

## WILGA PARK POWER STATION

### Annual Environmental Management Report

#### Approval 07-0023

For period 1 January 2022 to 31 December 2022

Submitted by Santos NSW (Eastern) Pty Ltd as CSG Operator



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Name of Operation	Wilga Park Power Station
Name of Operator	Santos NSW (Eastern) Pty Ltd
Development consent / project approval#	MP 07_0023
Name of holder of development consent	Santos NSW (Eastern) Pty Ltd
Petroleum Exploration Licence #	PEL238
Name of holder of Petroleum Exploration Licence	Santos NSW Pty Ltd (ACN 094 269 780) and Energy Australia Narrabri Gas Pty Ltd (ACN 147 609 729)  From 22 December 2021 <b>Santos NSW (Narrabri Gas) Pty Ltd</b>
Water licence #	N/A for this operation
Name of holder of water licence	N/A
Annual Review start date	1 January 2022
Annual Review end date	31 December 2022
I, Brendon Child, certify that this annual environmental management report is a true and accurate record of the compliance status of the Narrabri Coal Seam Gas Utilisation Project for the reporting period 1 January 2022 to 31 December 2022 and that I am authorised to make this statement on behalf of Santos NSW (Eastern) Pty Ltd.	
Name and Title of authorised reporting officer	Brendon Child Area Manager Scotia, Arcadia and Narrabri
Signature and Date	

## 1. Regulatory Context

This Annual Environmental Management Report (AEMR) has been prepared for submission to the NSW Department of Planning, Industry and Environment (DPIE) by Santos NSW (Eastern) Pty Ltd to satisfy commitment 11.7 in the Final Statement of Commitments made by the previous operator Eastern Star Gas (ESG) for the Narrabri Coal Seam Gas Utilisation Project (Project). ESG submitted the original Project Application 07-0023 in early 2007 with the approval being granted by DPIE in December 2008 (Approval Doc. No. S07/00277). There was no specific obligation in the conditions of approval for the submission of an Annual Environmental Management Report or an Annual Review document.

The Wilga Park Power Station was originally constructed and operated pursuant to a development consent granted by Narrabri Shire Council on 14 November 2002 and subsequent modifications. The consent and modifications allowed the power station to operate up to a capacity of 12 megawatts using gas extracted from the Coonarah Gas Field in PPL 3.

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).

The approved project includes:

- construction and operation of gas gathering systems at the Bibblewindi and Bohena Coal Seam Gas Pilots;
- construction and operation of gas compression facilities at the Bibblewindi and Bohena Coal Seam Gas Pilots;
- construction of an approximately 32 kilometre buried gas flow line between the Bibblewindi and Bohena Pilot and the Wilga Park Power Station; and
- the staged expansion and operation of the Wilga Park (base load) gas-fired power station from a capacity of 12 megawatts to 40 megawatts, fuelled by coal seam gas extracted from the Bibblewindi and Bohena Coal Seam Gas Pilots.

Construction works under the then Part 3A approval commenced in 2009. Further works continued during 2010-2012. The works which have been undertaken under the approval to date include:

- construction of the gas gathering systems at the Bibblewindi and Bohena CSG Pilots;
- construction of the gas compression facilities for the Bibblewindi and Bohena CSG Pilots;
- construction of the 32 kilometre buried gas flow line between the Bibblewindi and Bohena pilots and the Wilga Park Power Station; and
- installation of 4 x 3MW gas generators at Wilga Park Power Station together with a switch room, gas conditioning skid, auxiliary transformers, ventilation fans, substation upgrade and other related equipment.

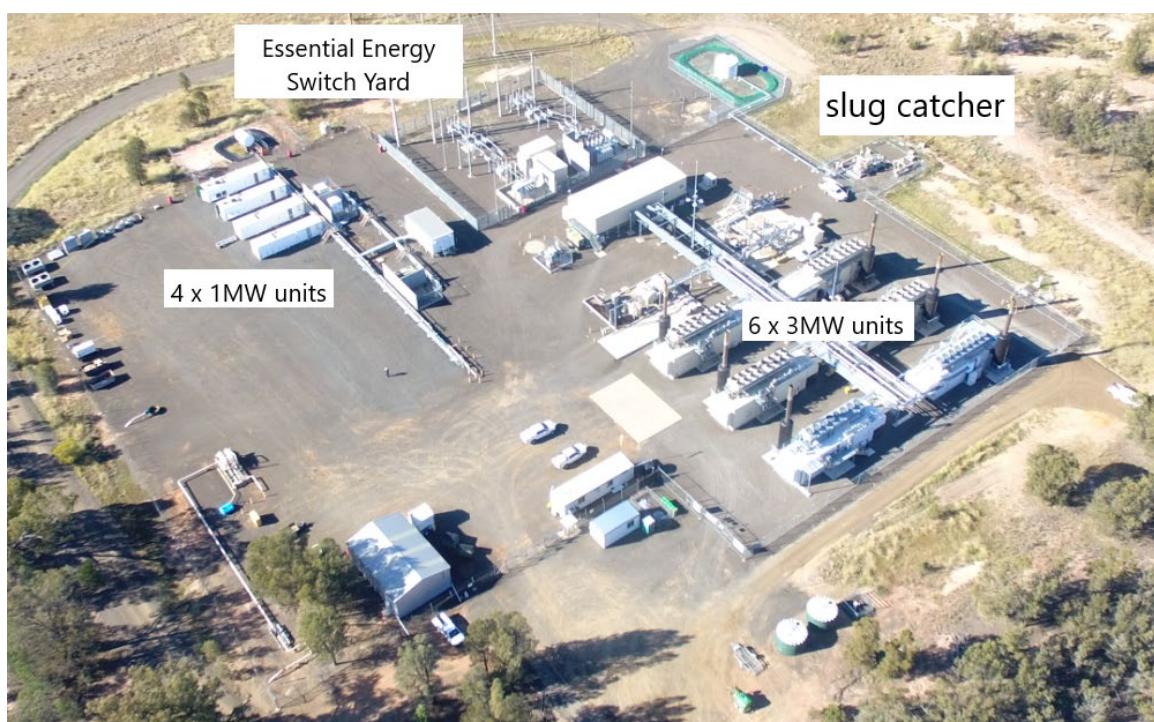
- Installation of an additional 2 x 3MW gas generators at the Wilga Park Power Station
- Installation of a slug catcher at Wilga Park Power Station on the 32 kilometre buried gas flow line.

The Minister for Planning approved a modification to the Narrabri CSG Utilisation Project on 11 February 2011 (MP 07\_0023 MOD 1). The modification changed condition of approval (CoA) 2.34 relating to the submission date for the compensatory habitat package required.

A further modification to the project was approved on 14 March 2012 (MP 07\_0023 MOD 2) allowing the temporary use of the gas flow line to transfer produced water. The approval for this modification allowed the transfer of water until 28 February 2013.

On 18 July 2014, the Wilga Park Power Station (WPPS) was approved to receive gas from all wells located within PAL 2 and PPL 3 following the application of Santos Narrabri Coal Seam Gas Utilisation Project (MP 07\_0023 MOD 3). The approval allowed for:

1. Installation of a riser on the existing buried gas flow line which would allow materials (gas and liquids) to be diverted to the Leewood Produced Water Facility;
2. Use of the gas flow line to transfer liquids (including fresh water, produced water and brine) between the Tintsville ponds and the Bibblewindi Water Transfer facility and to the Leewood Produced Water Facility; and
3. Use of coal seam gas from existing or future wells within PAL 2 or PPL 3 at the Wilga Park Power Station.



**Figure 1: Wilga Park Power Station Layout**

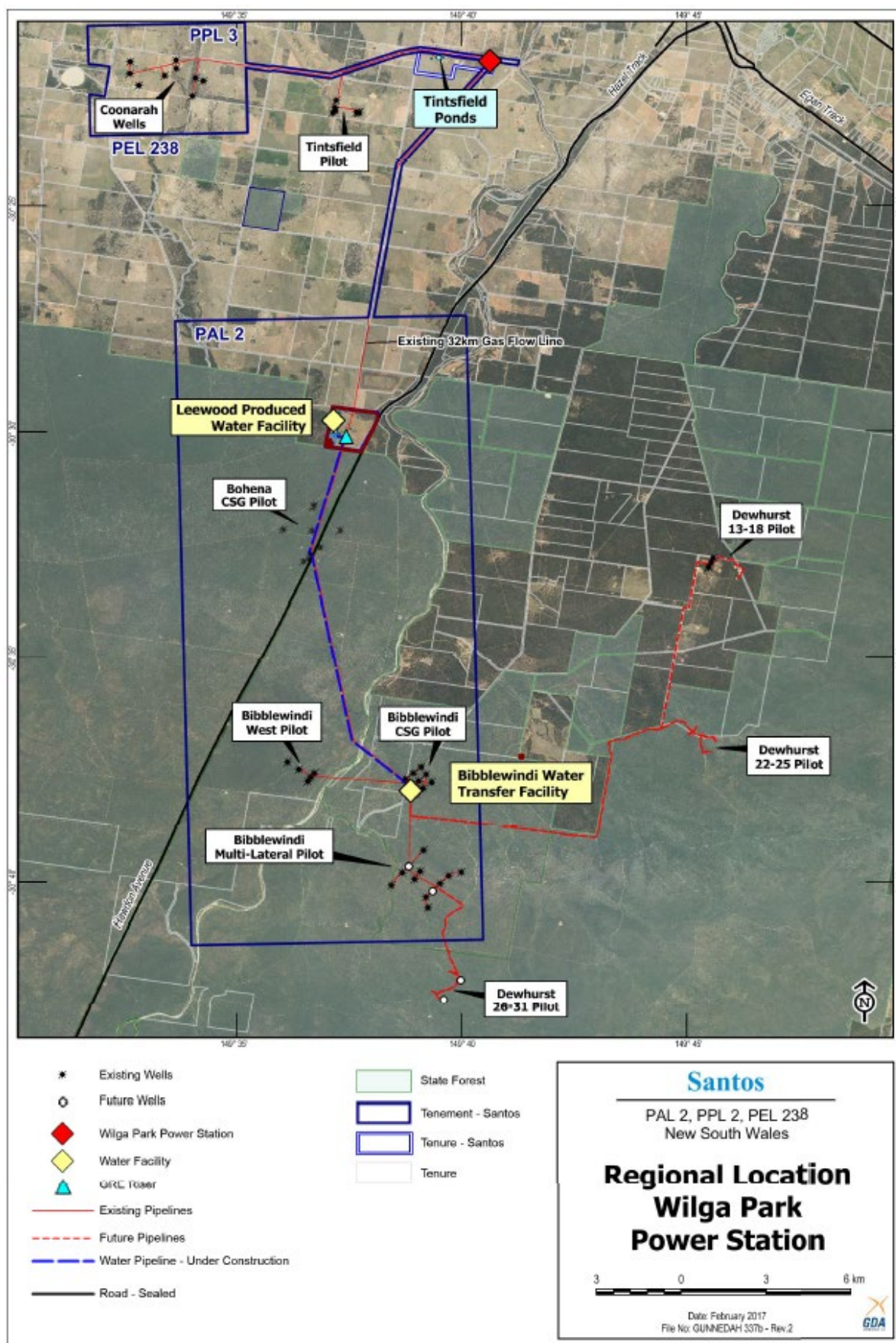


Figure 2: Location of the Wilga Park Power Station and Pipeline including CSG infrastructure

The most recent modification to the approval was in October 2019, for the installation of a slug catcher for capturing slugs of solids as a result of gas pipeline cleaning at the pipeline entry into the power station site.

The relevant approvals for the development are:

- MP 07\_0023 approval (as amended);
- PEL 238.

On 22 December 2021 Santos acquired all shares in EnergyAustralia Narrabri Gas Pty Ltd. This means that EnergyAustralia Narrabri Gas Pty Ltd is now a Santos subsidiary and Santos effectively holds 100% of the working interests in the Narrabri Project, including the Wilga Park Power Station. Santos has changed the name of the company from 'EnergyAustralia Narrabri Gas Pty Ltd' to '**Santos NSW (Narrabri Gas) Pty Ltd**'.

Santos holds an Environmental Protection Licence (EPL 20350) for the operation of pilot wells and water management in PEL238, PAL2 and PPL3. The EPL 20350 does not apply to the operation of the Wilga Park Power Station.

## 2. Contacts

The author of this report is Sally Mayberry, Environmental Adviser ([sally.mayberry@contractor.santos.com](mailto:sally.mayberry@contractor.santos.com)). The nominated point of contact in relation to this report is Janelle Twyman ([Janelle.twyman@santos.com](mailto:Janelle.twyman@santos.com)).

## 3. Actions from previous AEMR

The approval letter for the 2019 AEMR required the following inclusions in future AEMRs:

Required Action	Where addressed in this report
<p><b>A section on the landscape and ecological monitoring during the reporting period is to be added in future AEMR's;</b></p> <p><b>Tabulate the semi-regular monitoring and reporting on weeds.</b></p> <p><b>(Section 12.1.4 of the approved Operational Environmental Management Plan.)</b></p>	Section 4.4

## 4. Summary of operations

In the period covered by this report, the Wilga Park Power Station operated continuously apart from scheduled maintenance. In 2019, Santos made preparations for increasing the generation output of the power station from the existing 16MW to 22 MW.

In 2020, installation was completed and approval to operate two newly installed generators (GO5B and GO6B) up to a maximum of 6MW was obtained.

In 2022, Wilga Park Power Station operated above 16MW but below 22MW . This triggered noise and air quality monitoring conditions to be undertaken within prescribed periods. All the required actions were completed and reports submitted to the Secretary as required by the conditions of approval.

### 4.1 Gas

Gas produced from the PAL 2 pilots is primarily consumed by the Wilga Park Power Station. Minor amounts are consumed by onsite power generation for surface equipment with the remaining gas either being flared at the Bibblewindi Flare or used in a gas generator at Leewood to power the water treatment plant.

### 4.2 Power

In 2022, the Wilga Park Power Station generated electricity from the gas produced in PAL2. Although the maximum operating capacity was increased to 22MW within the previous reporting period, the maximum average power generated (on a daily basis) was 17.89 MW.

### 4.3 Water

No water is used in the generation of electricity at the Wilga Park Power Station. Any water needed at the power station is Narrabri town water brought to site by a tanker. The water is stored in poly tanks at the power station. Accordingly, there is no applicable water licence for the facility.

#### 4.3.1 Water transfers

There have been occasions in the past that the pipeline used to convey gas to the Wilga Park Power Station, has been used for water transfer between the nearby Tintsville Water Storage Ponds and either the Leewood Water Management Facility or the Bibblewindi Water Management Facility.

No water transfers took place during the reporting period.



#### 4.4 Landscape and Ecological Monitoring

Inspections are conducted over the Bibblewindi Facilities to Wilga Park Power Station pipeline on a regular basis. Inspections focus on identifying potential environmental impacts such as pest plants. Records of these inspections are saved within Santos' EHS Toolbox.

Operators frequent the power station on a regular basis conducting visual inspections on the facility. Follow up actions are captured and assigned within Santos' EHS Toolbox.

Regular pest plant management is undertaken over the project area when required, particularly when seasonal conditions favour pest species.

### 5. Environmental Management and Performance

MP 07-0023 requires the development, approval and implementation of an Operation Environmental Management Plan (OEMP). The original plan was approved on 14 July 2009.

No review of the OEMP was required within the reporting period.

#### 5.1 Environmental Management and Monitoring

Mandatory monitoring for noise and air discharges were undertaken during the reporting period and reports provided within the required timelines. These reports were accepted by DPIE.

Monitoring for	Monitoring Trigger	Comment
<b>Air quality</b>	>16MW	Required to be undertaken within 90 days of exceeding 12MW and at every stage of new generation capacity is added to the power station or as otherwise agreed with Secretary, and a report is required to be provided within two months of completion of the assessment.
<b>Noise</b>	>16MW	Required to be undertaken within 90 days of exceeding 12MW and at every stage of new generation capacity is added to the power station, and a report is required to be provided within twenty eight days of completion of the assessment.
<b>Biodiversity</b>	N/A	There were no new disturbances during the reporting period. The construction period ended in 2009, and pipeline corridors have been undergoing rehabilitation since that time. See also Section 7 for inspections of the pipeline corridor, and for the biodiversity offset.
<b>Heritage</b>	N/A	There were no new disturbances during the reporting period. No aboriginal or non-aboriginal heritage items were discovered in the reporting period.

Monitoring for	Monitoring Trigger	Comment
<b>Water Management</b>	N/A	See sections 4.3 and 4.3.1

## 5.2 Environmental Performance

### Statement of Compliance

Were all conditions of the relevant approval complied with as they relate to the development in 2020	
<b>07_0023</b>	Yes
<b>PEL 238</b>	Yes

Appendix 1 to this report shows results of internal compliance review undertaken. Santos has in place a compliance management system to monitor its performance against conditions of approval. Inspections are scheduled through a corporate database (ComTrack). Results of inspections are saved within Santos' EHS Toolbox Audit and Inspection Manager. Any identified corrective actions are tracked through to completion.

Conditions which were triggered once the Power Station output exceeded 16 megawatts (MW) were outlined in ComTrack.

Mr Peter Smith of SLR Consulting Australia was approved as an Independent Environmental Representative (IER) on 10 May 2018. Mr Smith undertook a performance review of the operation of the Wilga Park Power Station in May 2019 as it relates to the increase in electricity generation.

He had 3 recommendations and the actions in response. Two recommendations have been completed as reported in the 2019 AEMR, with one recommendation still to be implemented as per the table below:

#### 2019 Performance Review Actions

Recommendation	Action/Response
<b>Santos engage an independent environmental audit in accordance with AS/NZ ISO 19011:2003 – Guidelines for Quality and/or Environmental Systems Auditing within the next twelve (12) months (from 28 June 2019)</b>	The anticipated audit as recommended by the IER was not conducted due to the following reasons: <ul style="list-style-type: none"> <li>The anticipated increased power generation of up to 22MW was not realised within the reporting period (i.e.</li> </ul>

	<p>the power station only operated at a peak output of maximum 17.89 MW hours;</p> <ul style="list-style-type: none"> <li>• There is no requirement within the approval for independent environmental auditors, however Santos anticipates undertaking an independent environmental audit as per the recommendation, taking into consideration the factors as above.</li> </ul>
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### 5.3 Comparisons against Criteria and EA Predictions

A compliance audit as outlined in the Operation Environmental Management Plan is attached in Appendix 1 to this report. There were no non-conformances identified against the EA criteria within the reporting period.

#### 5.1.1 Comparisons against EIS predictions

The EIS covered:

- construction and operation of gas gathering systems at the Bibblewindi and Bohena Coal Seam Gas Pilots;
- construction and operation of gas compression facilities at the Bibblewindi and Bohena Coal Seam Gas Pilots;
- construction of an approximately 32 kilometre buried gas flow line between the Bibblewindi and Bohena Pilot and the Wilga Park Power Station; and
- the staged expansion and operation of the Wilga Park (base load) gas-fired power station from a capacity of 12 megawatts to 40 megawatts, fuelled by coal seam gas extracted from the Bibblewindi and Bohena Coal Seam Gas Pilots.

The construction components occurred in 2009 and is outside the period covered by this Annual Environmental Management Report.

Emissions testing was undertaken between 16 and 17 November 2022 to confirm compliance condition 2.4. During the emissions testing event multiple engines were offline due to mechanical issues. The data collected was not representative of the typical operating capacity within the reporting period. This report is published and available on the website <https://narrabrigasproject.com.au>.

The EIS refers to an instack nitrogen oxide (NO<sub>2</sub>) discharge limit of 450mg/m<sup>3</sup> set by the NSW DECC, *Protection of Environment Operations (Clean Air) Regulation 2002*. All generators at the Wilga Park Power Station tested below this trigger limit.

Noise assessments were undertaken between 14 and 16 February 2022 to confirm compliance condition 2.8 and 2.9 of the Planning Approval. The report from the 2022 monitoring event was provided to DPIE in accordance with the conditions of approval.

#### 5.4 Environmental Incidents and Improvements

There were no reportable environmental incidents made during 2022 for the power station and the gas pipelines. Equipment continued to be serviced in accordance with manufacturers' specifications. Santos has a preventative maintenance program in place.

## 6. Community and Stakeholder Relations

### 6.1 Complaints

Santos did not receive any complaints either directly, or referred, in relation to activities at the Wilga Park Power Station during the reporting period. As part of Santos' operations, complaints are entered to a database and the response provided or action taken is recorded. There have been no complaint trends over the previous five years of operation.

### 6.2 Engagement

Key community consultation activities for the Narrabri Gas Project are managed by Santos on a 'whole-of-project' basis, and relate to activities undertaken across PEL 238, PAL 2 and PPL 3 generally and are not specific to the Wilga Park Power Station.

There is a comprehensive Community Consultation Plan in place for PEL 238, stakeholders have been identified, and a risk-based assessment undertaken on the level of impact or benefit those activities may potentially have on stakeholders and the community.

Santos does not retain separate consultation records for the Wilga Park Power Station; however, community activities undertaken in the similar reporting period (1 September 2021 to 31 August 2022) for the PEL 238 licence area demonstrate the comprehensive community engagement activity for this licence area, including Wilga Park Power Station. However, throughout the period, there have been intermittent social gathering and stay at home restrictions in the licence area associated with COVID-19

Public Health Orders that have limited the opportunity to host and participate in activities such as face to face meetings and community site tours. Activities that were undertaken include:

- There were around 150 visitors to Santos Narrabri shopfront;
- 5 Community and field site tours were hosted in the licence area (almost all of which included a visit to the Wilga Park Power Station);
- The Narrabri Gas Project website has been maintained; Monthly Activity Updates for PEL 238 activities were distributed to over 430 individuals each month;
- Three Narrabri Gas Project Community Consultative Committee meetings.

There are well established consultation tools in place, and this is complementary to the mature relationship that Santos has with stakeholders in the PEL 238 licence area. These tools provide ongoing opportunities for stakeholders and members of the community to learn about, provide input to, and raise concerns about activities that Santos is conducting, or planning to conduct including those at the Wilga Park Power Station. This includes:

Consultation Activity	Frequency
Narrabri Gas Project CCC	<ul style="list-style-type: none"> <li>• Quarterly or as determined by the Chair and committee members</li> </ul>
Face to face meetings	<ul style="list-style-type: none"> <li>• Regular face to face meetings are held with key stakeholders relevant to their level of interest in activities</li> </ul>
Community Site Tours	<ul style="list-style-type: none"> <li>• Site tours are provided on request from interested community groups and other stakeholders</li> <li>• Site tours are advertised in the local newspaper when activities of significance are being planned and/or undertaken in the project area</li> </ul>
Communication tools	<ul style="list-style-type: none"> <li>• An email and a contact telephone number for the Narrabri Shopfront is referenced on Santos website and external printed documentation</li> <li>• Enquiries are answered promptly, and issues raised are recorded in a consultation database</li> </ul>
Activity Update Reports	<ul style="list-style-type: none"> <li>• Monthly activity updates are emailed to key stakeholders, uploaded to the website, and included monthly in the local newspaper</li> <li>• Updates are distributed to the Narrabri Gas Project CCC members to disseminate to members of their respective organisations</li> </ul>
Media Updates	<ul style="list-style-type: none"> <li>• Media releases on key announcements will continue and Santos' Facebook page will provide information through social media channels</li> </ul>
Attendance at community events	<ul style="list-style-type: none"> <li>• Santos will continue to attend the local agricultural show, AgQuip, and other relevant community events with staff</li> </ul>

Consultation Activity	Frequency
	available to provide information and answer questions on our activities
Santos shopfront	<ul style="list-style-type: none"> <li>Narrabri Shopfront has printed information and displays and staff available to answer questions and provide information</li> </ul>

## 7. Rehabilitation and Disturbance

There was no additional disturbance during the reporting period. As previously reported, all rehabilitation along pipeline corridors has been monitored quarterly. Santos maintains contact with private landholders who have the pipeline passing through their properties and attend to matters requiring attention.

## 8. Activities Proposed for next AEMR period

- Undertake noise monitoring and emissions monitoring in the 2023 reporting period.
- Routine scheduled maintenance in accordance with manufacturers' specifications.
- Independent environmental audit to be undertaken if operating conditions exceed the next trigger level as recommended by IER.

**END OF REPORT**

## Appendix 1 Compliance Audit for AEMR reporting period

Operations Compliance Audit	Comments / Corrective Action
<b>1 Air Quality</b>	
<p><b>SEC 3.2 and 3.3 Air Quality Monitoring</b></p> <p><b>Has the facility exceeded the 12 MW or 40 MW (or agreed) monitoring triggers during the reporting period (refer to SEC 3.1 and 2.4 if triggers exceeded). If so, refer to the following:</b></p>	<p>YES.</p> <p>Wilga Park Power Station operated above 12MW commencing 22<sup>nd</sup> December 2018.</p>
<p><b>SEC 3.1 Air Quality Monitoring</b></p> <p><b>Has air quality monitoring been completed during the reporting period in accordance with the appropriate methodology of Table 3 of approval?</b></p>	<p>YES</p> <p>Annual Emissions Testing required by Schedule 2 Condition 3.1 (Table 3) of the approval conducted by Etkimo 16 and 17 November 2022</p>
<p><b>SEC 2.4 Discharge Limits</b></p> <p><b>Does air quality monitoring confirm compliance with maximum allowable discharge concentration limits listed in table 1 of approval</b></p>	<p>YES</p>
<p><b>SEC 2.2 - Odour</b></p> <p><b>Are any discernible odours apparent at Wilga Park at or around the generators or any part of the facility</b></p>	<p>NO.</p>

Operations Compliance Audit	Comments / Corrective Action
<b>2 Noise and Vibration</b>	
<p><b>SEC 3.5 Noise Monitoring</b></p> <p><b>Has the facility exceeded the 16 MW monitoring triggers (next new stage of power generation) during the reporting period? If so, refer to the following:</b></p>	<p>NO.</p> <p>Wilga Park Power Station operated above 12MW commencing 22<sup>nd</sup> December 2018 – noise monitoring in accordance with Condition(s) 2.8 and 2.9 and Condition 3.5 completed in the 2022 AEMR period.</p>
<p><b>SEC 2.9 Operational Noise Criteria</b></p> <p><b>Has noise monitoring been conducted during the reporting period in accordance with the methodology listed in SEC 2.9?</b></p>	<p>N/A for reporting period.</p>
<p><b>SEC 2.8 Operational Noise Criteria</b></p> <p><b>Does noise monitoring confirm compliance with maximum allowable noise contributions listed in table 2 of the approval?</b></p>	<p>N/A for reporting period.</p>
<p><b>SEC 2.10 to SEC 2.23 – Noise Related Actions</b></p> <p><b>Have there been any actions taken consistent with noise mitigation and land acquisition outlined in SEC 2.10 to 2.23. Outline any actions taken in detail.</b></p>	<p>N/A for reporting period.</p>



<p><b>SEC 2.5</b></p> <p><b>Does vibration monitoring confirm that operations does not exceed the preferred vibration values for low probability of adverse comment presented in DECC guidelines stated in SEC 2.5.</b></p>	<p>Not required as per the Operational Environment Management Plan, which was approved by the previously named NSW Department of Planning and Environment 13<sup>th</sup> December 2018.</p>
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<b>Operations Compliance Audit</b>	<b>Comments / Corrective Action</b>
<b>3 Waste Management</b>	
<b>Are the operational sites clear of general rubbish and receptacles being utilised?</b>	YES
<p><b>SEC 2.27 Waste generation and management</b></p> <p><b>Is there any evidence of waste generated outside of the site being used for storage, treatment, processing</b></p>	NO
<b>SOC – Are used lubricants being stored in approved tanks for collection by a licensed contractor?</b>	YES

<b>Operations Compliance Audit</b>	<b>Comments / Corrective Action</b>
<b>4 Traffic and Transport Impacts</b>	
<b>Are all current operational haulage routes identified prior to construction period in good working condition?</b>	YES

**Has there been any dispute with any relevant roads authorities as to the roads condition or state of repair?**

NO

**Operations Compliance Audit**

**Comments / Corrective Action**

**5 Hazard Auditing**

**SEC 3.6 Hazard Audit Report**

**Have any of the events specified in SEC 3.6 occurred during period that requires a hazard audit report to be conducted?**

NO

## Appendix 2 Location of the Compensatory Habitat (Offset) Area

