

Narrabri Coal Seam Gas Utilisation Project (MP 07_0023)

Modification 6 supporting information

June 2018



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1. Introduction

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

Wilga Park Power Station was originally constructed and operated pursuant to a development consent granted by Narrabri Shire Council on 14 November 2002.

On 2 December 2008 the Minister for Planning approved the Narrabri CSG Utilisation Project under Part 3A of the *Environmental Planning and Assessment Act 1979* (EP&A Act) (MP 07_0023) (Project Approval).

The approved project includes gas gathering systems at Bibblewindi and Bohena appraisal pilots, a buried flow line between Bibblewindi and the Wilga Park Power Station and the operation of the Wilga Park Power Station up to 40 megawatts (MW) using gas from the appraisal pilots.

There have been a number of modifications made to the Project Approval. In summary these relate to:

- Compensatory habitat package requirements
- Use of the gas flow line to transfer produced water
- Installation of a riser on the flowline at the Leewood facility to allow gas and liquids to be transferred between the Tintsville ponds, the Bibblewindi and Leewood facilities and the Wilga Park Power Station
- The use of gas from existing and future wells within PAL 2 in the power station
- The receipt of gas for beneficial use at the power station from wells located within PAL 2 in accordance with section 28B(1) of the *Petroleum (Onshore) Act 1991* (PO Act) and clause 16(2)(a) of the *Petroleum (Onshore) Regulation 2016* (PO Reg).

The project site, to which the Project Approval applies, is located within PEL 238 and PAL 2. PEL 238 encompasses a 7916 km² area overlying Narrabri and the Pilliga Forest to the south of Narrabri. PAL 2 is located in the centre of PEL 238 and covers a 267 km² area.

The electricity generated at the Wilga Park Power Station is supplied to the NSW grid.

2. Proposed modification

The Project Approval currently limits the receipt of gas for beneficial use of gas at the Wilga Park Power Station from wells located within PAL 2. A modification to the Project Approval is proposed to allow the receipt of gas for beneficial use at the Wilga Park Power Station from the Tintsville and Dewhurst South 26-31 pilot wells located within PEL 238 in accordance with section 28B(1) of the PO Act and clause 16(2)(a) of the PO Reg. This would be in addition to the currently approved beneficial use of gas from the wells within PAL 2.

The following is a list of existing and approved pilot wells located within PEL 238 proposed for beneficial use in the power station. See Figure 1 below.

- Dewhurst South 26-31 Pilot (including the Dewhurst 26, 27, 28, 29, 30 and 31 pilot wells. Construction has commenced for wells 30 and 31, however they have yet to be completed.)
- Tintsville Pilot (including the Tintsville 2, 3, 4, 5, 6 and 7 pilot wells).

Minor piping modifications and operational preparations would be undertaken to allow the natural gas recovered during petroleum prospecting activities at the above wells to be directed to and used within the Wilga Park Power Station.

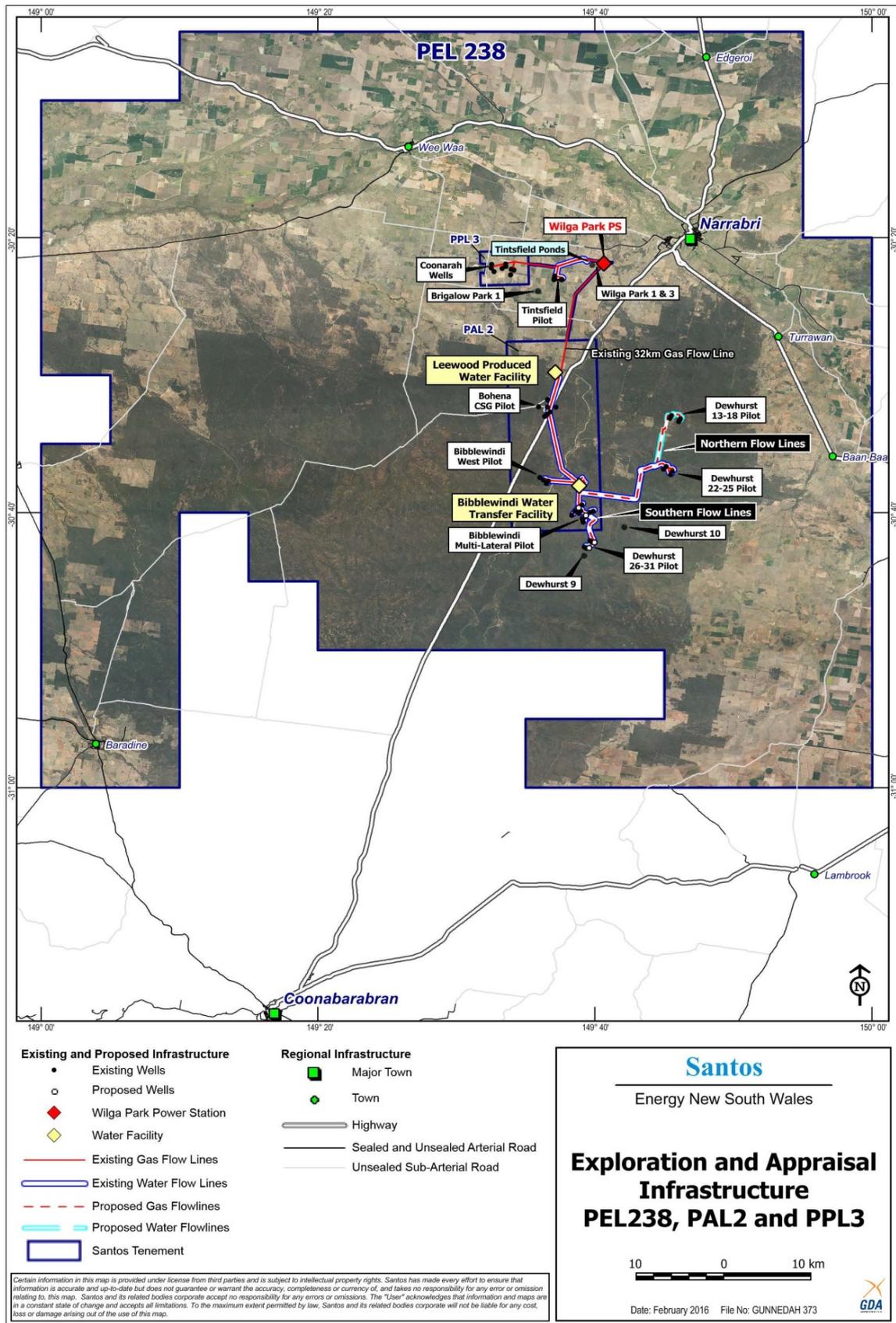


Figure 1: PEL 238 pilot wells and associated infrastructure.

3. Justification for modification

The proposed modification would enable gas from the existing wells within PEL 238 (identified above) to be beneficially used to fuel the Wilga Park Power Station. This would increase the supply of gas available to the power station. No increase to the approved capacity of the power station beyond 40 MW is proposed and therefore this modification would not result in additional noise or air emissions or other environmental impacts beyond those that were considered in the original environmental assessment.

The PO Reg enables the beneficial use of gas recovered during prospecting operations subject to meeting thresholds and limitations. The objective of the legislation is to deliver on better environmental outcomes by minimising the flaring of gas where there is a viable opportunity to use the gas beneficially.

Beneficially using the gas from pilot wells within PEL 238 (in addition to PAL 2) to fuel the Wilga Park Power Station would minimise the requirement to flare gas and would help meet the demand for electricity in NSW. As gas-fired power generation produces less greenhouse gases per unit of energy generated than coal-fired generation, this may result in a net decrease in overall greenhouse gas emissions.

The beneficial use of gas from the PEL 238 wells in the power station will facilitate the ongoing appraisal of the gas resource in PEL 238 and its suitability for use.

A State Significant Development application and associated Environmental Impact Statement for the Narrabri Gas Project is currently under assessment under the EP&A Act. Applications for four petroleum production leases over an area within PEL 238, including the areas covered by the existing pilot wells, were lodged in 2014.

It is noted that for the purposes of section 28B (2) of the PO Act, a royalty may be payable in accordance with Part 7 of the Act in respect of the beneficial use of gas.

4. Planning and approvals

The project was originally approved under Part 3A of the EP&A Act. From 1 March 2018, clause 3BA of Schedule 2 of the *Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017* provides that existing Part 3A approvals are to be modified consistent with the process for development consents under Part 4 of the Act, subject to certain exemptions that do not apply to this modification application.

Under section 4.55(1A) of the EP&A Act, a proponent may request the modification of a consent where the proposed modification is of minimal environmental impact. Other approvals, or modification of approvals for existing and approved pilot wells, will be sought as necessary to meet the requirements of the PO Reg for the beneficial use of gas.

An application for modification to the Dewhurst Gas Exploration Pilot Expansion project approval will also be made under section 4.55(1A) of the EP&A Act to allow gas produced from the operation of the Dewhurst South 26-31 pilot wells to be beneficially used in the Wilga Park Power Station for the generation of electricity.

To allow the transfer of the gas from the Dewhurst South 26-31 pilot wells to the power station, the gas flow line between the Dewhurst South pilot wells and the Bibblewindi Multi-Lateral pilot would be required to be installed. The construction of the gas flow line was assessed as part of the Dewhurst Southern Water and Gas Flow Lines project which was approved in September 2013 by the (then) NSW Office of Coal Seam Gas under the PO Act. The water flow line was installed in March 2014 however the gas flow line was not installed at that time. To date, gas from the Dewhurst South pilot wells has been flared at the flare stack located at the Dewhurst 28 well pad. An application for modification of the Dewhurst Southern Water and Gas Flow Lines project approval will also be made to allow the installation and operation of the gas flow line. This will allow gas recovered from the operation of the Dewhurst 26-31 pilot wells to be transferred to the Bibblewindi Multi-Lateral pilot where it would join the broader gathering network for transfer to the Bibblewindi facility, and on to the Wilga Park Power Station for beneficial use as fuel in the power station. Minor piping modifications would be required at the Dewhurst South pilot to connect it to the gas flow line, once installed.

Any future pilot wells proposed for PEL 238 would be subject to applicable environmental assessment requirements.

5. Consideration of potential impacts and mitigation

The modification application proposes the use of gas extracted from existing or future wells within PEL 238 within the terms and conditions of the approval for the Wilga Park Power Station. This gas would otherwise be required to be flared without beneficial use. The proposed modification would not significantly alter the nature or scale of the approved project.

Minor pipeline modifications and operational preparations would be required to existing infrastructure. As there is no major infrastructure changes to existing or approved infrastructure required, the proposed modification would not significantly increase environmental impacts above those previously assessed.

The modification does not seek to increase the capacity of the power station beyond the already approved 40MW.

The beneficial use of gas from wells in PEL 238 would minimise the light emissions associated with the flaring of gas.

Standard operational and maintenance work associated with the ongoing operation of the Wilga Park Power Station would continue to occur. The operation of the power station using gas sourced from PEL 238, in addition to gas sourced from PAL 2, would not give rise to any impacts over and above those already assessed and approved.

6. Conclusion

The proposed modification is minor in nature and would result in minimal environmental impacts. The beneficial use of the gas would likely result in environmental benefits associated with minimising air and light emissions in comparison with the flaring of gas.

The project (as to be modified) would remain substantially the same as the approved project. The modification would not significantly alter the nature or scale of the project.

Additionally the use of the gas to generate electricity for the NSW grid results in lower greenhouse gas emissions per unit of energy output when compared to traditional coal-fired power generation.

The proposed modifications would also allow the benefits of the project to be more fully realised, including:

- increased reliability of electricity supply to power networks during peak demand periods
- the provision of additional social and economic benefits to the Narrabri local government area
- the continued operation of the Wilga Park Power Station in accordance with the approval
- further developed understanding of the gas resource in PEL 238 and its suitability for use
- a beneficial use of the State's gas resources extracted during petroleum prospecting activities that would otherwise be flared.