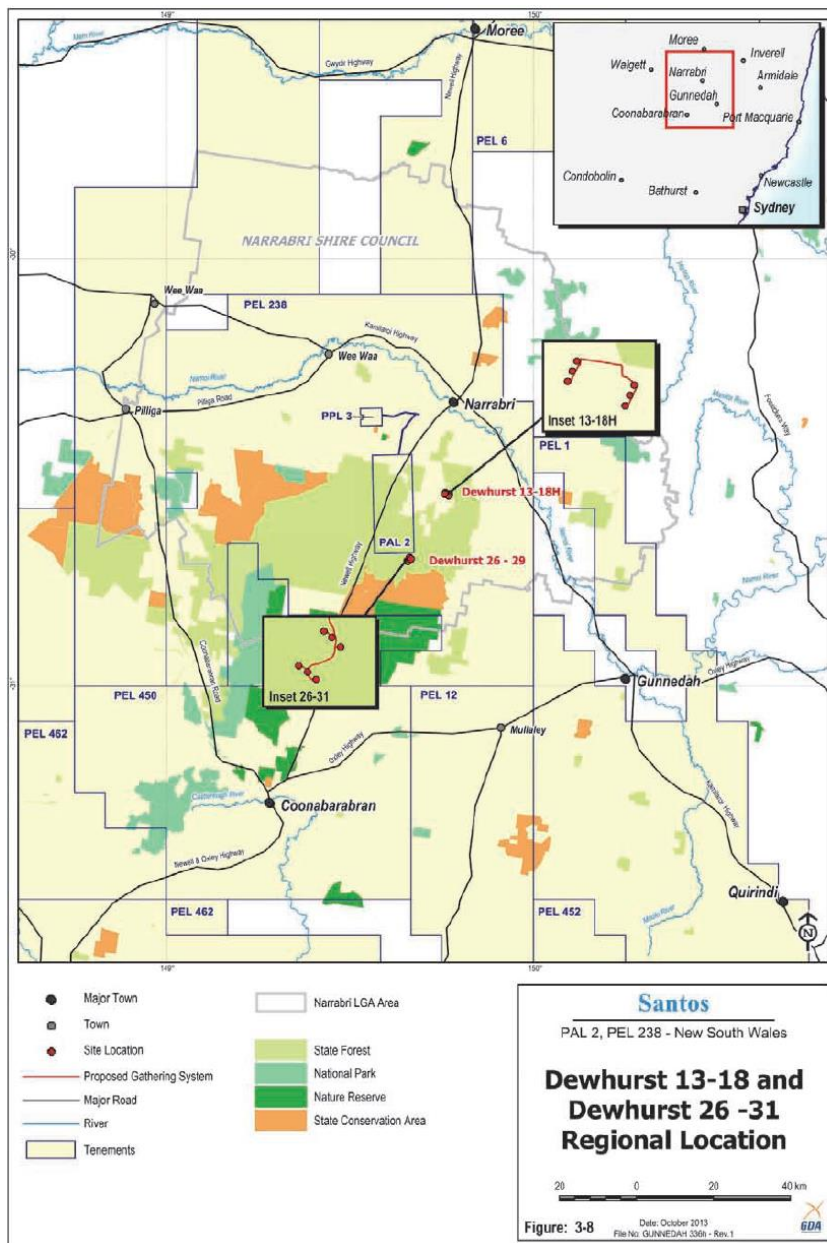


**ASSESSMENT REPORT**  
**Dewhurst Exploration Wells**  
**Beneficial Use of Gas (SSD 6038 Mod 2)**

**1. BACKGROUND**

The Dewhurst Exploration Wells (the project) are located within the Narrabri local government area. The project comprises two pilot well sets (Dewhurst 13-18 and Dewhurst 26-31) located within Petroleum Exploration Lease (PEL) 238, approximately 25 kilometres (km) and 44 km south of Narrabri respectively (see Figure 1). Santos NSW (Eastern) Pty Ltd (Santos) is the titleholder of PEL 238 and operates the project.



**Figure 1: Approved Project**

Santos also undertakes exploration and appraisal activities within a number of petroleum titles in the area, including Petroleum Assessment Lease (PAL) 2 and Petroleum Production Lease (PPL) 3. Exploration infrastructure within these title areas is operated through approvals issued by the Division of Resources and Geosciences (DRG) within the Department of Planning and Environment under the *Petroleum (Onshore) Act 1991* following assessment under Part 5 of the *Environmental Planning and Assessment Act 1979* (EP&A Act).

A number of the coal seam gas (CSG) pilot wells were also approved as State Significant Development (SSD) by the independent Planning Assessment Commission under Part 4 of the EP&A Act in July 2014. A summary of the existing approvals under the EP&A Act for various gas infrastructure (see Figure 2) is provided in Table 1, with the Dewhurst infrastructure components highlighted.

Table 1: Summary of Approvals

Gas infrastructure	EP&A Act	Consent/ Approval Authority
<ul style="list-style-type: none"> <li>• Wilga Park Power Station</li> <li>• 32 km gas flow line</li> <li>• Bibblewindi gas gathering system</li> <li>• Bohena gas gathering system</li> </ul>	Part 3A	Minister for Planning
<ul style="list-style-type: none"> <li>• Dewhurst 13-18 pilot</li> <li>• Dewhurst 26-31 pilot</li> </ul>	Part 4 (SSD), Part 5 <sup>1</sup>	Planning Assessment Commission DRG
<ul style="list-style-type: none"> <li>• Bibblewindi multi-lateral pilot</li> </ul>	Part 4 (SSD), Part 5 <sup>1</sup>	Planning Assessment Commission DRG
<ul style="list-style-type: none"> <li>• Northern flow lines</li> <li>• Southern flow lines</li> <li>• Dewhurst 9-10, 22- 25</li> <li>• Brigalow Park 1</li> <li>• Wilga Park 3</li> <li>• Tintsville pilot, ponds and flare</li> <li>• Bibblewindi West pilot</li> <li>• Leewood water treatment facility</li> <li>• Bibblewindi water transfer facility</li> <li>• Dewhurst Southern Water and Gas Flow Lines</li> </ul>	Part 5	DRG
<ul style="list-style-type: none"> <li>• Coonarah gas field</li> <li>• Wilga Park Power Station</li> <li>• Pipeline from Coonarah to Wilga Park Power Station</li> </ul>	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.

The Dewhurst 13-18 pilot well set was originally approved in July 2009, and the Dewhurst 26-29 pilot well set was approved in August 2013, following assessment under Part 5 of the EP&A Act and subsequent granting of activity approvals under the *Petroleum (Onshore) Act 1991*.

However, a development consent to extend and operate both well sets was granted under Part 4 of the EP&A Act in July 2014. This consent allows the Applicant to:

- convert Dewhurst wells 16, 17 and 18 from single lateral to tri-stacked lateral configuration;
- drill two additional wells in the Dewhurst 26-29 well set (Dewhurst 30 and 31);
- install additional ancillary surface infrastructure;
- operate the existing pilot wells along with the new and converted wells; and
- manage the water and gas produced during operation.

### Narrabri Gas Project

In February 2017, Santos lodged a development application and supporting Environmental Impact Statement (EIS) for the Narrabri Gas Project. That project would involve the progressive development of a coal seam gas field comprising up to 850 new 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 ongoing operation of existing and approved wells within PAL 2, PEL 238 and PPL 3.

The Narrabri Gas Project is the subject of a separate assessment process, and the Department is currently undertaking a detailed assessment of the merits of the project.

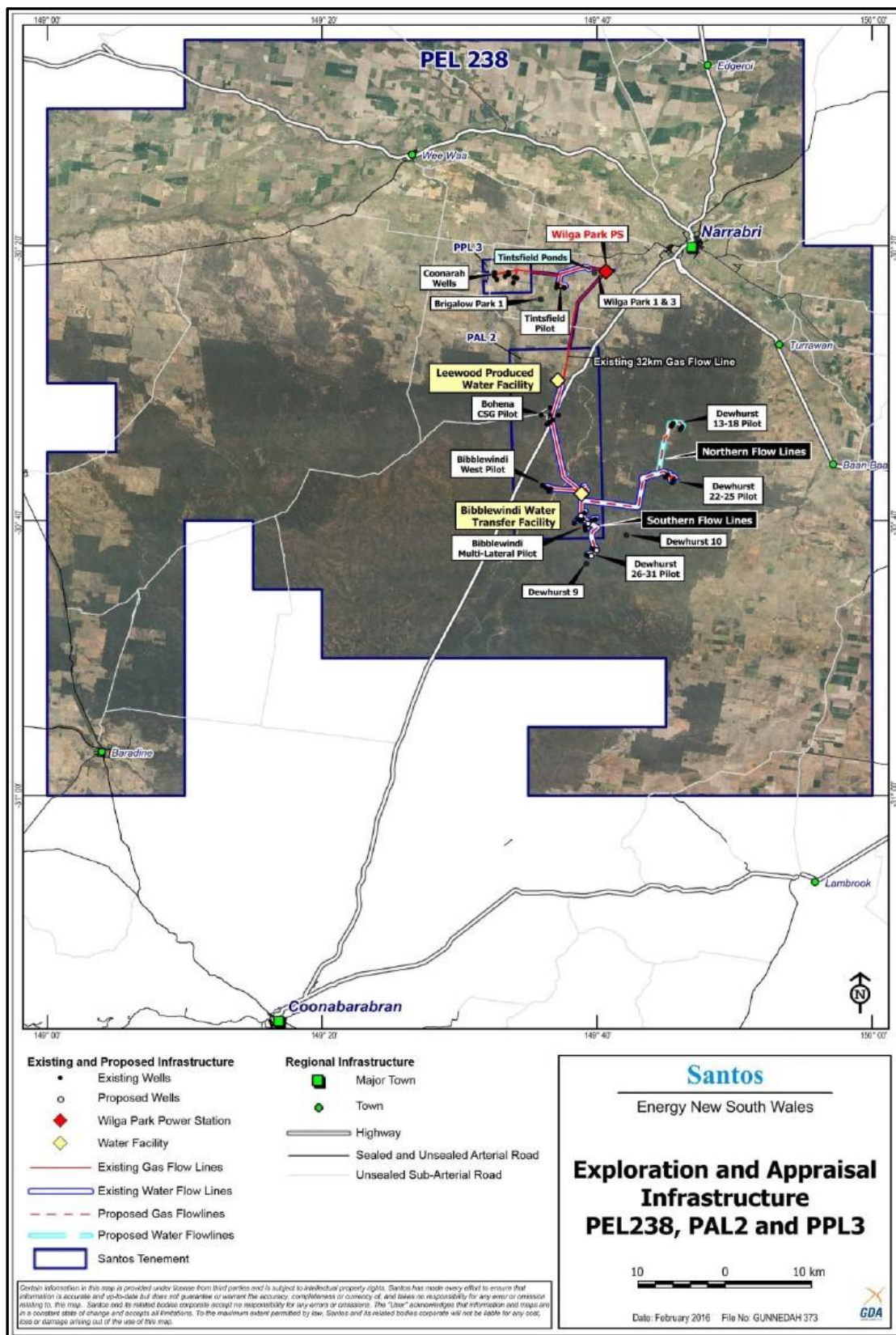


Figure 2: Gas exploration areas and infrastructure

## 2. PROPOSED MODIFICATION

Under the Dewhurst development consent, approximately 10% of the gas produced from the pilot wells may be used to power the well site generators. Surplus gas collected from the Dewhurst 13-18 wells must be flared from a location adjacent to Dewhurst 14, while gas collected from the Dewhurst 26-32 pilot wells must be flared from a location adjacent to Dewhurst 28.

However, the recently commenced *Petroleum (Onshore) Regulation 2016*<sup>1</sup> allows the holder of a petroleum exploration licence or assessment lease to beneficially use recovered gas which would otherwise have been flared or released into the atmosphere. Clause 16 of the 2016 Regulation relevantly states:

- (1) For the purposes of section 28B (1) (a) of the Act:
- (a) all assessable prospecting operations authorised by an exploration licence or assessment lease, and by an activity approval, may be carried out to enable the beneficial use of gas, and
  - (b) all operations authorised by an exploration licence or assessment lease in relation to which a relevant development consent is in force authorising works that facilitate the beneficial use of gas may be carried out to enable the beneficial use of gas.

Following an amendment in December 2015, clause 28B (1) of the *Petroleum (Onshore) Act 1991* confers the right to carry out operations to enable beneficial use of gas recovered from the land within an exploration licence or assessment lease, as described in the subordinate regulation.

The Regulation provides opportunity for beneficial use of gas that would otherwise be flared or released, in recognition of environmental benefits associated with generating energy from the gas.

Consistent with this amendment, Santos is proposing to modify the development consent to allow gas from the Dewhurst 26-31 pilot wells to be used beneficially at the Wilga Park Power Station. Santos has also lodged a separate modification application for the Wilga Park Power Station to beneficially use the gas from the 6 Dewhurst wells to generate power. That modification also seeks to beneficially use gas from 6 pilot wells within the existing Tintsville pilot, which is also currently being flared.

The Dewhurst 13-18 wells are not currently operating, and the modification does *not* include the beneficial use of gas from these pilot wells at the power station.

Gas would be transferred from the Dewhurst 26-31 pilot to the Bibblewindi multi-lateral pilot, and from there to the power station.

Gas and water flow lines were approved between the Dewhurst 26-31 pilot and the Bibblewindi multi-lateral pilot in September 2003 as part of the Dewhurst Southern Water and Gas Flow Lines project. The water flow line was installed in March 2014, however the gas flow line was not installed at that time.

Santos has lodged a separate application with the Resources Regulator to modify an approval under the *Petroleum (Onshore) Act 1991* for the Southern Water and Gas Flow Lines project, to allow the gas pipeline to be retro-fitted and operated. The proposed works are located within the previously approved disturbance corridor, adjacent to the existing water pipeline.

Transfer of gas from the Bibblewindi multi-lateral pilot to the Wilga Park Power Station would be via existing gas flow lines. Apart from the gas flow line between the Dewhurst 26-31 pilot and the Bibblewindi multi-lateral pilot, no other infrastructure would be required to connect the Dewhurst pilot wells to the power station, and no other changes to existing approved activities are proposed.

The proposed modification is described in the Environmental Assessment (EA) which accompanied the application (see **Appendix A**).

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<sup>1</sup> The *Petroleum (Onshore) Regulation 2016* commenced in August 2016 and replaced the since repealed *Petroleum (Onshore) Regulation 2007* which was itself amended in December 2015 in conjunction with the amendment to the *Petroleum (Onshore) Act 1991* to include clause 28B to allow beneficial reuse of gas.

### 3. STATUTORY CONTEXT

The project was originally approved under Section 4.38 (previously Section 89E) of the EP&A Act and any modification to this consent must be made under Section 4.55 of the EP&A Act.

A modification application under section 4.55 (1A) was submitted to the Department on 18 June 2018.

Based on its assessment, the Department considers that the application can be characterised as a modification involving minimal environmental impacts as the proposal:

- would not significantly increase the environmental impacts of the project as approved;
- is substantially the same development as originally approved;
- allows for improved environmental performance in generating power rather than flaring gas; and
- would not involve any further disturbance outside the already approved disturbance areas for the Dewhurst project.

Consequently, the Department considers that the proposed modification is within the scope of Section 4.55(1A) of the EP&A Act.

The Minister for Planning is the approval authority for the modification application. However, under the Minister's delegation dated 11 October 2017, the Executive Director, Resource Assessments and Business Systems, may determine the application.

### 4. CONSULTATION

The Department made the modification application and accompanying information publicly available on its website from 26 June 2018 and consulted with the Environment Protection Authority (EPA), Division of Resources and Geoscience (DRG) and the Resource Regulator within the Department of Planning and Environment, and Narrabri Shire Council.

The **Resource Regulator** did not comment on the proposal but advised that it is assessing a separate application from Santos to modify the Dewhurst Southern Water and Gas Flow Lines project.

**DRG** supported the proposal as an effective use of a resource that would otherwise be flared, noting that the provisions of the *Petroleum (Onshore) Regulation 2016* would apply.

The **EPA** raised no concerns but advised that Santos would need an environment protection licence (EPL) under the *Protection of the Environment Operations Act 1997* if the operating capacity of the power station is increased above 30 MW or pipeline modifications extend beyond the Wilga Park Power Station premises.

**Narrabri Shire Council** raised no concerns.

Agency advice is attached as **Appendix B**.

While the modification was not formally exhibited as it is a project involving minimal environmental impact under section 4.55 (1A) of the EP&A Act, the Department received representations from 10 members of the public. Key concerns raised by the community representations include that the use of gas for exploration is production by stealth, that the request is not clearly restricted to the nominated exploration wells, that royalty payments would be avoided, and that the modification should not be considered until the Narrabri Gas Project was determined.

The Department is aware that these concerns are shared by other members of the community and has addressed these issues in Section 5 of this report.

## 5. ASSESSMENT

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

- EA for the proposed modification;
- existing conditions of approval;
- community views;
- the *Petroleum (Onshore) Act 1991* and the *Petroleum (Onshore) Regulation 2016*, in regard to beneficial use of gas;
- relevant environmental planning instruments, policies and guidelines; and
- requirements of the EP&A Act, including the objects of the Act.

Table 2 summaries the key assessment issues and consideration by the Department for the modification application.

Table 2: Key assessment issues

Issue	Consideration
Production by Stealth	<ul style="list-style-type: none"> <li>• Section 33 of the <i>Petroleum (Onshore) Act 1991</i> allows the holder of an exploration lease to recover petroleum while assessing the viability of commercial production from its exploration and assessment activities.</li> <li>• Clause 28B(2) of the <i>Petroleum Regulation</i> currently limits the right to beneficial use of gas from exploration wells to 1,000 days (whether or not consecutive) per well.</li> <li>• The limited number of Dewhurst wells proposed to be connected to the Wilga Park Power Station (6) and the restricted timeframe that the wells can be used for power generation (1,000 days) is consistent with NSW Government policy for the beneficial use of gas from exploration activity.</li> <li>• The Resource Regulator is responsible for ensuring that Santos complies with the 1,000-day restriction.</li> <li>• Even if the modification were not approved, Santos could continue to flare the gas from these wells in accordance with existing approvals.</li> <li>• The proposed modification would minimise the venting or flaring of gas and associated environmental impacts, such as light pollution impacts on the Siding Springs Observatory and fire risks within the Pilliga State Forest.</li> <li>• Furthermore, using the gas from wells within PEL 238 to fuel the power station would mean less power would need to be generated elsewhere, thereby assisting to meet electricity demand in NSW.</li> <li>• The use of gas at Wilga Park Power Station remains subject to the existing approved 40 MW capacity.</li> <li>• Gas in excess of that required to operate the power station at 40 MW could not be used without further planning approval.</li> <li>• Accordingly, the Department does not believe the modification would facilitate commercial production under the guise of an exploration lease.</li> <li>• The recommended notice of modification restricts the gas from wells located in PEL 238 that can be used to supply the Wilga Park Power Station to only the 12 wells nominated in the modification application, including the 6 Dewhurst wells.</li> </ul>
Royalty Payments	<ul style="list-style-type: none"> <li>• In recognition of the potential benefits from beneficial use of gas for power generation rather than the flaring or venting of gas, under clause 16 of the <i>Petroleum Regulation</i>, a petroleum lease holder is not required to pay royalties for gas extracted during exploration activities, where it is authorised under a development consent.</li> <li>• In relation to concerns that the use of gas from exploration activities would not attract royalty payments and there would be no financial benefit to the people of NSW, it is important to note that beneficial use of gas instead of venting or flaring in this instance would provide a better environmental outcome.</li> <li>• Furthermore, if the modification were not approved, there would still be no royalty payments from the flaring of the gas, and the environmental benefits from generating power would not be realised.</li> </ul>

Issue	Consideration
Determination of the Narrabri Gas Project	<ul style="list-style-type: none"> <li>The Narrabri Gas Project is currently under assessment and if approved, would facilitate the transition from exploration to production.</li> <li>The Narrabri Gas Project is a separate State Significant Development (SSD) application, and the Department is legally obliged to assess the modification application to the Dewhurst development consent on its merits, in accordance with applicable NSW Government policies and guidelines</li> </ul>
Disturbance footprint	<ul style="list-style-type: none"> <li>Construction of a 4.5 km gas pipeline approved in 2013 under the <i>Petroleum (Onshore) Act</i> as part of the Southern Water and Gas Flow Lines project connecting Dewhurst pilot wells into existing gas pipeline infrastructure has not commenced. In 2014, a water pipeline was constructed under this activity approval along the same alignment.</li> <li>Santos is seeking a modification of this activity approval to permit the later construction and operation of the gas pipeline within the originally approved construction footprint. This modification is currently being assessed by the Resource Regulator.</li> <li>Minor piping modifications would be required at the Dewhurst pilot to connect to the existing flare to the gas flow line. However, these would be within the previously disturbed areas.</li> <li>Consequently, the Department is satisfied that there would be no material increase to the environmental impacts that have already been assessed and approved for the Dewhurst Exploration Wells.</li> </ul>

## 6. RECOMMENDED CONDITIONS

The Department has prepared a notice of modification and consolidated development consent for the modification (see **Appendices C and D**) to allow Santos to supply gas from the Dewhurst 26-31 pilot wells to the Wilga Park Power Station.

## 7. CONCLUSION

The proposed modification would allow gas extracted from the Dewhurst 26-31 to be used beneficially instead of being flared.

Under the current NSW regulatory regime of the *Petroleum (Onshore) Regulation 2016*, the maximum duration of supply from each well would be 1,000 days.

The Department considers that the modification is consistent with NSW Government policy and statutory framework for beneficial use of gas, that would otherwise be flared, from the exploration and appraisal stages of petroleum projects.

The Department considers the modification to be minor in nature and that it is unlikely to increase the environmental impacts of the previously approved project as no additional infrastructure would be required and there would be no disturbance beyond the existing disturbance footprint.

The Department also believes fuelling the power station from gas that would otherwise be wasted would be a positive environmental outcome; not only would the gas be used beneficially, it would mean less power may have to be generated elsewhere to meet the demand for electricity.

Consequently, the Department is satisfied that the proposed modification is in the public interest and should be approved.

## 8. RECOMMENDATION

It is recommended that the Acting Executive Director, Resource Assessments and Business Systems, as delegate of the Minister for Planning:

- **consider** the findings and recommendations of this report;
- **determine** that modification request falls within the scope of section 4.55 (1A) of the EP&A Act;
- **modify** the approval (SSD 6038); and
- **sign** the attached notice of modification (**Appendix C**).


Recommended by:



18/7/18

Rose-Anne Hawkeswood  
**Senior Planner**  
**Resource and Energy Assessments**

Recommended by:



18/7/18

Stephen O'Donoghue  
**Acting Director**  
**Resource and Energy Assessments**

## 9. DECISION

The recommendation is Approved / Not approved by:



23/7/18

Mike Young  
**Acting Executive Director**  
**Resource Assessments and Business Systems**  
as delegate of the Minister for Planning

## **APPENDIX A – SUPPORTING INFORMATION**

Please see: [http://majorprojects.planning.nsw.gov.au/index.pl?action=view\\_job&job\\_id=8509](http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8509)

## **APPENDIX B – AGENCY ADVICE**

Please see: [http://majorprojects.planning.nsw.gov.au/index.pl?action=view\\_job&job\\_id=8509](http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8509)

## **APPENDIX C – NOTICE OF MODIFICATION**

Please see: [http://majorprojects.planning.nsw.gov.au/index.pl?action=view\\_job&job\\_id=8509](http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8509)

## **APPENDIX D – CONSOLIDATED PROJECT APPROVAL**

Please see: [http://majorprojects.planning.nsw.gov.au/index.pl?action=view\\_job&job\\_id=8509](http://majorprojects.planning.nsw.gov.au/index.pl?action=view_job&job_id=8509)