage 2 – HDD GMSP developed Groundwater monitoring competed monthly and reported quarterly first 24 months – now moved to quarterly. Two monitoring bores have been installed (MW10-MW11 near the entry point in Hexham and MW8-MW9 near the exit point in Tomago) to monitor groundwater levels during construction. HDD works now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
	Groundwater monitoring will be undertaken throughout the life of the Project in the PPA in accordance with the groundwater management plan. In addition the groundwater management plan will make provision for additional groundwater monitored at the Hexham receiving station site and adjacent to HDD entry and exit points during construction. Water quality parameters to be monitored will be defined during development of the groundwater management plan for the site and determined in consultation with HWC, OEH and NOW. Groundwater monitoring results will be evaluated against natural background concentrations (the primary comparison) and have relevance to ANZECC 2000 ecosystem trigger values and NHMRC 2004 Australian drinking water guidelines. Thresholds will be defined in the groundwater management plan for the site and determined in consultation with HWC, OEH and NOW. Exceedances above the final adopted thresholds would trigger responses as outlined in the contingency flow chart. The indicative groundwater monitoring program schedule is outlined in Table 7.1.				

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
99	Spill Response will include: (1) Clean-up of the contamination source; (2) Assess the groundwater quality with respect to relevant guidelines; (3) Advise OEH, NOW and HWC of any spill or leakage to unpaved ground that has potential to impact groundwater; (4) Undertake hydraulic containment using one or more downstream pumping bores; (5) install additional monitoring bores and increase monitoring frequency; and (6) Pump the contained water to a treatment facility for treatment and reinjection to groundwater if the water meets criteria.	Preconstruction	CB&I (1, 3, 6), AGL (2, 4, 5)	Compliance Open	GMSP 1. Appendix E 2. Section 2.0 3. Appendix E 4. Appendix E and Figures 5 & 6 5. Appendix E 6. Appendix E
100	Advise OEH, NOW and HWC of any spill or leakage to unpaved ground that has potential to impact groundwater.	Construction	CB&I AGL	Compliance Open	OEH notified in GMSP, Emergency Response Plan, CEMP and PIRMP. GMSP – Appendix E also includes requirement to contact NOW and HWC No incidents reported to EPA during reporting period.
7.3.4 Modifications to Management and Mitigation Measures for Groundwater					
101	A groundwater assessment (at Hexham site) based on site redevelopment details are carried out.	Preconstruction – Stage 2	AGL	Compliance Closed	Report completed
102	NOW will be consulted regarding any construction dewatering of pipeline excavations to ensure that any extractions are properly licensed (if required).	Construction – Stage 2	Other	Compliance Closed	Letter from NOW (dated 13/11/13) allows 3ML allowance before licensing required.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
103	AGL will ensure compliance with all statutory licensing requirements, including those stipulated by the conditions of approval.	Construction	AGL CB&I	Compliance Open	GMSP – Section 5.0 Audit schedule, review of operations, CB&I reporting
104	All water supplies for construction and operations will be sourced from an authorised and reliable supply.	Construction Operations	All subcontractors	Compliance Open	GMSP – Table 8-1 Water sourced from HWC metered standpipe to site
105	A groundwater management plan will be prepared in consultation with HWC, OEH and NOW. The groundwater management plan will include, but not be limited to: A description of the quantity and source of all surface water supplies relating to construction and operations; A description of all dewatering activities including the quantity of groundwater to be taken; In relations to groundwater levels and quality: (i) a detailed baseline data on groundwater levels and quality, (ii) Groundwater quality impact assessment criteria, (iii) a program to monitor the effects of any change in groundwater levels and quality on groundwater dependent ecosystems, (iv) A protocol for the investigation, notification and mitigation of identified exceedances of the groundwater quality impact assessment criteria, (v) A strategy to prevent illegal dumping of waste on the site and any access roads or tracks.	Preconstruction	AGL	Compliance Closed	GMSP – sent in email to DP&I dated 11 July 2012 with acceptance of plan received August 2012 for Primary Project Area. Email from HWC 31 October 2011 indicating satisfaction with plan. Email to DP&I 9 August 2012 with correspondence attached endorsing GMSP from NOW (i) Appendix C includes baseline water quality, depth. Duration and frequency of monitoring include in Table 5-2 Groundwater Monitoring Requirements (ii) Performance criteria included in Section 5.1.1 (iii) Section 5.1.1 for water quality and changes in water levels (using CUMSUM) (iv) Contingency Plan Flowchart Figure 5 and Appendix E for spills (v) WMSP – Table 7-7 Illegal Dumping

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
106	A groundwater monitoring piezometer will be installed and regularly sampled for pathogens and nutrients, downstream of the holding tank for wastewater.	Preconstruction	AGL	Compliance Closed	GMSP – Table 8.1. Refer SoC 86 (repeat). Groundwater bore located to north (down gradient) of sewage holding tank (MW5) Analytes tested for nutrients and pathogens such as E. Coli, total and faecal coliforms to indicate sewage contamination.
107	Groundwater monitoring data collected from the site will be provided to HWC, OEH and NOW.	Construction	AGL	Compliance Open	GWMP – Section 3.0 and Section 5.0 Groundwater monitoring completed monthly – minutes of meeting between NOW, HWC and PSC sighted which includes discussion on results and any exceedances. Results are forwarded to EPA via email (sighted).
108	Monitor and assess groundwater quality with respect to background concentrations.	Construction	AGL	Compliance Open	GMSP – Section 5.0 Groundwater monitoring completed monthly and reported quarterly for first 24 months – now sampled quarterly. Reports assess water against trigger values derived from background sampling.
109	Conduct a review of the analytical suite of groundwater monitoring parameters following first 12 months of construction works.	Construction	AGL	Compliance Closed	GMSP – Section 5.0, Appendix C Review completed. Monitoring moved to quarterly. List of analytes to remain unchanged until next review.
110	Prepare remediation action plan which is likely to include hydraulic containment using one or more down gradient (new) pumping bores (in the event of spill).	Construction	AGL	Compliance Open	GMSP – Appendix E and Figures 5 & 6 outlines approach to be taken in event of spill/pollution which includes hydraulic containment. In relation to specific event AGL may provide support to CB&I when CB&I is developing management strategy.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.4 Flora and Fauna					
7.4.1 Flora					
111	Limit the width of the construction right of ways for the gas pipeline (up to 10 m) where significant species and vegetation remnants are located (applies to gas pipeline corridor along northern boundary).	Preconstruction	CB&I	Compliance Closed	FFMSP – Appendix B, Table 8-9 Vegetation Clearing Protocol, Table 8-10 Earp's Gum Protection Protocol The current WP drawings show the whole of the 30m easement being cleared along the gas access track, with 10m being used to create a track. Letter from ecoBiological 14/05/2012 confirming that there are no significant species or ecological communities which would limit the clearing to 10m.
112	Re-vegetate relevant sections of the right of ways with suitable native species that comply with pipeline license requirements (e.g., no large tree species) as soon as practicable following construction.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Lucas added to their plans as required, however revegetation to be other groundcover. All rights of way now completed.
113	Allow an appropriate buffer distance (to be determined when developing the CEMP) between any construction activity and remnant native vegetation, where practicable. In such situations, strict erosion controls will be implemented to prevent sediment-laden runoff entering the adjacent vegetation.	Preconstruction	AGL All subcontractors	Compliance Closed	VRSMP Appendix B Table 8-2 Silt fences installed around Primary Project Area and monitored regularly. Silt fences installed along Main Access Road and Gas Access Track – since been removed after conclusion of construction works. Permanent fencing now installed.
114	Ensure vehicle and equipment parking areas and stockpile areas are identified and sited to avoid areas containing ecological value.	Preconstruction	CB&I AGL	Compliance Open	FFMSP – Appendix B Table 8-2 Access Table 8-10 Earp's Gum Protection Protocol VRSMP Appendix C

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
					SWMSP – Table 8-11 CEMP – includes location of stockpiles and offices. Areas located within delineated project area. ER and CB&I inspections confirm locations. All clearing now completed. Designated vehicle parking inside primary project area. Stockpiles located in laydown area near north boundary.
115	Erect flagging tape to mark 'no-go' zones to ensure areas to be protected are clearly defined, identified and avoided.	Preconstruction	AGL	Compliance Closed	FFMSP – Appendix B Table 8-1 General Construction Table 8-6 Pre-clearing Protocol Table 8-10 Earp's Gum Protection Protocol Table 8-12 Koala Protection Protocol Table 8-13 Hollow dependant Threatened Fauna Protection Protocol VRSMP Appendix C Site inspections confirmed flagging tape delineated boundary of works during clearing activities. Permanent fencing installed along Main Access Road, Gas Access Track (north side) and around Gas Storage Facility. Temporary flagging now removed from all areas.
116	Identify appropriate biodiversity offsets consistent with 'improve or maintain' principles.	Preconstruction	AGL	Compliance Closed	Refer Offset Strategy ecoBiological May 2012

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
117	Use native vegetation grown from local seed banks for re-vegetation where appropriate.	Preconstruction	AGL (responsible for seed bank), Other responsible for re-vegetation	Compliance Open	VRSMP Appendix D, Appendix B Table 8-5 Dianella harvested prior to clearing and stored at Hexham office now planted along Main Access Road. No other revegetation completed to date apart from natural revegetation. Seeding of northern laydown area to be completed using seed harvested prior to clearing activities.
118	Limit access to sensitive areas of riverbanks and riparian vegetation during construction of the pipelines where practicable to avoid inadvertent or unauthorised disturbance of adjacent vegetation.	Preconstruction	AGL	Compliance Closed	Pipeline design changed to underboring from trenching to avoid impacts to riparian areas
119	Reinstate logs and rocks, which are removed for pipeline construction, along the right of ways or relocate them to appropriate nearby habitats.	Construction – Stage 2 Operations	Lucas Engineering	Compliance Closed	Pipeline design changed to underboring from trenching to avoid impacts to riparian areas
120	Trim vegetation where possible rather than removing it.	Construction Operations	CB&I	NC-2 Open	VRSMP Section 3.2 ER site inspections confirm trees left along boundaries and trimmed where possible – refer inspection reports. Commitment to be added to OEMP

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
121	Re-vegetate disturbed areas where possible, other than those required for permanent use, access to the easement or facilities or for bushfire protections areas. The following procedures will be followed during re-vegetation: • Reinstate topsoil; • Re-spread cleared vegetation in the Project area to facilitate natural regeneration of native vegetation, where appropriate; • Undertake weed control where necessary to promote the rehabilitation of re-vegetated areas; • In consultation with the landowner, fence rehabilitated areas until successful re-vegetation is evident or until such time as the landowner requests fencing to be removed; • Monitor rehabilitation success, and undertake supplementary active re-vegetation (as outlined above), if required.	Construction Operations	All subcontractors	Compliance Open	FFMSP – Appendix B Table 8-1 General Construction Table 8-9 Vegetation Clearing Protocol VRMSP – Table 8-2, Table 8-5, Section 3.1, Section 5
7.4.2 Fauna					
122	Prepare a detailed fauna translocation (displacement) protocol to assist in the translocation of wildlife during the clearing process.	Preconstruction	AGL	Compliance Closed	FFMSP – Appendix B Table 8.8 General Fauna Displacement Protocol
123	Use HDD where warranted.	Construction – Stage 2	Lucas Engineering	Compliance Closed	HDD used under riparian areas and along majority of Old Punt Rd. Trenching limited to small area at Forgacs site and along Gas Access Track. Low pressure pipeline installation to be via trenching. All works now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
124	Minimise the length of time that construction trenches remain open, particularly in areas where habitat for significant species has been identified nearby.	Construction	All subcontractors	Compliance Closed	FFMSP – Appendix B Table 8-1 General Construction Trenches backfilled generally within 24 to 48 hours for all stages of project. All trenching works now completed
125	Clear fauna from the right of way prior to vegetation clearing and implement mitigation measures where habitat is present.	Pre-clearing	AGL	Compliance Closed	FFMSP – Appendix B Table 8-9 Vegetation Clearing Protocol Clearing process now completed – Ecobiological completed report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012) detailing fauna rescue and relocations. Total of 57 animals rescued from clearing zone.
126	Remove habitat features, such as rocks and logs, from the right of way prior to clearing, and carefully stockpile prior to clearing and return during easement restoration. Inspect these features for signs of fauna and remove habitat features prior to clearing the right of way.	Pre-clearing	CB&I	Compliance Closed	FFMSP Appendix B Table 8-6 Pre clearing protocol. No rocks or logs suitable for restoration works were identified by Ecobiological as per report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
127	Conduct pre-clearing surveys prior to any tree felling to identify hollow-bearing trees, which will be left standing, where practicable. Nesting boxes will be placed into nearby trees where hollow-bearing trees are removed.	Pre-clearing	AGL	Compliance Closed	FFMSP – Appendix B Table 8-6 Pre-clearing Protocol, Table 8-7 Hollow Bearing Tree Clearing Protocol Ecobiological detailed process in report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012). ER site inspections also noted protocol followed – refer inspection reports. Clearing now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
128	Conduct pre-construction trapping and relocation of targeted species where possible in specified ecologically sensitive locations.	Pre-clearing	AGL	Compliance Closed	FFMSP – Appendix B Table 8-8 General Fauna Displacement Protocol Table 8-11 New Holland Mouse Protection Protocol Table 8-12 Koala Protection Protocol Ecobiological detailed trapping results in report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012). No New Holland Mice found during trapping program. Clearing now completed
129	Monitor open sections of trenches as required for trapped animals, such as small ground-dwelling mammals, particularly in areas where sensitive habitat has been identified.	Construction	All subcontractors	Compliance Closed	FFMSP – Appendix B, Table 8-15 Monitoring Excavations checked daily by CB&I environment staff and Daracon subcontractors. Trenching works now completed
130	Ensure fauna ramps are regularly incorporated into open sections of trench to allow animals that have fallen into the trench to make their way out	Construction	All subcontractors	Compliance Closed	FFMSP All excavations observed during site inspections to have ramps for human and fauna escape. Trenching works now completed
131	Re-vegetate disturbed areas where possible, other than those required for permanent use, access to the easement or facilities, or for bushfire asset protection. Replace terrestrial habitat features, such as rocks and logs, following construction with landowner approval. Where landowner approval cannot be obtained, replace rocks and logs in another suitable location.	Construction	All subcontractors	Compliance Open	VRMSP - Table 8-5 Refer SoC 126 Reinstatement works completed. North laydown area unstable – to be further stabilised.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
132	Manage re-vegetated areas (specific techniques to be developed as part of the CEMP to prevent overgrazing from native fauna and introduced pest animals.	Construction	All subcontractors	Compliance Closed	VRMSP - Table 8.5 Works still current within PPA only. All other areas reinstatement works completed. Natural revegetation occurring – no signs of overgrazing noted.
Gas Plant Site					
133	A number of avoidance and minimisation measures have been incorporated into the Project design, for example, the rigorous route selection of the pipeline alignments to avoid significant species and habitat.	Construction	AGL	Refer below	Design layout
Table 7.2 Avoidance and mitigation measures for flora and fauna at Gas Plant					
134	Gas plant facility will be located at the western end of the gas plant site and partially on previously disturbed land to minimise clearing of established flora and fauna communities (including preferred koala habitat), east of the gas plant site.	Preconstruction	AGL	Compliance Closed	Final design – plant is located at western end of land
135	Develop and implement comprehensive CEMP and OEMP. These documents will include detailed information about significant flora and fauna species, their management and on-going conservation recommendations.	Preconstruction Pre-operations	All subcontractors AGL	Compliance Open	FFMSP – CEMP completed OEMP developed – refer Pre Operations Report
136	Clearing of Earp's gum will be minimised by: (1) Mapping location of individual Earp's gums within 100m of facility; (2) Marking sensitive 'no-go' areas; (3) Limiting amount of disturbance during construction phase;	Preconstruction	AGL (1,2), CB&I (3, 4)	Compliance Closed	FFMSP Appendix D – Table 8-10 1) Figure 2 of FFMSP 2) No go areas marked out with tape and parawebbing 3) Disturbance limited to project footprint 4) Access tracks only used for vehicles

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
	(4) Ensuring vehicles keep to designated tracks.				All controls noted as implemented in Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012). Clearing completed – boundary delineated with fencing. Earp's Gums adjacent to boundary marked.
137	A biodiversity offsets strategy will be prepared and implemented in consultation with OEH and DSEWPaC.	Preconstruction	AGL	Compliance Closed	Refer Biodiversity Offset Strategy prepared by Ecobiological May 2012 Correspondence from DP&I accepting Strategy sighted.
138	The CEMP will include management strategies to mitigate work-site lighting, dust suppression and noise associated with the construction phase of the Project.	Preconstruction	CB&I	Compliance Closed	CEMP Dust - AQMSP, Noise – NVMSP Site inspections indicate compliance during current construction activities Checklists include checks for noise, dust. Noise monitoring completed.
139	A habitat management plan will be prepared to document offset areas.	Preconstruction	AGL	Compliance Closed	Biodiversity Offset Package developed which includes vegetation management and monitoring plan.
140	The CEMP and OEMP will include vegetation and weed management plans to prevent spread of weed species and avoid disturbance on quality and functioning of sensitive ecological communities.	Preconstruction	CB&I Other	Compliance Open	VRMSP – Table 8-4. Weeds sprayed prior to clearing works. Weed material stockpiled into separate piles and disposed off-site to landfill. Daily and weekly CB&I inspections check for new weed outbreaks. OEMP developed – refer Pre Operations Report.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
141	The OEMP will consider appropriate measures associated with lighting of facility, e.g., downward facing lighting, to minimise light pollution and impacts on light-sensitive fauna.	Pre operations	AGL	Outstanding Open	OEMP developed – refer Pre Operations Report
142	Surface water management plan will be implemented, particularly the best practice sediment and erosion control measures, to avoid impacts on surface water quality.	Construction	CB&I AGL	Compliance Open	SWMSP completed – implementation checked during daily and weekly inspections completed. Area relatively flat and ground sandy lowering erosion potential. Silt fences installed along work boundaries to prevent off site transport of sediment.
143	Implement a pest animal control program on areas owned and/or managed by AGL to prevent increase in pest animal populations in the vicinity of the gas plant site.	Construction	CB&I AGL	Compliance Open	FFMSP – Table 8-4 Feral Animals Wild dogs noted on site – EPA trapping program covers the area. No other pest animals noted on inspection reports or during ER inspections.
144	Fencing will be in accordance with PSC's Koala Plan of Management to allow for fauna dispersion. Fencing around facility will be vermin proof security fencing to prevent fauna entering the site.	Construction	CB&I	Compliance Closed	FFMSP – Table 8-12 Koala Protection Permanent fencing installed as per PSC's Koala Plan of Management (rural) with exception of fence around Tomago Caravan Park – requested by landholder.
Table 7.2 Avoidance and mitigation measures for flora and fauna at Access road and utility corridor					
145	The access road and utility corridor will be partially located on land already cleared for fire trails and for electricity easements. This will minimise clearing of key flora and fauna communities within the Swamp Mahogany and Woodland Rehabilitation communities.	Preconstruction	AGL	Compliance Closed	Final design of road access completed with fire trails and electricity easements used where possible.
146	The alignment of the access road and utility corridor will avoid clearing of Earp's gum.	Preconstruction	AGL	Compliance Closed	Initial design would have removed 67 Earps Gums. Final design removed 4.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
147	Fencing around sensitive 'no go' areas will be erected and speed limits will be in accordance with PSC's Koala Plan of Management to avoid or minimise death or injury of wildlife.	Preconstruction	CB&I	Compliance Closed	FFMSP – Table 8-1, 8-12 Site inspections indicate project areas marked with flagging initially and replaced with parawebbing once boundaries surveyed. Earps gums marked off with parawebbing prior to clearing.
148	Perimeter fencing of Access Road and utility corridor will be in accordance with PSC's Koala Plan of Management to allow fauna dispersion beyond the corridor.	Preconstruction	CB&I	Compliance Closed	FFMSP – Table 8-12 Koala Protection Protocol Permanent fencing installed along Gas Access Track and Main Access Road and PPA
Table 7.2 Avoidance and mitigation measures for flora and fauna at Gas pipeline access corridor					
149	Clearing of Redgum-Earp's gum-Apple-Banksia Forest will be minimised by: • Limiting amount of disturbance during construction phase; • Ensuring vehicles keep to designated tracks.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	No clearing of Redgum-Earp's gum-Apple-Banksia Forest for Stage 2 of works
150	Clearing of Earp's Gum-Apple Banksia Forest will be minimised by – Marking 'no go' areas where possible.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	No clearing of Redgum-Earp's gum-Apple-Banksia Forest for Stage 2 of works
151	Perimeter fencing of Gas pipeline access corridor will be in accordance with PSC's Koala Plan of Management to allow fauna dispersion beyond the corridor.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	Permanent fencing installed along Gas Access Track and Main Access Road and PPA
Table 7.2 Avoidance and mitigation measures for flora and fauna at Preferred pipeline corridor (option 2)					
152	Pipeline corridor will be located on previously disturbed land or alongside road easements to avoid removal of Swamp Mahogany-Paperbark Swamp Forest and Phragmites Rushland.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	Stage 2 of works Use of HDD has avoided and/or minimised clearance of vegetation.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
153	Selection of pipeline corridor (option 2) and HDD will be used to avoid removal of Phragmites Rushland, Hunter River, SEPP 14 Coastal Wetlands and SEPP 71 Coastal Protection Areas where practicable.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	Works used HDD to avoid Phragmites Rushland, Hunter River, SEPP 14 Coastal Wetlands and SEPP 71 Coastal Protection Areas
153A	The surface water management plan will be implemented to avoid disturbance from water runoff and erosion.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	Surface Water Management Plan completed
154	Geotechnical investigations, specialist site design and suitable management of required materials will be carried out to minimise frac-out associated with HDD.	Preconstruction – stage 2	Lucas Engineering	Compliance Closed	Stage 2 of works AGL have completed geotechnical investigations prior to commencing works. This data has been used in planning construction works including frac-out mitigation measures as outlined in NGSF-LUC-HPW-PM-PLN-0010 Drilling Fluid Management Plan
155	Ensuring that works occur when favourable weather conditions prevail.	Construction – Stage 2 Operation	Lucas Engineering	Compliance Closed	Checked during ER site inspections – pipeline works now completed.
155A	Use sediment fences and/or sterile straw bales down slope of exposed soil and stockpiles	Construction – Stage 2 Operation	Lucas Engineering	Compliance Closed	Checked during ER site inspections – pipeline works now completed
156	Undertake rapid seeding and re-vegetation of disturbed areas to limit the time soil is exposed to erosion.	Construction – Stage 2 Operation	Lucas Engineering	Compliance Open	Topsoil and mulch re-spread in Gas Access Track easement. Main Access Road north side stabilised. HDD work pads reinstated – to be stabilised via natural revegetation. Seeding to be completed in northern laydown area using stock harvested during pre-clearing works.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at Access Road and Utility Corridor					
156A	Worksite lighting will be kept to a minimum.	Construction Operation	CB&I	Compliance Closed	CEMP – Appendix A7 Table 12-5 Permanent infrastructure installed including downward facing lighting.
157	The access road and utility corridor will be partially located on land already cleared for fire trails. This will minimise clearing of key flora and fauna communities within the Swamp Mahogany and Woodland Rehabilitation communities.	Construction Operation	CB&I	Compliance Closed	Access road and utility corridor have been sited to minimise clearing of key flora and fauna communities within the Swamp Mahogany and Woodland Rehabilitation communities.
158	Explore implementing the following options: Use of passive means of lighting, such as installing reflector roadway markers, lines, warning or information signs and attaching reflectors to furnishings, Use solar-powered light emitting diode studs to highlight roadways and paths of travel, Use of directional lighting focussed only upon areas to be illuminated and not mounted higher than an appropriate height from grounds. This will assist in reducing visual impacts from light spill.	Construction Operation	CB&I AGL	Compliance Closed	The roads into the NGSF employ reflectors and roadway markers into and around the site. NGSF uses directional lighting. OEMP includes lighting requirements
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at Preferred Pipeline Corridor (Option 2)					
159	Pipeline corridor will be located on previously disturbed land or alongside road easements to avoid removal of Swamp Mahogany-Paperbark Swamp Forest and Phragmites Rushland.	Construction – Stage 2 Operation	Lucas Engineering	Compliance Closed	Pipeline installed in areas previously disturbed

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
160	Selection of pipeline corridor (option 2) and HDD will be used to avoid removal of Phragmites Rushland, Hunter River, SEPP 14 Coastal Wetlands and SEPP 71 Coastal Protection Areas where practicable.	Construction – Stage 2	Lucas Engineering	Compliance Closed	HDD used for majority of pipeline length – no clearing of Phragmites Rushland, Hunter River, SEPP 14 Coastal Wetlands and SEPP 71 Coastal Protection Areas for this stage of works
160A	The CEMP will include an ASS management plan to minimise potential ASS	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	ASS included in Soil Management Plan
160B	The surface water management plan will be implemented to avoid disturbance from water runoff and erosion	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Implementation checked during ER site inspections, Works now completed
160C	The CEMP and OEMP will include vegetation and weed management plans to prevent spread of weed species and ensure avoid disturbance on quality and functioning of sensitive ecological communities	Preconstruction – Stage 2 Pre- operations	Lucas Engineering AGL	Compliance Open	Vegetation and Rehabilitation Plan developed for construction. OEMP developed – refer Pre Operations Report.
160D	Geotechnical investigations, specialist site design and suitable management of required materials will be carried out to minimise frac-out associated with HDD	Construction – Stage 2	Lucas Engineering	Compliance Closed	AGL have completed geotechnical investigations prior to commencing works. This data has been used in planning construction works including frac-out mitigation measures as outlined in NGSF-LUC-HPW-PM-PLN-0010 Drilling Fluid Management Plan.
160E	Use sediment fences and/or sterile straw bales down slope of exposed soil and stockpiles	Construction-Stage 2 Operation	Lucas Engineering	Compliance Closed	Checked during ER site inspections. Works now completed
160F	Ensuring that works occur when favourable weather conditions prevail	Construction – Stage 2	Lucas Engineering	Compliance Closed	Checked during ER site inspections. Works now completed

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
160G	Undertake rapid seeding and revegetation of disturbed areas to limit the time soil is exposed to erosion	Construction – Stage 2	Lucas Engineering	Compliance Closed	Topsoil and mulch re-spread in Gas Access Track easement, main access road and Old Punt Rd including Forgacs site.
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at SEPP 14 Coastal Wetlands					
161	HDD will be used to avoid removal of SEPP 14 Coastal Wetlands for preferred pipeline corridor (option 2).	Preconstruction – Stage 2 Construction	Lucas Engineering	Compliance Closed	Completed – HDD used. No further HDD works remaining.
162	The surface water management plan will be implemented to avoid disturbance from water runoff and erosion.	Construction-Stage 2 Operation	Lucas Engineering	Compliance Closed	SWMP developed – implementation checked during ER site inspections. Works now completed in area
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at SEPP 71 Coastal Protection Areas					
163	HDD will be used to avoid removal of SEPP 71 Coastal Protection Areas where practicable.	Construction-Stage 2	Lucas Engineering	Compliance Closed	Completed – HDD used
164	Construction right of way will be reduced to 10 m to minimise removal of SEPP 71 Coastal Protection Areas.	Construction-Stage 2	Lucas Engineering	Compliance Closed	Received letter from ecoBiological on 14-May-12 confirming no threatened species or ecological communities identified within the gas pipeline corridor and therefore SEPP71 vegetation will not be removed.
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at SEPP 44 Koala Habitat Protection					
165	The Project components will be sited to avoid or minimise preferred koala habitat where possible	Preconstruction	AGL	Compliance Closed	Final project layout sited to west to avoid koala habitat.
166	Clearing of supplementary koala habitat will be avoided or minimised through HDD or reducing construction right of way where practicable	Construction – Stage 2	Lucas Engineering	Compliance Closed	HDD used – no koala habitat removed

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
167	Identifying and restoring potential koala habitat will be undertaken in consultation with PSC	Construction Operation	AGL	Outstanding Open	To be assessed.
168	Fencing around pipeline easements within Lot 105 will be in accordance PSC's Koala Plan of Management to ensure Koala movement beyond the Project area	Construction Operation	CB&I	Compliance Closed	FFMSP – Table 8-12 Koala Protection. Fencing for Lot105 has been specified by WP in detailed design work. Permanent fencing four wire rural fence in project area.
169	Speed limits along the access road and utility corridor will be in accordance with PSC's Koala Plan of Management to minimise injury or death to koalas and other wildlife	Construction Operation	CB&I	NC-1 Closed	FFMSP – Table 8-12 Koala Protection Access road and utility corridor construction completed. Construction speed limit 20km/h. Operations speed limit 50km/h. PSC states speed limit to be 40km/h – raised as NC during audit.
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at Habitat and corridors					
170	Construction right of way will be reduced, where possible, to minimise removal of sensitive vegetation and habitat.	Construction Operation	AGL	Compliance Closed	Pre-construction – surveys completed by Ecobiological prior to clearing to ensure endangered flora not removed. Sighting of access roads along fire trails and electricity easements completed where possible.
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at Instream habitats					
171	Geotechnical investigations, specialist site design and suitable management of required materials will be carried out to minimise frac-out associated with HDD.	Construction – Stage 2 Operation	AGL	Compliance Closed	Stage 2 of Project AGL have completed geotechnical investigations prior to commencing works. This data has been used in planning construction works including frac-out mitigation measures as outlined in NGSF-LUC-HPW-PM-PLN-0010 Drilling Fluid Management Plan

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
Table 7.3 Mitigation measures for TSC Act-related flora and fauna at Groundwater dependent ecosystems					
172	The implementation of management measures identified in groundwater assessment, including implementation of groundwater management plan and surface water management plan to avoid disturbance from water runoff and erosion, will avoid measurable impacts to groundwater quality, levels or flow and on GDEs.	Construction Operation	CB&I, AGL to implement monitoring component	Compliance Open	GWMSP and SWMP developed and implemented. Audits against implementation completed as per CEMP.
173	Conduct pre-clearing surveys on identified clearing areas.	Pre-clearing	CB&I	Compliance Closed	FFMSP – Table 8-6 Pre Clearing Protocol Ecobiological completed surveys in morning prior to works commencing. Refer Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
174	All hollow-bearing trees to be soft-felled by experienced machine operator.	Construction Operation	CB&I Lucas Engineering	Compliance Closed	FFMSP – Table 8-7 Hollow Bearing Tree Clearing Protocol. Refer Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
175	Remove habitat features, such as rocks and logs, from the right of way prior to clearing, and carefully stockpiled prior to clearing and returned, where possible, during easement restoration.	Construction Operation	CB&I	Compliance Closed	Refer SoC 126 and 131 No rocks or logs suitable for restoration works were identified by Ecobiological as per report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
Table 7.4 Mitigation measures for EPBC Act-related flora and fauna for Earps Gum					
???	The gas plant facility will minimise clearing of the Woodland Rehabilitation community to the northern portion. This will avoid fragmentation of the existing Earp's gum population	Preconstruction Construction	AGL CB&I	Compliance Closed	Siting of plant to west and north edge of project area. Four Earp's Gums removed during clearing works rather than 67 as originally assessed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
176	Clearing of Earp's gum will be minimised by: – Mapping location of individual Earp's gum within 100 m of gas plant facility and access road and utility corridor.	Preconstruction Construction	AGL	Compliance Closed	FFMSP – includes map with location of Earp's Gums.
177	Clearing of Earp's gum will be minimised by: – Marking 'no go' areas where possible.	Preconstruction Construction	AGL	Compliance Closed	FFMSP – Table 8-10 Earp's Gum Protection Protocol, site inspection reports. Earp's Gums on edge of project area marked with parawebbing to prevent accidental removal or damage. Project area defined by temporary taping replaced with parawebbing once boundary lines surveyed.
178	Clearing of Earp's gum will be minimised by: – Limiting amount of disturbance during construction phase.	Preconstruction Construction	CB&I	Compliance Closed	FFMSP – Table 8-9, site inspection reports Project area clearly marked. Vehicles remained on marked access tracks. Earp's Gums on edge of project area marked with parawebbing to prevent accidental removal or damage. Project area defined by temporary taping replaced with parawebbing once boundary lines surveyed.
179	Clearing of Earp's gum will be minimised by: – Ensuring vehicles keep to designated tracks.	Preconstruction Construction	CB&I	Compliance Closed	FFMSP – Table 8-2 Access
Table 7.4 Mitigation measures for EPBC Act-related flora and fauna for Dwarf kerrawang					
180	No removal of potential dwarf kerrawang habitat is envisaged. However, clearing of potential suitable habitat will be limited to disturbed areas across the Project area.	Preconstruction Construction	CB&I	Compliance Closed	Not included in FFMSP however, not required as no clearing of dwarf kerrawang habitat. EcoBiological mapped all vegetation on site and marked out limit of area to be cleared. Clearing restricted to marked areas as stipulated in FFMSP – Table 8-1 and Table 8-2.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
Table 7.4 Mitigation measures for EPBC Act-related flora and fauna for New Holland mouse					
181	The clearing of suitable New Holland mouse habitat, the Heath Rehabilitation community, will be avoided.	Preconstruction Construction	AGL	Compliance Closed	Site inspections during pre-clearing and clearing, EcoBiological report issued. Final area to be cleared moved to west and north of project area to avoid area
182	The Project will minimise the clearing of similar suitable habitat (including Coastal Sand Apple-Blackbutt Forest) by where possible locating Project components in disturbed areas or by reducing construction widths of right of ways.	Preconstruction Construction	AGL	Compliance Closed	Site inspections during pre-clearing and clearing, EcoBiological Report issued – main access and pipeline corridor limited to fire trails and electricity easement where possible.
183	The OEMP will consider appropriate measures associated with lighting to minimise impact on the light-sensitive New Holland Mouse.	Preconstruction Construction	AGL	Outstanding Open	OEMP developed – refer Pre Operations Report. The roads into the NGSF employ reflectors and roadway markers into and around the site. NGSF uses directional lighting.
183A	Prepare and detailed biodiversity offsets strategy that includes implementation of a recovery plan for the New Holland mouse in consultation with the OEH and DSEWPaC	Preconstruction Construction	AGL	Compliance Closed	Offset Strategy report prepared by ecoBiological dated May 2012. Biodiversity report states that PSC, OEH and DSEWPaC consulted during development of offset strategy. 15-Aug-12: Approval received from the Director General.
Table 7.4 Mitigation measures for EPBC Act-related flora and fauna for Migratory species					
184	HDD and reducing construction widths of right of ways will avoid or minimise removal of suitable habitat associated with regent honey eater, swift parrot, satin flycatcher, black-faced monarch and rufous fantail, respectively. These communities are: Alluvial Tall Moist Forest, Redgum-Apple-Banksia Forest, Swamp Mahogany-Paperbark Swamp Forest, Coastal Sand Apple-Blackbutt Forest.	Preconstruction Construction	AGL	Compliance Closed	ROW restricted to 30m and within design boundaries HDD used for Stage 2 of works where possible

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
Table 7.4 Mitigation measures for EPBC Act-related flora and fauna for Hunter estuary wetlands					
185	Geotechnical investigations, specialist site design and suitable management of required materials will be carried out to avoid risk of frac-out associated with HDD.	Preconstruction – Stage 2	Contractor	Compliance Closed	AGL have completed geotechnical investigations prior to commencing works. This data has been used in planning construction works including frac-out mitigation measures as outlined in NGSF-LUC-HPW-PM-PLN-0010 Drilling Fluid Management Plan. HDD works now completed – minor frac outs experienced along Old Punt Rd – reported to EPA and PSC.
	The surface water management plan will be implemented to avoid disturbance from water runoff and erosion	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Implementation checked during ER site inspections. Works in this area now completed.
	The CEMP will include an ASS management plan to avoid ASS entering the Hunter River	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	ASS included in SMP. HDD used under Hunter River. Works in this area now completed.
186	The implementation of management measures identified in groundwater assessment, including the surface water management plan to avoid disturbance from water runoff and erosion, will avoid measurable impacts to groundwater quality, levels, flow and therefore on the Hunter Estuary Wetlands.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Implementation checked during ER site inspections. Works now completed in this area.
187	Undertake rapid seeding and re-vegetation of disturbed areas to limit the time soil is exposed to erosion.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Stage 2 Topsoil and mulch re-spread in Gas Access Track easement. Main Access Road north side stabilised. HDD work pads reinstated and stabilised via natural revegetation.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
188	Noise attenuation measures associated with HDD will be considered to minimise impacts on significant bird species.	Preconstruction – Stage 2	Lucas Engineering	Compliance Closed	Stage 2 CEMP – NVMSP. All HDD now completed.
7.4.3 Monitoring					
189	Inspect 'no-go' areas to ensure they are clearly marked prior to clearing activities.	Pre-clearing	AGL	Compliance Closed	FFMSP – Appendix B Earps gums marked and other no go areas marked with tape initially. Now fenced. All clearing and scrubbing works completed with ecologist on site to prevent accidental clearing - refer to Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
190	Conduct pre-clearing surveys prior to any tree felling to identify hollow-bearing trees, which will be left standing, where practicable. Nesting boxes will be placed into nearby trees where hollow-bearing trees are removed.	Pre-clearing	AGL	Compliance Closed	FFMSP – Appendix B Table 8-7 Hollow Bearing Tree Clearing Protocol Pre-clearing surveys completed by Ecobiological - refer to Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
191	Conduct pre-construction trapping and relocation of targeted species in specified ecologically sensitive locations.	Preconstruction	AGL	Compliance Closed	FFMSP – Appendix B Trapping for New Holland Mouse completed by Ecobiological - refer to Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012).
192	Supervise construction activities in sensitive areas to ensure procedures for spread move around, reduced right of way, HDD etc. are being implemented, where required.	Construction	CB&I	Compliance Closed	FFMSP – Appendix B Checked during ER Site Inspections Works completed in area

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
193	Monitor rehabilitated areas periodically to evaluate the success of rehabilitation procedures within Project components.	Construction	CB&I, AGL	Compliance Closed	VRMSP – Section 5.0 and Appendix B Table 8-5 Rehabilitation activities to be completed on PPA only – checked during ER site inspections
194	Monitor trenched sections daily for trapped animals such as reptiles and small ground-dwelling mammals, particularly in areas where sensitive habitats have been identified.	Construction	CB&I	Compliance Closed	FFMSP – Appendix B Table 8-15 Monitoring Trenches closed within 24-48 hours. Pits in PPA monitored daily by contraction staff prior to commencing works. Works now completed in area.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.4.4 Biodiversity Offsets					
195	AGL will secure a biodiversity offsets package for the Project in consultation with OEH, DP&I and the DSEWPaC prior to the commencement of construction. It is currently proposed that the Biodiversity Offset Package will comprise: • Offsets which will be assessed in accordance with the Biobanking assessment methodology to ensure reasonably 'like for like' principle and vegetation types to those impacted by the Project. • Additional rehabilitation to offset loss of up to 15 Eucalyptus parramattensis (Earp's gum) from the development site. A number of potential offsets sites have been identified and AGL is committed to continuing to assess these sites and consult with landowners and the OEH, DP&I and DSEWPaC to determine the final preferred offsets. AGL is committed to securing the selected offsets in perpetuity with appropriate management regimes and financial security via one or more of the following mechanisms: • Conservation agreement under the National Parks and Wildlife Act 1974 (NSW) (NPW Act). • Dedication of land under the NPW Act. • Planning agreement under the EP&A Act • Trust agreement under the Nature Conservation Trust Act 2001 (NSW). • Biobanking agreement under the Threatened Species Conservation Act 1995 (NSW).	Preconstruction	AGL	Compliance Closed	Referred to in FFMSP but detail in 'Conservation Agreement' with OEH Offset Strategy report prepared by ecoBiological dated May 2012 "BioBanking Assessment Methodology" (Seidel and Briggs 2009) adopted for determining the extent and type of offset required by AGL. Medowie Conservation Area Offset Monitoring Protocol prepared by ecoBiological dated May 2012 Draft Conservation Agreement for Lot 20 at 3 Old Swan Bay Road, Medowie Draft Conservation Agreement for Lot 16 at 218 Old Swan Bay Road, Medowie. 4 Earp's gums removed from development site. 60 plants will be established in Hunter Region Botanical Gardens Biodiversity report states that PSC, OEH and DSEWPaC consulted during development of offset strategy Correspondence from DP&I accepting Strategy dated 15 August 2012 A final version of the Conservation Agreement has been developed through consultation with DP&I and PSC. Package submitted to DP& I 4 May 2015

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.4.5 Modifications to Management and Mitigation Measures for Flora and Fauna					
196	The internal access road into the gas plant site will be redesigned to greatly reduce the number of Earp's gum requiring removal.	Preconstruction	AGL	Compliance Closed	Road realigned to avoid clearing Earp's Gums. Four gums removed during clearing works – reduced from 67 predicted in EA. Minor clearing completed by Lucas Engineering during installation of low pressure pipeline – no trees cleared during works. Clearing now completed
197	Seed collected from Earp's gum within the site will be provided to the Hunter Botanic Gardens to propagate the seed and plant the seedlings on their property. A habitat management sub plan will be prepared which will detail the management and on-going protection of the remaining Earp's gum within the site.	Preconstruction	AGL	Compliance Closed	Long term management of Earp's gums include in Biodiversity Strategy, Ecobiological May 2012 Management of Earp's gums during construction detailed in FFMSP Appendix B Table 8-10. Habitat Management Sub Plan developed by AGL.
198	A vegetation rehabilitation management sub plan will be prepared which will detail the management and on-going protection of the remaining Earp's gum within PPA.	Preconstruction	CB&I	Outstanding Open	Management of Earp's gums during construction detailed in FFMSP Appendix B Table 8-10. OEMP developed – refer to Pre Operations Audit Report.
199	Additional targeted surveys will be undertaken in the appropriate season for Asperula asthenes, Galium australe, Lindernia alsinoides, Persicaria elatior, Zannichellia palustris and Maundia triglochinoides in areas of suitable habitat within the final development footprint prior to construction. Should any species be likely to be impacted by the proposal then such species will be adequately compensated for in the form of offsets	Preconstruction	AGL	Compliance Closed	Survey completed 25 Nov 2011. Offsets include in Offset Strategy, Ecobiological May 2012

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
200	A habitat management plan will be prepared (in consultation with the OEH and DSEWPaC) and implemented for the offsets and the development footprint.	Preconstruction	AGL	Outstanding Open	Habitat Management Plan developed. Plan to be implemented by AGL
201	In order to protect Earp's gum, individual trees will be retained within the APZ.	Preconstruction	CB&I	Compliance Closed	FFMSP – Table 8-1, Table 8-12, Site inspections. Trees within APZ area outside permanent fencing now installed.
202	There will be no direct disturbance to the Freshwater Wetlands Endangered Ecological Community (EEC), Riverflat Eucalypt Forest EEC and Swamp Sclerophyll Forest that are located along Old Punt Road (due to pipeline realignment and choice of construction technique).	Preconstruction – Stage 2	AGL	Compliance Closed	Final design and works completed along Old Punt Rd.
203	The proposed width of the gas pipeline access corridor will be reduced to 30 m which will reduce clearing in the Redgum-Apple-Banksia community (that contains Eucalyptus tereticornis) from 0.85 ha to 0.69 ha.	Preconstruction	AGL CB&I	Compliance Closed	FFMSP – Table 8-2. Site Inspections Project areas delineated with permanent fencing. Gas pipeline access corridor 30m width
204	Any New Holland Mouse trapped will be translocated into areas safe away from development. This will be done in consultation with DSEWPaC.	Preconstruction	AGL	Compliance Closed	FFMSP – Table 8-11 New Holland Mouse Protection Protocol Five transects completed with no New Holland Mice captured. Refer to Ecobiological report "Vegetation Clearing for Newcastle Gas Storage Facility" (November 2012)

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.5 Bush Fire					
7.5.2 Emergency Planning					
205	An emergency response plan will detail required actions at construction sites for approaching bush fire danger. This emergency response plan will be consistent with the RFS Guidelines for the Preparedness of Emergency/Evacuation Plan and be in compliance with AS 3745-2002 'Emergency control organisation and procedures for buildings, structures and workplaces'. The plan will be prepared prior to construction.	Preconstruction	CB&I	Compliance Closed	CB&I's Bushfire Management Sub Plan includes reference to the AS
206	A CEMP will include measures for working in a bush fire-prone area. AGL will apply its standard procedures during construction e.g., hot work permits.	Preconstruction	CB&I	Compliance Closed	BFMSP – Appendix B (Mitigation Measures) Table 12-13 in CEMP also has mitigation measures included
7.5.3 Access and Egress					
207	The design of the access road and utility corridor will be sufficiently wide to allow attending emergency vehicles and evacuating vehicles to pass unimpeded in case of fire. It will be accessible in all weather conditions and will be designed to have a minimum load rating to accommodate fire-fighting units. The gas pipeline access corridor will serve as an alternative access/egress road. It will be designed for one way traffic and for light vehicles only.	Preconstruction	AGL	Compliance Closed	Width of roads 30m to allow space for vehicles to pass. Main access road has been designed for general road traffic incl road tankers and emergency vehicles. Width of road caters for two way traffic. Gas access track designed for one way traffic and light vehicles as an alternative access/egress road. TMSP – Table 9-1 for requirement during construction phase
208	The access road and emergency access road will include adequate outer radius-turning circles at the entry of the gas plant site and vertical clearance will be maintained above the access road.	Preconstruction	AGL	Compliance Open	Referenced in ERP Table 1-3 Statement of Commitments Included in TMSP – Table 9-1 Area for turning around in laydown areas

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.5.4 Project Design					
209	The gas plant is classified as a Class 10 building under the BCA. The construction of buildings and infrastructure will be in accordance with AS 3959-2009 'Construction of Buildings in Bush Fire Prone Areas'.	Preconstruction	AGL	Compliance Closed	Pre-construction technical design CB&I has stated all buildings are designed for BAL-29 as per AS 3959. As PDC is within 25m of the APZ it CB&I has designed this building to withstand higher (Bushfire Attack Level) heat at BAL-40.
7.5.5 Water and Services					
210	The bush firefighting water supply for the gas plant site will exceed the minimum volume requirement of 20,000 L (0.02 ML). The firewater tank will be able to direct water for fire suppression and cooling within the plant for a minimum of two hours. Fixed pumping systems, one electric and one diesel-engine driven, will be used. The water tank will be close to the southern boundary of the site and unimpeded access for emergency vehicles will be provided. Connections to the water tank will be provided for firefighting teams.	Preconstruction Operations	AGL	Compliance Closed	Pre-construction technical design NFPA 59A requires 2 hour fire water storage at maximum demand which exceeds this requirement. Note that the split to 2 x 50% tanks is still larger than the 20,000L requested by bush firefighting Additional firefighting tank to be installed.
7.5.6 Landscape and Vegetation Management					
211	A bushfire management plan will be prepared for the PPA. The plan will address the management and maintenance of bush fire mitigation infrastructure. Clearance within the easements will be maintained to ensure fuel loads are kept to a minimum.	Preconstruction	CB&I	Compliance Open	BFMSP – Appendix B Table 8-1 Table 12-13 (Risk Register) in CEMP has mitigation measures included.
7.5.8 Modifications to Management and Mitigation Measures for Bush Fire					
212	APZs will be sized to provide a Bushfire Attack Level (BAL) of 29 kW/m^2.	Preconstruction	AGL	Compliance Closed	APZ based on design – PPA cleared as per design

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
213	An emergency plan will be prepared in accordance with clause 174ZC of the Occupational Health and Safety Regulations 2001 (NSW) and the DP&I guidance note HIPAP 1, Emergency Planning.	Preconstruction	CB&I	Compliance Closed	CB&I's PRP refer to both documents. Emergency Response Plan and Safety Management System developed for operations phase.
214	A fire safety study will be prepared and submitted to FRNSW for review and comment. The fire safety study will be compiled in accordance with NSW Department of Planning and Infrastructure guidance note HIPAP 2, Fire Safety Study Guidelines.	Preconstruction	CB&I	Compliance Closed	CB&I –FSS August 2012 based on final design Letter dated 19-June requesting for approval of a staged approach to the HAZOP Study, Fire Safety Study and Final Hazard Analysis Process 6-Aug-12: Approval received from Director General for the proposed staged submission approach. 28-Nov-12: Submission of Phase 1 Fire Safety Study and Hazop Report to DP&I 10-Dec-12: Submission of Phase 1 Final Hazard Analysis to DP&I 19-Dec-12: Phase 1 Fire Safety Study approved by Rural Fire Service 17-Jan-13: Phase 1 submission approved by DP&I 5-Feb-13: Phase 1 Fire Safety Study approval by Fire & Rescue NSW 15-Feb-13: Meeting held with Fire & Rescue NSW to discuss their comments 6-Jun-13: Meeting held with FRNSW to discuss proposed mitigation to comments provided in February. 9-Sep-13: Submission of Phase 2 FSS to DoPI, FRNSW and RFS. 12-Sep-13: Phase 2 FSS approval by FRNSW. 23-Sep-14: Submission of Phase 3 FSS to FRNSW

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
215	The proposed emergency traffic arrangements will be reviewed and assessed to ensure compliance with the stated Emergency Vehicle Access Policy No. 4.	Preconstruction	CB&I	Compliance Open	Requirement included in CB&I's PRP
216	With regards to the LNG Tank, there are two sources to determine the APZ. The European LNG Code, EN 1473:2007 recommends a radiant heat less than 15kW/m2, which requires an APZ of 43m. The Department of Planning recommends a radiant heat less than 23kW/m2, which requires an APZ of 31m. The current site layout has a APZ of 46m (minimum), including the slashing zones, and therefore satisfies both requirements.	Preconstruction	AGL	Compliance Closed	Note
7.6 Aboriginal Cultural Heritage					
218	Maintain an Aboriginal cultural heritage site register.	Preconstruction Construction	CB&I	NC-1 Open	CHMSP refers to requirement in SOC Table 1-3. If artefacts are found will be added to register developed by CB&I OEMP to include any heritage sites located near the facility and pipeline.
219	Record all Aboriginal cultural heritage sites within proximity of the Project area in the CEMP and OEMP.	Preconstruction Construction Operations	AGL	Compliance Closed	CHMSP – Section 2 and Figure 2-1
220	Train all employees and contractors as part of the induction process in the procedures to be followed in the event that Aboriginal cultural heritage sites, objects and/or remains are unearthed.	Preconstruction Construction	CB&I	Compliance Open	CHMSP – Section 3-1 and Appendix A Induction includes overview of process if heritage item found. Specifics on heritage works discussed further in

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
					workshop 21 August 2012 with clearing contractors. Toolbox talks held by all subcontractors.
221	Prepare a Cultural Heritage Management Plan (CHMP) in consultation with Aboriginal Stakeholders prior to construction for incorporation into the CEMP. The CHMP will address: a) The impact mitigation and management requirements for Aboriginal and historic heritage, b) Details of any additional archaeological investigations to be undertaken and any associated licences or approvals required, c) Procedures to be implemented if previously unidentified Aboriginal or historic objects are discovered during construction, d) Procedures if human remains found, e) An education program for construction personnel on their obligations for Aboriginal cultural materials and historic items.	Preconstruction	AGL	Compliance Closed	CHMSP a) Section 2-3, Section 4 b) Section 5-1 and Appendix C for legislative context c) Appendix A d) Appendix A e) Appendix A
222	Conduct a field survey of the PPA when the current dense vegetation layer is removed. This will be undertaken by a qualified archaeologist and representatives from the Worimi Local Aboriginal Land Council, Mu-Roo-Ma Inc, Nu-Run-Gee Pty Ltd and the GGAC.	Preconstruction Clearing	AGL	Compliance Closed	CHMSP – Section 5-3 Three inspections of the site were completed by the groups. 30 August 2012 – understory vegetation removed 7 September 2012 – all material cleared 24 September 2012 – topsoil removed. 15 October 2012 – sub soil removal

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
					24 October 2012 – unexpected find
223	Regular monitoring of implementation of Aboriginal cultural heritage procedures, including the CHMP, and relevant legislation will be conducted to ensure that they are followed by staff and contractors.	Construction	All	Compliance Open	CHMSP Table 5-1 indicates weekly inspections and internal audits completed. Daily and weekly checks for heritage issues conducted by CB&I environment staff. JBS&G undertaking inspections weekly or fortnightly depending upon works. Quarterly audits can include CHMSP
7.7 Non-Aboriginal Cultural Heritage					
224	The CHMP will include procedures in the event that significant non-Aboriginal cultural heritage material is unearthed during construction of the Project.	Preconstruction	AGL All	Compliance Closed	CHMSP – Appendix A All subsoil works completed on PPA – no non-Aboriginal cultural heritage material found.
225	All staff and contractors will be inducted and trained in cultural heritage procedures and the CHMP so they are aware of their obligations under the NSW Heritage Act.	Preconstruction Construction	All	Compliance Open	CHMSP – Section 3-2 Induction included overview of process if heritage item found. Specific training on heritage find identification delivered to clearing contractors at workshop 21 August 2012. Toolbox held on topic when relevant to area or works.
7.8 Socio-Economic Environment					
226	Employ a strategy that focuses on equipment suppliers, trades and services, within the Port Stephens and Newcastle LGAs, boosting the local economy.	All	CB&I	Compliance Open	Subcontractors have been sourced from Newcastle are including Wards Engineering, Newcastle Earthworks, Antquip.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
227	Meet the construction and operations noise goals of the Project to minimise disturbance to sensitive receptors.	All	CB&I	Compliance Open	NVMSP – Section 2.0 Monitoring completed – results entered into register. Night time monitoring completed near site office with noise goals exceeded and audibility of site works evident, however not audible/below noise goals at site boundary.
228	Use local labour where appropriately qualified people are available to minimise the influx of workers to the area during construction and reduce the risk of subsequent potential impacts on rental prices.	All	CB&I	Compliance Open	Bulk earthworks and clearing completed by subcontractors sourced from local area
229	Outline accommodation options for workers during inductions and encouraged, where practicable, to share houses during construction.	All	CB&I	Compliance Open	Bulk earthworks and clearing completed by subcontractors sourced from local area
230	Consult with local accommodation providers and tourism industry representatives on an on-going basis to manage potential impacts on short-term accommodation, particularly during peak construction periods.	All	CB&I	Compliance Open	Due to length of project, most staff relocated to permanent accommodation. Local contractors used where possible.
7.8.3 Property					
231	Access to properties will be maintained during pipeline construction works and pipeline trenches will be progressively reinstated to minimise impacts on the use of land.	Preconstruction Construction	CB&I	Compliance Closed	27.02.12: CB&I only responsible where their work crosses TAC private access road and Old Punt Rd associated with stormwater pipe. Access to properties along Old Punt Rd maintained. Lucas Engineering primarily used underboring technique along Old Punt Rd. Pads were located away from access points to properties. Pipeline works now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
232	Minimise the requirement for roadworks along the section of Old Punt Road passing through the Tomago industrial estate between Kennington Drive and Old Punt Road and Laverick Avenue and Tomago Road intersections.	Preconstruction – Stage 2 Construction	AGL	Compliance Closed	Trenching alongside of Old Punt Rd – traffic control used where required for safety. Pipeline works now completed
7.8.4 Employment, Training and Local Business					
233	Engage local businesses where possible to service the Project both during construction and operations. Detailed advanced notices of goods and services required by the Project will be issued to assist local businesses meet the needs of the Project.	All	CB&I AGL	Compliance Open	Bulk earthworks and clearing completed by subcontractors sourced from local area. Check if advanced notice issued - not checked.
7.8.5 Social Infrastructure					
234	Community consultation will be on-going during the life of the Project.	All	CB&I AGL	Compliance Open	Procedure provided in the Community Engagement Plan (Document no: NGSF-AGL-NAS-PM-PLN-0002) - Section 4 Minutes of CCC Meetings are available on the Project website.
235	Notify the local community by means of public notice publications and advertisements on the progress of the Project and the scheduling of works.	All	CB&I AGL	Compliance Open	Provided in the Community Engagement Plan (Document no: NGSF-AGL-NAS-PM-PLN-0002) Contact details advertised on project website – details also included in Newspaper advertisement published in Port Stephens Examiner and Newcastle Herald. Notices indicate expected operational date (mid 2015) and that AGL will continue to inform the community throughout all stages of the project

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
236	Preventative occupational health and safety measures and awareness programs will be implemented.	Construction	All subcontractors AGL	Compliance Open	Toolbox talks held weekly (records sighted) which discussed any topical issues Pre-starts held daily highlighting hazards and discussing works to be completed that day
237	All staff, contractors and site visitors will undergo site inductions, be conversant with the construction safety management plan and the emergency management plan, as well as occupational health and safety requirements as specified by specialist contractors, professional bodies and unions.	Construction	CB&I	Compliance Open	CEMP –Section 3.2 Training and Awareness PIRMP – Section 3.2 Training and Awareness Induction records maintained – all staff required to undergo inductions prior to commencing works on site. Review of induction content completed August 2012 and December 2014.
238	Working relationships will be developed with local area emergency services providers, including Raymond Terrace Police, Ambulance and Fire services, and regional hospitals to advise on risks relating to on-site work and prepare for emergencies. Assistance will be provided with emergency training. This process will begin prior to construction.	Construction	CB&I AGL	Compliance Open	BFMSP – Section 3.1 for Fire Services stakeholder consultation once plan completed. Visit to Rural Fire Service command centre in Raymond Terrace completed with discussion of plan completed. RFS was invited to site to complete toolbox for bushfire management however RFS has not attended site to date for this purpose. HAXMAT Newcastle and RFS from Raymond Terrace, Taree and East Maitland have visited site to confirm understanding of plans and activities. Police and ambulance are aware of site however, specific relationships are yet to be developed.
239	A zero-tolerance on-site drug and alcohol policy will be enforced.	Construction	CB&I	Compliance Open	Random breath testing completed during pre-starts and results recorded in register. Drug testing is not currently completed as type of testing appropriate to site to be confirmed i.e. blood, urine, saliva swab etc.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
240	As the Project will be classified as a Major Hazard Facility, the Project will comply with the requirements for hazard and risk management under the National Standard for the Control of Major Hazard Facilities administered by NSW WorkCover. The National Standard for the Control of Major Hazard Facilities requires that relevant community and employee groups are consulted.	Construction	CB&I AGL	Compliance Closed	MCoA B16 states that a Final Hazard Analysis of the project, consistent with Hazardous Industry Planning Advisory Paper No. 6 – Guidelines for Hazard Analysis (DoP, 2011) shall be developed. The FHA shall report on the implementations of the recommendations of the Preliminary Hazard Analysis. 10-Dec-12: Submission of Phase 1 Final Hazard Analysis to DP&I 27-Sep-13: Submission of Phase 2 FHA to DoPI 31-Oct-13: Phase 2 FHA approved by DoPI 12-Sep-14: Submission of Phase 3 FSS, FHA, HAZOP report
241	Prior to operation of the Project, a safety management system will be implemented, which will include an emergency response plan.	Operations	AGL	Compliance Open	PRIMP has been developed for construction phase Safety management system and procedures has been developed and implemented for construction Developed for operations
242	Project design will provide sufficient open space for emergency vehicles and equipment including firefighting and rescue.	Preconstruction	CB&I	Compliance Open	Check of final design not completed as part of this report Refer SoC 207 and 208 TMSP – Table 9-2

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
243	Two suitably qualified first aid officers (with access to basic medical facilities) will be on duty at all times during construction activities associated with the gas plant, the receiving station in Hexham and the pipeline corridor, and at all times at the gas plant during operations.	Construction	CB&I AGL	Compliance Open	CB&I advised that they have more than two qualified first aiders in addition to a full time nurse (commencing 22-Jul-13)
7.8.6 Monitoring					
244	The number of jobs created by the Project for local residents during the construction period to assist in quantifying the positive impacts of the Project on workforce participation.	Construction	CB&I	Compliance Closed	Economic Benefits Report completed which details number of FTE. Report estimates the weighted average local content at 35% of materials and labour.
245	Stakeholder feedback via the implementation of a community information line to ensure that issues associated with the Project are appropriately addressed.	Construction	AGL	Compliance Open	Information line advertised on website
246	The local community's response and awareness of the Project as a result of the community consultation program.	Construction	AGL	Compliance Open	AGL participates in a community consultative committee for the NGSF which provides a mechanism for exchange of information between the community and AGL. In addition, AGL regularly advertises an information/complaints hotline number, email address, website and postal address whereby the community can make contact for more information.
247	Long-term benefits to the community achieved by AGL's partnering with stakeholders.	Construction	AGL	Compliance Open	NGSF grants summary doc and media release (140303) - AGL Announces annual $25000 community grant program for Greater Newcastle Area. Additional information is included in the Economic Benefits Report regarding economic benefits.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.9 Visual Amenity					
248	Colour selection of office buildings will be considerate of the surrounding environment.	All	CB&I	Compliance Closed	The colour selection of the admin building was determined by taking into account the natural and built environment. The sandy colour schemes provides a bridge to the natural and built divide by being consistent, and therefore blend into the gas plant, but also sympathetic to the natural surrounds through adopting a colour that integrates with the sandy soils, which are prevalent in the area. Final colour confirmed during site inspections
249	Existing vegetation will be retained where possible to act as a visual screen.	All	AGL	Compliance Closed	Only required area for PPA, access track and pipeline cleared. All other vegetation in Project area retained. Project is not visible from surrounding roads, residences or businesses. Hexham Receiving Station has retained trees on east and southern boundary. No further clearing works proposed.
250	Additional screen planting will be undertaken on the front and side boundaries of the Hexham receiving station site. Planting will need to allow for the final site layout, location of underground infrastructure and any security surveillance requirements.	All – Stage 2	Lucas Engineering	Compliance Closed	Tress retained on east and southern boundaries. Northern boundary contains stormwater drain and road with limited space for screen plantings. Front of site to be kept open for security purposes.
251	On completion of the pipeline construction, disturbed areas of land will be rehabilitated and returned to previous use.	All – Stage 2	Lucas Engineering	Compliance Closed	High pressure pipeline route reinstated. Low pressure pipeline works also completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.10 Traffic					
252	A construction traffic management plan will be prepared for the Project to minimise any impacts on the road network. Measures in the construction traffic management plan will include: a) Transportation of equipment and machinery likely to cause delays to traffic flows will be timed to avoid peak traffic flows, where practicable; b) Ensure heavy vehicles meet the Australian Road Rules and RTA standards so that road safety is not compromised; c) Transport oversized equipment and machinery in accordance with the RTA guidelines for oversized movements; d) Implement appropriate signage to warn road users of the presence of construction vehicles as well as changes to the normal traffic conditions.	Preconstruction	CB&I	Compliance Closed	Traffic Management Sub Plan (TMSP) a) Table 9-1 b) Section 2.7 and Table 9-1 c) Table 9-1 d) Table 9-1
253	Notify the local community by means of public notice publications and advertisements on the progress of the Project and the scheduling of works so as to inform the local community of any additional vehicles added onto the local road network.	All	CB&I AGL	Compliance Open	TMSP – Table 9-3 Notification Section 3 AGL needs to sign off any public notices regarding the project.
254	These measures (relating to traffic) will be developed and implemented in consultation with the RTA, Port Stephens Council and Newcastle City Council.	All	CB&I	Compliance Open	TMSP - Section 3.1
255	It is anticipated that some Project components will be transported as over-dimensional loads during construction. Required permits will be obtained.	All	CB&I	Compliance Closed	TMSP – Table 9-1 All project components now delivered to site.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
256	The pipeline construction may necessitate the partial closure of traffic lanes along Old Punt Road during pipeline installation. Temporary decking will be implemented if required during the trenching works to allow vehicles to traverse the open trench. The construction traffic management plan will outline management measures to protect pedestrian, cyclist and vehicular movements.	All – Stage 2	Lucas Engineering	Compliance Closed	Trenching completed on side of Old Punt Rd only. All works along Old Punt Rd now completed
257	Operation traffic management controls will be implemented to ensure staff, contractor and public safety relating to vehicle transport. Safe driver conduct policies and standards will be applicable to all AGL staff and contractors. Other controls include: • Implement driver and pedestrian safety awareness programs, • Review speed limits across the Project sites for all vehicles, • Conduct a random alcohol and drug testing program.	Operations	AGL	Compliance Open	OEMP developed – implementation to be checked
258	A detailed construction traffic management plan will be prepared and implemented	All	CB&I	Compliance Open	TMSP prepared. Implementation checked during inspections (on-going)
259	A number of temporary construction compounds will be required along the route of the pipeline for its construction. Safe traffic movement in and out of these sites will be described in the construction traffic management plan.	All – Stage 2	Lucas Engineering	Compliance Closed	Stage 2 TMSP developed. Stage 2 now completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
260	Temporary impacts to road infrastructure by the Project during the construction phase will be rehabilitated and reinstated by AGL.	All – Stage 2	AGL	Compliance Closed	Works were on side of Old Punt Rd. TAC Northern Access Road used underboring techniques. Water line and low pressure pipeline impacted TAC Northern Access rd. – now reinstated and repaired. All works along/across roads now completed
261	AGL will carry out HDD beneath the Old Punt Road and Tomago Road intersection to avoid disruption to traffic during the Project construction phase.	All – Stage 2	Lucas Engineering	Compliance Closed	HDD completed
262	AGL shall arrange for a public liability policy to cover the RTA and the relevant Council for public liability in relation to this contract/works for an amount of $20 million.	All	AGL	Compliance Closed	Certificate of Currency B0509DR619414 issued by Marsh valid until 30 November 2015.
263	Use of the existing infrastructure of the Hexham receiving station where possible, noting that there is existing parking and access to the site.	All – Stage 2	CB&I	Compliance Closed	Existing roads and car park used during works. Works now completed.
7.11 Noise and Vibration					
7.11.1 Noise					
264	A noise and vibration management plan will be prepared as part of the CEMP and OEMP to ensure noise levels are adequately controlled and any impacts managed. The traffic noise management plan will be prepared within the construction traffic management plan. It will be prepared in line with practices outlined in DECCW Interim Construction Noise Guideline 2009 and DECCW Environmental Criteria for Road Traffic Noise 1999 and in consultation with the Port Stephens Council, Newcastle City Council and OEH. The CEMP will be implemented by AGL and the construction contractors.	All	CB&I	Compliance Closed	Noise and Vibration Management Sub plan (NVMSP) TMSP – Table 9-4. Noise Management Plan developed as part of OEMP. OEMP developed in consultation with NOW, NCC, PSC, HWC – letters provided.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
265	Noise emissions will be confirmed for equipment and infrastructure (including low frequency noise) during detailed design when final specifications are known. The potential for high-flow gas flaring at the gas plant site will be reviewed and noise assessment may be required to determine impacts of noise associated with high-flow gas flaring.	All	AGL	Outstanding Open	Noise monitoring to be completed at sensitive receptors to confirm NGSF meets noise criteria.
266	Construction and operation activities will be undertaken with a focus on noise control at source, noise attenuation and in consultation with potentially affected receptors to minimise the risk of noise exceeding noise criteria and disturbing sensitive receptors. The following measures will be implemented (where practical) to manage impacts of noise and ensure Project goals are met:	All	CB&I	Refer below	NVMSP completed with mitigation and management measures included in Appendix B. EA Noise component indicate construction noise will not exceed criteria at the sensitive receptors.
267	Stage Project activities (and reduce simultaneous noise emitting practices) to reduce peak noise levels.	All	CB&I	Compliance Closed	NVMSP – Appendix B Table 8-2 Hours of Construction Earthmoving now completed. Works emitting noise limited to dust cart, trucks delivering concrete and equipment, welding, small vehicles. Arc welding nosiest activity – scheduled during normal work hours. HDD at HDD2 was not undertaken concurrently with excavation of trenches. Works now completed.
268	Incorporate attenuation (such as mufflers) into the design of Project equipment and infrastructure.	All	CB&I	Compliance Open	NVMSP – Table 1-5 and Table 8-3 Vehicles are checked prior to entry on site – includes checks for silencers and mufflers. Daily pre start checks include check for excessive noise.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
269	Orient equipment away from receptors.	All	CB&I	Compliance Open	NVMSP – Appendix B Table 8-3 Operation of Vehicles, Plant and Machinery Predicted noise levels from current site works not audible at nearest receptor (Botanical Gardens). At HDD2, noisiest equipment (mud pumps) located at lowest level of site with containers located on higher level closer to Caravan Park to minimise noise in Park through shielding and orientation. Works now completed.
270	Restrict noise generating construction activities to daytime hours (7.00 a.m. to 6.00 p.m. Monday to Friday and 8.00 a.m. to 1.00 p.m. Saturday). In special circumstances, if noise generating evening or night work is required, a consultation process will be undertaken to ensure noise impacts can be adequately controlled. This will be the case for horizontal directional drilling works, which will occur 24 hours a day, 7 days per week.	All	CB&I Lucas	Compliance Open	NVMSP – Appendix B Table 8-2 Hours of Construction Activities completed during work hours. OOHW inaudible. HDD works 24hrs in accordance with condition – now completed. Lucas has consulted with identified sensitive receivers at R4, R5 and R6. Other works undertaken during standard work hours identified in Table 3-3 of NVMP.
271	Schedule high noise generating activities for less sensitive times of the day (including periodic respite breaks from noise).	All	CB&I Lucas	Compliance Open	NVMSP – Appendix B Table 8-2 Hours of Construction No high noise generating activities during period of reporting

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
272	Consult potential noise receptors (particularly those within 500 m of the gas pipeline works) about the nature of the noise emissions and avoidance and mitigation practices to be adopted. Complaints and feedback and will be recorded and addressed where practical.	All	CB&I Lucas	Compliance Open	NVMSP - Section 3.1 and Table 8-1 General Construction No works within 500m of sensitive receptors during period of reporting with exception of botanical gardens and Tomago Holiday Park. Liaison with Tomago Holiday Park competed by Lucas Engineering. One complaint received during works at HDD2. OOHW notified to community section of AGL
273	Ensure vehicles and equipment are in good working order and have effective noise reduction features.	All	CB&I Lucas Engineering	Compliance Open	NVMSP – Appendix B Table 8-3 Operation of Vehicles, Plant and Machinery Vehicles checked daily – records kept. CB&I environment staff note levels during daily and weekly site inspections
274	Ensure that best practices for noise attenuation (such as exhaust silencers, mufflers and enclosures) and noise minimisation are incorporated into the design of the gas plant and Hexham receiving station.	All	CB&I	Outstanding Open	OEMP states noise emissions during operations is to be monitored to ensure equipment is meeting noise certification and criteria requirements and detect any faulty or damaged equipment.
275	Consult potential noise receptors about the nature of operations noise emissions and avoidance and mitigation practices to be adopted. Feedback and complaints will be recorded and addressed where practical.	Operations	AGL	Outstanding Open	OEMP developed - Table A-1, Appendix A mentions criteria. Implementation to be checked during operations.
276	Monitor noise levels during operations to ensure localised noise creep (increase in local ambient noise) is not occurring due to the Project.	Operations	AGL	Outstanding Open	OEMP developed - noise monitoring to be completed after 3 months of operations to confirm noise levels.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.11.2 Vibration					
277	Construction activities will be implemented with a focus on vibration control at source and consultation with potentially affected receptors.	Construction	CB&I	Compliance Open	NVMSP – Table 8-3 Operation of Vehicles, Plant and Machinery Vibratory roller completed during previous reporting periods – site inspections indicate impacts localised
278	The following measures will be implemented (where practical) to manage impacts of construction vibration and ensure Project goals are met:	Construction	CB&I	Refer below	Refer below
279	Use alternative, lower-impact equipment or methods where practicable.	Construction	CB&I	Compliance Open	NVMSP – Appendix B Check of vibration at boundary indicates no off site impacts.
280	Operate high vibration equipment as far away from receptors as possible. Rock-breakers will not be used within 20 m of residences.	Construction	CB&I	Compliance Open	NVMSP – Table 8-3 Operation of Vehicles, Plant and Machinery. Check of vibration at boundary indicates no off site impacts.
281	Schedule vibration-causing equipment to be used at the least sensitive time of day (times of day to be determined in consultation with local stakeholders, including councils).	Construction	CB&I	Compliance Open	NVMSP – Appendix B Vibratory roller completed during previous reporting periods – site inspections indicate impacts localised. No sensitive receptors impacted.
282	Keep equipment well maintained.	Construction	CB&I	Compliance Open	NVMSP – Appendix B Table 8-3 Operation of Vehicles, Plant and Machinery. Vehicle checklist completed daily prestart. Records maintained.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
283	Reduce instances of simultaneous vibration activities.	Construction	CB&I	Compliance Open	NVMSP – Appendix B Table 8-3 Operation of Vehicles, Plant and Machinery Vibratory roller and vibro compaction completed during previous reporting periods – works in different areas with site inspections indicating no cumulative impact.
284	Isolate high vibration equipment on resilient mounds.	Construction	CB&I	Compliance Open	NVMSP – Appendix B Table 8-3 Operation of Vehicles, Plant and Machinery No high vibration equipment used during audit period
285	Consult potential receptors about the nature of construction vibration and avoidance and mitigation practices to be adopted (particularly those within 500 m of the pipeline works, including the receptor R5 (217 Old Maitland Road)). Community feedback and complaints will be recorded and addressed where practical.	Construction	CB&I	Compliance Open	NVMSP – Appendix B Table 8-1 General No vibratory works completed within 500m of sensitive receptors during reporting period
7.11.3 Monitoring					
286	Noise emissions during construction and operations to ensure equipment is meeting noise certification and criteria requirements and detect any faulty or damaged equipment.	All	CB&I Lucas Engineering	Compliance Open	NVMSP - Section 5.0 Monitoring as per the NVMSP implemented. Baseline assessment monitored noise at the Botanic Gardens (R1), 5 Graham Drive (R2), 25 School Drive (R3), Caravan Park (R4), 217 Old Maitland Road (R5) and 185 Old Maitland Road (R6). Noise monitoring not completed at receptors during audit period. Checks on equipment completed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
287	Vibration levels during construction to ensure vibration criteria are being met.	All	CB&I	Compliance Open	NVMSP - Section 5.0 Daily checks for vibration at site boundary completed.
288	Responding to community complaints in line with EPA license conditions.	All	CB&I AGL	Compliance Open	NVMSP - Section 5.0 No formal complaints received during the reporting period – refer complaints register
7.12 Air Quality					
289	Minimise vegetation clearance to reduce the areas of exposed soil.	Construction	AGL	Compliance Open	Pre-Con - Site Layout - Detailed design AQMSP – Appendix B Table 8-1 General Vegetation clearance limited to areas required for roads and primary project area. Clearing now completed.
290	Water construction sites during dry windy conditions as required, including cleared areas, soil stockpiles and unsealed roads.	Construction Operations	CB&I	Compliance Open	AQMSP - Appendix B Table 8-1 General Daily checklist includes monitoring for dust levels. No dust issues noted during site inspections.
291	Undertake activities likely to generate dust during favourable meteorological conditions where practical. Earth moving activities will be modified when wind speeds exceed 30 km/h if excessive dust is generated.	Construction	CB&I	Compliance Open	AQMSP - Appendix B Table 8-1 General and Table 8-4 Extreme Weather Conditions Daily checks for excessive dust is completed and dust cart used to limit generation as required. All trafficable areas now sealed.
292	Prevent dirt being carried onto the TAC Northern Access Road or Old Punt Road from the access road where it could form dust.	Construction	CB&I	Compliance Closed	AQMSP - Appendix B Table 8-1 General Main Access Road now sealed with bitumen – no further tracking issues expected.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
293	Load trucks transporting any potential dust generating material off site to below the height of the side and tail board and cover the load.	Construction	CB&I	Compliance Open	AQMSP - Appendix B Table 8-1 General Soil not transported from site during reporting period.
294	Enforce vehicle speed limits on unsealed roads to reduce dust generation.	Construction	CB&I	Compliance Open	AQMSP - Appendix B Table 8-1 General Speed limit signage placed on site (10km/h) and along Main Access Rd (50km/h) – sealed surface.
295	Re-vegetate as soon as practical.	Construction	AGL	Compliance Open	AQMSP - Appendix B Table 8-5 Re-vegetation of Cleared Areas All project areas now re vegetated with exception of northern laydown area of PPA.
296	Maintain trucks and construction equipment in accordance with the manufacturers' specifications and comply with all relevant regulations.	Construction	CB&I	Compliance Open	Daily checks completed on machinery which includes air emissions. Maintenance completed as required.
297	Avoid unnecessary idling of trucks, plant and engines.	Construction	All	Compliance Open	AQMSP - Appendix B Table 8-2 Vehicle, Plant and Equipment Management and Maintenance
298	Plan material deliveries to avoid congestion and excessive truck queuing and truck idling.	Construction	All	Compliance Open	AQMSP - Appendix B Table 8-1 General Approximately 1-2 trucks per day deliveries. Concrete trucks staggered to avoid queuing – all concrete pours completed. No congestion noted during site inspections
299	Project equipment, machinery and vehicles will meet exhaust air quality standards and will comply with state regulations. Machinery will be fitted with the appropriate emission control equipment and will be maintained and serviced frequently.	Construction	CB&I	Compliance Open	Daily checks completed on machinery which includes check for excessive air emissions. Maintenance completed as required. Incoming vehicles – exhaust emissions checked.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
300	Project equipment will be designed to enable monitoring of operating performance to ensure the equipment is operating according to manufacturer's specifications.	Construction Operations	CB&I	Compliance Open	OEMP includes monitoring points for monitoring performance.
301	A monitoring program will be established to ensure regular (or continuous) monitoring of air emissions.	Operations	AGL	Compliance Open	OEMP includes monitoring plan.
302	The access road will be sealed during operations to prevent the generation of dust by vehicles using the road and to dirt being carried onto the TAC Northern Access Road or Old Punt Road where it could form dust.	Operations	AGL	Compliance Closed	Main Access Road sealed with bitumen.
303	Monitoring of the Project emissions will be in accordance with current AGL practice. Emissions of pollutants are reported annually in the National Pollution Inventory (NPI).	Operations	AGL	Compliance Open	OEMP completed.
304	Chemicals and analytes, including glycol, used across the Project for dehydration, rehydration and refrigeration will be monitored and modelled.	Operations	AGL	Compliance Open	Potential contamination impacts from Glycol were modelled in the project EA. Monitoring of glycol for leaks and levels included in the OEMP.
305	Liaison will continue with OEH in relation to the licensing requirements for the Project under the POEO Act and the proposed draft conditions for the environmental protection licence.	Operations	AGL	Outstanding Open	EPL handed over to AGL 4 May 2015 – conditions remain same for constriction until commissioning completed mid-June 2015.
306	There will not be any gas venting during shutdown other than in an emergency.	Construction Operations	AGL	Compliance Open	Requirement include in OEMP
7.13 Greenhouse Gas Emissions					
307	Design the site layout to reduce the extent of vegetation clearing required.	All	AGL	Compliance Closed	Clearing as per design. Clearing now completed

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
308	Incorporate initiatives focusing on energy efficiency in the Project design. This may include high-efficiency motors, variable speed drives and high-efficiency lighting (e.g., motion sensors or passive lighting).	All	AGL (WP)	Outstanding Open	Design to be checked.
309	Implement the AGL Climate Change Policy which is incorporated through the Health, Safety and Environment Management System including greenhouse abatement initiatives will be adopted for the Project.	Operations	AGL	Outstanding Open	OEMP completed – refer Pre Operations Audit Report
310	Establish measureable greenhouse gas emission reduction targets.	Operations	AGL	Outstanding Open	OEMP completed – refer Pre Operations Audit Report. One GHG initiative was the second Part 3A modification for the connection of the NGSF to Tomago Aluminium for the supply of "boil off" gas from the LNG storage tank. Alternatives to supplying gas to Tomago would have involved flaring or additional processing (energy consumption), which would have increased GHG emissions from the site.
311	Maintain vehicles appropriately to maximise their fuel efficiency.	All	CB&I	Compliance Open	AQMSP Appendix B Table 8-2 Vehicle, Plant and Equipment Management and Maintenance Vehicles maintained as per schedule – completed off site
312	In accordance with the Commonwealth National Greenhouse and Energy Reporting Act 2007, AGL will be required to report on greenhouse gas emissions, energy production and energy consumption. Greenhouse gas emissions will be monitored and reviewed on an annual basis.	All	CB&I AGL	Compliance Open	Requirement to track fuel usage and electricity consumption of construction phase added to AQMSP. Fuel usage maintained in excel spreadsheet – no electricity from grid (generator only). OEMP completed – refer Pre Operations Audit Report

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
7.14 Hazard and Risk					
7.14.1 Risk Management					
313	Conduct a review of the hazard and risk assessment once detailed design and hazard and operability studies (HAZOPs) have been completed for the Project, this will ensure that the assumptions made in this hazard and risk assessment remain valid though conservative.	All	AGL	Compliance Closed	Letter to DP&I dated 19 June 2012 requesting approval to stage Fire Safety Study (FSS), Hazard and Operability Study (HAZOP), Final Hazard Analysis (FHA). CB&I – HAZOP, FSS and FHA August 2012 based on final design Letter from DP&I dated 6 August 2012 approving staged approach with requirement the HAZOP for the second stage should cover the interaction with already installed equipment. 28-Nov-12: Submission of Phase 1 Fire Safety Study and Hazop Report to DP&I. 9-Sep-13: Submission of Phase 2 FSS, HAZOP, FHA to DoPI, FRNSW and RFS. 16-Sep-13: Phase 2 HAZOP approval by DoPI. 12-Sep-14: Submission of Phase 3 FSS, FHA, HAZOP report
314	Undertake an audit of the Safety (Health and Environment) Management System within twelve months of commissioning the gas plant. This audit will focus on the management of potential major hazards associated with the development and based on the DP&I Hazard Audit Guidelines.	Operations	AGL	Outstanding Open	12 months after operations commenced

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
315	Develop an emergency response plan that will coordinate procedures with the Tomago Aluminium Smelter, other adjacent industrial facilities and any local emergency planning groups, fire brigades, state and local police and appropriate government agencies. This plan will include: a) Contacts with state and local emergency response agencies; b) Scalable procedures for the prompt notification of appropriate local official and emergency response agencies, based on the level and severity of potential incidents; c) Procedures for notifying businesses, residents and recreational users within areas of potential hazard; d) Evacuation routes/methods for residents, business and members of the public in the vicinity of the Project. Evacuation routes will include alternatives to the main access road; e) The locations of permanent sirens and other warning devices; f) Appointment of an emergency coordinator(s) to be available on site at all times; g) Plans for initial and continued training of plant operators and local responders, along with provisions for periodic emergency response drills by emergency personnel, emergency response agencies and federal, state and local officials.	All	CB&I	Compliance Open	PRIMP – Rev 0 a) Section 3.0, Section 6.1.2 (Table 6-2) b) Section 2.1 c) Section 6.1.2 d) Draft emergency response plan for operations has been developed. e) Sirens ae located in the admin/control building, heater shelter and tank top platform. f) Section 1.8. identification of designated emergency controller/coordinator in case of emergency added into responsibilities section g) Not applicable to this stage of works - operations

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
316	Undertake a security assessment to ensure arrangements are acceptable for the gas plant site as per the current requirements for critical infrastructure in NSW and under the NSW Regulations for Major Hazards Facilities.	All	AGL	Compliance Closed	Design and operations phase of project. Preliminary Hazard Analysis completed as part of EA. Security assessment has been undertaken and included in the Safety Case
317	Design the gas plant to ensure that any spills will drain into sumps, away from other plant items and infrastructure. Additional design features will also be incorporated to minimise the risk of cold metal brittle fracture and verify the adequacy of the design features during the HAZOP and safety integrity level (SIL) studies.	All	AGL	Compliance Closed	Process areas drain to sumps and the stormwater system. Provision installed to retain and test water prior to release to the wetland holding pond. HAZOP completed.
318	Install an automatic shutdown system for use in the event of a leak.	All	AGL	Compliance Closed	The Process Shutdown System (PSD) system detects any abnormal operating conditions which earlier corrective measures from the Process Control System have failed to control, and triggers automatic shutdown of process and utilities equipment to protect the NGSF and personnel from abnormal operating conditions. The NGSF has six (6) types of process shutdowns, one plant wide shut down and five (5) system shutdowns.
319	Evaluate additional mitigation of vapour generated in the impoundment system, such as the installation of insulating concrete inside the LNG impoundment trenches and sump.	All	AGL	Compliance Closed	Vaporisation shutdown including WPG heaters, send out pumps, WPG pumps and plant isolation valves.
320	Install an air quality monitoring or other early warning system inside the compressor building.	All	AGL	Compliance Closed	Flammable gas detectors are located throughout the NGSF in areas where: › Natural gas and refrigerant gases are handled, and

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
					› Spills of LNG or MRL may generate quantities of flammable gas through evaporation. Flammable gas detectors are also located on the inlets to building ventilation systems. The detectors are programmed to alarm at 20% (high) and 40% (high-high) of the lower explosive limit (LEL). Alarms appear on the operator terminals. Audible alarms (hazard horns) and beacons are activated by a high-high alarm. A number of beacons and hazard and fire horns are located throughout the NGSF. The six beacons are located at the: 1. Administration building (XL-8301); 2. Heater shelter (XL-8302); 3. Compressor shelter (XL-8303); 4. Firewater pump shelter (XL-8304); 5. LNG tank top platform (XL-8305), and 6. Odorant building (XL-8306).
321	Determine the requirement for lightning protection for the top of the tank during detailed design.	All	AGL	Compliance Closed	Lightening protection installed on the tank
322	Install an overfill and overpressure protection system for tanker loading.	All	AGL	Compliance Closed	The overfill protection for road tankers is based on weight measurement. The max weight load is entered into weighbridge computer. When the set weight is reached, the filling valve closes

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
					automatically. If the tanker is overfilled, the liquid will return to the plant via the vent hose. This flow goes into the sump tank. There is also temperature measurement on the vapour return line and there is a level alarm in the sump tank. These will indicate an overfill and operator will then stop flow.
323	Consult with air transport stakeholders to determine any requirements for restricting airspace above the gas plant and aircraft warning lights or other warning devices.	All	AGL	Compliance Closed	CASA and Dept of Defence have rejected request for restricting airspace above NGSF.
324	Incorporate appropriate allowances in the Project design to ensure that multiple pipelines located in the same easement are separated by acceptable distances to ensure that radiant heat produced during an incident is not transferred to a neighbouring pipe.	All	AGL	Compliance Closed	Main Access Road – pipeline installed along one side of road. Additional services such as water located on other side of road. Gas Access track has single pipeline along one side of road.
7.14.2 Safe Engineering Design					
325	The storage facility will be designed according to Australian and/or international standards to meet the required earthquake characteristics of the site.	Preconstruction	AGL	Compliance Closed	Designed to NFPA 59A as well as AS1170. The Seismicity Study defines worst case scenarios which have been included into the design - setting high accelerations than the codes
326	AGL will continue to consult with all relevant agencies through the detailed design and Project operation phases.	Preconstruction	AGL	Compliance Open	Meeting with NOW and HWC to confirm ongoing meeting requirements.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
327	Maximise separation distances to separate the most credible (though rare) leaks from ignition sources, physically isolate any fire, prevent its spread and minimise the risk to people and property.	Preconstruction	AGL	Compliance Closed	Plot plan has three zones: LNG tank; processing area; and non-process area. LNG tank is segregated into bunded area with large separation to process area; and non-process area is segregated for process area by pipe rack. Fire Monitor Accessibility Study demonstrates extent of potential gas jet fires and how to apply cooling water to mitigate escalation of fire event. Fire zones are kept within the plant boundary to minimise risk to people outside the plant.
328	Minimise the inventory of LNG and of pressurised natural gas in process equipment.	Preconstruction	AGL	Compliance Open	LNG primarily stored in the tank rather than in the process equipment during operations.
329	Minimise pumping rates and pressure levels in Project components external to the storage tank.	Preconstruction	AGL	Compliance Open	Gas processing pressure is reduced from supply pressure. Operating pressure minimised to optimise refrigerant load.
330	Minimise vulnerability of equipment and processes through equipment selection and design.	Preconstruction	AGL	Compliance Closed	Equipment vulnerability has been mitigated by stringent definition of requirements (datasheets and specifications) during design. Selection of equipment during the purchasing stage has been managed by selection of reputable vendors that have been supplying the types of equipment for a long time and are well recognized in the industry.
331	Ensure maximum integrity of flammable material containment.	Preconstruction	AGL	Compliance Open	Loss of Containment is considered a worst case scenario. Multiple risk applications used to reduce to SFARP.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
332	Minimise exposure to people by reducing process complexity and maintenance requirements.	Preconstruction	AGL	Compliance Open	Process is relatively simple and additional systems have not been added to increase complexity. High quality equipment has been purchased to minimise unplanned maintenance. Operation is periodic and maintenance can be undertaken with separate parts of the plant shutdown.
333	Ensure systems are available for rapid detection and prompt remote isolation of any leaks.	Preconstruction	AGL	Compliance Closed	Gas detectors and fire detectors are located around the processing areas where there is potential for gas leaks. Detectors will alarm in the Control Room. Confirmed fire will prompt isolation of gas systems.
334	Control all ignition sources.	Preconstruction	AGL	Compliance Open	AGL Operating Procedures preclude carrying ignition sources onto operating sites. Part of AGL inductions. Equipment in hydrocarbon areas covered.
335	Minimise the opportunity for ignition sources in areas where hydrocarbon leaks are a possibility.	Preconstruction	AGL	Compliance Closed	Design to requirements for Hazardous areas. Prevents installation of ignition sources within hydrocarbon areas.
336	Provide passive and active fire protection systems for the gas plant site.	Preconstruction	AGL	Compliance Closed	Active fire protection provided via firewater pumps and ring main. Monitors used to cool equipment adjacent to fire to mitigate escalation. Automated water spray initiated on LPG storage tanks to mitigate BLEVE. Passive fire protection used on structures where a fire would cause escalation of the event.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
337	Consider the implications of cold metal brittle failure in the design of the plant. The likelihood of a catastrophic cold metal brittle failure event should be rendered negligible through design.	Preconstruction	AGL	Compliance Closed	Areas where cryogenic temperatures occur during operation are contained with materials which will not suffer embrittlement at the low temperatures. Areas where low temperatures can occur during abnormal operation, selection of materials has taken that into consideration.
338	Ensure that LNG transfer pipes which enter and leave the storage tank are positioned on the roof of the tank.	Preconstruction	AGL	Compliance Closed	There are no pipes that penetrate the walls of the LNG storage tank, which reduces the potential for LNG to leak from the tank. All penetrations are in tank roof.
339	Minimise the likelihood of over pressure, under pressure or overfill scenarios of the LNG storage tank by instigating appropriate measures in the design of the Project.	Preconstruction	AGL	Compliance Closed	Over-pressure and under-pressure events have been reviewed in the Layer of Protection Analysis (LOPA), which has reduced potential LOC SFARP.
7.14.3 Modifications to Management and Mitigation Measures for Hazard and Risk					
340	Advise the Office of Airspace Regulation of the expected start date of the operation of the facility six months prior to commencement of operation.	Preconstruction	AGL	Outstanding Open	Notification not required until six months prior to expected operation of facility – estimated to be approximately June 2015.
341	Reasonable measures will be taken to maintain security of the construction site to prevent third parties gaining unlawful access to the site. Measures will include secure fencing and lighting along the main access road and the pipeline corridor close to Old Punt Road.	Preconstruction	CB&I	Compliance Open	Fencing and lighting now installed.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
342	If any evidence of illegal dumping of wastes on the Project area is observed the dumped material will be removed immediately. If any liquid sludge or chemical waste is observed then appropriate sampling and monitoring will be implemented to determine whether any impact to groundwater has occurred.	Construction	CB&I	Compliance Open	WMSP – Table 7-1 Gates to site locked after hours. Some incidences of waste material dumped outside site gates in previous reporting periods. Legacy waste encountered during initial clearing works. Material collected by waste contractor and disposed to landfill – refer ER Site Inspection reports
343	AGL will provide 'as constructed' drawings and details to RAAF.	Operations	AGL	Compliance Closed	2-Jul-14: As built details of the tank were provided to CASA and RAAF.
344	AGL will continue to consult with all relevant agencies through the detailed design and operation phases of the Project.	Operations	AGL	Compliance Open	Ongoing – AGL currently meets with NOW, PSC, HWC quarterly. Meetings during operations to be confirmed.
345	An emergency plan will be prepared to comply with clause 174ZC of the Occupational Health and Safety Regulations 2001 (NSW).The emergency response plan will be compiled in accordance with DP&I guidance note HIPAP 1, Emergency Planning.	Operations	AGL	Compliance Closed	Section 10 of the ERP states Emergency Services Information Package developed in accordance with HIPAP. Plan has been developed in accordance with Work Health and Safety Regulation 2011 which supersedes Occupational Health and Safety Regulations 2001
346	The proposed emergency traffic arrangements will be reviewed and assessed to ensure compliance with the stated Emergency Vehicle Access Policy No.4.	Operations	AGL	Compliance Closed	Table 1 of the OEMP states requirement that adequate emergency vehicle access is available at all times. Review of other components indicates design requirements only including minimum width of roads (6m), turning requirements and ramp design.

Item	Commitment	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
347	Compliance with the regulations applicable to major hazard facilities and will continue to consult with WorkCover in order to obtain details of its requirements for inclusion in the site risk assessment and safety report.	Operations	AGL	Compliance Closed	20-Aug-14: Safety Case submitted to WorkCover for review.
348	AGL will prepare and submit the safety report to WorkCover six months prior to commissioning.	Operations	AGL	Compliance Closed	Meeting held with WorkCover on 18-April-2012. NGSF determined as a Major Hazard Facility by WorkCover in letter dated 19-Oct-2012. 15-Feb-13: Safety Case outline submitted to WorkCover. 10-May-13: Revision 1 of Safety Case Outline submitted to WorkCover 20-Aug-14: Safety Case submitted to WorkCover for review.

Table A.3 Compliance Assessment –EPBC Approval 2010/5752

Item	Assessment Requirement	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
APPROVAL CONDITIONS					
1	To minimise the risk of construction and operational activities leading to the offsite movement of sediments or contaminants that could adversely affect the Kooragang Nature Reserve (now Hunter Wetlands National Park) wetland of international importance, the person taking the action must implement Conditions B 20 to B26 inclusive (dealing with Soils, Water and Hydrology), and B56 (dealing with a Construction Environmental Management Plan), imposed under the New South Wales Planning Assessment Commission conditions of approval dated 10 May 2012 for Application Number MP10_0133 under the NSW Environmental Planning & Assessment Act 1979	All	CB&I Lucas Engineering AGL	Compliance Open	Refer assessment of compliance against MCoA B20 – B26 and B56
2	To minimise adverse impacts during construction on listed threatened species and ecological communities, and in particular the New Holland Mouse (Pseudomys novaehollandiae), and Earp's Gum (Eucalyptus parramattensis subsp. decadens), the person taking the action must implement Conditions B 56 (dealing with a Construction Environmental Management Plan), imposed under the New South Wales Planning Assessment Commission conditions of approval dated 10 May 2012 for Application Number. MP10_0133.	Pre-clearing Construction	CB&I AGL	Compliance Open	Refer assessment of compliance against MCoA B56

Item	Assessment Requirement	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
3	To offset the loss of approximately four (4) individuals of Earp's Gum (Eucalyptus parramattensis subsp. decadens) and approximately 15ha of potential habitat for the New Holland Mouse (Pseudomys novaehollandiae), the person taking the action must implement Condition C2 (dealing with a Biodiversity Offset Package), imposed under the New South Wales Planning Assessment Commission conditions of approval dated 10 May 2012 for Application Number MP10_0133.	Pre-commissioning	CB&I AGL	Compliance Open	Refer to assessment of compliance against MCoA C2
4	The Biodiversity Offset Package required under conditions B13 and C2 imposed under the New South Wales Planning Assessment Commission conditions of approval dated 10 May Page 2 of 3 2012 for Application Number MP10_0133, must provide for the permanent offsite protection of at least 25ha of optimal habitat for the New Holland Mouse (Pseudomys novaehollandiae) and permanent offsite protection of at least 60 individual Earp's Gum (Eucalyptus parramattensis subsp. decadens) trees.	Pre-clearing Pre commissioning	AGL	Compliance Open	Offset Report 60 Earp's gums to be established in Hunter Botanic Gardens in an area of 2.9 ha New Holland Mouse - the offset sites provide permanent protection of at least 25 ha of preferred habitat and approximately 80 ha of sub-optimal habitat, which may become more suitable for this species with appropriate fire management as outlined in the Conservation Agreements for the offset sites. The development of the Gas Storage facility removed approximately 12 ha of sub-optimal habitat for this species.
5	Within 10 days after the commencement of the action, the person taking the action must advise the Department in writing of the actual date of commencement.	Commencement of Construction	AGL	Compliance Closed	Department was notified by AGL in writing – letter dated 27 August 2012. This was the commencement date of the project and is therefore within 10 days as required.

Item	Assessment Requirement	Stage/timing	Responsibility	Compliance Status	Reference/ Comment
6	The person taking the action must maintain accurate records substantiating all activities associated with or relevant to these conditions of approval, including measures taken to implement management plans required as part of the approval, and make them available upon request to the Department. Such records may be subject to audit by the Department or an independent auditor in accordance with section 458 of the EPBC Act, or used to verify compliance with the conditions of approval. Summaries of audits will be posted on the Department's website. The results of audits may also be publicised through the general media.	All stages	AGL CB&I	Compliance Open	Document Control is included in Section 4.5 of the CEMP. All full audit reports completed to date are on the project website accessible to Department if required.
7	Within 3 months of every 12 month anniversary of the commencement of the action, the person taking the action must publish a report on their website addressing compliance with the conditions of this approval over the previous 12 months, including implementation of any management plans as specified in the conditions. Non-compliance with any of the conditions of this approval must be reported to the Department at the same time as the compliance report is published.	One year anniversary of commencement	AGL	Compliance Open	Letters to Department included on project website: Returns dated 27 November 2013 and 17 July 2014 which is within period as required (commencement of construction – 27 August 2012)

Annex B

Monitoring Results

Table B1.1 Gas Storage Site Ground and Surface Water Monitoring Results – March 2015

Analyte	Units	LOR	Adopted Groundwater Thresholds	March 2015 Groundwater Sampling Results Range	Adopted ISBL Surface Water Thresholds	March 2015 ISBL Surface Water Sampling Results Range	Adopted OSBL Surface Water Thresholds	March 2015 OSBL Surface Water Sampling Results (SW4)
General Parameters								
Field pH	pH unit	0.1	3.6 to 7.0	4.6 to 5.9	3.6 to 6.7	5.8	4.8 to 9.3	5.6 to 5.7
Electrical Conductivity @ 25°C	µS/cm	1	500	87 to 202	1000	116	5000	617 to 688
Total Dissolved Solids @180°C	mg/L	10	2000	60 to 168	2000	130	2000	370 to 410
Suspended Solids (SS)	mg/L	5	N/A	44 to 3540	2000	16	2000	40 to 52
Cations (filtered)								
Calcium	mg/L	1	N/A	<1 to 4	N/A	6	N/A	8
Magnesium	mg/L	1	N/A	<1 to 4	N/A	2	N/A	10 to 11
Sodium	mg/L	1	N/A	9 to 25	N/A	12	N/A	86 to 97
Potassium	mg/L	1	N/A	<1 to 4	N/A	2	N/A	2 to 3
Anions								
Total Alkalinity as CaCO3	mg/L	1	N/A	<1 to 11	N/A	27	N/A	16 to 20
Chloride	mg/L	1	N/A	8 to 50	N/A	21	N/A	153 to 178
Fluoride	mg/L	0.1	1.5	<0.1 to 0.1	1.5	0.6	3.5	2.7 to 3.1
Sulfate	mg/L	1	500	1 to 31	500	7	500	18 to 23
Dissolved Metals								
Arsenic	mg/L	0.001	0.005	<0.001 to 0.002	N/A	NT	N/A	NT
Cadmium	mg/L	0.0001	0.002	<0.0001	N/A	NT	N/A	NT
Chromium	mg/L	0.001	0.005	<0.001 to 0.003	N/A	NT	N/A	NT
Copper	mg/L	0.001	0.01	<0.001 to 0.005	N/A	NT	N/A	NT
Lead	mg/L	0.001	0.01	<0.001	N/A	NT	N/A	NT

Analyte	Units	LOR	Adopted Groundwater Thresholds	March 2015 Groundwater Sampling Results Range	Adopted ISBL Surface Water Thresholds	March 2015 ISBL Surface Water Sampling Results Range	Adopted OSBL Surface Water Thresholds	March 2015 OSBL Surface Water Sampling Results (SW4)
Nickel	mg/L	0.001	0.01	<0.001 to 0.002	N/A	NT	N/A	NT
Zinc	mg/L	0.005	0.2	0.005 to 0.060	N/A	NT	N/A	NT
Iron	mg/L	0.05	10	0.06 to 3.29	N/A	NT	N/A	NT
Total Metals								
Arsenic	mg/L	0.001	N/A	NT	0.005	0.002	0.02	<0.001 to 003
Cadmium	mg/L	0.0001	N/A	NT	0.002	<0.0001	0.0002	<0.0001
Chromium	mg/L	0.001	N/A	NT	0.1	0.002	0.01	0.002 to 0.003
Copper	mg/L	0.001	N/A	NT	0.02	0.003	0.05	0.003
Lead	mg/L	0.001	N/A	NT	0.02	<0.001	0.02	0.001 to 0.002
Nickel	mg/L	0.001	N/A	NT	0.02	0.002	0.02	0.01 to 0.007
Zinc	mg/L	0.005	N/A	NT	1	0.024	0.2	0.035 to 0.036
Iron	mg/L	0.05	N/A	NT	20	2.35	20	8.47 to 11.9
Nutrients								
Nitrate as N	mg/L	0.01	1	<0.01 to 0.64	3	0.03	3	0.93 to 1.98
Nitrite as N	mg/L	0.01	3	<0.01	3	<0.01	3	<0.01
Nitrite + Nitrate as N	mg/L	0.01	4	<0.01 to 0.64	6	0.03	6	0.93 to 1.98
Total Kjeldahl Nitrogen as N	mg/L	0.1	4	0.3 to 4.1	9	0.9	9	1.5 to 2.5
Total Nitrogen as N	mg/L	0.1	4	0.3 to 4.2	9	0.9	9	2.4 to 4.5
Total Phosphorus as P	mg/L	0.01	2	0.03 to 0.82	0.5	0.03	0.5	0.06
TPH								
C6 - C9	µg/L	20	<20	<20	<20	<20	<20	<20
C10 - C14 Post Silica Gel Clean	µg/L	50	<50	<50	<50	<50	<50	<50
C15 - C28 Post Silica Gel Clean	µg/L	100	<100	<100	<100	<100	<100	<100

Analyte	Units	LOR	Adopted Groundwater Thresholds	March 2015 Groundwater Sampling Results Range	Adopted ISBL Surface Water Thresholds	March 2015 ISBL Surface Water Sampling Results Range	Adopted OSBL Surface Water Thresholds	March 2015 OSBL Surface Water Sampling Results (SW4)
C29 - C36 Post Silica Gel Clean	µg/L	50	<50	<50	<50	<50	<50	<50
C10 - C36 Post Silica Gel Clean	µg/L	50	<50	<50	<50	<50	<50	<50
BTEX								
Benzene	µg/L	1	<1	<1	<1	<1	<1	<1
Toluene	µg/L	2	<2	<2	<2	<2	<2	<2
Ethylbenzene	µg/L	2	<2	<2	<2	<2	<2	<2
meta- & para-Xylene	µg/L	2	<2	<2	<2	<2	<2	<2
ortho-Xylene	µg/L	2	<2	<2	<2	<2	<2	<2
Other Organic Compounds								
Total VOC	µg/L	-	5 to 50	<LOR	N/A	<LOR	N/A	<LOR
Total SVOC	µg/L	-	2 to 10	<LOR	N/A	<LOR	N/A	<LOR
Total Glycols	mg/L	-	2	<2	N/A	<2	N/A	<2
Coliforms								
Total Coliforms	cfu/100ml	-	N/A	<1 to 9	N/A	NT	N/A	NT
Faecal coliforms	cfu/100ml	-	N/A	0 to <17	N/A	NT	N/A	NT
E. Coli	MPN/100ml	-	0	<1*	N/A	NT	N/A	NT

LOR means laboratory limit of reporting N/A means not applicable – no guideline available NT means not tested

* No E.coli was detected by Colilert method therefore no faecal contamination identified

Value	Within 1.1 times threshold concentrations
Value	Greater than 1.1 and up to 2.5 times threshold concentrations
Value	Greater than 2.5 and up to10 times threshold concentrations
Value	Greater than 10 times threshold concentrations

Table B1.2 CB&I Surface Water Laboratory Monitoring Results - March 2015 to June 2015

Description			Guidelines		Groundwater		Sample Results
Analyte	**Units**	**LOR**	**Ecosystem Guidelines [1]**	**Drinking Water Guidelines [2]**	**Baseline Groundwater Results Range**	**Adopted ISBL SW Thresholds**	**HP3 19 March 2015** ES1506418001
General Parameters							
Field pH	pH unit	0.1	6.5 to 8.0 [3]	6.5-8.5 [6]	3.4 to 6.6	3.6 to 6.7	7.08
Electrical Conductivity @ 25°C	µS/c m	1	N/A	N/A	102 to 195	1000	119
Total Dissolved Solids @180°C	mg/L	10	N/A	600 [6]	86 to 420	2000	92
Suspended Solids (SS)	mg/L	5	N/A	N/A	<5 to 4780	2000	12
Cations							
Calcium	mg/L	1	N/A	N/A	<1 to 5	N/A	8
Magnesium	mg/L	1	N/A	N/A	1 to 6	N/A	2
Sodium	mg/L	1	N/A	N/A	12 to 28	N/A	11
Potassium	mg/L	1	N/A	N/A	<1 to 3	N/A	2
Anions							
Total Alkalinity as CaCO3	mg/L	1	N/A	N/A	<1 to 8	N/A	29
Chloride	mg/L	1	N/A	N/A	18 to 40	N/A	13
Fluoride	mg/L	0.1	N/A	1.5	<0.1 to 0.2	1.5	0.6
Sulfate	mg/L	1	N/A	500	<1 to 29	500	6
Total Metals							
Arsenic	mg/L	0.001	0.013	0.007	<0.001 to 0.002	0.01	0.002
Cadmium	mg/L	0.0001	0.0002	0.002	<0.0001 to 0.0001	0.002	<0.0001
Chromium	mg/L	0.001	0.001 [4]	0.05 [4]	<0.001 to 0.002	0.10	0.002
Copper	mg/L	0.001	0.0014	2	<0.001 to 0.006	0.02	0.002
Nickel	mg/L	0.001	0.011	0.02	<0.001 to 0.011	0.02	<0.001
Lead	mg/L	0.001	0.0034	0.01	0.001 to 0.007	0.02	0.002
Zinc	mg/L	0.005	0.008	3 [6]	<0.005 to 0.113	1.0	0.02
Iron	mg/L	0.05	0.3 [5]	0.3 [6]	<0.05 to 2.24	20	2.24
Nutrients							
Nitrite as N	mg/L	0.01	N/A	3	<0.01	3	<0.01
Nitrate as N	mg/L	0.01	0.7	50	<0.01 to 0.53	3	0.02
Nitrite + Nitrate as N	mg/L	0.01	N/A	N/A	<0.01 to 0.53	6	0.02
Total Kjeldahl Nitrogen as N	mg/L	0.1	N/A	N/A	<0.1 to 1.2	9	0.8
Total Nitrogen as N	mg/L	0.1	0.5 [3]	N/A	<0.1 to 1.3	9	0.8
Total Phosphorus as P	mg/L	0.01	0.05 [3]	N/A	<0.01 to 1.65	0.5	0.06
Total Petroleum Hydrocarbons							
C6-C9 Fraction	µg/L	20	N/A	N/A	<20 to 20	<20	<20
C10-C14 Fraction	µg/L	50	N/A	N/A	<50	<50	<50
C15-C28 Fraction	µg/L	100	N/A	N/A	<100	<100	<100
C29-C36 Fraction	µg/L	50	N/A	N/A	<50	<50	<50
C10-C36 Fraction (sum)	µg/L	50	N/A	N/A	<50	<50	<50
BTEX							
Benzene	µg/L	1	950	1	<1	<1	<1
Toluene	µg/L	2	180 [5]	800	<2	<2	<2
Ethylbenzene	µg/L	2	80 [5]	N/A	<2	<2	<2
meta- & para-Xylene	µg/L	2	N/A	N/A	<2	<2	<2
ortho-Xylene	µg/L	2	350	N/A	<2	<2	<2
Total Xylenes	µg/L	2	N/A	N/A	<2	<2	<2
PAH							
Naphthalene	µg/L	5	16	N/A	N/A	N/A	<5

Notes:

1 ANZECC (2000) Fresh Water Ecosystem Trigger Values for 95% Species Protection
2 NHMRC (2011) Drinking Water Guidelines (Health)
3 Range of values for NSW lowland rivers
4 Chromium guidelines are for Chromium VI
5 ANZECC Indicative Interim Working Level (IWL) – Low Reliability Trigger Values
6 NHMRC 2011 Drinking Water Guidelines (Aesthetic) LOR means laboratory limit of reporting

N/A means not applicable – no guideline available
NT means not tested
Dissolved metals sample 40 micron filtered in the field
Baseline and adopted threshold criteria from Coffey Geotechnics quarterly groundwater monitoring report GEOTLCOV24054AC-AH, April to June 2013

HP1 - Process Area Holding Pond (Sump)
HP2 - LNG tank Holding Pond (Sump)
HP3 - Wetlands Holding Pond

Legend for comparison to threshold concentrations

Within 1.1 times threshold concentrations
Greater than 1.1 and up to 2.5 times threshold concentrations
Greater than 2.5 and up to10 times threshold concentrations
Greater than 10 times threshold concentrations