



Wilga Park Power Station Modification 7

*State Significant
Development
Modification Assessment
(MP07_0023 MOD 7)*



October 2019

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Cover photo

Wilga Park Power Station (Santos, 2016)

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1. Introduction

1.1 Background

Santos NSW (Eastern) Pty Ltd (Santos) owns and operates the Narrabri Coal Seam Gas Utilisation Project (the project), which is located 10 kilometres (km) south-west of Narrabri, within the Narrabri Shire local government area.

The project comprises a gas fired power station at Wilga Park, gas compression facilities and gas gathering lines at the Bibblewindi and Bohena pilot wells, and a 32 km buried gas flow pipeline (see **Figure 1**). The power station has a current operating capacity of 16 MW, with an installed capacity of 22 MW likely to be operational by the end of 2019.

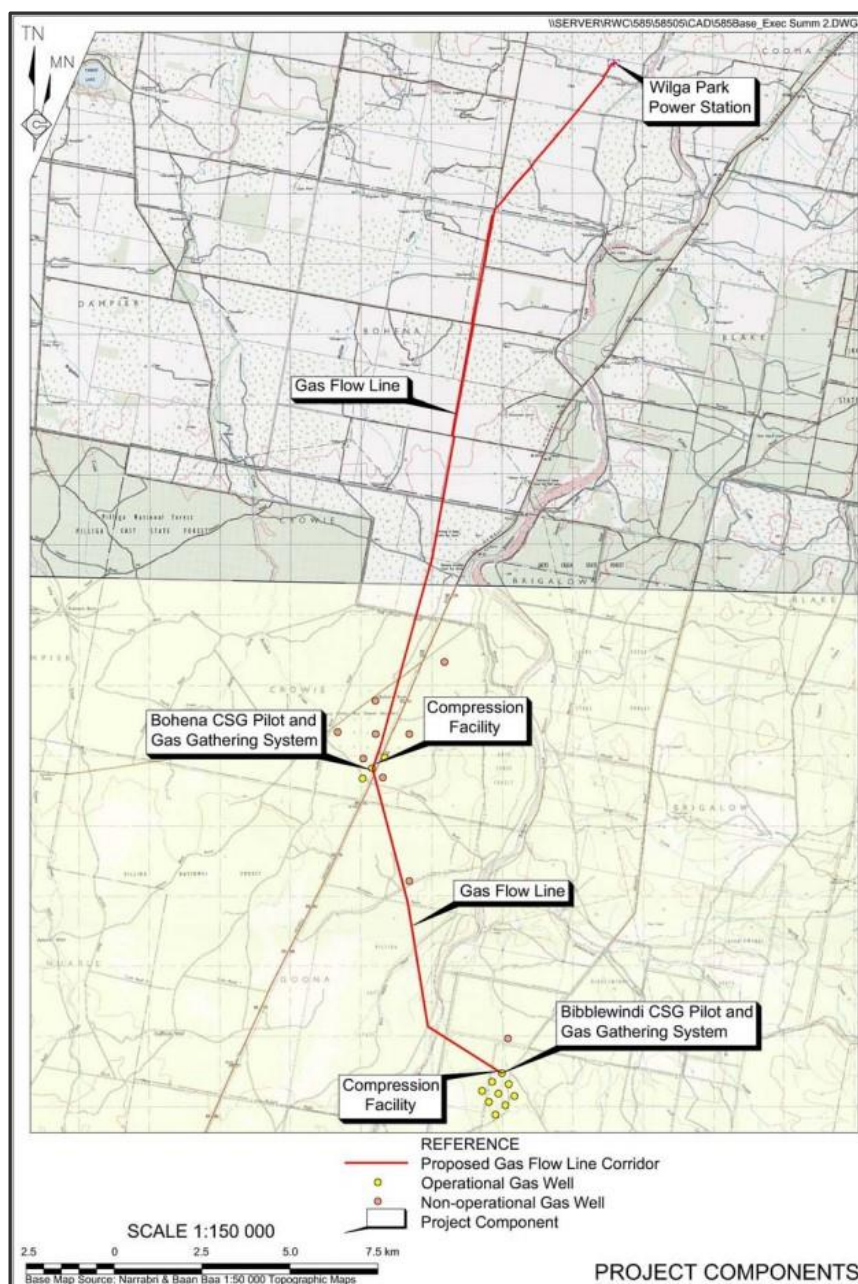


Figure 1: Approved project

1.2 Approval History

The project operates under a development consent granted by Narrabri Shire Council (DA 76/2003) and a Project Approval granted by the Minister for Planning (07_0184).

Development Consent DA 76/2003

In November 2002, Narrabri Shire Council approved the development consent for the power station under Part 4 of the *Environmental Planning and Assessment Act 1979* (the Act). The consent allowed the construction and operation of:

- a 12 MW gas fired power station using gas from the Coonarah gas field, 20 km west of Narrabri;
- construction of wells and gas gathering system at Coonarah; and
- the pipeline to the power station.

The development consent has been modified twice, first in 2003 to change the location of the power station site to the current Wilga Park site, and again in 2008 to allow an additional stratigraphic core hole in the Coonarah gas field.

Project Approval 07_0184

In December 2008, the then Minister for Planning granted the Project Approval for the power station under the now repealed Part 3A of the Act. The approval has been modified on six occasions and allows Santos to:

- generate up to 40 MW at the power station using gas sourced from the Bibblewindi and Bohena pilot wells and from other wells within its Petroleum Production Lease 3 (PPL 3), Petroleum Assessment Lease 2 (PAL 2) and Petroleum Exploration Licence 238 (PEL 238); and
- transfer gas and water from the Bibblewindi facility and Tintsville ponds to the Leewood water treatment facility along the gas flow line.

The project was commenced in 2009 with construction of the gas gathering system, pipeline and compression facilities.

Under clause 6 of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017*, the project was transitioned to State Significant Development by order, published in the NSW Government Gazette in June 2018.

Summary of other approvals

Santos also undertakes exploration activities and operates associated infrastructure under a range of other approvals within PEL 238. This infrastructure includes the Leewood water treatment plant and the Bibblewindi compression facility, which would allow gas to be transported further if more gas wells are approved.

The Bibblewindi compression facility is installed but not yet operational. The other approvals are shown in **Table 1**. Infrastructure relevant to the power station is blue highlight. The infrastructure related to the approvals is shown in **Figure 2**.

Table 1 | Summary of Approvals

Infrastructure	EP&A Act	Consent or Approval Authority
- Wilga Park Power Station 32 km gas flow line - Bibblewindi gas gathering system - Bohena gas gathering system	Part 3A	Minister for Planning
- Dewhurst 13-18 pilot - Dewhurst 26-31 pilot	Part 4 (SSD), Part 5 ¹	Planning Assessment Commission Division of Resources and Geoscience (DRG)
Bibblewindi multi-lateral pilot	Part 4 (SSD), Part 5 ¹	Planning Assessment Commission DRG
- Northern flow lines - Southern flow lines - Dewhurst 9-10, 22-25 - Brigalow Park 1 - Wilga Park 3 - Tintfield pilot, ponds and flare - Bibblewindi West pilot - Leewood water treatment facility - Bibblewindi water transfer facility - Dewhurst Southern Water and Gas Flow Lines	Part 5	DRG
- Coonarah gas field - Wilga Park Power Station - Pipeline from Coonarah to Wilga Park Power Station	Part 4 (Local Development)	Narrabri Shire Council

Note 1: Separate infrastructure components of the Dewhurst 13-18, Dewhurst 26-31 and Bibblewindi multi-lateral pilot were approved as SSD by the Planning Assessment Commission, and under Part 5 by DRG

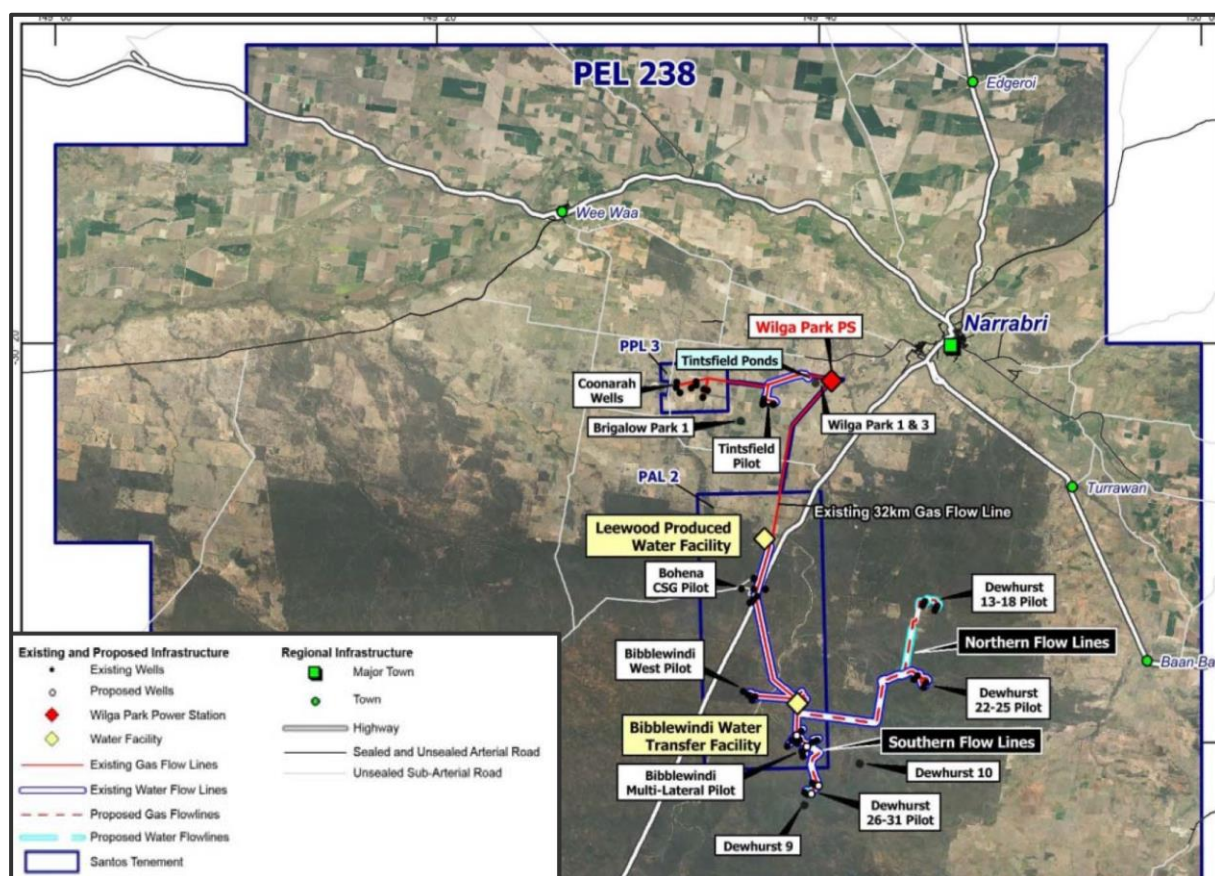


Figure 2 | Petroleum tenements and approved infrastructure

Narrabri Gas Project

In February 2017, Santos lodged a development application and supporting Environmental Impact Statement (EIS) for the Narrabri Gas Project. The project would involve the progressive development of a new gas field comprising up to 850 gas wells on up to 425 well pads over 20 years, and the construction and operation of gas processing and water treatment facilities. The Narrabri Gas Project would also include the ongoing operation of existing and approved wells within PPL 3, PAL 2 and PEL 238. The Department is currently undertaking a detailed assessment of the merits of the project.



2. *Proposed Modification*

On 1 September 2019, Santos lodged a modification application and supporting Modification Report for the project under Section 4.55 (1A) of the EP&A Act.

During ordinary operations, the gas which is transferred in the buried pipeline contains water vapour. Some of this water may accumulate in low points of the pipeline. These “slugs” of water must be removed on a regular basis so that the operation of power station equipment is not affected.

The proposal involves the installation of water management infrastructure (a “slug catcher”) to capture this water. The infrastructure includes a separation vessel, water storage tank and associated bunding, and piping and instrumentation at the power station site (see **Figure 3**). The separation vessel would capture the water in the pipeline before it enters the power station and transfer it to the storage tank.



Figure 3: Location of proposed modification within the Wilga Park Power Station site

This infrastructure is required to be installed before additional compression units at Bibblewindi are commissioned, as the compressor would increase the gas flow rate and the resulting volume of water accumulating in the pipeline.

The captured water would be transferred by pipe to a new 38,000 litre capacity water storage tank. A containment bund would be constructed around the tank. The transfer pipe and tank would be located on an existing hardstand area of the power station and would not be visibly intrusive.

Captured water would be regularly transferred from the storage tank by road to the Leewood water treatment facility, where it would be treated and re-used.

The infrastructure would take around one month to install.

The proposed modification is described in detail in the Modification Report (see **Appendix B**).



3. Statutory Context

3.1 Scope of Modification

The modification application and Modification Report were lodged under Section 4.55(1A) of the EP&A Act. The Department has reviewed the scope of the modification and considers that the application can be characterised as a modification involving minimal environmental impact as it:

- is substantially the same development as originally approved;
- would not involve any disturbance outside the already approved to be disturbed area for the project; and
- would not materially change the environmental impacts of the project as approved.

3.2 Substantially the Same Development

The Department is satisfied that the project as modified would be substantially the same development as originally approved, and that the proposal should be characterised as a modification to the project approval, as:

- there is no change to the scope of the project, the project area or its key operating activities;
- the proposed site infrastructure would complement existing infrastructure; and
- the impacts of the development as modified would be similar to the impacts as approved.

3.3 Consent Authority

The Minister for Planning and Public Spaces is the approval authority for the proposed modification. However, under the Minister's delegation dated 11 October 2017, the Director, Resource Assessments may determine the application, as:

- there were no public objections to the proposal;
- Santos did not report any political donations; and
- Narrabri Shire Council did not object to the proposal.



4. Engagement

As the proposal is a Section 4.55(1A) modification, the Department did not formally exhibit the application and Modification Report.

Notwithstanding, the Department made the relevant documents publicly available on its website and sought comment from Narrabri Shire Council, which did not object to the proposal.

The Department also consulted with its Hazards Branch on the proposal, which recommended that a Hazard and Operability study is undertaken for the detailed design of the proposed infrastructure.



5. Assessment

The Department considers the key issue for the assessment of the proposed modification is hazard and risks (see Section 5.1). The Department's consideration of other issues is summarised in Section 5.2.

5.1 Hazards and Risks

Santos undertook a hazard and risk assessment for the proposal in accordance with the Departments *Hazardous Industry Planning Advisory Paper No. 6 'Hazard Analysis' and Multi-level Risk Assessment*. The assessment identified six potential hazardous events including:

- uncontrolled discharge from the water storage tank;
- overpressure of the separation vessel;
- uncontrolled release of methane gas when using the separation vessel;
- piping rupture; and
- ignition of a bushfire from project related activities.

The assessment found the risk rating for the above risks was very low to low, as:

- procedures would be in place to ensure the tank is regularly emptied, and the storage would be appropriately bunded to contain 110% of its capacity;
- the separation vessel would be protected with safety shut-down systems;
- the transfer pipe would be constructed to applicable standards; and
- effective bushfire management procedures are already in place at the power station.

Santos has committed to minimising the associated risks by designing and constructing the proposed infrastructure in accordance with relevant Australian standards for pressure vessels and polyethylene water storage tanks.

The Department's hazards unit reviewed the hazard and risk assessment and was satisfied that it had been undertaken generally in accordance with *Hazardous Industry Planning Advisory Paper No. 4, 'Risk Criteria for Land use Safety Planning'* and that the proposal would not pose an unacceptable risk to surrounding land users. It recommended that Santos undertakes a Hazard and Operability Study prior to the commencement of construction to ensure the equipment is designed to minimise the risk of failure. While these studies are a standard procedure when constructing equipment of this nature, to ensure it is undertaken the Department has included the requirement for an independent expert to undertake the study, as a condition of approval.

5.2 Other Issues

The Department has considered a range of other issues which relate to the proposed modification. Its assessment is summarised in **Table 1**.

Table 1 | Summary of other issues raised

Project Component	Findings	Recommendation
Air Quality and	- The proposal would not increase the approved air quality impacts of the project. - Construction air quality impacts would be managed in accordance with standard construction practices - Greenhouse gas emissions may occur from the release of gas which has not separated from the water, however any increase in emissions would be negligible.	No changes to existing conditions of consent required
Biodiversity	The proposal would not affect biodiversity values, and in accordance with the provisions of Clause 7.17(2) (c) of the <i>Biodiversity Conservation Act 2016</i> the Department is satisfied that a biodiversity development assessment report was not required to be submitted with the application.	No changes to existing conditions of consent required
Noise	- The proposed modification is unlikely to cause significant noise impacts during construction as work would only occur during standard construction hours and the nearest sensitive receiver is located over 1 kilometre away. - The existing strict operational noise limits would continue to apply to the modified project during the operation of the new infrastructure.	No changes to existing conditions of consent required
Transport	The proposal would add up to 20 daily traffic movements during the one month construction period, and 2 additional daily truck movements (one tanker load) during operations, which would not affect the current performance of the road network.	No changes to existing conditions of consent required
Waste Management	- Construction waste would be stored on site and collected by suitably licensed waste contractors and transported to licensed waste facilities. - During operations, water from the storage tank would be transported to Leewood water treatment plant for processing. Leewood is a licensed facility permitted to treat water and has the capacity to handle the water from the proposal.	No changes to existing conditions of consent required



6. Evaluation

The Department has assessed the modification application and supporting information in accordance with the relevant requirements and objects of the Act.

The Department has considered Santos's hazard assessment, which indicates that the risks associated with the operation of the additional water management infrastructure would be very low to low. The Department considers that any residual risks can be minimised through a Hazard and Operability Study, which it has recommended as a condition of approval.

The Department is satisfied that construction impacts of the modification would be managed in accordance with standard construction procedures, including standard construction hours, and that operational impacts would be managed in accordance with the existing conditions of approval.

Overall, the Department considers that the proposal would allow the safe transfer and management of water which accumulates in the gas supply pipeline, and would protect downstream gas processing equipment. The Department also considers that the modification is in the public interest as it would allow the power station to continue to effectively generate electricity as intended under the relevant approvals.

The Department has recommended conditions of approval for the proposal, to which Santos has agreed. Consequently, the Department considers the modification should be approved.



7. Recommendation

It is recommended that the Director, Resource Assessments, as delegate of the Minister for Planning and Public Spaces:

- **considers** the findings and recommendations of this report;
- **determines** that the Wilga Park Power Station Mod 7 application falls within the scope of Section 4.55(1A) of the EP&A Act;
- **accepts and adopts** all of the findings and recommendations in this report as the reasons for making the decision to grant approval to the application;
- **modifies** the project approval 07_0023; and
- **signs** the attached Notice of Modification (**Appendix C**).

Recommended by:

 21/10/19

Rose-Anne Hawkeswood

Acting Team Leader
Resource Assessments



8. Determination

The recommendation is: **Adopted** / Not adopted by:

 21/10/19

Steve O'Donoghue

Director
Resource Assessments



9. *Appendices*

Appendix A – List of Documents

The Department has used the following sources of information to undertake its assessment:

- the modification application and supporting Modification Report for Wilga Park Power Station MOD 7;
- the Department's assessment reports for previous modifications for Wilga Park Power Station;
- the existing conditions of approval for the project;
- advice from Narrabri Shire Council and the Department's hazard unit;
- relevant environmental planning instruments, policies and guidelines; and
- relevant requirements of the EP&A Act.

Appendix B – Modification Report

See the Department's website - <https://www.planningportal.nsw.gov.au/major-projects/project/25106>

Appendix C – Notice of Modification

See the Department's website - <https://www.planningportal.nsw.gov.au/major-projects/project/25106>

Appendix D – Consolidated Consent

See the Department's website - <https://www.planningportal.nsw.gov.au/major-projects/project/25106>