STATE SIGNIFICANT INFRASTRUCTURE ASSESSMENT

Horsley Park Meter Station Upgrade Project (SSI 6681)

Environmental Assessment Report
Section 115ZA of the
Environmental Planning and Assessment Act 1979

July 2015

Cover Photos: (clockwise from top left) View towards Horsley Park Meter Station, bulk liquid separator and associated pipework, regulator gas inside masonry enclosure and metering equipment.

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NSW Department of Planning & Environment
www.planning.nsw.gov.au

1. BACKGROUND

The Horsley Park Meter Station is an existing natural gas facility that receives gas from the Eastern Gas Pipeline. The facility is located at 194-202 Chandos Road, Horsley Park, about 32 km west of Sydney's Central Business District (see Figures 1 and 2).

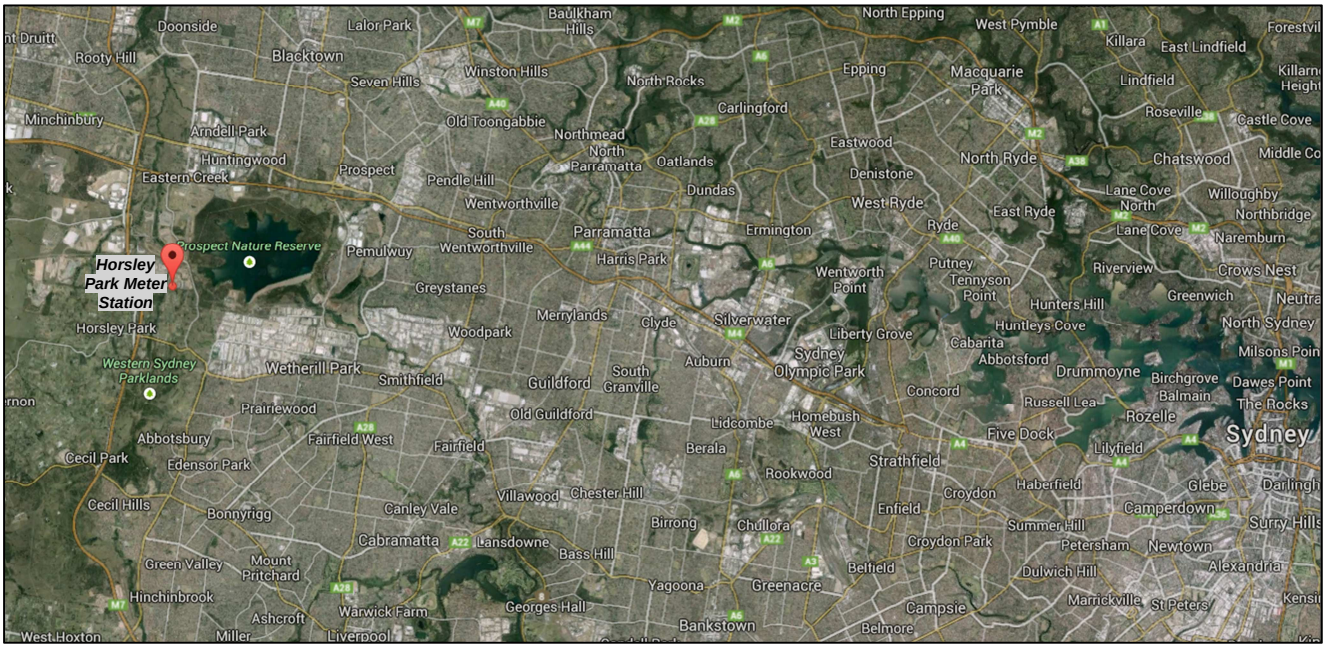


***Figure 1**: Regional Context*

***Figure 2:** Project Area*

The Horsley Park Meter Station and the Eastern Gas Pipeline are owned and operated by Jemena Eastern Gas Pipeline Pty Ltd (Jemena), a subsidiary of SGSP (Australia) Assets Pty Ltd. Both the Eastern Gas Pipeline and the Horsley Park Meter Station are regulated under Pipeline Licence No. 26 in accordance with the NSW *Pipelines Act 1967.*

The Eastern Gas Pipeline, together with the Moomba-Sydney Pipeline, supply the Sydney gas distribution network with 95% of its gas (see Figure 3).The Horsley Park Meter Station reduces and regulates the pressure of gas received from the Eastern Gas Pipeline and delivers it to the Sydney gas distribution network (see Figure 4). The Horsley Park Meter Station has a total capacity of 208 terajoules a day.

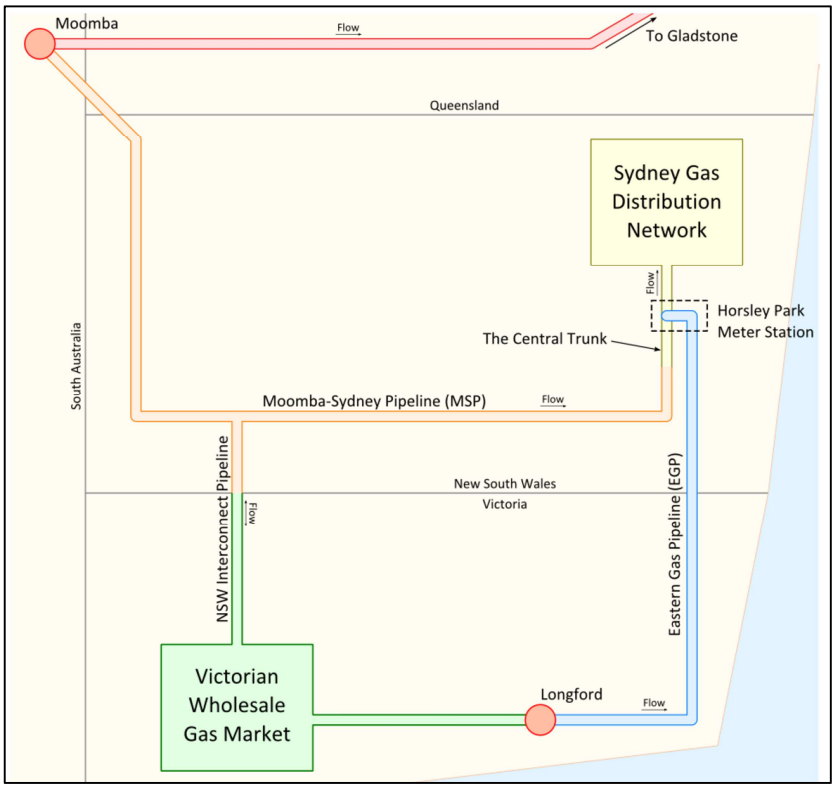


Figure 3: *Sydney Gas Distribution Network*

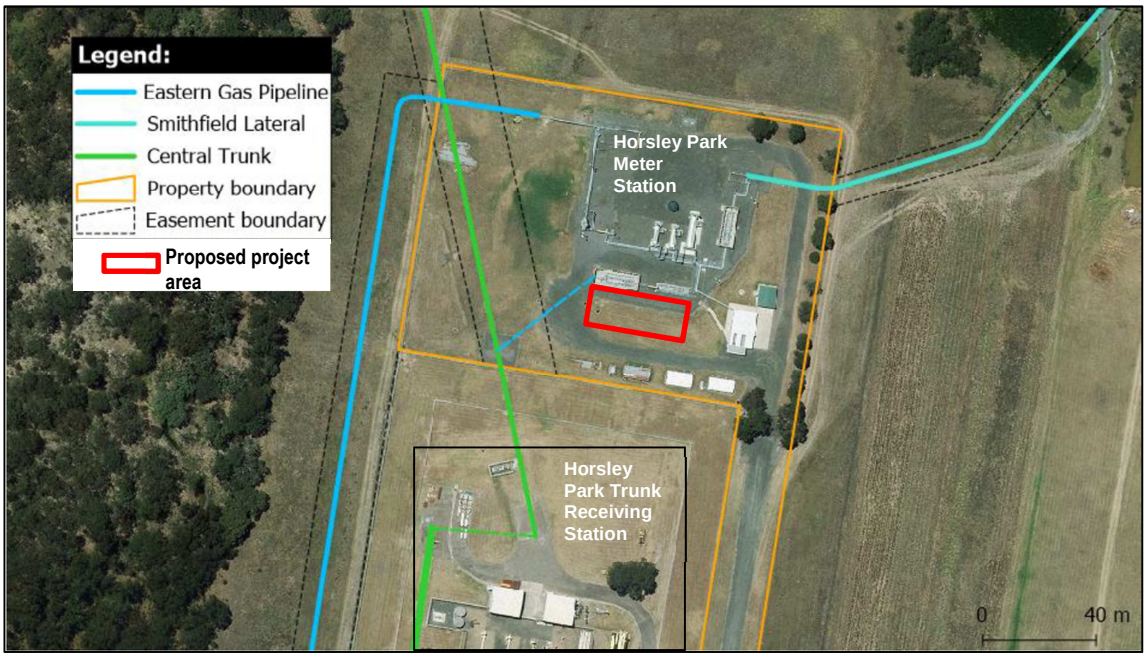


Figure 4: *Horsley Park Meter Station and connecting pipelines*

1.1 Project Setting

The Horsley Park Meter Station is located within Lot 3 DP1002746, which covers an area of 1.4 ha. The site is accessed via a 220 m long asphalt driveway that connects with Chandos Road (see Figure 2). Chandos Road is an east-west road connecting the Westlink M7 Motorway in the west (via Wallgrove Road) with Wetherill Park Industrial Estate in the east.

The landscape immediately surrounding the site is semi-rural with some industrial operations. Austral Bricks' quarry and brick making facility is located about 200 m north of the site, and the Horsley Park Trunk Receiving Station is located immediately south of the site. The Trunk Receiving Station is a separate facility that receives gas from the Moomba-Sydney Pipeline, and is also owned by Jemena (see Figure 4).

Electricity and telecommunications networks connect to the site from Chandos Road via the existing site access road. The gas pipelines associated with the Horsley Park Meter Station are located underground once outside the site boundary.

The closest privately-owned residence is located about 300 m southeast of the site. Views of the meter station from surrounding residences are obscured wholly or partly by other buildings, agricultural structures, vegetation or topographical features.

Vegetation on the site largely consists of exotic grasses, with a few planted native trees located along the fence line of the access driveway. The site has been disturbed by previous agricultural activities, as well as construction works associated with the existing facility. The closest native woodland is about 40 m west of the site.

The meter station is located on land that generally declines to the northwest, towards Eastern Creek, which is located about 50 m west of the site and is ephemeral in nature at this location. The site is located within the upper catchment of Eastern Creek, which has been significantly disturbed by past vegetation clearance and agriculture.

2. PROPOSED DEVELOPMENT

2.1 The Project

The proposal is known as the Horsley Park Meter Station Upgrade Project (the project). In summary, the project would increase natural gas deliverability from the Eastern Gas Pipeline into the Sydney gas distribution network via the Horsley Park Meter Station by 120 terajoules a day by mid-2016.

The project would require the installation of the following equipment (see Figure 5):

- gas heat exchangers;
- dry gas filtration equipment;
- hot water heaters (gas fired boiler) within a noise attenuating masonry enclosure and including a 9 m stack;
- a gas metering unit;
- a gas regulator within a noise attenuating masonry enclosure; and
- above and belowground connecting pipework.

The project would occur wholly within the existing site boundary and on land owned by Jemena. The project would not require any adjustments to the existing pipeline easements or the licence areas associated with existing pipelines, and all pipelines would continue to be located underground once outside of the site boundary. Gas flow and supply would not be disrupted during construction of the project.

The project would take about 6 months to construct, with the majority of the new equipment assembled and pre-tested off-site. The prefabricated equipment would then be delivered to the site for installation on a newly constructed level pad located immediately south of the existing facility (see Figures 4 and 6).

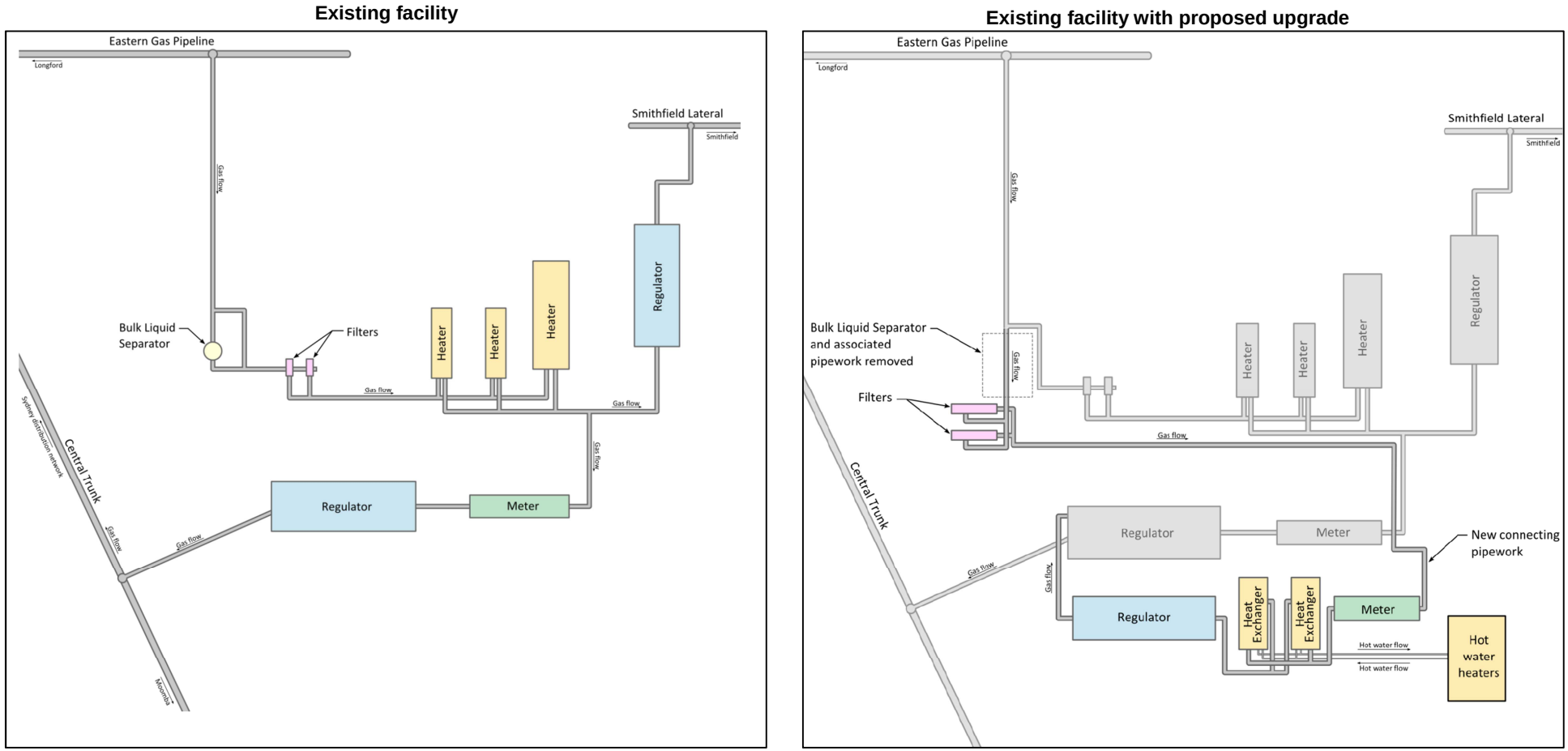


Figure 5: *Horsley Park Meter Station Upgrade Project – existing facility compared to proposed upgrade*

Figure 6: *Location of expanded level pad – immediately south of the existing facility*

The proposed level pad would require bulk excavation works to a depth of 0.5 m over an area of about 750 m^2. The project would also require minor excavations for the installation of concrete pads and plinths, underground conduits, services and pipework. Temporary site shelters and amenities would also be installed on site for construction personnel.

The project has a capital investment value of $15 million and would generate 25 new construction jobs over a 6 month period.

Under normal operating conditions the existing facility is controlled, operated and monitored 24 hours a day 7 days a week via an offsite control room for the Eastern Gas Pipeline. Staff are only required on-site during site maintenance. The proposed project would not require any additional operational staff, and the facility would continue to be operated remotely.

The project is detailed in full in the Environmental Impact Statement (EIS) (see **Appendix C**) and Response to Submissions (see **Appendix E**).

2.2 Project Justification

The Horsley Park Meter Station has reached contractual capacity and is currently constraining natural gas supply from the Eastern Gas Pipeline into the Sydney gas distribution network.

Jemena indicates that gas supply to the Sydney gas distribution network may fall significantly below gas demand as early as 2016. The Department considers that failure to meet the increased demand for natural gas would impact the development and operation of gas dependant industries, and may result in adverse socio-economic impacts on the wider community.

Jemena's proposal to upgrade the Horsley Park Meter Station would address this issue by increasing the capacity of the existing facility by 120 terajoules a day by mid-2016.

The Department notes that Jemena considered other options to address the likely gas supply short fall, but concluded that the proposed project is the best option given that it would have minimal environmental impacts, and could be achieve in a relatively short timeframe (See Section 5 below).

3. STATUTORY CONTEXT

3.1 State Significant Infrastructure

The project is State Significant Infrastructure under Part 5.1 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

Clause 14 of *State Environmental Planning Policy (State and Regional Development) 2011* declares the project to be State Significant Infrastructure because it is development that does not require approval under Part 4 of the EP&A Act, and it is of a type specified in Clause 5 of Schedule 3 of the SEPP. Clause 5 of Schedule 3 includes development for the purpose of a pipeline licensed under the NSW *Pipelines Act 1967*.

Consequently, the Minister for Planning is the consent authority for the project. However, under existing Ministerial delegations the Executive Director, Resource Assessments and Business Systems, may determine the development application as there were no public objections, Council did not object to the project and Jemena did not make a reportable political donation.

3.2 Permissibility

The site is located within the Fairfield local government area (LGA). However, the *Fairfield Local Environmental Plan 2013* does not apply to the site because the site is located on unzoned land that is subject to *State Environmental Planning Policy (Western Sydney Parklands) 2009.*

Clauses 12 and 17 of the Western Sydney Parklands SEPP set out matters that the consent authority must consider when determining a development application on land within the Western Sydney Parklands zone. The project is consistent with Clauses 12 and 17 as it would not result in the disturbance of land outside the existing site boundary.

Additionally, Clause 17A of the Western Sydney Parklands SEPP requires the consent authority to be satisfied that all essential services (i.e. water, electricity, waste disposal, storm water management and road access) are available to accommodate the proposed development. Jemena anticipates that the upgraded facility would require an additional 32 kilowatts of electricity per hour, and proposes to upgrade existing infrastructure located at a power pole on Chandos Road. Endeavour Energy has provided the design brief for this aspect of the proposal, which would not require new easements. Consequently, the Department considers that all essential services would be available for the operation of the upgraded facility.

The Department is therefore satisfied that the project is permissible with development consent under the Western Sydney Parklands SEPP.

3.3 Environmental Planning Instruments

Jemena has undertaken a review of the relevant provisions of the various Environmental Planning Instruments (EPIs) that apply to the proposed development (see Section 4 of the EIS), including:

- *SEPP (State and Regional Development) 2011*;
- *SEPP (Western Sydney Parklands) 2009;*
- *Infrastructure SEPP*; and
- *Fairfield Local Environmental Plan 2013*.

The Department has considered Jemena's review and has undertaken its own assessment of these matters (see Section 5 and **Appendix B**). Based on this assessment, the Department considers that the proposed development can be undertaken in a manner that is generally consistent with the aims, objectives and provisions of these instruments, subject to the management measures that have been incorporated in the recommended conditions of approval (see **Appendix A**).

3.4 Other Approvals

In accordance with Section 115ZG of the EP&A, no other approvals are required for State Significant Infrastructure proposals.

4. CONSULTATION

The Department publicly exhibited the EIS from 8 April 2015 until 8 May 2015 on the Department's website, at the Department's Information Centre, at Fairfield Council's office and at the Nature Conservation Council's office. Additionally, the Department advertised the exhibition of the EIS in the Fairfield Advance and notified relevant State government authorities and Council.

In undertaking this process, the Department is satisfied that the requirements of Section 115Z of the EP&A Act have been met.

In response to the public exhibition, the Department received submissions from 5 government agencies, none of which objected to the project. No submissions were received from special interest groups or members of the public. A summary of the issues raised in submissions is provided below, and full copies are included in **Appendix D**.

4.1 Submissions

Fairfield City Council raised concerns and requested further information about erosion and sediment control and potential flooding impacts, and made a number of general recommendations in regard to the management of noise, dust and lighting. Council also requested that Jemena pay Section 94A contributions to the value of $150,000 (i.e. 1% of the CIV).

The **NSW Office of Water** (NOW) within the Department of Primary Industries made general recommendations about erosion and sediment control and groundwater, and raised concerns and requested additional information about the potential impact of the project on the Eastern Creek riparian corridor.

The Roads and Maritime Services (RMS), the Office of Environment and Heritage (OEH) and the Division of Resources and Energy (DRE) within NSW Trade & Investment raised no concerns and made no recommendations about any aspect of the project.

4.2 Response to Submissions

In June 2015, Jemena provided a response to the issues raised in submissions (see **Appendix E**), which was made publicly available on the Department's website and forwarded to the relevant public authorities for comment. NOW confirmed that the additional information addressed and resolved its initial concerns, and the Department considers that all other issues raised in submissions were adequately addressed in the Jemena's Response to Submissions (RTS).

In regard to Council's request that Jemena pay Section 94A contributions, the Department notes that the project would not require additional operational employees or increase road traffic, or otherwise increase demand on public amenities and services. Consequently, the Department does not consider it appropriate to require Jemena to pay financial contributions to Council.

5. ASSESSMENT

In assessing the merits of the project, the Department has considered the:

- DA and EIS for the project;
- issues raised in submissions and Jemena's response to these issues;
- additional information provided by Jemena and government agencies;
- relevant environmental planning instruments, policies and guidelines; and
- relevant provisions of the EP&A Act, including the objects of the Act.

The Department's assessment of the potential impacts of the project is summarised in Table 1 below. The Department is satisfied that all potential impacts would be acceptable and/or could be suitably managed through appropriate conditions of approval.

Table 1: *Assessment of key issues*

Issue	Assessment	Conclusion/Recommended Conditions
Noise	• The EIS includes a noise impact assessment undertaken by Marshall Day Acoustic. • The project would result in additional operational noise sources similar to those at the existing facility, including a new regulator, boilers and aboveground pipework. The regulator and boilers would be housed in noise attenuating open-roofed masonry enclosures. • Gas release (known as blow downs) during routine or emergency maintenance would continue to be required. These events generate noise levels between 130 and 140 dB. The project would not significantly increase the frequency or length of blow downs, which only occur once or twice a year for a few minutes during the day. • With the exception of blow downs, the assessment found that the project would not exceed the operational noise criteria. • The worst case maximum noise level at the closest privately-owned receiver is expected to be 29 dB(A), which is below the day/evening noise limit of 41 dB, and the night time limit of 38 dB. • In regard to scheduled and emergency blow downs, the Department considers that it is not reasonable or feasible to attenuate noise from these events. The Department also notes that noise from blow downs would not be a new noise source to the area, and that Jemena notifies residents 24 to 48 hours prior to these events. • During construction, noise levels are expected to comply with the ICNG criteria of 56 dB, with the exception of deliveries. However, the Department considers that noise from deliveries (i.e. expected to be 63 dB) would be intermittent and temporary, and therefore would not significantly impact surrounding receivers.	• The Department has recommended conditions requiring Jemena to: o implement all reasonable and feasible noise mitigation measures during the construction and operation of the project; o detail construction noise management measures in a Construction Environmental Management Plan (CEMP); o comply with daytime operating hours during construction of the project and during blow down events; and o notify surrounding residents 24 to 48 hours prior to blow down events (excluding emergency works). • With these measures in place, the Department considers that noise emissions from the project would not significantly impact the amenity of surrounding receivers.
Air Quality	• The EIS includes an air quality impact assessment undertaken by Benbow Environmental. • During construction, the project would result in localised dust emissions and exhaust fumes from the operation of plant and equipment. • The Department notes that the construction phase would be temporary and Jemena proposes to mitigate potential impacts through a range of standard dust control mitigation measures, including minimum ground disturbance, application of water to unsealed surfaces and stabilisation of exposed areas as soon as practical. • During operation of the facility, emissions would be released from the gas fired boiler via a 9 m stack, emitting oxides of nitrogen, carbon dioxide and carbon monoxide. • The assessment concludes that cumulative emissions (background plus source emissions) would continue to be well below the applicable air quality criteria for oxides of nitrogen and carbon monoxide at all surrounding receivers, and the Department accepts the conclusion of this assessment. • The Department also notes that the project would not result in significant Scope 1, 2 or 3 greenhouse gas emissions.	• The Department has recommended conditions requiring Jemena to: o implement all reasonable and feasible measures to minimise dust and gaseous emissions from the site; and o detail specific air quality management measures in the CEMP. • In consideration of the air quality assessment outcomes, and with the above measures in place, the Department is satisfied that the project would not significantly impact air quality or the amenity of surrounding receivers during the construction and operation of upgraded facility.

Issue	Assessment	Conclusion/Recommended Conditions
Hazards	• The EIS includes a Preliminary Hazard Analysis (PHA) undertaken by Planager Risk Management Consulting and includes a full Quantitative Risk Assessment. The Department also commissioned an expert review of this matter (see **Appendix F**). • Hazardous materials present on the site include natural gas and minor quantities of oils and fuels, with the key hazards risk relating to the potential for ignition/explosion of gas leaked from the site and the probable fatality to people and/or damage to surrounding facilities. • Jemena proposes to ensure the project is constructed to meet the relevant Australian safety standards for gas pipeline facilities. • Jemena's PHA and the Department's expert review conclude that the project would comply with all relevant risk criteria specified in *Hazardous Industry Planning Advisory Paper No 4 – Risk Criteria for Landuse Planning*, and the Department accepts the conclusions of the assessment and expert review.	• The Department considers that the project would not impose an unacceptable hazards risk on the surrounding locality. • To ensure the facility is operated in a manner consistent with the findings of the PHA, the Department requires Jemena to complete: o a Hazard and Operability Study, a Final Hazard Analysis and a Construction Safety Study, prior to commencing construction of the project; and o a Pre-Startup Compliance Report, prior to commencing operations.
Waste	• Waste would be generated during the construction of the project, including about 320 m^3 of soil. Jemena proposes to recycle construction waste and/or dispose of it at a suitably licensed waste facility. • During operations, some potentially hazardous waste would be removed from the gas filters, stored in HAZMAT drums and disposed of at a licensed waste facility. Two additional gas filters would be installed as part of the project, therefore increasing waste. • Jemena would continue storing waste in HAZMAT drums, and disposing of waste at a suitably licensed waste facility.	• The Department has recommended a condition of approval requiring Jemena to minimise, handle and dispose of waste appropriately.
Water	• The site is relatively flat with good grass cover surrounding the proposed extension area, and existing sediment controls are installed along the inside of the northern site boundary. • The extent of ground disturbance is relatively small (750 m^2), and to a maximum depth of 0.5 m and therefore unlikely to intercept groundwater. • Jemena proposes to manage the site during construction to minimise ground disturbance. Disturbed areas would be stabilised and reinstated as soon as practical and Jemena proposes to install additional sediment control devices at the low point of the facility to prevent sediment reaching Eastern Creek. • The western extent of the proposed extension area is located within an area mapped as a 'Low Risk Flood Precinct' under Fairfield City Council flood mapping. The flood risk to the site is therefore minimal.	• Given the hydrological context in which the project would occur, and the minor nature of ground disturbance, the Department considers that the potential impacts on water resources would be minimal. • The Department has recommended conditions requiring Jemena to: o comply with Section 120 of the *Protection of the Environment Operations Act 1997,* which prohibits the pollution of waters; and o prepare and implement an Erosion and Sediment Control Plan as part of the CEMP.
Traffic	• Under normal operating conditions the existing facility is unmanned and only requires infrequent vehicular access. This would not change during operation of the upgraded facility. • During construction of the project, there would be a minor and temporary increase in light and heavy vehicle movements along Chandos Road from Wallgrove Road. • Given the low existing traffic volumes along Chandos Road, construction related traffic is not expected to increase congestion or travel times,	• The Department considers that the project would not result in significant temporary or long term traffic impacts. • To ensure that construction related traffic is managed appropriately the Department requires Jemena to prepare and implement a Construction Traffic Management Plan as part of the CEMP.

Issue	Assessment	Conclusion/Recommended Conditions
	or restrict property access for any other vehicles using the road. • All parking for construction personnel would be accommodated within existing unused space on the site.	
Biodiversity	• The EIS includes a Biodiversity Impact Assessment undertaken by Biosis Pty Ltd. • The project would disturb 750 m^2 of exotic pasture grassland and may require tree limb pruning at the site entrance to allow suitable access for delivery of plant and equipment. • The Eastern Creek riparian corridor would not be disturbed by the project, and no threatened flora and fauna species would be impacted. • To minimise any potential impacts on biodiversity during construction of the project, Jemena proposes to: o limit all works and site access to within the existing fenced site perimeter and access driveway; and o install sediment filtration devices to reduce sediment laden runoff to aquatic ecosystems down gradient of the site.	• The Department considers that the project would not result in any impacts to biodiversity values on or surrounding the site. • The Erosion and Sediment Control Plan would address potential indirect biodiversity impacts and no further conditions specific to biodiversity are required.
Heritage	• The EIS considers potential impacts on historic heritage and Aboriginal cultural heritage, and includes a Due Diligence Archaeological Assessment undertaken by Biosis Pty Ltd in consultation with the Deerubbin Local Aboriginal Land Council (LALC). • No features of historic heritage significance were identified in the vicinity of the site. • No Aboriginal artefacts or sites were identified within the site. The closest registered Aboriginal site is an artefact scatter located about 25 m to the west of the site. • The assessment concluded that the presence of intact subsurface archaeological artefacts would be unlikely due to the existing disturbed nature of the site.	• The Department considers that the project would not impact items of heritage significance. • However, the Department has recommended a condition requiring construction works to cease if any previously unidentified heritage items are identified. Works may recommence once consultation and/or management and mitigation of potential impacts has occurred.
Visual	• The existing facility is obscured either wholly or partially from most residences in the vicinity by other buildings, agricultural structures, vegetation and topography. • The project would not have a significant impact on the existing visual landscape, or result in any significant visual impacts (including lighting impacts).	• No conditions necessary.

6. RECOMMENDED CONDITIONS

The Department has prepared recommended conditions of approval for the proposed development (see **Appendix A**). These conditions are required to:

- prevent and minimise adverse environmental impacts;
- set standards and performance measures for acceptable environmental performance; and
- provide for the ongoing environmental management of the development.

Jemena has reviewed and accepted the recommended conditions.

7. CONCLUSION

The Department has assessed the proposed development in accordance with the relevant requirements of the EP&A Act.

Overall the Department's assessment concludes that the project would not result in significant adverse impacts on the amenity of local residents, nor would the project pose an unacceptable risk to public safety. Given the environmental context in which the project would occur, and the minor nature of ground disturbance, the Department considers that the project would not significantly impact water resources, biodiversity values or items of heritage significance.

The Department's assessment also concludes that the project would not increase the need for (or impact upon existing) public amenities, services and infrastructure in the Fairfield LGA. There would be no significant temporary or long-term traffic impacts.

The project has a capital investment value of $15 million and would generate 25 new construction jobs over a 6 month period. No operational employees are required following the upgrade.

Importantly, the project would address the gas supply constraints at the existing facility by increasing gas throughput at the Horsley Park Meter Station by 120 terajoules a day by mid-2016. The Department also considers that addressing the increasing demand for natural gas at the existing facility would assist the development and operation of gas dependant industries within the Sydney gas distribution network, and may result further long term socio-economic benefits to the wider community.

Given that the benefits of the project can be realised in a relatively short timeframe and without any significant adverse impacts, the Department considers that the proposed upgrade is in the public interest, and should be approved subject to conditions.

8. RECOMMENDATION

It is RECOMMENDED that the Executive Director, Resource Assessments and Business Systems, as delegate of the Minister:

- **considers** the findings and recommendations of this report;
- **approves** the development application, subject to conditions; and
- **signs** the attached instrument of approval (see **Appendix A**).

17/7/15

Nicole Brewer
Team Leader
Resource Assessments

17/7/15

David Kitto
Executive Director
Resource Assessments and Business Systems

APPENDIX A – RECOMMENDED CONDITIONS OF APPROVAL

Infrastructure Approval

Section 115ZB of the *Environmental Planning and Assessment Act 1979*

As delegate of the Minister for Planning, I approve the State Significant Infrastructure application referred to in Schedule 1, subject to the conditions in Schedule 2 to 4.

These conditions are required to:

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

David Kitto
Executive Director
Resource Assessments and Business Systems

Sydney 17 JULY 2015

SCHEDULE 1

Application Number:	SSI-6681
Proponent:	Jemena Eastern Gas Pipeline (1) Pty Ltd and Jemena Eastern Gas Pipeline (2) Pty Ltd
Approval Authority:	Minister for Planning
Land:	Lot 3 in DP 1002746
Development:	Horsley Park Meter Station Upgrade Project

CONTENTS

DEFINITIONS

BCA	Building Code of Australia
Blow downs	The release of gas from the site for maintenance and/or emergency purposes
CEMP	Construction Environmental Management Plan
Conditions of approval	Conditions contained in schedules 1 to 4 inclusive
Construction	The demolition of buildings or works, carrying out of works and erection of buildings and infrastructure covered by this approval
Day	The period from 7am to 6pm on Monday to Saturday, and 8am to 6pm on Sundays and Public Holidays
Department	Department of Planning and Environment
Development	The development described in the EIS
EIS	Environmental Impact Statement titled *Horsley Park Meter Station Upgrade Project* (2 volumes), dated March 2015, and the Response to Submissions titled *Horsley Park Meter Station Upgrade Project Submissions Report* dated June 2015
Evening	The period from 6pm to 10pm
Feasible	Feasible relates to engineering considerations and what is practical to build
Incident	A set of circumstances that: • causes or threatens to cause material harm to the environment; and/or • breaches or exceeds the limits or performance measures/criteria in this approval
LALC	Local Aboriginal Land Council
Night	The period from 10pm to 7am on Monday to Saturday, and 10pm to 8am on Sundays and Public Holidays
OEH	NSW Office of Environment and Heritage
POEO Act	*Protection of the Environment Operations Act 1997*
Proponent	Jemena Eastern Gas Pipeline (1) Pty Ltd and Jemena Eastern Gas Pipeline (2) Pty Ltd, or any other person or persons who rely on this approval to carry out the development that is subject to this approval
Reasonable	Reasonable relates to the application of judgement in arriving at a decision, taking into account: mitigation benefits, cost of mitigation versus benefits provided, community views and the nature and extent of potential improvements
Secretary	Secretary of the Department, or nominee
Site	The land listed under “Land” in schedule 1, and shown in Appendix 1

SCHEDULE 2
ADMINISTRATIVE CONDITIONS

OBLIGATION TO MINIMISE HARM TO THE ENVIRONMENT

1. In addition to meeting the specific performance criteria established under this approval, the Applicant shall implement all reasonable and feasible measures to prevent and/or minimise any harm to the environment that may result from the construction, commissioning, operation or decommissioning of the development.

TERMS OF APPROVAL

2. The Proponent shall carry out the development:
   (a) generally in accordance with the EIS; and
   (b) in accordance with the conditions of this approval.

   Note: The general layout of the development is shown in Appendices 1 and 2.

3. If there is any inconsistency between the above documents, 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.

4. The Applicant shall comply with any reasonable requirement/s of the Secretary arising from the Department's assessment of:
   (a) any reports, plans, strategies or correspondence that are submitted in accordance with this approval; and
   (b) the implementation of any actions or measures contained in these documents.

LIMITS ON APPROVAL

5. The approval shall lapse 5 years after the date on which it is granted, unless the works the subject of this approval are physically commenced on or before that date.

STRUCTURAL ADEQUACY

6. The Proponent shall ensure that any new buildings and structures, and any alterations or additions to existing buildings and structures, are constructed in accordance with the:
   (a) *AS2885.1 Design and construction of Pipelines gas and liquid petroleum,* or its latest version*;*
   (b) *AS4041-2006 Pressure piping*, or its latest version; and
   (c) relevant requirements of the BCA.

PROTECTION OF PUBLIC INFRASTRUCTURE

7. The Proponent shall:
   (a) repair, or pay the full costs associated with repairing, any public infrastructure that is damaged by the development; and
   (b) relocate, or pay the full costs associated with relocating, any public infrastructure that needs to be relocated as a result of the development.

   Note: This condition does not apply to any damage to roads caused as a result of general road usage.

OPERATION OF PLANT AND EQUIPMENT

8. The Proponent shall ensure that all plant and equipment used on site, or in connection with the development is:
   (a) maintained in a proper and efficient condition; and
   (b) operated in a proper and efficient manner.

SCHEDULE 3
ENVIRONMENTAL PERFORMANCE CONDITIONS

NOISE

Operating Hours

1. The Proponent shall comply with the operating hours set out in Table 1.

Table 1: Operating Hours

Activity	***Operating Hours***
Operation	24 hours a day 7 days a week
Blow downs (excluding emergency work)	7am to 6pm Monday to Friday 8am to 1pm Saturday Not permitted on Sundays or public holidays
Construction activities	

The following construction activities may be undertaken outside of the hours identified in Table 1:

- activities that are inaudible at any privately-owned residence;
- the delivery of materials as requested by the NSW Police Force or other authorities for safety reasons;
- emergency work to avoid the loss of lives, property and/or to prevent environmental harm; or
- works as approved through the out-of-hours work protocol outlined in the CEMP.

Operating Conditions

2. The Proponent shall:
   (a) implement all reasonable and feasible measures to minimise the construction and operational noise of the development; and
   (b) notify the occupants of residences in close proximity to the site 24 to 48 hours prior to undertaking blow downs (excluding emergency works).

Note: Refer to Appendix 1 to identify the residences in close proximity to the site.

AIR QUALITY

3. The Proponent shall implement all reasonable and feasible measures to minimise dust and gaseous emissions generated by the development.

HAZARDS AND RISK

Pre-construction

4. The Proponent shall prepare the following documents prior to commencing construction of the development:
   (a) a Construction Safety Study that is consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'*;
   (b) a Hazard and Operability Study, prepared by a suitably qualified, experienced and independent person, that is consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'*; and
   (c) a Final Hazard Analysis that reports on the validity of the assumptions in the Preliminary Hazzard Analysis in the EIS, that is consistent with the Department's *Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'.*

Note: Construction, other than of preliminary works that are outside the scope of the hazard studies, shall not commence until study recommendations have been considered and, where appropriate, acted upon.

Pre-startup

5. The Proponent shall prepare a Pre-startup Compliance Report for the development to the satisfaction of the Secretary. This report must be submitted to the Secretary for approval prior to carrying out any operations under this approval, and detail the development's compliance with the documents required under condition 4 of schedule 3 of this approval, including:
   (a) date of document preparation;
   (b) date that construction and commissioning commenced; and
   (c) actions proposed and/or taken in order to implement the recommendations made in the documents.

WASTE MANAGEMENT

6. The Proponent shall:
   (a) ensure that the construction and operation of the development does not cause any water pollution; and
   (b) ensure that the waste generated by the development is appropriately stored, handled and disposed of.

SOIL AND WATER

7. The Proponent shall:
   (a) comply with section 120 of the POEO Act;
   (b) ensure that all construction and operation activities are undertaken generally in accordance with *Managing Urban Stormwater: Soils and Construction* (Landcom, 2004); and
   (c) ensure that all dangerous goods and hazardous materials storage and handling is undertaken in accordance with *AS1940-2004: The storage and handling of flammable and combustible liquids*,

   to the satisfaction of the Secretary.

HERITAGE

8. If historical and/or Aboriginal archaeological relics are unexpectedly discovered during construction of the development, all works must cease and a suitably qualified and experienced archaeologist be brought in to assess the find. Depending on the nature of the discovery, additional assessment, recording and management measures may be required prior to the recommencement of works in the affected area. The Heritage Council of NSW, OEH and/or members of the relevant LALC must be notified of this discovery in writing.

SCHEDULE 4
ENVIRONMENTAL MANAGEMENT AND REPORTING

ENVIRONMENTAL MANAGEMENT

Construction Environmental Management Plan

1. The Proponent shall prepare and implement a CEMP for the development to the satisfaction of the Secretary. This plan must:
   (a) be submitted to the Secretary for approval prior to the commencement of construction activities under this approval, unless the Secretary agrees otherwise;
   (b) outline all environmental management practices and procedures to be followed during construction and demolition works associated with the development;
   (c) detail how the environmental performance of the construction works will be monitored;
   (d) describe of the roles and responsibilities for all relevant employees involved in construction and demolition works associated with the development; and
   (e) include the following sub-plans:
      (i) noise;
      (ii) air quality;
      (iii) erosion and sediment control;
      (iv) traffic; and
      (v) community consultation and complaints handling.

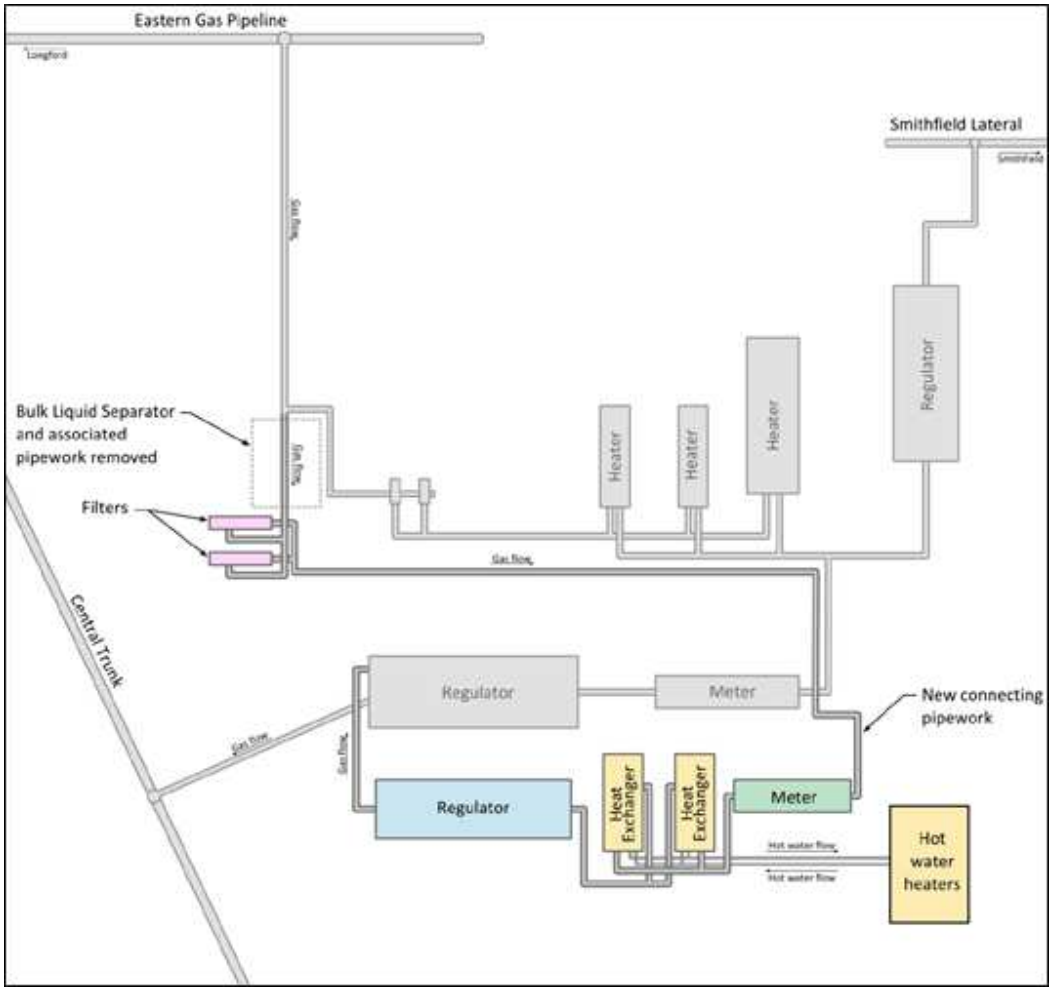
REPORTING

Incident Reporting

2. The Proponent shall immediately notify the Secretary and any other relevant agencies of any incident. Within 7 days of the date of the incident, the Proponent shall provide the Secretary and any relevant agencies with a detailed report on the incident, and such further reports as may be requested.

APPENDIX 1
DEVELOPMENT AREA

APPENDIX 2
DEVELOPMENT SCHEMATIC



APPENDIX B
CONSIDERATION OF ENVIRONMENTAL PLANNING INSTRUMENTS

SEPP (State and Regional Development) 2011
The proposed development is "State Significant Infrastructure" as it meets the classification under Clause 5 of Schedule 3 of the *SEPP (State and Regional Development) 2011,* and therefore requires development approval under Part 5.1 of the EP&A Act from the Minister for Planning or delegate.

SEPP (Western Sydney Parklands) 2009
The proposed development would not result in the disturbance of land outside the existing property boundary of the gas facility, and is therefore consistent with the requirements of the SEPP. Further, the Department is satisfied that all essential services (i.e. water, electricity, waste disposal, storm water management and road access) are available for the operation of the upgraded facility.

SEPP (Infrastructure) 2007
Clause 53 permits development for the purpose of a pipeline without consent on any land if the pipeline is subject to a licence under the NSW *Pipelines Act 1967*. The proposed development is subject to Pipeline Licence No. 26.

SEPP (Infrastructure) 2007 requires the consent authority to notify relevant government authorities about developments that may affect public infrastructure or public land. The Department notified Council and the RMS given the use of public roads by the proposed development.

Neither RMS, Council or Endeavour Energy object to the proposed development, and any recommendations made by these authorities have been considered by the Department, and incorporated into the conditions of approval where appropriate. This satisfies the requirements of *SEPP (Infrastructure) 2007*.

Fairfield Local Environmental Plan 2013
The Fairfield LEP does not apply because the proposed development is located within an area cover by the Western Sydney Parklands SEPP.

APPENDIX C – ENVIRONMENTAL IMPACT STATEMENT

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6681

APPENDIX D – SUBMISSIONS

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6681

APPENDIX E – RESPONSE TO SUBMISSIONS

http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6681

APPENDIX F – HAZARDS AND RISK REVIEW

OZZY CONSULTING

Memorandum

To	Elle Donnelley Department of Planning and Environment
cc.	
From	Lilia Donkova Principal Consultant Ozzy Consulting Pty Ltd

Date 1 April 2015 **File no** **File** Horsley Park EIS_PHA_COC.docx

Subject: Horsley Park Meter Station Upgrade – Hazards and Risks

Project name:	**Horsley Park Meter Station Upgrade**
Study Title:	**PHA of Horsley Park Meter Station Upgrade**
Doc No	**04-B395**
Revision:	**0**
Issue date:	**10 March 2015**
Prepared by:	**Planager**

Background

The project is related to upgrade of the existing metering station at Horsley Park to accommodate natural gas flow of up to 290 TJ/day through the station inlet.

To ensure that the proposed upgrade would not increase the overall risks from the station to unacceptable levels, a Preliminary Hazard Analysis was carried out and it is enclosed as Appendix C of the EIS.

The PHA was carried out in accordance with relevant departmental policies and guidelines, in particular the Hazardous Industry Planning Advisory Paper No 6 and No4.

The scope of the PHA includes the existing equipment and the proposed upgrade and as such, the cumulative risks from the facility are estimated and compared with the relevant risk criteria for land use safety planning adopted in NSW.
The PHA comprised a full Quantitative Risk Assessment (QRA).

The purpose of a risk assessment is to determine whether a development would impose an unacceptable level of risk on the surrounding locality. The assessment identifies potential hazards, analyses the consequences and likelihood of possible incidents and estimates resultant risks to surrounding land uses. The risks are then assessed against relevant criteria. The risk assessment process is shown diagrammatically in Figure . This Memo is structured around these key elements.

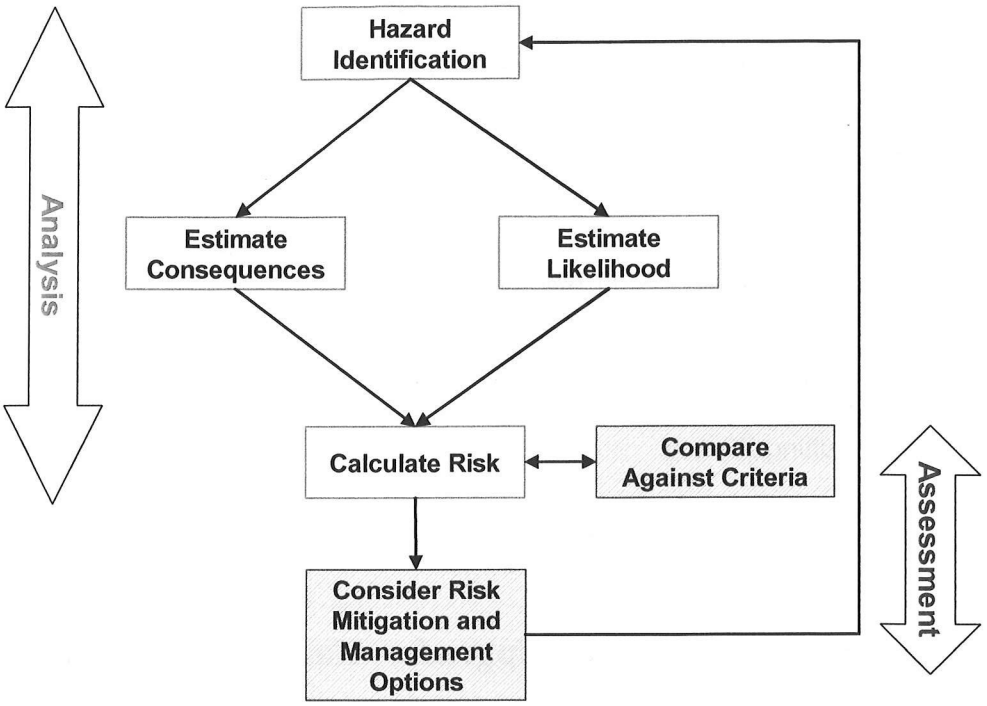


Fig.1

Review

Hazard Identification

The hazardous materials present at the site are natural gas, diesel and minor quantities of oils and fuels. The only hazardous material with the potential offsite safety is natural gas. Incidents involving natural gas could cause fatalities, injuries or damage to property or the biophysical environment as a result of fires and explosions.

A Hazard Identification Word Diagram (HIWD) was used to identify the site hazards (existing and proposed) with a potential for off-site impacts. The HIWD systematically considered initiating events that could lead to the release of hazardous materials, Events considered included equipment failure, mechanical impact, design and construction defects and human error.

Natural events (such as flooding, lightning strike and bush fires) were also considered.

The hazard identification technique used in the PHA is considered to be appropriate and well applied.

Consequence Analysis

Natural gas consists of more than 90% methane and this chemical is selected as representative material.

The assessment estimated the consequences of each hazardous incident with potential offsite impact. These incidents include fires involving natural gas and

explosions of natural gas. Commercial software for consequence modelling (Effects) was used to calculate the consequences of the identified scenarios.

Likelihood Analysis

The likelihood analysis draws on internationally recognised frequency data published by TNO[i] .The same source of information is used for estimation of the probabilities for ignition of methane releases.
It is noted that the analysis assumes the probability of explosion of methane to be 40 % of the delayed ignition, which is very conservative approach.
The likelihood and frequency analysis results presented in the assessment are appropriate for each representative incident and include an appropriate level of conservatism.

Risk Analysis

The consequence and likelihood of the identified hazardous incident scenarios are combined to produce an estimate of overall risks from the site. The following risk levels are estimated:

- individual fatality risk;
- injury risk from heat radiation and explosion overpressure;
- societal risk; and
- risk of property damage and accident propagation.

The risks from the facility comply with the risk criteria adopted in NSW.

Risk Control and Mitigation

Section 3 of the PHA provides sufficient information on the proposed risk control and mitigation measures to be incorporated in the design of the upgrade and to be integrated in the operations.

Findings and Recommendations

Overall, the results indicate that the risks from the overall operation (i.e. existing and proposed) of the metering station would comply with all relevant risk criteria for land use safety planning in NSW.

Nevertheless and to ensure that the facility will operate in a safety manner, it is recommended the following conditions of consent to be imposed.

Pre-construction

1) The Applicant shall prepare the studies set out under subsections 1 (a) to 1(c) (the pre-construction studies). Construction, other than of preliminary works that are outside the scope of the hazard studies, shall not commence until study recommendations have been considered and acted upon.

(a) HAZARD AND OPERABILITY STUDY

A Hazard and Operability Study for the proposed development, chaired by an independent qualified person. The study shall be consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 8, 'HAZOP Guidelines'.

(b) FINAL HAZARD ANALYSIS

A Final Hazard Analysis of the proposed development, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 6, 'Hazard Analysis'. The study shall further report on the validity of the PHA assumptions.

(c) CONSTRUCTION SAFETY STUDY

A Construction Safety Study, consistent with the Department of Planning's Hazardous Industry Planning Advisory Paper No. 7, 'Construction Safety'.

Pre-startup

2) PRE-STARTUP COMPLIANCE REPORT
One month prior to the commencement of operation of the development, the Applicant shall submit to Secretary, a report detailing compliance with conditions 1 and 2, including:

(a) dates of study/plan/system submission, approval, commencement of construction and commissioning; and

(b) actions taken or proposed, to implement recommendations made in the studies/plans/systems

Kind Regards,

Lilia Donkova
Principal Consultant, Ozzy Consulting

[i] TNO , Committee for the Prevention of Disasters, Guidelines for quantitative risk assessment, "Purple Book"