Santos

Wilga Park Power Station
Modification 7

August 2019

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1. Introduction

1.1 Overview

The Narrabri Coal Seam Gas (CSG) Utilisation Project is located within Petroleum Assessment Lease (PAL) 2 and at Wilga Park Power Station in the Narrabri region of NSW.

Santos NSW (Eastern) Pty Ltd (Santos) is the operator of PAL 2 and adjoining tenements including Petroleum Exploration Licence (PEL) 238 and Petroleum Production Lease (PPL) 3.

Santos is seeking a modification of consent for Wilga Park Power Station under section 4.55(1A) of the *Environmental Planning and Assessment Act 1979*.

The proposed modification is for the installation of a separation vessel, known as a slug catcher, and associated water storage tank, piping and instrumentation at Wilga Park Power Station. The slug catcher will be necessary to manage entrained water transferred through the existing buried gas pipeline once Santos commissions the existing Bibblewindi compressor.

The slug catcher and associated infrastructure would be installed on existing hardstand within operational areas of the power station.

The proposed modification would involve effectively no additional environmental impact and is substantially the same development for which consent was originally granted.

1.2 Purpose and structure

The purpose of this report is to support an application for a modification of consent under section 4.55 *Environmental Planning and Assessment Act 1979* and provide information as required under division 12 of the *Environmental Planning and Assessment Regulation 2000*.

The structure and content of this report is as follows:

Section 2 — Identifies the applicable laws, regulations, planning instruments and consents

Section 3 — Describes the proposed modification and relationship to existing infrastructure

Section 4 — Describes the potential environmental impacts of the proposed modification

Section 4.1 — Summarises the content of the report and provides recommendations.

2. Statutory context

2.1 Environmental Planning and Assessment Act 1979

The *Environmental Planning and Assessment Act 1979* (EP&A Act) is the principal law regulating development in NSW. It establishes a regime for the making of development applications, assessment of their environmental impacts, and development consent.

Modifications of consents under division 4.9 in part of the EP&A Act include:

- section 4.55(1) — modifications for minor error, misdescription or miscalculation
- 4.55(1A) — modifications involving minimal environmental impact
- 4.55(2) more substantial modifications to consent under section.

The proposed modification is being made under section 4.55(1A) of the EP&A Act.

The existing consents that apply at Wilga Park Power Station are summarised in Table 1.

Wilga Park Power Station was the subject of a development application and development consent under part 3A of the EP&A Act in 2008. Modification 1 through Modification 5 were made under section 75W in part 3A of the EP&A Act between 2011 and 2017 respectively[1][2][3][4][5].

Part 3A of the EP&A Act was repealed in 2011, which replaced the major infrastructure designation with State significant development (SSD) and State significant infrastructure (SSI) designations under division 4.7 and division 5.2 respectively in part 4 of EP&A Act.

Development for which consent was granted under the former part 3A of the EP&A Act were made subject to transitional arrangements *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, including the capacity of the Minister to declare such development as State significant development under section 6 of Schedule 2.

Wilga Park Power Station was declared to be State significant development under part 4 of the EP&A Act in accordance with the transitional arrangements in June 2018. Modification 6 was subsequently made under the relevant provisions in division 4.9 in part 4 of the EP&A Act[6].

Wilga Park Power Station and the proposed modification are described further in section 3.

[1] Department of Planning and Environment 2011, Wilga Park Power Station — Modification 1, http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=4112
[2] Department of Planning and Environment 2012, Wilga Park Power Station — Modification 2, http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=5150
[3] Department of Planning and Environment 2014, Wilga Park Power Station — Modification 3, http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=6301
[4] Department of Planning and Environment 2016, Wilga Park Power Station — Modification 4, http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8010
[5] Department of Planning and Environment 2017, Wilga Park Power Station — Modification 5, http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8508
[6] Department of Planning and Environment 2018, Wilga Park Power Station — Modification 6, http://www.majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=9440

Table 1 Existing consents

Consent	Date	Description
Part 3A — now SSD	2 December 2009	Approval to expand and operate power station at 40 megawatts and construct and operate associated buried gas pipeline and gas gathering and compression systems.
Modification 1	11 February 2011	Extension of timeframe for submission of offset package.
Modification 2	14 March 2012	Allowance for temporary transfer of water in pipeline.
Modification 3	18 July 2014	Installation of riser in pipeline, continued transfer of water in pipeline, use of coal seam gas from existing or future wells.
Modification 4	Withdrawn	Use of coal seam gas from existing or future wells.
Modification 5	14 July 2017	Extension of duration of consent to use coal seam gas.
Modification 6	23 July 2018	Use of coal seam gas from existing or future wells.

2.2 Environmental Planning and Assessment Regulation 2000

The requirements for modification of consent under the EP&A Act are prescribed in the *Environmental Planning and Assessment Regulation 2000* (EP&A Regulation). The relevant requirements and responses under clause 115 and clause 117 are provided in Table 2.

Table 2 Requirements for modification of consent

Requirement	Response
115 Application for modification of development consent	—
(1) An application for modification of a development consent under section 4.55 (1), (1A) or (2) or 4.56 (1) of the Act must contain the following information:	—
(a) the name and address of the applicant,	See application form
(b) a description of the development to be carried out under the consent (as previously modified),	Section 3.1
(c) the address, and formal particulars of title, of the land on which the development is to be carried out,	Section 3.1
(d) a description of the proposed modification to the development consent,	Section 3.2
(e) a statement that indicates either: (i) that the modification is merely intended to correct a minor error, misdescription or miscalculation, or (ii) that the modification is intended to have some other effect, as specified in the statement,	Section 1.1
(f) a description of the expected impacts of the modification,	Section 4
(g) an undertaking to the effect that the development (as to be modified) will remain substantially the same as the development that was originally approved,	Section 4.1
(g1) in the case of an application that is accompanied by a biodiversity development assessment report, the reasonable steps taken to obtain the like-for-like biodiversity credits required to be retired under the report to offset the residual impacts on	Not applicable

Requirement	Response
biodiversity values if different biodiversity credits are proposed to be used as offsets in accordance with the variation rules under the *Biodiversity Conservation Act 2016*,	
(h) if the applicant is not the owner of the land, a statement signed by the owner of the land to the effect that the owner consents to the making of the application (except where the application for the consent the subject of the modification was made, or could have been made, without the consent of the owner),	See application form
(i) a statement as to whether the application is being made to the Court (under section 4.55) or to the consent authority (under section 4.56),	Not applicable
(2) The notification requirements of clause 49 apply in respect of an application if the consent of the owner of the land would not be required were the application an application for development consent rather than an application for the modification of such consent.	Not applicable
(3) In addition, if an application for the modification of a development consent under section 4.55 (2) or section 4.56 (1) of the Act relates to residential apartment development and the development application was required to be accompanied by a design verification from a qualified designer under clause 50 (1A), the application must be accompanied by a statement by a qualified designer.	Not applicable
(3A) The statement by the qualified designer must: (a) verify that he or she designed, or directed the design of, the modification of the development and, if applicable, the development for which the development consent was granted, and (b) provide an explanation of how: (i) the design quality principles are addressed in the development, and	Not applicable

Requirement	Response
(ii) in terms of the Apartment Design Guide, the objectives of that guide have been achieved in the development, and (c) verify that the modifications do not diminish or detract from the design quality, or compromise the design intent, of the development for which the development consent was granted.	
(3B) If the qualified designer who gives the design verification under subclause (3) for an application for the modification of development consent (other than in relation to State significant development) does not verify that he or she also designed, or directed the design of, the development for which the consent was granted, the consent authority must refer the application to the relevant design review panel (if any) for advice as to whether the modifications diminish or detract from the design quality, or compromise the design intent, of the development for which the consent was granted.	Not applicable
(4) If an application referred to in subclause (3) is also accompanied by a BASIX certificate with respect to any building, the design quality principles referred to in that subclause need not be verified to the extent to which they aim: (a) to reduce consumption of mains-supplied potable water, or reduce emissions of greenhouse gases, in the use of the building or in the use of the land on which the building is situated, or (b) to improve the thermal performance of the building.	Not applicable
(5) The consent authority may refer the proposed modification to the relevant design review panel but not if the application is for modification of a development consent for State significant development.	Not applicable — Application is for modification of development consent for SSD.
(6) An application for the modification of a development consent under section 4.55 (1A) or (2) of the Act, if it relates to development for which the development application was required to be accompanied by a BASIX certificate or BASIX	Not applicable

Requirement	Response
certificates, or if it relates to BASIX optional development in relation to which a person has made a development application that has been accompanied by a BASIX certificate or BASIX certificates (despite there being no obligation under clause 2A of Schedule 1 for it to be so accompanied), must also be accompanied by the appropriate BASIX certificate or BASIX certificates.	
(7) The appropriate BASIX certificate for the purposes of subclause (6) is: (a) if the current BASIX certificate remains consistent with the proposed development, the current BASIX certificate, and (b) if the current BASIX certificate is no longer consistent with the proposed development, a new BASIX certificate to replace the current BASIX certificate.	Not applicable
(8) An application for modification of a development consent under section 4.55 (1), (1A) or (2) or 4.56 (1) of the Act relating to land owned by a Local Aboriginal Land Council may be made only with the consent of the New South Wales Aboriginal Land Council.	Not applicable
(9) The application must be accompanied by the relevant fee prescribed under Part 15.	See application form
(10) A development consent may not be modified by the Land and Environment Court under section 4.55 of the Act if an application for modification of the consent has been made to the consent authority under section 4.56 of the Act and has not been withdrawn.	Not applicable
117 Modification of consent involving minimal environmental impact	—
(1) This clause applies to an application under section 4.55 (1A) of the Act or under section 4.56 of the Act in respect of a modification which, in the opinion of the consent authority, is of minimal environmental impact.	—

Requirement	Response
(2) If an application to which this clause applies is required by a development control plan to be notified or advertised and the development consent was granted by the Court on appeal, the application must be so notified or advertised by the consent authority to which the original development application was made.	Not applicable
(3) A consent authority referred to in subclause (2) must, in the case of an application under section 4.56 of the Act, notify the Court of: (a) the manner in which the application was notified or advertised, and (b) any submission period required by the development control plan, and (c) the date (or dates) on which the application was notified or advertised.	Not applicable
(3A) If an application to which this clause applies relates to a development consent that was originally granted or deemed to have been refused by a regional panel, the council or councils of the area in which the development concerned is to be carried out are to notify or advertise the application, and are to notify the Court (if applicable), in accordance with this clause instead of the regional panel.	Not applicable
(3B) Subclauses (2)–(3A) do not apply if the application to which this clause applies is in respect of State significant development.	Noted — Wilga Park Power Station was declared to be State significant development under part 4 of the EP&A Act in accordance with the transitional arrangements in June 2018
(4) If a development control plan provides for a period for notification or advertising of an application, any person during that period may inspect the application and any accompanying information and make extracts from or copies of them.	Not applicable

3. Proposed modification

3.1 Wilga Park Power Station

Wilga Park Power Station is situated on lot 11 and lot 12 on DP 1171292 at 930 and 932 Kiandool Lane, Bohena Creek, about 10 kilometres south-west of the main township of Narrabri. Other features in the surrounding area include Bohena Creek about one kilometre east and Kiandool Lane about 2.5 kilometres west; the latter of which is connected to the site by an access track. The site and surrounding land is rural in nature and zoned for primary production under the *Narrabri Local Environmental Plan 2012*. There are very few residences in the area, the nearest of which are situated about one kilometre south-east and 1.5 kilometres north-west.

The site location and surrounding environment is shown in Figure 1.

Santos owns and operates a range of existing and approved coal seam gas infrastructure in the region including a number of coal seam gas pilot wells, gas and water gathering lines as well as gas and water management facilities at the Bibblewindi and Leewood properties. Where the gas supplied to Wilga Park Power Station is from Bibblewindi, the gas is transported via a 32 kilometre buried gas pipeline.

Wilga Park Power Station includes a series of generator units, control room, fenced switchyard, site office, storage and car parking areas within a 1.4 hectare fenced site. A small fenced area on the southern boundary of the site contains a riser that provides a connection to the buried gas pipeline from Bibblewindi. This fenced area also includes an existing skid-mounted “pig receiver”, which is used in the maintenance of the buried gas pipeline. A “pig” is a tool that is used as part of maintenance activities along the buried gas that sweeps the pipeline and removes any accumulated water or other material. The existing pig receiver at Wilga Park Power Station is shown in Photograph 1.

Photograph 1 Existing pig receiver

LEGEND

- Cadastre
- Waterway
- Sensitive receivers

Paper Size ISO A4

0 400 800

Metres

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

N

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Wilga Park Power Station Mod 7

Site location

Project No. **21-22463-69**
Revision No. **-**
Date **16 Aug 2019**

FIGURE 1

N:\AU\Sydney\Projects\21\22463\GIS\Maps\WilgaParkPowerStationMod7\21_2246369_Z001_WilgaPark_SiteLocation.mxd

Data source: General Topo - NSW LPI DTDB 2015; Cadastre - NSW LPI DCDB 2017; Inset map - Geoscience Australia; Aerial Imagery - Sixmaps 2019 . Created by: sross2

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3.2 Proposed modification

3.2.1 Overview

The proposed modification is for the installation of a slug catcher, transfer pipe and water storage tank upstream of the existing buried gas pipeline, at Wilga Park Power Station. The proposed new infrastructure would separate entrained water transferred in the existing buried gas pipeline prior to it entering power station equipment. In this way, it would serve as a safety mechanism to protect existing equipment at Wilga Park Power Station. It will be necessary once Santos commissions the existing Bibblewindi compressor.

The slug catcher would function to capture water carried through the existing gas pipeline from pigging or other activities. The slug catcher would be installed in an existing operational area being the small fenced area where the pig receiver is located as discussed in section 3.1.

The water storage tank would have a capacity of around 38,000 litres (38 m^3) and would function to store water collected by the slug catcher. It would be situated on an existing hardstand area and would be fenced. A containment bund would be constructed surrounding the storage tank. The containment bund would be 30 cm high and sized to contain 110% of the total volume of the storage tank.

The transfer pipe would function to transfer captured water from the slug catcher to the storage tank. The transfer pipe would be situated in existing hardstand areas and be fenced.

The proposed modification would be designed to meet relevant codes and standards including *AS 1210-2010 Pressure vessels* and *AS/NZS 4766:2006 Polyethylene storage tanks for water*.

The indicative layout of the proposed modification is shown in Figure 2.

Design drawings of the proposed modification are provided as Appendix A.

3.2.2 Construction and commissioning

Construction of the proposed modification is expected to commence in the fourth quarter of 2019 and occur over approximately one month. The workforce required for the construction of the proposed modification would be relatively small, in the order of 10 to 20 workers and consist of local contractors where practicable. As an alternative, contractors from elsewhere may be used, in which case existing accommodation facilities in Narrabri would be utilised.

The equipment that would be required for the construction of the proposed modification would indicatively include four-wheel drive vehicles for transportation of the construction workforce and heavy low loaders or similar vehicles for the transportation of the construction materials. The proposed modification would be constructed on existing hardstand areas meaning earthworks would be minimal.

Construction of the proposed modification would be carried out during recommended standard hours of work under the NSW EPA *Interim Construction Noise Guideline*[7], being:

- Monday to Friday 7 am to 6 pm
- Saturday 8 am to 1 pm
- No work on Sundays or public holidays

[7] NSW EPA 2009, Interim Construction Noise Guideline, https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/noise/09265cng.pdf

3.2.3 Operation and maintenance

The operation of the proposed modification would be limited to the capture of water during pigging or other operating scenarios where water is transferred through the existing 32 kilometre buried gas pipeline.

During ordinary operation, the gas transferred through the buried gas pipeline would include water vapour. Some of this water vapour may condense and accumulate forming a “slug”.

This would typically occur at low points in the buried gas pipeline and would be more pronounced under operating conditions where the flow of gas has been suspended providing a lengthier duration of time for any water vapour present in the buried gas pipeline to condense.

The liquid slugs may move through the buried gas pipeline during ordinary operation or during maintenance as a result of pigging, typically undertaken after the flow of gas has been suspended.

The volume of water that would be captured by the slug catcher and transferred to the storage tank over a given period of time would depend on the operating conditions but would be well below the capacity of the water collection tank.

The proposed modification would include standalone instrumentation, including an emergency shutdown system. The instrumentation would include a number of sensors, valves and alarms that would function to ensure liquid is captured by the slug catcher while preventing discharge or overpressure of gas, or carryover of liquid to the power station.

The slug catcher would be depressurised to atmospheric levels by a pressure safety valve and would be capable of being isolated from the buried gas pipeline and pig receiver by an emergency shutdown valve.

3.2.4 Decommissioning

It is expected that the proposed modification would remain in operation for the duration of the operation of Wilga Park Power Station. In the event Wilga Park Power Station is decommissioned, the proposed modification would be decommissioned as part of that broader activity. The details of the decommissioning would be contained in the Operation Environment Management Plan for Wilga Park Power Station as required under the existing approval conditions[8].

[8] Minister for Planning 2018, Project Approval, https://majorprojects.accelo.com/public/a503283aa1a3f176c7ed506606b4838f/Wilga%20Park%20Power%20Station%20-%20Mod%206%20-%20Consolidated%20Approval.pdf

LEGEND

- Proposed Transfer Pipe
- Proposed Bund
- Proposed Slug Catcher
- Proposed Water Storage Tank
- Hardstand Boundary

Paper Size ISO A4

0 20 40

Metres

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

Santos
Wilga Park Power Station Mod 7

Proposed modification

Project No. **21-22463-69**
Revision No. **-**
Date **22 Aug 2019**

FIGURE 2

N:\AU\Sydney\Projects\21\22463\GIS\Maps\WilgaParkPowerStationMod7\21_2246369_Z002_WilgaPark_ProposedModification.mxd

Data source: General Topo - NSW LPI DTDB 2015; Cadastre - NSW LPI DCDB 2017; Aerial Imagery - ESRI Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: sross2

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4. Environmental assessment

4.1 Potential environmental impacts

The potential environmental impacts of the proposed modification are assessed in Table 3.

As discussed in 3.2.4, in the event Wilga Park Power Station is decommissioned, the proposed modification would be decommissioned as part of that broader activity, which would be detailed in the Operation Environment Management Plan for Wilga Park Power Station as required under the existing approval conditions[9]. The potential impacts of decommissioning the proposed modification would be very limited and subordinate to the potential impacts of the broader decommissioning of Wilga Park Power Station. The potential impacts would be similar to those encountered during construction and include potential leaks or spills, minimal additional traffic generation, and waste generation including the removal of infrastructure. It is expected that these potential impacts would be readily managed by the broader decommissioning plan.

In addition to the environmental assessment in this section a separate hazard and risk assessment of the proposed modification has been carried out and is provided as Appendix B.

Table 3 Environmental assessment

Matter	Assessment
Air quality and greenhouse gas	The proposed modification would not result in a change to the power generation capacity and gas throughput at the power station. There is potential for water captured in the slug catcher to contain residual gas. While the vast majority of gas would be separated from the water and sent to the power station, total separation may not occur. As such, some residual gas may be present in the water stored in the storage tank. Over time, any such residual gas would be released from the water. It is expected that the volume of gas released to air would be negligible. The potential impacts of the proposed modification with regard to air quality and greenhouse gas are therefore negligible.
Flora and fauna	The proposed modification would be completely within existing hardstand areas. It would not result in any direct disturbance to flora and fauna or their habitats. The potential impacts of the proposed modification with regard to flora and fauna are therefore considered to be negligible.

[9] Minister for Planning 2018, Project Approval, https://majorprojects.accelo.com/public/a503283aa1a3f176c7ed506606b4838f/Wilga%20Park%20Power%20Station%20-%20Mod%206%20-%20Consolidated%20Approval.pdf

Matter	Assessment
Soil and land capability	The proposed modification would be constructed on existing hardstand areas meaning earthworks would be minimal. A review of existing licences, penalty notices, clean up notices held by the NSW Environment Protection Authority did not identify any potentially contaminated sites within a kilometre of the site. The records have been provided as Appendix C. The prior assessment documentation for existing consents under the EP&A Act did not identify contamination issues at the site. The potential impacts of the proposed modification on soil and land capability would be limited to potential contamination in the event of an accidental leak or spill of fuel or other chemicals during construction. It would also include any accidental leak or spill of water during operation. Management measures to address risks of accidental leaks or spills during construction and operation are proposed in section 4.1. The residual risk to soil and land capability with the implementation of the proposed management measures would be low.
Aboriginal heritage	The proposed modification would be constructed and operated within existing hardstand areas that have been significantly disturbed and modified by the construction and operation of Wilga Park Power Station. The potential impacts of the proposed modification with regard to Aboriginal heritage are therefore negligible.
Groundwater	The proposed modification would involve minimal and very shallow earthworks. Interaction with groundwater is therefore not expected to occur. The potential impacts of the proposed modification on groundwater would be limited to potential contamination in the event of an accidental leak or spill. This would include an accidental leak or spill of fuel or other chemicals during construction. It would also include any accidental leak or spill of water during operation.

Matter	Assessment
	Management measures to address risks of accidental leaks or spills during construction and operation are proposed in section 4.1. The residual risk to groundwater with the implementation of the proposed management measures would be low.
Surface water	The proposed modification would be significantly distant from surface water features, about 500 metres west and about one kilometre to the east. Further, the hydrological modelling carried out for the Narrabri Gas Project showed the site would have limited flooding under both the 1 in 10 year, 1 in 100 year and probable maximum flood scenarios assessed[10]. The proposed modification would have a limited footprint on hardstand within the existing operational footprint of Wilga Park Power Station. It would not materially affect the flow of surface water. The potential impacts of the proposed modification with regard to surface water are therefore considered to be negligible.
Noise and vibration	The proposed modification would involve the installation of a slug catcher, storage tank, transfer pipe and instrumentation. Construction would involve use of noise generating equipment during the recommended standard hours of work as discussed in section 3.2.2. As discussed in section 3.1, there are very few residences in the area, the nearest of which are situated about one kilometre to the south-east and 1.5 kilometres to the north-west. The construction of the proposed modification would therefore not have noise impacts at residences. The operation of the proposed modification, namely the transfer of liquid slugs from the slug catcher to the storage tank via the transfer pipe, would be driven by pressure from the existing buried gas pipeline. It

[10] GHD 2016, Narrabri Gas Project, Environmental Impact Statement, Hydrology and geomorphology, https://majorprojects.accelo.com/public/980045de7a096a9b63f7e94c49634dd0/Chapter%2013%20Hydrology%20and%20geomorphology.pdf

Matter	Assessment
	would not require the use of equipment such as pumps in order to operate. Sources of noise during the operation of the proposed modification would be limited to occasional movements of vacuum trucks or similar for the collection of liquid stored in the storage tank and then transportation to a suitably licensed waste management facility. The frequency of vacuum trucks travelling to and from Wilga Park Power Station would depend on operating conditions but would be relatively infrequent and would not typically exceed one return trip on a given day. Overall, the operation of the proposed modification would not be expected to cause significant noise impacts at residences.
Traffic management	Construction of the proposed modification would be relatively small scale and likely involve in the order of 10 or 20 vehicle movements per day for transportation of workers, equipment and materials. An additional 10 or 20 vehicle movements per day would not be expected to have significant effects on the safety or the performance of the external road network. Traffic generated during the operation of the proposed modification would be limited to occasional movements of vacuum trucks or similar for the collection and transportation of liquid stored in the storage tank. The frequency of vacuum trucks travelling to and from Wilga Park Power Station would depend on operating conditions but would be relatively infrequent and would not typically exceed one return trip on a given day. The addition of one vehicle movement per day to the external road network would not materially affect road safety or performance. Measures for safe and orderly management of traffic are proposed in section 4.1.
Visual amenity	The proposed modification would involve the installation of relatively minor infrastructure at an existing power station. As such, the

Matter	Assessment
	proposed modification would not result in a material change the existing visual amenity.
Non-Aboriginal heritage	The NSW Government ePlanning Spatial Viewer did not return local or State heritage items within one kilometre of the site. The records have been provided as Appendix C. The Australian Government Protected Matters Search Tool did not return any National Heritage Places or World Heritage Properties within one kilometre of the site. Records have been provided as Appendix C. The prior assessment documentation for existing consents under the EP&A Act did not identify heritage issues at or near the site. Further, the heritage assessments of the region for the Narrabri Gas Project did not identify any historic heritage items in the vicinity of Wilga Park Power Station[11].
Hazard and risk	A separate hazard and risk assessment of the proposed modification has been carried out and is provided in full as Appendix B. The assessment identified a number of hazards associated with construction and commissioning, operation and maintenance and decommissioning phases of the proposed modification. The identified hazards included: • Storage tank water spill • Slug catcher overpressure • Uncontrolled gas release • Catastrophic vessel failure • Transfer pipe rupture • Bushfire ignition The assessment found that the design of the proposed modification in accordance with the relevant standards for pressure vessels and pipes, the incorporation of systems such as shutoff valves and monitoring, and other

[11] GHD 2016, Narrabri Gas Project, Environmental Impact Statement, Historic heritage impact assessment, https://majorprojects.accelo.com/public/86eec086c8041ff97dbf6515239a3b30/Appendix%20O%20Historic%20heritage%20impact%20assessment.pdf

Matter	Assessment
	features such as containment bunds would adequately avoid, mitigate and manage the potential risks associated with the hazards. Further details on the relevant design standards, systems and other design features are provided in section 3.2 The residual risk ranking for each of the identified hazards was low to very low.
Waste management	Construction of the proposed modification would have the potential to generate waste including excess construction materials and small volumes of domestic type waste such as food packaging. Any such waste would be stored in appropriate waste receptacles at the construction site, collected by suitably licensed waste contractors and transported to suitably licensed waste facilities. Waste generated during the operation of the proposed modification would be limited to the liquid slugs captured by the slug catcher and stored in the storage tank. It is planned that the liquid would be collected by vacuum trucks and then transported off the site. Santos operates Leewood Water Treatment Facility, which is an existing produced water treatment and beneficial reuse facility at the Leewood property about 15 kilometres to the south of Wilga Park Power Station. It is intended that liquid slugs captured and stored at Wilga Park Power Station be transported to Leewood Water Treatment Facility for management.

4.1 Proposed management measures

The assessment of potential environmental impacts in section 4.1 has found that the proposed modification would have minimal environmental impact. The additional environmental impacts when considered in the context of the existing infrastructure and consents that apply at the site of Wilga Park Power Station were mainly limited to potential leaks or spills, minimal additional traffic generation and waste generation, and potential hazards and risks during operation.

Based on a review of the consolidated approval conditions for Wilga Park Power Station[12], incorporating all prior modifications, it is considered that the potential environmental impacts of

[12] Minister for Planning 2018, Project Approval, https://majorprojects.accelo.com/public/a503283aa1a3f176c7ed506606b4838f/Wilga%20Park%20Power%20Station%20-%20Mod%206%20-%20Consolidated%20Approval.pdf

the proposed modification would be readily avoided, mitigated and managed within those existing approval conditions and associated environmental management framework.

As discussed in section 3.2, the proposed modification would be sized and designed in accordance with relevant codes and standards and would incorporate a number of safety systems that would effectively mitigate the identified hazards and risks.

5. Conclusion

It is considered that the proposed modification would involve effectively no additional environmental impact and is substantially the same development for which consent was originally granted.

The potential environmental impacts of the proposed modification would be readily avoided, mitigated and managed within the existing approval conditions for Wilga Park Power Station.

Appendices

Appendix A — Design drawings

PLANT NORTH

MGA 10.524°

WILGA PARK POWER STATION

NEW PLANT DATUM

MGA (WORLD) COORDINATES	PLANT COORDINATES
E. 747800.00	E. 100.100
N. 6647870.00	N. 100.100

PLANT ROTATION = 10.524°

9055-V-0001
SLUG CATCHER
E. 109.100

GATE

EXISTING FENCE

E. 102.221
N. 96.430

SKID CORNER
E. 107.975
N. 92.410

RTU

9055-V-0001
T.L. N. 91.786

L4100-003
PIG RECEIVER
(EXISTING)

TIP 02
E. 112.490
N. 92.265

TELSTRA CABLE PIT

EXISTING FENCE

EXISTING FENCE

TIP 01
E. 105.868
N. 83.710

EXISTING FENCE

E. 137.121
N. 96.200

EXISTING FENCE

EXISTING HARDSTAND

EXISTING BOLLARDS

EXISTING OWS SUMP

NEW GATE

NEW FENCE

BOLLARDS

VACUUM TRUCK CONNECTION

NEW BUND

N. 86.700

9055-TK-0001
WATER COLLECTION TANK

E. 150.300

NEW FENCE

NEW FENCE

NEW FENCE

EXISTING ACCESS ROAD

TB TB TB TB TB TB TB TB TB TB TB

DR DR DR DR DR DR DR DR DR DR DR

TB TB TB TB TB TB TB TB TB TB TB

LEGEND:

- FENCE
- T — TELSTRA UG LINE
- DR — DRAIN
- TB — TOP OF BATTER

NOTES:

1. PLOT PLAN HAS BEEN DEVELOPED BASED ON "END OF LINE" FACILITIES PLOT PLAN DWG. NO. 9047-50-018.

SCALE IN METRES 1:100

PREPARED BY: thyssenkrupp

PROJECT. | DRAWING OFFICE.

PROJECT APPROVALS - OTHERS

No	DATE	DRN	CHKD	ENG	Q.A.	PROJ	ACC	DESCRIPTION
3	12/08/19	NXY	TXC	TXC	TXC			RE-ISSUED FOR CONSTRUCTION
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1	06/08/19	NXY	TXC	TXC	TXC			RE-ISSUED FOR CONSTRUCTION
0	26-09-14	NXY	SBB	MVK	SBB	5674938		ISSUED FOR CONSTRUCTION - CDCR-9055-6
C	10/9/14	NXY	SBB	MVK	SBB	5674938		ISSUED FOR DESIGN - CDCR-9055-6

REVISIONS | DRG No. | SUBJECT | REFERENCE DRAWINGS

DRN: NXY
DATE: 19/08/14
SCALE: 1:100
CHKD: SBB
ENG: MVK
Q.A.: TXC
PROJ: 5674938
ACC:
A.B.N. 80 007 550 923

AREA 9055 - WILGA PARK
WILGA PARK SLUG CATCHER PROJECT
PLOT PLAN

Santos

DRAWING No. 9055-050-PLN-0032

REV 3

CADFILE No. - 9055-050-PLN-0032-H0

AUTOCAD

A1SHEET

Appendix B — Hazard and risk assessment

Santos Ltd

Wilga Park Power Station Modification 7

Hazard and risk assessment

August 2019

Table of contents

Table index

Figure index

Appendices

1. Introduction

1.1 Proposed modification

The purpose of this proposed modification is to provide a slug catcher vessel downstream of the pig receiver at the Wilga Park Power Station. The slug catcher is a safety mechanism to protect downstream equipment at the power station from water carryover and slugs that may be created when clearing the line during pigging and other operations including steady state operation, gas flow ramp up and re-start up conditions.

The proposed modification involves the addition of a slug catcher vessel, a HDPE water collection tank and associated piping, valving and instrumentation to provide a means to collect and remove the water carryover from the flowline before it enters the power station.

1.1.1 Site location and description

The slug catcher will be located at Wilga Park Power Station within Petroleum Exploration Licence (PEL) 238, located approximately 10km south-west of Narrabri in north-western NSW.

As shown in Figure 1, the slug catcher will be installed at the end of the Bibblewindi - Wilga Park flowline adjacent to the Wilga Park Power Station, in a separate compound that currently contains the pig receiver

LEGEND

- Proposed Transfer Pipe
- Proposed Bund
- Proposed Slug Catcher
- Proposed Water Storage Tank
- Hardstand Boundary

Paper Size ISO A4

0 20 40

Metres

N

Map Projection: Transverse Mercator
Horizontal Datum: GDA 1994
Grid: GDA 1994 MGA Zone 55

Santos
Wilga Park Power Station Mod 7

Proposed modification

Project No. **21-22463-69**
Revision No. **-**
Date **22 Aug 2019**

FIGURE 1

N:\AU\Sydney\Projects\21\22463\GIS\Maps\WilgaParkPowerStationMod7\21_2246369_Z002_WilgaPark_ProposedModification.mxd

Data source: General Topo - NSW LPI DTDB 2015; Cadastre - NSW LPI DCDB 2017; Aerial Imagery - ESRI Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographics, CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the GIS User Community. Created by: sross2

© 2019. Whilst every care has been taken to prepare this map, GHD (and Sixmaps 2019, NSW Department of Lands) make no representations or warranties about its accuracy, reliability, completeness or suitability for any particular purpose and cannot accept liability and responsibility of any kind (whether in contract, tort or otherwise) for any expenses, losses, damages and/or costs (including indirect or consequential damage) which are or may be incurred by any party as a result of the map being inaccurate, incomplete or unsuitable in any way and for any reason.

1.1.2 Proposed modification

A slug catcher is required downstream (i.e. the Wilga Park Power Station End) of the Bibblewindi - Wilga Park buried gas pipeline to remove steady state liquid carry over, as well as slugs created during operation.

The slugs are created when liquid holdup in the flowline is pushed through the line with the gas during a change of operating condition, or by cleaning and maintenance operations know as pigging. The new carbon steel slug catcher will be installed directly downstream of the existing pig receiver on existing hardstand within the power station.

The slug catcher will be sized to accommodate a maximum slug flow of 60,000 barrels per day (bbl/d) (i.e. 9,500 m^3/d), based on a pig speed of 2.5 m/s.

A new HDPE water collection tank will also be installed to allow for liquid drainage from the slug catcher. The water collection tank volume will have a capacity of around 38 m^3.

The plot plan for the proposed modification is shown in Appendix B.

Existing facilities inside the Wilga Park Power Station, and the upstream Bibblewindi – Wilga Park flowline are not included in the assessment of hazards and risk.

2. SEPP 33 Screening Process

In accordance with the requirements of the *State Environmental Planning Policy 33 – Hazardous and Offensive Development* (SEPP 33), the proposed modification has been screened for potential hazards across the site to determine the potential for off-site impacts and for any requirement for a Preliminary Hazard Analysis (PHA).

The application of SEPP 33 considers the following three questions.

1. Does the proposal require development consent?

Yes — the proposal requires modification to the existing Major Project approval MP07_0023. This hazard and risk assessment has been prepared in support of an application to modify the existing approval under the *Environmental Planning and Assessment Act 1979*.

2. Is the proposal 'potentially hazardous'?

Yes — The proposed modification has undergone a screening exercise to determine the potential for off-site impacts and for any requirement to complete a PHA in accordance with Hazardous Industry Planning Advisory Paper No 3 Risk Assessment (NSW Government 2011a), Hazardous Industry Planning Advisory Paper No 6 Hazard Analysis (NSW Government 2011b) and Multi-level Risk Assessment (NSW Government 2011c).

3. Is the proposal 'potentially offensive'?

No — The proposed installation of a slug catcher and water collection tank at the Wilga Park Power Station has the potential to impact on the local and regional environment from the emission of greenhouse gases from the vessels. However, these are small emissions resulting from abnormal venting conditions that would not normally occur.

2.1 Hazardous materials

The proposed modification would not introduce any new dangerous goods to Wilga Park Power Station during operations.

During construction there may be small quantities of combustible (diesel) fuels (Class 3) stored near the construction site for refuelling of mobile plant. This is expected to be minimal.

2.2 Hazards screening

A desktop screening of hazards with potential for offsite impact that could arise during the phases of the project has been undertaken, covering the phases:

- Construction and commissioning
- Operation and maintenance
- Decommissioning

This will be used for the PHA in Section 3.

The results of this screening are presented in Table 1.

Table 1 Hazard Identification

Scenario ID	Hazard	Risk Scenario	Phase		
			Construction and Commissioning	Operation and Maintenance	Decommissioning
1	Overfilling of Water Collection Tank	Spill of water to environment through the tank overflow line, potential for minor environmental damage		✓	
2	Overpressure of Slug Catcher	The Slug Catcher is overpressured[a] leading to a vessel rupture, loss of containment of methane gas, with potential for fire, explosion and injuries / fatalities		✓	
3	Uncontrolled release of methane gas when using Slug Catcher	The liquid level in the Slug Catcher drops allowing gas to break through into the Water Collection Tank, leading to methane gas (greenhouse gas) release to the environment	✓	✓	
4	Catastrophic vessel failure	The vessel integrity is reduced by corrosion or the presence of an undetected flaw, leading to a vessel failure with loss of containment of methane gas. Potential for ignition causing injuries to operators		✓	
5	Piping rupture	The piping is ruptured by an integrity failure due to corrosion or undetected flaw, an external impact, or maloperation during pigging, leading to a loss of containment of methane gas. Potential for ignition causing injuries to operators		✓	
6	A bushfire igniting from project related activities and impacting life and property	Fire causing injuries / fatalities or damage to assets.	✓	✓	✓

[a] This hazard is based on an unmitigated scenario where operational error or excessive pigging velocity lead to overpressure. As discussed in section 3.1.2, the slug catcher would be designed according to pressure vessel codes and would be equipped with a pressure safety valve that would depressurise the vessel to atmospheric levels. It would also be capable of being isolated from the buried gas pipeline and pig receiver by an emergency shutdown valve.

2.3 Frequency of occurrence

The predicted frequency of each identified hazard will be assessed according to the descriptions presented in Table 2.

Table 2 Frequency categories for hazard screening

Level	Descriptor
E	**Almost Certain** Is expected to occur in most circumstances or could occur within days to weeks
D	**Likely** Could occur in most circumstances or could occur within weeks to months
C	**Possible** Has occurred before in the industry or could occur within next few years
B	**Unlikely** Has occurred elsewhere or could occur within decades
A	**Remote** Requires exceptional circumstances, is unlikely even in the long term, 100 year event

2.4 Consequence

The possible consequences of each identified threat, should it occur, will be assessed taking into account the potential for:

- human injury or fatality;
- environmental damage; and
- economic impact resulting from loss of gas supply.

The severity of each identified threat has then been estimated according to categories set out in Table 3.

Table 3 Severity categories for hazard screening

Level	Descriptor
I - Negligible	**First aid treatment** Illness / injury not requiring medical treatment (no lost time injuries) **Negligible environmental impact** Minimal environmental impact with no lasting effect
II - Minor	**Minor or Medically Treated Injury** Injury / injuries requiring medical treatment with lost time **Minor environmental impact** Localised environmental impact with short-term effect
III - Moderate	**Permanent Disability** Permanent disabling injury / injuries **Moderate environmental impact** Localised environmental impact with short to moderate-term effect
IV - Major	**Single Fatality** Single fatality **Major environmental impact** Widespread environmental impact with moderate to long-term effect
V - Critical	**Multiple Fatality** Multiple fatalities **Critical environmental impact** Severe and widespread environmental impact with long-term or permanent effect

2.5 Risk ranking

According to estimated frequencies of occurrence and consequences, the risk ranking of each identified threat will be determined and is included in the risk matrix shown in Table 4.

Table 4 Risk matrix for hazard screening

		LIKELIHOOD				
		E	D	C	B	A
CONSEQUENCE	V	Very High	Very High	High	High	Medium
	IV	Very High	High	High	Medium	Medium
	III	High	Medium	Medium	Medium	Low
	II	Medium	Medium	Low	Low	Very Low
	I	Medium	Low	Low	Very Low	Very Low

3. Preliminary Hazards Analysis

3.1 Risk assessment

Risk assessments have been undertaken for each of the six hazards identified in Table 1. The results have been tabulated in the Hazards and Risk Register provided in Appendix A.

3.1.1 Spill of water

A spill of water from the water collection tank would lead to environmental damage. This could occur as a result of an operational error, or an excessive quantity of water in the flowline entering the slug catcher and overfilling the water collection tank. There are a number of design controls including bunding of the tank to mitigate the risk leading to the initial assessment:

Frequency: Remote

Consequence: Moderate

Risk Ranking: Low

3.1.2 Overpressure of slug catcher

The slug catcher being overpressured by an operational error, or an excessive pigging velocity (>2.5 m/s) would lead to a loss of containment of methane gas. If there were an ignition source this could result in a fire or explosion with the potential for burn injuries. However, the slug catcher would be designed according to pressure vessel codes and protected by a pressure safety valve to mitigate this risk, leading to the initial assessment:

Frequency: Remote

Consequence: Moderate

Risk Ranking: Low

3.1.3 Uncontrolled release of methane gas

An operational error or a level control failure in the slug catcher could result in the gas in the slug catcher breaking through into the water collection tank. The gas would then freely vent to atmosphere, creating an environmental consequence due to greenhouse gas emissions. However, the slug catcher is protected by an independent low-level switch that would immediately shut a valve between the two vessels to mitigate this risk, leading to the initial assessment of:

Frequency: Unlikely

Consequence: Minor

Risk Ranking: Low

3.1.4 Catastrophic vessel failure

Corrosion or an undetected vessel flaw could cause the slug catcher or the HDPE tank to fail, leading to a loss of containment of methane gas, or water from the tank. However, the design of the slug catcher to Class 2A under *AS 1210-2010 Pressure vessels* and the design of the HDPE tank to AS/NZS 4766:2006 Polyethylene storage tanks for water and chemicals, including allowances for corrosion resistance, would mitigate this risk, leading to the initial assessment of:

Frequency: Remote

Consequence: Minor

Risk Ranking: Very Low

3.1.5 Piping rupture

The piping around the slug catcher could experience corrosion or have an undetected pipe flaw, be ruptured by an external force, or have overpressure during pigging, leading to a loss of containment of methane gas, with potential for a fire causing burn injuries to personnel. However, the piping will be designed to applicable piping standards (Piping Class #300) to mitigate this risk, leading to the initial assessment of:

Frequency: Remote

Consequence: Moderate

Risk Ranking: Low

3.1.6 Bushfire

An ignition source from project related activities e.g. 'hot work' activities or processes that can be a source of ignition or fire hazard or gas fire / explosion events as a result of loss of containment could cause a bushfire spreading to the surrounding bushland or into the power station. However, the slug catcher and water collection vessel would be designed for hazardous area operation and operational procedures would already be in place with regard to ignition source control to mitigate this risk. As an existing and approved facility, bushfire management measures are already in place at Wilga Park Power Station and include bushfire preparedness, awareness, mitigation, reporting, response (fire-fighting, evacuation, refuge) and recovery actions and procedures, leading to the initial assessment of:

Frequency: Remote

Consequence: Moderate

Risk Ranking: Low

4. Summary

4.1 Summary

The PHA has found that each of the hazards identified has a low to very low initial risk based on the frequency / consequence / risk ranking criteria for the project. As documented in Appendix A, the proposed modification would be sized and designed to relevant codes and standards including *AS 1210-2010 Pressure vessels* and *AS/NZS 4766:2006 Polyethylene storage tanks for water*. Based on each of the hazards being a low risk a further more detailed quantitative risk assessment would not be required.

5. References

GHD 2016, Narrabri Gas Project — Environmental Impact Statement, Hazard and Risk Assessment, https://majorprojects.accelo.com/public/ba9c1c5f018928e044bf6d43967c89fc/Appendix%20S%20Hazard%20and%20risk%20assessment.pdf

NSW Government 2011a, Hazardous Industry Planning Advisory Paper No 3 Risk Assessment, https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/hazardous-industry-planning-advisory-paper-no-3-risk-assessment--2011-01.pdf?la=en

NSW Government 2011b, Hazardous Industry Planning Advisory Paper No 6 Hazard Analysis, https://www.planning.nsw.gov.au/-/media/Files/DPE/Other/hazardous-industry-planning-advisory-paper-no-6-hazard-analysis-2011-01.pdf?la=en

NSW Government 2011c, Multi-level Risk Assessment, https://www.planning.nsw.gov.au/-/media/Files/DPE/Guidelines/assessment-guideline-multi-level-risk-assessment-2011-05.pdf?la=en

Appendices

Appendix A – Hazard and risk register

WILGA PARK POWER STATION
SLUG CATCHER PROJECT
HAZARDS AND RISK REGISTER

Scenario ID	Hazard	Potential causes	Risk assessment scenario	Project Phases: * Construction & commissioning * Operations & maintenance * Decommissioning	Inherent design standards and operational practices applied	Initial risks			Site / activity specific mitigation measures / management plans applied to reduce risk	Residual risks		
						Frequency	Consequence	Risk rating		Frequency	Consequence	Risk rating
1	Overfilling of Water Collection Tank	Operational error Excessive quantity of liquids in the pipeline	Spill of water to environment through the tank overflow line, potential for minor environmental damage	Operations & maintenance	Design of Water Collection Tank, sized for maximum quantity Water Collection Tank is in a bund High level alarm in the Water Collection Tank Emergency shutdown activated by high high level switch	Remote	Moderate	**Low**		Remote	Moderate	**Low**
2	Overpressure of Slug Catcher	Operational error Excessive pigging velocity Overpressure during commissioning	The Slug Catcher is overpressured leading to a vessel rupture, loss of containment of methane gas. Potential for ignition causing burn injuries to operators, or environmental damage	Operations & maintenance	Slug catcher design to AS 1210 Class 2A Pressure Safety Valve Pipeline pigging procedure Trained and competent operators Commissioning procedures for pressure vessels	Remote	Moderate	**Low**		Remote	Moderate	**Low**
3	Uncontrolled release of pressure when using Slug Catcher	Operational error Level control failure in the Slug Catcher	The liquid level in the Slug Catcher drops allowing gas to break through into the Water Collection Tank, leading to methane gas (greenhouse gas) release to the environment	Construction & commissioning Operations & maintenance	Design of Water Collection Tank to AS4766, open vent away from ignition sources Low level alarm in the Slug Catcher Emergency shutdown activated by low low level switch in the Slug Catcher	Unlikely	Minor	**Low**		Unlikely	Minor	**Low**
4	Catastrophic vessel failure	Corrosion or undetected vessel flaw	The vessel integrity is reduced by corrosion or the presence of an undetected flaw, leading to a vessel failure with loss of containment of methane gas or water. Potential for ignition causing burn injuries to operators, or environmental damage	Operations & maintenance	Design of slug catcher to pressure vessel codes, with corrosion allowance HDPE tank is corrosion resistant Pressure vessel inspections (statutory)	Remote	Minor	**Very low**		Remote	Minor	**Very low**
5	Piping rupture	Corrosion or undetected pipe flaw External interference by impacts Overpressure during pigging	The piping is ruptured by an integrity failure due to corrosion or undetected flaw, an external impact, or maloperation during pigging, leading to a loss of containment of methane gas. Potential for ignition causing burn injuries to operators	Operations & maintenance	Design of piping to applicable design standards (Piping Class #300) Corrosion protection on pipeline Pipeline pigging procedure	Remote	Moderate	**Low**		Remote	Moderate	**Low**
6	A bushfire igniting from project related activities and impacting life and property	Ignition source from project related activities e.g. 'hot work' activities or processes that can be a source of ignition or fire hazard or gas fire / explosion events as a result of loss of containment	Fire causing injuries / fatalities or damage to assets.	Construction & commissioning Operations & maintenance Decommissioning	Annual works mitigation to maintain asset protection and strategic fire advantage zones around assets, asset maintenance to ensure plant and equipment operated in a proper and efficient condition Electrical and instrumentation equipment is hazardous area rated in accordance with AS / NZS 60079: Electrical Apparatus for Explosive Gas Atmospheres Hot work permit system for staff and contractors Staff and contractor induction for bushfire awareness and mitigation Ignition Control Work Permit System / Job Hazard Analysis Personal Protective Equipment Emergency Response Plan Evacuation alarms, points & procedures Annual works mitigation schedule to identify and implement vegetation management around infrastructure. Modification of work activities (including hot work) based on bushfire risk rating and operating environment. Preparation and implementation of project bushfire management plan incorporating bushfire risk, preparedness, awareness , mitigation , reporting, response (fire fighting, evacuation, refuge areas) and recovery actions and procedures. Active involvement in bushfire response planning with local authorities, including the Rural Fire Service.	Remote	Moderate	**Low**		Remote	Moderate	**Low**

Appendix B – Plot plan

PLANT NORTH

MGA 10.524°

WILGA PARK POWER STATION

NEW PLANT DATUM

MGA (WORLD) COORDINATES	PLANT COORDINATES
E. 747800.00	E. 100.100
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N. 92.265

TELSTRA CABLE PIT

EXISTING FENCE

EXISTING FENCE

TIP 01
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N. 83.710

EXISTING FENCE

E. 137.121
N. 96.200

EXISTING FENCE

EXISTING HARDSTAND

EXISTING BOLLARDS

EXISTING OWS SUMP

NEW GATE

NEW FENCE

BOLLARDS

VACUUM TRUCK CONNECTION

NEW BUND

N. 86.700

9055-TK-0001
WATER COLLECTION TANK

E. 150.300

NEW FENCE

NEW FENCE

NEW FENCE

EXISTING ACCESS ROAD

TB TB TB TB TB TB TB TB TB TB TB

DR DR DR DR DR DR DR DR DR DR DR

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SCALE IN METRES 1:100

PREPARED BY: thyssenkrupp

PROJECT. | DRAWING OFFICE.

PROJECT APPROVALS - OTHERS

No	DATE	DRN	CHKD	ENG	Q.A.	PROJ	ACC	DESCRIPTION
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REVISIONS | DRG No. | SUBJECT | REFERENCE DRAWINGS

DRN: NXY
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SCALE: 1:100
CHKD: SBB
ENG: MVK
Q.A.: TXC
PROJ: 5674938
ACC:
A.B.N. 80 007 550 923

AREA 9055 - WILGA PARK
WILGA PARK SLUG CATCHER PROJECT
PLOT PLAN

Santos

DRAWING No. 9055-050-PLN-0032

REV 3

CADFILE No. - 9055-050-PLN-0032-H0

AUTOCAD

A1SHEET

www.ghd.com

Appendix C — Desktop searches

AHIMS Web Services (AWS)
Search Result

Purchase Order/Reference : 2122463 Wilga Park Mod

Client Service ID : 440666

GHD Sydney

133 Castlereagh St
Sydney New South Wales 2000

Attention: Michael Goodall

Email: michael.goodall@ghd.com

Date: 08 August 2019

Dear Sir or Madam:

AHIMS Web Service search for the following area at Lat, Long From : -30.3641, 149.6766 - Lat, Long To : -30.3625, 149.6781 with a Buffer of 1000 meters, conducted by Michael Goodall on 08 August 2019.

The context area of your search is shown in the map below. Please note that the map does not accurately display the exact boundaries of the search as defined in the paragraph above. The map is to be used for general reference purposes only.

A search of the Office of the Environment and Heritage AHIMS Web Services (Aboriginal Heritage Information Management System) has shown that:

0	Aboriginal sites are recorded in or near the above location.
0	Aboriginal places have been declared in or near the above location. *

If your search shows Aboriginal sites or places what should you do?

- You must do an extensive search if AHIMS has shown that there are Aboriginal sites or places recorded in the search area.
- If you are checking AHIMS as a part of your due diligence, refer to the next steps of the Due Diligence Code of practice.
- You can get further information about Aboriginal places by looking at the gazettal notice that declared it. Aboriginal places gazetted after 2001 are available on the NSW Government Gazette (http://www.nsw.gov.au/gazette) website. Gazettal notices published prior to 2001 can be obtained from Office of Environment and Heritage's Aboriginal Heritage Information Unit upon request

Important information about your AHIMS search

- The information derived from the AHIMS search is only to be used for the purpose for which it was requested. It is not be made available to the public.
- AHIMS records information about Aboriginal sites that have been provided to Office of Environment and Heritage and Aboriginal places that have been declared by the Minister;
- Information recorded on AHIMS may vary in its accuracy and may not be up to date .Location details are recorded as grid references and it is important to note that there may be errors or omissions in these recordings,
- Some parts of New South Wales have not been investigated in detail and there may be fewer records of Aboriginal sites in those areas. These areas may contain Aboriginal sites which are not recorded on AHIMS.
- Aboriginal objects are protected under the National Parks and Wildlife Act 1974 even if they are not recorded as a site on AHIMS.
- This search can form part of your due diligence and remains valid for 12 months.

3 Marist Place, Parramatta NSW 2150
Locked Bag 5020 Parramatta NSW 2220
Tel: (02) 9585 6380 Fax: (02) 9873 8599

ABN 30 841 387 271
Email: ahims@environment.nsw.gov.au
Web: www.environment.nsw.gov.au

Search results

Your search for: **General Search** with the following criteria

Suburb - Bohena Creek

returned 0 result

Search Again

For business and industry

For local government

Contact us

- 131 555 (tel:131555)
- info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)
- EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on (https://au.linkedin.com/company/environment-protection-authority-nsw)

Search results

Your search for: **General Search** with the following criteria

Suburb - jacks creek

returned 0 result

Search Again

For business and industry

For local government

Contact us

- 131 555 (tel:131555)
- info@epa.nsw.gov.au (mailto:info@epa.nsw.gov.au)
- EPA Office Locations (https://www.epa.nsw.gov.au/about-us/contact-us/locations)

Accessibility (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/help-index)
Disclaimer (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/disclaimer)
Privacy (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/privacy)
Copyright (https://www.epa.nsw.gov.au/about-us/contact-us/website-service-standards/copyright)

Find us on (https://au.linkedin.com/company/environment-protection-authority-nsw)

Number	Name	Location	Type	Status	Issued date
1015485	AUSCOTT LIMITED	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	12-Mar-02
6957	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	POEO licence	Issued	3-Jan-02
1019870	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	15-Aug-02
1025241	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	19-Aug-03
1055598	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	13-Feb-06
1513659	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	29-May-13
1518556	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	19-Dec-13
1519329	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	Compliance Audit	Complete	9-Jan-14
1527173	AUSCOTT MARKETING PTY LTD	21154 Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	20-Jan-17
3778	BORAL RESOURCES (COUNTRY) PTY. LIMITED	WAVE HILL ROAD, NARRABRI, NSW 2390	POEO licence	Issued	22-Oct-99
1004542	BORAL RESOURCES (COUNTRY) PTY. LIMITED	WAVE HILL ROAD, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	18-Mar-02
1513624	BORAL RESOURCES (COUNTRY) PTY. LIMITED	WAVE HILL ROAD, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	29-May-13
1515358	BORAL RESOURCES (COUNTRY) PTY. LIMITED	WAVE HILL ROAD, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	9-Sep-13
1518839	BORAL RESOURCES (COUNTRY) PTY. LIMITED	WAVE HILL ROAD, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	13-Mar-14
1527166	BORAL RESOURCES (COUNTRY) PTY. LIMITED	WAVE HILL ROAD, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	14-Dec-15
1477	CSR LIMITED	COLGOORA ROAD, NARRABRI, NSW 2390	POEO licence	Surrendered	18-Feb-00
1005974	CSR LIMITED	COLGOORA ROAD, NARRABRI, NSW 2390	s.80 Surrender of a Licence	Issued	23-Apr-01
20236	G & S Lein Earthmoving Pty Ltd	Sandy Creek Lane, NARRABRI, NSW 2390	POEO licence	Revoked	15-Jul-13
1578473	G & S Lein Earthmoving Pty Ltd	Sandy Creek Lane, NARRABRI, NSW 2390	s.79 Revocation of a Licence	Issued	12-Apr-19
7196	HUNTER AND NEW ENGLAND AREA HEALTH SERVICE	11 CAMERON STREET, NARRABRI, NSW 2390	POEO licence	No longer in force	21-Mar-00
1052272	HUNTER AND NEW ENGLAND AREA HEALTH SERVICE	11 CAMERON STREET, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	25-Nov-05
20139	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	POEO licence	Issued	22-Aug-12
1519599	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	20-Feb-14
1520319	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	21-Feb-14
3085773965	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	Penalty Notice	Issued	5-May-14
1523340	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	22-Oct-14
1528238	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	5-Feb-15
1534339	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	9-Aug-16
3173527666	Johnstone Concrete and Landscape Supplies Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	Penalty Notice	Issued	15-Apr-19
3085765073	Johnstone Ready Mixed Concrete Pty Ltd	Wavehill Road, NARRABRI, NSW 2390	Penalty Notice	Issued	13-Aug-12
3085773956	NAMOI WASTECORP PTY LTD	54-56 Wee Waa Rd, NARRABRI, NSW 2390	Penalty Notice	Issued	6-May-14
1578807	NARRABRI COAL OPERATIONS PTY LTD	Yarrie Lake Road, NARRABRI, NSW 2390	s.91 Clean Up Notice	Issued	30-Apr-19
200	NARRABRI SHIRE COUNCIL	NEWELL HIGHWAY, NARRABRI, NSW 2390	POEO licence	Issued	18-Dec-00
1009870	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	25-Oct-01
10697	NARRABRI SHIRE COUNCIL	NAMOI STREET, NARRABRI, NSW 2390	POEO licence	Issued	1-Nov-01
1013594	NARRABRI SHIRE COUNCIL	NAMOI STREET, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	2-Jan-02
1015290	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	25-Jun-02
1019677	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	20-Aug-02
1021929	NARRABRI SHIRE COUNCIL	NAMOI STREET, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	12-Nov-02
1025184	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	27-Mar-03
1029315	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	1-Sep-03
11760	NARRABRI SHIRE COUNCIL	Wave Hill Road, NARRABRI, NSW 2390	POEO licence	Surrendered	1-Jun-04

1042457	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	7-Dec-04
12193	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	POEO licence	Issued	13-Dec-04
1040136	NARRABRI SHIRE COUNCIL	NAMOI STREET, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	4-Jan-05
1061533	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	6-Jul-06
1050494	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	28-Dec-06
1077597	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	11-Apr-08
1098913	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	20-Mar-09
1500569	NARRABRI SHIRE COUNCIL	Wave Hill Road, NARRABRI, NSW 2390	s.80 Surrender of a Licence	Issued	20-Sep-11
3085766568	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	Penalty Notice	Issued	22-Oct-12
3085766577	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	Penalty Notice	Issued	22-Oct-12
3085766586	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	Penalty Notice	Issued	22-Oct-12
1506701	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	28-Nov-12
1509164	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	3-Dec-12
1511926	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	Compliance Audit	Complete	11-Feb-13
1513666	NARRABRI SHIRE COUNCIL	NAMOI STREET, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	9-May-13
1516128	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	13-Sep-13
1516753	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	7-May-14
1521909	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	7-May-14
1526940	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	4-Feb-15
1562473	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.91 Clean Up Notice	Issued	2-Mar-18
1547213	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	1-May-18
1566296	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	18-Jul-18
1568652	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	17-Aug-18
3173526099	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	Penalty Notice	Issued	20-Aug-18
1572456	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.91 Clean Up Notice	Issued	15-Nov-18
1573707	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.110 Variation of Clean Up Notice	Issued	14-Dec-18
1574555	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	25-Jan-19
1568697	NARRABRI SHIRE COUNCIL	Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	6-Mar-19
1578386	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	12-Apr-19
1581191	NARRABRI SHIRE COUNCIL	Yarrie Lake Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	25-Jun-19
3085773231	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	Penalty Notice	Withdrawn	
3085773240	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	Penalty Notice	Issued	11-Feb-14
20350	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	POEO licence	Issued	1-May-14
1523754	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.91 Clean Up Notice	Issued	29-Jul-14
20378	SANTOS NSW (EASTERN) PTY LTD	300 Yarrie Lake Road, NARRABRI, NSW 2390	POEO licence	Issued	18-Sep-14
1525279	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	29-Oct-14
1529290	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	7-Aug-15
1534515	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	26-Nov-15
1537959	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	30-Mar-16
1542305	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	20-Dec-16
1549128	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	18-Jul-17
1557968	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	11-Oct-18
1573774	SANTOS NSW (EASTERN) PTY LTD	X Line Road, NARRABRI, NSW 2390	s.58 Licence Variation	Issued	9-Jan-19

POEO Licences

Search criteria: Suburb = Narrabri		
Results 14 Records (9 Issued, 1 Revoked, 3 Surrendered, 1 No longer in force)	Approx distance from site (-30.3641, 149.6766)	Status
6957 Auscott Marketing PTY LTD, 21154 Kamilaroi Highway, NARRABRI, NSW, 2390	16 km North	Issued
3778 BORAL COUNTRY - CONCRETE & QUARRIES WAVE HILL ROAD, NARRABRI, NSW, 2390	30 km East	Issued
902 CARGILL PROCESSING LIMITED	8 km NE	Issued
20139 Johnstone Concrete and Landscape Supplies Pty Ltd, Wave Hill Quarry Wavehill Road, NARRABRI, NSW, 2390	30 km E	Issued
200 NARRABRI SEWAGE TREATMENT WORKS NEWELL HIGHWAY, NARRABRI, NSW, 2390	11.5 km NE	Issued
10697 NARRABRI SALEYARDS NAMOI STREET, NARRABRI, NSW, 2390	12 km NE	Issued
12193 NARRABRI LANDFILL Yarrie Lake Road, NARRABRI, NSW, 2390	3.6 km NW	Issued
20350 Narrabri Gas Field X Line Road, NARRABRI, NSW, 2390	12 km NE	Issued
20378 Santos Narrabri Operations Centre 300 Yarrie Lake Road, NARRABRI, NSW, 2390	6 km NE	Issued
20236 Pinebrook Quarry Sandy Creek Lane, NARRABRI, NSW, 2390	14 km E	Revoked
11572 INGLEGREEN PIGGERY CULGOORA ROAD, NARRABRI WEST, NSW, 2390	6 km North	Surrendered
1477 HUMES NARRABRI COLGOORA ROAD, NARRABRI, NSW, 2390	6 km North	Surrendered
11760 WAIROA GRAVEL QUARRY Wave Hill Road, NARRABRI, NSW, 2390	30 km E	Surrendered
7196 NARRABRI HOSPITAL 11 CAMERON STREET, NARRABRI, NSW, 2390	10.5 NE	No longer in force

EPA Notices

Search Criteria: Suburb = Narrabri		
Results: 84 Notices (11 Penalty Notices, 1 s110 Variation of clean up notice, 64 S.58 License variation, 1 s.79 Revocation of notice, 2 s.80 Surrender of license, 5 s.91 clean up notices)	Approx distance from site (-30.3641, 149.6766)	Type
Johnstone Concrete and Landscape Supplies Pty Ltd, Wave Hill Quarry Wavehill Road, NARRABRI, NSW, 2390 3 x Penalty Notices	30 km E	Penalty Notice
NAMOI WASTECORP 54-56 Wee Waa Rd, NARRABRI, NSW, 2390 1 x penalty notice	11 km NE	Penalty Notice
NARRABRI LANDFILL Yarrie Lake Road, NARRABRI, NSW, 2390 3 x Penalty notice	3.6 km NW	Penalty Notice
NARRABRI SEWAGE TREATMENT WORKS	11.5 km NE	Penalty Notice

NEWELL HIGHWAY, NARRABRI, NSW, 2390 1 x penalty notice		
SANTOS NSW (Eastern) PTY LTD X Line Road, NARRABRI, NSW, 2390 1 x Penalty Notice	12 km NE	Penalty Notice
NARRABRI COAL OPERATIONS PTY LTD NARRABRI COAL OPERATIONS PTY LTD	5 km North	Clean up notice
Federation Farm, Off Kamilaroi Highway, NARRABRI, NSW 2390 2 x Clean up notice	11.5 km NE	Clean Up notice
NARRABRI LANDFILL Yarrie Lake Road, NARRABRI, NSW, 2390	3.6 km NW	Clean up notice
20350 Narrabri Gas Field X Line Road, NARRABRI, NSW, 2390	12 km NE	Clean up notice

EPA Contaminated Land

Search Criteria: Suburb = Narrabri

One record identified: NARRABRI Westport ROAD Cargill Soapstock Disposal Site 2 former 12 km South

List of notified sites

Site	Approx Distance from project site
Caltex Service Station 13 Doyle STREET	11 kmNE
Lowes Petroleum (Former Mobil) Narrabri Depot 3 Old Gunnedah ROAD	11.4 km NE
Caltex Service Station 31-35 Cooma ROAD	9 km NE
Caltex Narrabri Service Station 31 Dangar (Cnr Anne and Dangar) STREET	10.3 NE
Caltex Service Station 12 Reid STREET	11.8 km NE
Cargill Soapstock Disposal Site Westport ROAD	11.9 km S
Caltex Service Station 7-13 James STREET	12 km NE


ePlanning Spatial Viewer
User Guide
930 Kiandool Lane Bohena Creek 2390
Lot/Section/Plan no: 12/-/DP1171292
Council: NARRABRI SHIRE COUNCIL
Layers
Legends
Filter layers
State Heritage Register Curtilage
EPI Heritage
Land Zoning
Additional Controls
Land Zoning
Map tools
Search Results (4)
Local Environmental Plan
Land Zoning
Local Aboriginal Land Council
Minimum Lot Size
SEPP Results
Development Control Plans
Contribution Plans
Brigalow State Conservation Area
Brigalow Nature Reserve
2 km
Powered by Esri

Australian Government
Department of the Environment and Energy

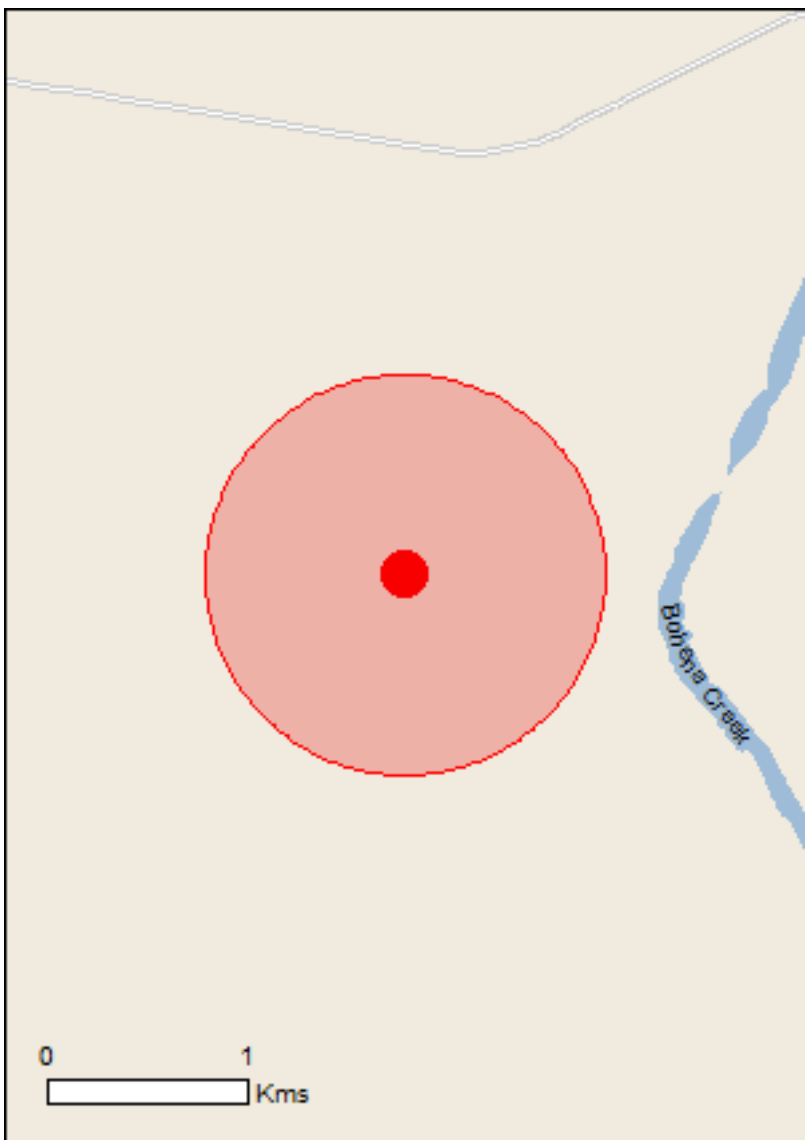
EPBC Act Protected Matters Report

This report provides general guidance on matters of national environmental significance and other matters protected by the EPBC Act in the area you have selected.

Information on the coverage of this report and qualifications on data supporting this report are contained in the caveat at the end of the report.

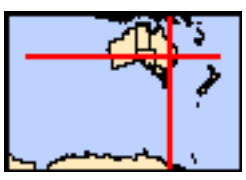
Information is available about Environment Assessments and the EPBC Act including significance guidelines, forms and application process details.

Report created: 13/08/19 11:48:13



This map may contain data which are ©Commonwealth of Australia (Geoscience Australia), ©PSMA 2010

Coordinates
Buffer: 1.0Km



Summary

Matters of National Environmental Significance

This part of the report summarises the matters of national environmental significance that may occur in, or may relate to, the area you nominated. Further information is available in the detail part of the report, which can be accessed by scrolling or following the links below. If you are proposing to undertake an activity that may have a significant impact on one or more matters of national environmental significance then you should consider the Administrative Guidelines on Significance.

World Heritage Properties:	None
National Heritage Places:	None
Wetlands of International Importance:	3
Great Barrier Reef Marine Park:	None
Commonwealth Marine Area:	None
Listed Threatened Ecological Communities:	7
Listed Threatened Species:	14
Listed Migratory Species:	9

Other Matters Protected by the EPBC Act

This part of the report summarises other matters protected under the Act that may relate to the area you nominated. Approval may be required for a proposed activity that significantly affects the environment on Commonwealth land, when the action is outside the Commonwealth land, or the environment anywhere when the action is taken on Commonwealth land. Approval may also be required for the Commonwealth or Commonwealth agencies proposing to take an action that is likely to have a significant impact on the environment anywhere.

The EPBC Act protects the environment on Commonwealth land, the environment from the actions taken on Commonwealth land, and the environment from actions taken by Commonwealth agencies. As heritage values of a place are part of the 'environment', these aspects of the EPBC Act protect the Commonwealth Heritage values of a Commonwealth Heritage place. Information on the new heritage laws can be found at http://www.environment.gov.au/heritage

A permit may be required for activities in or on a Commonwealth area that may affect a member of a listed threatened species or ecological community, a member of a listed migratory species, whales and other cetaceans, or a member of a listed marine species.

Commonwealth Land:	None
Commonwealth Heritage Places:	None
Listed Marine Species:	15
Whales and Other Cetaceans:	None
Critical Habitats:	None
Commonwealth Reserves Terrestrial:	None
Australian Marine Parks:	None

Extra Information

This part of the report provides information that may also be relevant to the area you have nominated.

State and Territory Reserves:	None
Regional Forest Agreements:	None
Invasive Species:	25
Nationally Important Wetlands:	None
Key Ecological Features (Marine)	None

Details

Matters of National Environmental Significance

Wetlands of International Importance (Ramsar)	[Resource Information]
Name	Proximity
Banrock station wetland complex	900 - 1000km upstream
Riverland	900 - 1000km upstream
The coorong, and lakes alexandrina and albert wetland	1100 - 1200km

Listed Threatened Ecological Communities	[Resource Information]

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Name	Status	Type of Presence
	Endangered	Community may occur within area
	Endangered	Community may occur within area
Brigalow (Acacia harpophylla dominant and co-dominant)	Endangered	Community known to occur within area
Coolibah - Black Box Woodlands of the Darling Riverine Plains and the Brigalow Belt South Bioregions	Endangered	Community likely to occur within area
Natural grasslands on basalt and fine-textured alluvial plains of northern New South Wales and southern Queensland	Critically Endangered	Community may occur within area
Weeping Myall Woodlands	Endangered	Community may occur within area
White Box-Yellow Box-Blakely's Red Gum Grassy Woodland and Derived Native Grassland	Critically Endangered	Community may occur within area

Listed Threatened Species		[Resource Information]
Name	Status	Type of Presence
Birds		
Anthochaera phrygia Regent Honeyeater [82338]	Critically Endangered	Foraging, feeding or related behaviour may occur within area
Calidris ferruginea Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Grantiella picta Painted Honeyeater [470]	Vulnerable	Species or species habitat likely to occur within area
Hirundapus caudacutus White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Leipoa ocellata Malleefowl [934]	Vulnerable	Species or species habitat may occur within area
Polytelis swainsonii Superb Parrot [738]	Vulnerable	Species or species habitat may occur within

Name	Status	Type of Presence
		area
Rostratula australis		
Australian Painted-snipe, Australian Painted Snipe [77037]	Endangered	Species or species habitat likely to occur within area
Mammals		
Chalinolobus dwyeri		
Large-eared Pied Bat, Large Pied Bat [183]	Vulnerable	Species or species habitat may occur within area
Nyctophilus corbeni		
Corben's Long-eared Bat, South-eastern Long-eared Bat [83395]	Vulnerable	Species or species habitat likely to occur within area
Phascolarctos cinereus (combined populations of Qld, NSW and the ACT)		
Koala (combined populations of Queensland, New South Wales and the Australian Capital Territory) [85104]	Vulnerable	Species or species habitat known to occur within area
Plants		
Cadellia pentastylis		
Ooline [9828]	Vulnerable	Species or species habitat may occur within area
Dichanthium setosum		
bluegrass [14159]	Vulnerable	Species or species habitat likely to occur within area
Lepidium aschersonii		
Spiny Pepper-cress [10976]	Vulnerable	Species or species habitat likely to occur within area
Reptiles		
Anomalopus mackayi		
Five-clawed Worm-skink, Long-legged Worm-skink [25934]	Vulnerable	Species or species habitat may occur within area

Listed Migratory Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Migratory Marine Birds		
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Migratory Terrestrial Species		
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species habitat may occur within area
Motacilla flava		
Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca		
Satin Flycatcher [612]		Species or species habitat known to occur within area
Migratory Wetlands Species		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area

Name	Threatened	Type of Presence
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area

Other Matters Protected by the EPBC Act

Listed Marine Species		[Resource Information]
* Species is listed under a different scientific name on the EPBC Act - Threatened Species list.		
Name	Threatened	Type of Presence
Birds		
Actitis hypoleucos		
Common Sandpiper [59309]		Species or species habitat may occur within area
Apus pacificus		
Fork-tailed Swift [678]		Species or species habitat likely to occur within area
Ardea alba		
Great Egret, White Egret [59541]		Breeding known to occur within area
Ardea ibis		
Cattle Egret [59542]		Species or species habitat may occur within area
Calidris acuminata		
Sharp-tailed Sandpiper [874]		Species or species habitat may occur within area
Calidris ferruginea		
Curlew Sandpiper [856]	Critically Endangered	Species or species habitat may occur within area
Calidris melanotos		
Pectoral Sandpiper [858]		Species or species habitat may occur within area
Chrysococcyx osculans		
Black-eared Cuckoo [705]		Species or species habitat likely to occur within area
Gallinago hardwickii		
Latham's Snipe, Japanese Snipe [863]		Species or species habitat may occur within area
Haliaeetus leucogaster		
White-bellied Sea-Eagle [943]		Species or species habitat may occur within area
Hirundapus caudacutus		
White-throated Needletail [682]	Vulnerable	Species or species

Name	Threatened	Type of Presence
		habitat may occur within area
Merops ornatus Rainbow Bee-eater [670]		Species or species habitat may occur within area
Motacilla flava Yellow Wagtail [644]		Species or species habitat may occur within area
Myiagra cyanoleuca Satin Flycatcher [612]		Species or species habitat known to occur within area
Rostratula benghalensis (sensu lato) Painted Snipe [889]	Endangered*	Species or species habitat likely to occur within area

Extra Information

Invasive Species [Resource Information]

Weeds reported here are the 20 species of national significance (WoNS), along with other introduced plants that are considered by the States and Territories to pose a particularly significant threat to biodiversity. The following feral animals are reported: Goat, Red Fox, Cat, Rabbit, Pig, Water Buffalo and Cane Toad. Maps from Landscape Health Project, National Land and Water Resouces Audit, 2001.

Name	Status	Type of Presence
Birds		
Acridotheres tristis Common Myna, Indian Myna [387]		Species or species habitat likely to occur within area
Alauda arvensis Skylark [656]		Species or species habitat likely to occur within area
Anas platyrhynchos Mallard [974]		Species or species habitat likely to occur within area
Columba livia Rock Pigeon, Rock Dove, Domestic Pigeon [803]		Species or species habitat likely to occur within area
Passer domesticus House Sparrow [405]		Species or species habitat likely to occur within area
Streptopelia chinensis Spotted Turtle-Dove [780]		Species or species habitat likely to occur within area
Sturnus vulgaris Common Starling [389]		Species or species habitat likely to occur within area
Turdus merula Common Blackbird, Eurasian Blackbird [596]		Species or species habitat likely to occur within area
Mammals		
Bos taurus Domestic Cattle [16]		Species or species habitat likely to occur within area
Canis lupus familiaris Domestic Dog [82654]		Species or species

Name	Status	Type of Presence
		habitat likely to occur within area
Capra hircus Goat [2]		Species or species habitat likely to occur within area
Felis catus Cat, House Cat, Domestic Cat [19]		Species or species habitat likely to occur within area
Lepus capensis Brown Hare [127]		Species or species habitat likely to occur within area
Mus musculus House Mouse [120]		Species or species habitat likely to occur within area
Oryctolagus cuniculus Rabbit, European Rabbit [128]		Species or species habitat likely to occur within area
Rattus rattus Black Rat, Ship Rat [84]		Species or species habitat likely to occur within area
Sus scrofa Pig [6]		Species or species habitat likely to occur within area
Vulpes vulpes Red Fox, Fox [18]		Species or species habitat likely to occur within area
Plants		
Lycium ferocissimum African Boxthorn, Boxthorn [19235]		Species or species habitat likely to occur within area
Opuntia spp. Prickly Pears [82753]		Species or species habitat likely to occur within area
Parthenium hysterophorus Parthenium Weed, Bitter Weed, Carrot Grass, False Ragweed [19566]		Species or species habitat may occur within area
Pinus radiata Radiata Pine Monterey Pine, Insignis Pine, Wilding Pine [20780]		Species or species habitat may occur within area
Rubus fruticosus aggregate Blackberry, European Blackberry [68406]		Species or species habitat likely to occur within area
Salix spp. except S.babylonica, S.x calodendron & S.x reichardtii Willows except Weeping Willow, Pussy Willow and Sterile Pussy Willow [68497]		Species or species habitat likely to occur within area
Tamarix aphylla Athel Pine, Athel Tree, Tamarisk, Athel Tamarisk, Athel Tamarix, Desert Tamarisk, Flowering Cypress, Salt Cedar [16018]		Species or species habitat likely to occur within area

Caveat

The information presented in this report has been provided by a range of data sources as acknowledged at the end of the report.

This report is designed to assist in identifying the locations of places which may be relevant in determining obligations under the Environment Protection and Biodiversity Conservation Act 1999. It holds mapped locations of World and National Heritage properties, Wetlands of International and National Importance, Commonwealth and State/Territory reserves, listed threatened, migratory and marine species and listed threatened ecological communities. Mapping of Commonwealth land is not complete at this stage. Maps have been collated from a range of sources at various resolutions.

Not all species listed under the EPBC Act have been mapped (see below) and therefore a report is a general guide only. Where available data supports mapping, the type of presence that can be determined from the data is indicated in general terms. People using this information in making a referral may need to consider the qualifications below and may need to seek and consider other information sources.

For threatened ecological communities where the distribution is well known, maps are derived from recovery plans, State vegetation maps, remote sensing imagery and other sources. Where threatened ecological community distributions are less well known, existing vegetation maps and point location data are used to produce indicative distribution maps.

Threatened, migratory and marine species distributions have been derived through a variety of methods. Where distributions are well known and if time permits, maps are derived using either thematic spatial data (i.e. vegetation, soils, geology, elevation, aspect, terrain, etc) together with point locations and described habitat; or environmental modelling (MAXENT or BIOCLIM habitat modelling) using point locations and environmental data layers.

Where very little information is available for species or large number of maps are required in a short time-frame, maps are derived either from 0.04 or 0.02 decimal degree cells; by an automated process using polygon capture techniques (static two kilometre grid cells, alpha-hull and convex hull); or captured manually or by using topographic features (national park boundaries, islands, etc). In the early stages of the distribution mapping process (1999-early 2000s) distributions were defined by degree blocks, 100K or 250K map sheets to rapidly create distribution maps. More reliable distribution mapping methods are used to update these distributions as time permits.

Only selected species covered by the following provisions of the EPBC Act have been mapped:

- migratory and
- marine

The following species and ecological communities have not been mapped and do not appear in reports produced from this database:

- threatened species listed as extinct or considered as vagrants
- some species and ecological communities that have only recently been listed
- some terrestrial species that overfly the Commonwealth marine area
- migratory species that are very widespread, vagrant, or only occur in small numbers

The following groups have been mapped, but may not cover the complete distribution of the species:

- non-threatened seabirds which have only been mapped for recorded breeding sites
- seals which have only been mapped for breeding sites near the Australian continent

Such breeding sites may be important for the protection of the Commonwealth Marine environment.

Coordinates

-30.3641 149.6766

Acknowledgements

This database has been compiled from a range of data sources. The department acknowledges the following custodians who have contributed valuable data and advice:

-Office of Environment and Heritage, New South Wales
-Department of Environment and Primary Industries, Victoria
-Department of Primary Industries, Parks, Water and Environment, Tasmania
-Department of Environment, Water and Natural Resources, South Australia
-Department of Land and Resource Management, Northern Territory
-Department of Environmental and Heritage Protection, Queensland
-Department of Parks and Wildlife, Western Australia
-Environment and Planning Directorate, ACT
-Birdlife Australia
-Australian Bird and Bat Banding Scheme
-Australian National Wildlife Collection
-Natural history museums of Australia
-Museum Victoria
-Australian Museum
-South Australian Museum
-Queensland Museum
-Online Zoological Collections of Australian Museums
-Queensland Herbarium
-National Herbarium of NSW
-Royal Botanic Gardens and National Herbarium of Victoria
-Tasmanian Herbarium
-State Herbarium of South Australia
-Northern Territory Herbarium
-Western Australian Herbarium
-Australian National Herbarium, Canberra
-University of New England
-Ocean Biogeographic Information System
-Australian Government, Department of Defence
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-Geoscience Australia
-CSIRO
-Australian Tropical Herbarium, Cairns
-eBird Australia
-Australian Government – Australian Antarctic Data Centre
-Museum and Art Gallery of the Northern Territory
-Australian Government National Environmental Science Program
-Australian Institute of Marine Science
-Reef Life Survey Australia
-American Museum of Natural History
-Queen Victoria Museum and Art Gallery, Inveresk, Tasmania
-Tasmanian Museum and Art Gallery, Hobart, Tasmania
-Other groups and individuals

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Please feel free to provide feedback via the Contact Us page.

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