

13 November 2023

NSW Government
Department of Planning and Environment
Locked Bag 5022
Parramatta NSW 2124

Confidential

Re: Narrabri Gas Project (SSD 6456) Independent Environmental Audit

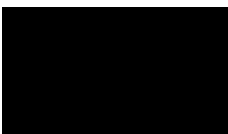
Dear Department of Planning and Environment

Development consent SSD 6456 was granted on 30 September 2020 for the Narrabri Gas Project (Development Consent). Condition D9 of Schedule 2 of the Development Consent requires an Independent Environmental Audit (IEA) to be undertaken within one year of commencement of Phase 1 and every three years thereafter unless the Planning Secretary directs otherwise.

Santos commenced the IEA on 14 August 2023. In accordance with Condition D10 of the Development Consent and Appendix D of the NSW Government Independent Audit *Post Approval Requirements* (May 2020), Santos responses and timeline for non-compliances and observations are included in this letter as Attachment 1 and Attachment 2 respectively.

Should you require any additional information in relation to this matter, please contact Santos via email onshoreenvcompliance@santos.com.

Yours sincerely



Team Lead Environmental Assurance (Acting)

Attachment 1: Non-compliances and Recommendations

Condition of Consent	Condition Requirement	Details of non-compliance	Recommendation	Unique ID for non-compliance	Santos Proposed Action/Response	Proposed Action Due Date
Condition B70 of SSD 6456	Waste – Waste Management Plan Prior to the commencement of Phase 1, the Applicant must prepare a Waste Management Plan for the development to the satisfaction of the Planning Secretary. This plan must: <ul style="list-style-type: none"> (a) be prepared by a suitably qualified and experienced person/s; (b) be prepared in consultation with the EPA, Council, and the owner of any waste facilities or land on which waste is proposed to be disposed; (c) describe the measures to be implemented to ensure: <ul style="list-style-type: none"> (i) Compliance with the waste operating conditions in this consent; (ii) Compliance with the <i>Protections of the Environment Operations (Waste) Regulation 2014</i>; and (iii) Reasonable and feasible waste minimisation and management measures are being deployed. (d) be consistent with the outcomes of the Produced Salt Beneficial Re-Use and Disposal Study; (e) identify all waste streams generated by the development (including produced water, salt and drill mud/cuttings); (f) identify the fate of those streams (including identification of the specific receiving facilities which have agreed to accept those wastes); (g) describe the waste management system in detail, including a contingency strategy if beneficial reuse and/or disposal options become unavailable; and (h) include a monitoring program that: <ul style="list-style-type: none"> (i) evaluates and reports on: <ul style="list-style-type: none"> • the effectiveness of the waste management system; • ongoing classification of waste (including salt); and • compliance against the waste operating conditions and the EPL; and (ii) defines what constitutes a waste-related incident or non-compliance and includes a protocol for identifying and notifying the Department and relevant stakeholders of these events. 	Non-compliance No. 1 – The Waste Management Plan does not satisfy paragraphs (g) and (h)(ii) of condition B70 in that the Plan: <ul style="list-style-type: none"> • does not describe the waste management system in detail, including a contingency strategy if beneficial reuse and/or disposal options become unavailable (paragraph (g)); and • does not define what constitutes a waste-related incident or non-compliance and does not include a protocol for identifying and notifying the Department and relevant stakeholders of these events (paragraph (h)(ii)). 	Recommendation No. 1 – Santos should review and update the Waste Management Plan to satisfy the requirements in paragraphs (g) and (h)(ii) of condition B70.	NC1	<p>The plans satisfy all relevant requirements of Condition B70. Specific observations regarding the content of the plan in relation to the condition requirements are provided below. Further, the auditor should note that the plan was prepared to the satisfaction of the Planning Secretary in accordance with Condition D9.</p> <p>Section 4 of the WMP states:</p> <p><i>“As described in this Plan, the waste management system for the Project would follow the waste management hierarchy (section 5) and waste management practices (section 6). All wastes will be included in a waste management inventory (section 6.2) and classified according to the Waste Classification Guidelines (section 6.1). Measures to minimise waste in accordance with the waste management hierarchy (section 5) will be considered, and then waste management practices applied in consideration of its classification, volume and available waste facilities (sections 6 and 7). A monitoring program will be implemented (section 8) which will be used to review and evaluate the waste management practices (section 10). Figure 4.1 provides a flow diagram which represents the waste management system. A contingency strategy where beneficial reuse and/or disposal options become unavailable have been developed and is presented in section 9.2.”</i></p> <p>The waste management system is outlined in Figure 4.1 and described in detail in the WMP Section 5 and Section 6. Waste management measures are presented in Section 7. Waste monitoring is detailed in Section 8.</p> <p>The contingency strategy is presented in Section 9.2. It describes the process for incident notification process and also directs readers to the EMS. This section states “In the event of an environmental incident or noncompliance with the Project Approval, Santos will initiate an investigation. The incident will be reported immediately after Santos becomes aware of an incident causing or threatening to cause material environmental harm”.</p> <p>The NGP Phase 1 EMS also describes notification of environmental harm in Section 6 and the EMS provides a management framework to effectively identify and control potential environmental impacts to achieve compliance with environmental legislation and regulatory requirements applicable to the Project.</p> <p>Santos will consider updating the Waste Management Plan during the management plan review as per condition D4 of SSD6456.</p>	14/01/2024
Condition D13 of SSD 6456	Access to Information From the commencement of Phase 1, until the completion of all rehabilitation required under this consent, the Applicant must: <ul style="list-style-type: none"> (a) make copies of the following information publicly available on its website: 	Non-compliance No. 2 – As of August 2023, Santos had not satisfied paragraphs (a)(ii), (a)(xii) and (b) of condition D13 in that: <ul style="list-style-type: none"> • the Santos NGP Water Access Licences (WAL Nos. 36546, 43458, 43533, 15819 and 15847) were not publicly available on the Santos NGP 	Recommendation No. 2 – Santos should make copies of: <ul style="list-style-type: none"> • the Santos NGP Water Access Licences (WAL Nos. 36546, 	NC2	<ul style="list-style-type: none"> • Santos NGP WAL’s are published on the Narrabri Gas Project website • An annual report was not required in 2021 and 2022 because the project had not commenced at that time, therefore condition D8 was not yet in effect or triggered. 	Completed

Condition of Consent	Condition Requirement	Details of non-compliance	Recommendation	Unique ID for non-compliance	Santos Proposed Action/Response	Proposed Action Due Date
	(i) the document/s listed in condition A2(c); (ii) current statutory approvals for the development; (iii) approved strategies, plans and programs; (iv) detailed plans for the Phases of the development; (v) minutes of CCC and Advisory Group meetings; (vi) regular reporting on the environmental performance of the development in accordance with the reporting requirements in any plans or programs approved under the conditions of this consent; (vii) a comprehensive summary of the monitoring results of the development, reported in accordance with the specifications in any conditions of this consent, or any approved plans and programs; (viii) a summary of the current phase/s and progress of the development; (ix) contact details to enquire about the development or to make a complaint; (x) a complaint register, updated monthly; (xi) a record of all incidents and non-compliances; (xii) the Annual Reviews of the development; (xiii) audit reports prepared as part of any Independent Environmental Audit of the development and the Applicant's response to the recommendations in any audit report; and (xiv) any other matter required by the Planning Secretary; and (b) keep such information up to date.	website or Santos Water Portal (website) (paragraph (a)(ii)); and <ul style="list-style-type: none"> the Santos NGP Annual Reviews for 2021, 2022 and 2023 (i.e. the Santos letters dated 26 March 2021, 28 March 2022 and 13 March 2023 to the DPE) were not publicly available on the Santos NGP website (paragraph (a)(xii)); and the version of PPL 3 which was publicly available on the Santos NGP website was not up-to-date (i.e. the Santos NGP website as of August 2023 included an obsolete version of PPL 3) (paragraph (b)). 	43458, 43533, 15819 and 15847) publicly available on the Santos NGP website or Santos Water Portal (website); and <ul style="list-style-type: none"> the Santos NGP Annual Reviews for 2021, 2022 and 2023 publicly available on the Santos NGP website. No action is required in relation to the public availability of PPL 3 on the Santos NGP website, which Santos had updated as of 31 October 2023.		Condition A7 of SSD6456 requires that Santos notify the Department of the commencement date of the development. Santos notified the Department of the project commencement date being 07 February 2023. Condition D8 of SSD6456 requires an Annual Review of the development to be submitted to the Department by the end of March each year, and Condition D8 (a) sets the reporting period as the previous calendar year. The first Annual Review is due at the end of March 2024 because the development commenced on 07 February 2023. Letters were submitted to the planning secretary for the 2021 and 2022 years providing an update, not an annual review and is available on the NSW Planning Portal website under post approval reports. Santos considers the letters as correspondence between Santos and the Department, not the submission of an annual review. <ul style="list-style-type: none"> The current version of PPL 3 is published on the Narrabri Gas Project website 	Completed

Attachment 2. SSD6456 Independent Environmental Audit Observations

Development Consent SSD6456		
Condition of Consent	Independent Audit Observations	Santos Response
Condition A16	<p>Observation No. 1 – As part of ongoing and improved well integrity processes, Santos should consider comments in the Independent Well Integrity Audit Report (see Appendix H of this audit report) in relation to elements of the <i>Code of Practice for construction, operation and decommissioning of petroleum wells</i> (May 2023).</p> <p>Observation No. 2 – Prior to the commencement of Phase 2, Santos could conduct an assessment of compliance of all gas and watering lines against the requirements of the <i>Code of Practice for Upstream Polyethylene Gathering Networks – CSG Industry</i> (2019) and <i>AS/NZS 4130:2018 Polyethylene (PE) Pipes for Pressure Application</i>.</p>	<p>01 – Santos will consider the comments made within the Well Integrity Audit Report.</p> <p>02 - Prior to the commencement of Phase 2 Santos will conduct a compliance audit of all of their CSG gathering networks in NSW against the Code of Practice for Upstream Polyethylene Gathering Networks – CSG Industry (2019) and AS/NZS 4130:2018 Polyethylene (PE) Pipes for Pressure Application.</p>
Condition A21	<p>Observation No. 3 – The Planning Agreement Deed with the Narrabri Shire Council is not dated. Santos should ensure the Planning Agreement is correctly dated for future reference.</p>	<p>Santos will review the signed Planning Agreement Deed.</p>
Condition A28	<p>Observation No. 4 – Ideally, Work Order Numbers raised from monthly inspections should be defined within an additional column on the Santos NGP Bibblewindi Flare Inspection Register.</p> <p>Observation No. 5 – Inspection Registers utilised and maintained by Santos NGP should not be titled as “Audit” lists, as these are only limited to visual inspections of each facility listed in these registers.</p> <p>Observation No. 6 – Santos could reconfirm with Ontoto that the NGP meteorological station remains fully serviced and calibrated at all times, inclusive of the retention of all service and calibration records.</p>	<p>04 - Work orders are tracked in a separate system. Santos operator inspection process (Operator Essential Care – OEC) is utilised by the business as a whole for all of its onshore operations. This process is not bespoke to NGP and any changes to the fundamental structure will require consideration from all Santos operating fields and may not be suitable.</p> <p>05 - Noted. This is Santos internal nomenclature.</p> <p>06 – A servicing program including calibration (as required) will be introduced prior to Phase 2.</p>
Condition B2	<p>Observation No. 1 – Table A1 in Appendix A of the FDPPro incorrectly references section 10.10 for noise and noise quality criteria. The correct reference is section 10.9.</p> <p>Observation No. 2 – The FDPPro does not incorporate the Santos Integrated Disturbance Planning (IDP) process and GIS management system as part of the required siting protocols. Santos should incorporate the IDP process in the FDPPro as a mandatory protocol to be followed for the implementation of the locational criteria and constraints analysis for siting infrastructure.</p>	<p>07 – Santos will update references during the management plan review, as per condition D4 of SSD6456</p> <p>08 – Santos’ IDP is an internal process which is utilised for development activities across Australia. A Compliance Operating Standard (SMS-LRG-OS04-Compliance) has been developed and implemented as part of the Santos Management System (SMS), the IDP process satisfies this internal requirement. The IDP process is already a mandatory Santos process.</p>

Condition B4	<p>Observation No. 3 – Section 5 of the FDP could be revised to list well pads as a construction activity in the dot point summary, for consistency with the reference to new well pads in section 5.4.</p> <p>Observation No. 4 – Section Reference Table A1 of the FPD incorrectly references Appendix E for results of all surveys undertaken as part of in-field micro-siting (see condition B4 (f)). The correct reference is Appendix D.</p> <p>Observation No. 5 – Section 6 of the FDP does not include a section to report on Offsetting requirements for the proposed disturbance in the FDP. Santos should consider inserting additional commentary in Section 6.4 to describe the Biodiversity Credit requirements for each Phase or future amendments of Development Consent SSD 6456.</p> <p>Observation No. 6 – Santos should consider updating Section 9.2 of the FPD to directly refer to <i>adaptive management</i> as referred to in condition B4(g)(ii).</p> <p>Observation No. 7 – Santos should consider describing the approach to adaptive management in the EMS, which should underpin the approach that will be taken across all Environmental Management Plans.</p>	<p>O9, O11 – O13 - Santos will consider this during the management plan review, as per condition D4 of SSD6456</p> <p>O10 - Santos will update references during the management plan review, as per condition D4 of SSD6456</p>
Condition B6	<p>Observation No. 8 – The FDP should be updated to include the Santos Integrated Disturbance Planning (IDP) process and GIS management system as mandatory requirements to support the FDP for the implementation of the locational criteria and constraints analysis for siting infrastructure.</p>	See O8 response.
Condition B10	<p>Observation No. 9 – Calibration certificates for the Noise Monitoring Meter used by GHD Sydney on 3rd May 2023 were not supplied with the issued report (i.e. for the Svantek SVAN 977 Class 1 sound level meter (Serial Number: 36871)). Santos should request that the calibration data/certificates of this meter be provided as an Appendix B in the final report.</p>	Santos will request calibration certificates be supplied and include in the report.
Condition B13	<p>Observation No. 10 – Section 7 and Table 7.1 (second-row heading) of the Noise Management Plan only refer to construction activities; however, Section 7 states the management measures are for the construction and operational phases of the project. Santos should update the Noise Management Plan accordingly to reflect both Phases.</p> <p>Observation No. 11 – Santos could consider reviewing the management measures described in Table 7.1 to ensure these measures are effective in supporting compliance with the noise criteria in SSD 6456, and not only workplace behavioural/cultural matters e.g. No Swearing.</p> <p>Observation No. 12 – The definition of an “Incident” in section 10.1 of the Noise Management Plan has been truncated and is not consistent with the SSD 6456 definition. Santos should update this definition to ensure consistency between the Plan and SSD 4656.</p> <p>Observation No. 13 – The noise monitoring TARPs are not well defined in the Noise Management Plan. Santos could consider including specific TARP tables and a process flow chart in the NMP to support decision-making in response to adverse noise impacts.</p>	<p>O16 - O19 Santos will consider observations during the management plan review, as per condition D4 of SSD6456</p>
Condition B17	<p>Observation No. 14 – Santos should formally assess its air quality monitoring program to ensure that air emissions generated by the development are measured in accordance with the relevant requirements and exemptions of the <i>Approved Methods for the Sampling and Analysis of Air Pollutants in New South Wales</i> (EPA, 2007).</p>	An air quality monitoring program will be implemented as part of the required Air Quality and Greenhouse Gas Management Plan for Phase 2 of the development.
Condition B21	<p>Observation No. 15 – Condition B21(b) requires that Santos monitors and publicly reports in their Air Quality and Greenhouse Gas Management Plan, the development's actual greenhouse gas emissions against cumulative forecasts. Santos should reconsider utilising its existing Air Quality and Greenhouse Gas Management Plan as the forum for the provision of monitoring data and public reporting of greenhouse gas emissions from the Project.</p>	Reporting will occur in accordance with B21(b) as part of the Air Quality and Greenhouse Gas Management Plan required for Phase 2 of the development.
Condition B26	<p>Observation No. 16 – Santos should review its change management triggers and procedure, to ensure that when modifications to the type of activity or location of</p>	

	<p>activity are made within the well pads, a review of proposed and existing controls (e.g. ESCP) is completed to assess the adequacy of these mitigation measures and implement additional controls as required.</p> <p>Observation No. 17 – The site-specific ESCP correctly designs the diversion of surface water around the well pad disturbance area. However, the ESCP does not consider controls for sediment generated from activities within the pad footprint. Santos's CPESC should consider including internal sediment controls for runoff from within the pad footprint.</p> <p>Observation No. 18 – At the Bibblewindi 16 well pad, the Auditors observed that the sediment fences are being compromised from a buildup of wood chip mulch from adjacent remediated areas. Santos should review the appropriateness of these fences and consider alternative controls.</p>	<p>O22 – Santos has a management of change procedure (SMS-LRG-OS04-PD04-management of change procedure) as part of its SMS (Santos Management System). Version 1.4 (current) of this document was reviewed, approved and implemented 31 May 2023. This procedure sets out key requirements for managing change to enable beneficial changes to be made with impacts and risk understood and appropriately managed.</p> <p>O23 - Santos ESC plans are prepared by a suitably qualified engineer in the first instance for construction, and adaptive management allows for additional ESC measures if required during operation. Santos will consider “internal” ESC where instances have or are likely to occur and warrant additional ESC measures.</p> <p>O24 – Santos will review the appropriateness of these sediment fences and consider substitutions.</p>
Condition B27	<p>Observation No. 19 – The Water Management Plan is unclear as to how the adaptive management framework will be implemented to determine if adjustments are required to the scale of the development to match its available water supply. Santos should update the Water Management Plan and relevant sub-plans to describe how the adaptive management framework will be implemented.</p>	<p>Santos will consider this during the management plan review, as per condition D4 of SSD6456</p>
Condition B37	<p>Observation No. 20 – The Santos NGP Annual Review template should include relevant tables and sections to report against the performance measures defined in Table 7 of Development Consent SSD 6456, to enable this information to be reported in March 2024.</p>	<p>Noted. This is a draft internal document and amendments can be made.</p>
Condition B41	<p>Observation No. 21 – Condition B41(d)(i) requires the ESCP to identify all activities that could cause soil erosion, generate sediment, or affect flooding. Santos should consider updating section 6 in the ESCP to discuss flooding risks and cross-reference sections 5.7 and 6.7, and Tables 6.1 and 8.1, in the SWMP.</p> <p>Observation No. 22 – The ESCP refers to <i>Managing Urban Stormwater: Soils and Construction - Volume 1 and Volume 2</i>, but there is limited guidance on what sediment controls could be used for different activities. Future ESCP revisions could consider including a matrix to identify potential control options by activity type and include capacity guidance for future sediment basins in Phase 2 of the Project.</p> <p>Observation No. 23 – Section 4.2.3 in the Site Water Balance states that the volume of potable water is negligible in comparison to the volume of produced water and as such has not been included in the overall water balance for Phase 1. To improve transparency, an estimated volume could be included in the Management Plan and reported in Annual Reviews.</p> <p>Observation No. 24 – Santos should consider including a water management system schematic in the SWMP and WMP to assist in understanding the system's various elements.</p> <p>Observation No. 25 – There is an inconsistency between the SWMP Channel Stability Performance measure: “<i>no increase in areas of instability within water courses</i>” and the Table 7 performance measure: “<i>maintain or improve baseline channel stability in affected watercourses</i>”. Santos should revise this aspect of the SWMP to ensure consistency with Table 7 of Development Consent SSD 6456.</p> <p>Observation No. 26 – For the purpose of complying with relevant performance measures in Table 7 of Development Consent SSD 6456 in relation to riparian and aquatic ecosystems, Santos should conduct a stream/channel stability assessment in accordance with an industry-recognised methodology.</p> <p>Observation No. 27 – In Section 8.1 and Table 8.1 of the SWMP, the terms “performance criteria” and “performance indicator” are used interchangeably. Santos should update Section 8.1 and Table 8.1 to ensure consistency between the section and table headings and the third column heading in the table.</p> <p>Observation No. 28 – Santos should review the Groundwater Management Plan and Groundwater Monitoring Program to address the expert's observations in the Independent Hydrogeological Audit Report (see Appendix G of this audit report)</p>	<p>O27 - Santos will consider this during the management plan review, as per condition D4 of SSD6456</p> <p>O28 - O30 Santos will consider this for Phase 2 management plans.</p> <p>O31 - Santos will consider this during the management plan review, as per condition D4 of SSD6456</p> <p>O32 - Santos will consider this for Phase 2 when the development transitions from exploration and appraisal to production and activity increases.</p> <p>O33 - Santos will consider this during the management plan review, as per condition D4 of SSD6456</p> <p>O34 – Santos Rig schedules are flexible and can change to meet business needs at any given point. Any dates would be approximate and subject to change. It is more appropriate to use phases rather than dates to describe when assets will be constructed.</p> <p>O35 & O36 - Santos will consider this during the management plan review, as per condition D4 of SSD6456</p>

	<p>regarding: a) timing of monitoring network installation; and b) timing of monitoring implementation.</p> <p>Observation No. 29 – The contingency measures described in Section 12.2 and in Level 2 of the TARP (Table 10.1 – Pond level trigger action response plan) are unclear apart from “shut-in PW production/stop the flow of water into the pond/cell”. Santos should review the contingency measures and clearly describe these in Section 12.2.</p> <p>Observation No. 30 – Due to the interaction between the PWMP and SWMP for the discharge activity, Santos should update Section 6 and Section 9 of the PWMP to clarify the monitoring program for the Bohena Creek discharge (treated water) activity and the Bohena Creek surface water monitoring program as described in the SWMP.</p> <p>Observation No. 37 – Santos should engage a suitably qualified agricultural expert to conduct periodic assessments of ‘soil and groundwater conditions and quality’ as referred to in condition B41(d)(vi), to support ongoing management of the irrigation area.</p> <p>Observation No. 38 – Santos could revise section 5 of the IMP to describe required protocols regarding any irrigation subject to an RREO.</p> <p>Observation No. 39 - Santos could revise Table 9.1 in Section 9.2 of the Irrigation Management Plan to describe relevant operational decisions to be made in relation to assessment and management of system capacity in the Leewood ponds, in the event of an unpredicted impact in relation to the irrigation of amended treated water</p> <p>Observation No. 40 - To add clarity to the purpose of the Protocols detailed in the DSP (and to reflect the Management Plan purpose documented in Section 1.2), Section 5 should be updated to clearly state that the protocols detailed in this section are for the management of Treated Water used for Dust Suppression. Dust management and mitigation measures will be described in the Air Quality and Greenhouse Gas Management Plan (to be developed prior to the commencement of Phase 2).</p> <p>Observation No. 41 – The Water Type for Treated Water and Amended Treated Water in Table 5.1 of the Dust Suppression Protocol could create confusion. The Auditors note that Development Consent SSD 6456 defines both types; however, the Amended Treated Water type excludes the words “and/or for managed release to Bohena Creek”. Santos should consider providing additional guidance in Section 5 to clarify or simplify definitions and the source of these water types.</p>	<p>O37 – Noted. Santos will engage a suitably qualified agricultural expert for advice when the irrigation area is operational.</p> <p>O38 - Santos will consider this during the management plan review, as per condition D4 of SSD6456 if an RREO is in effect at the time.</p> <p>O39 – O41 - Santos will consider this during the management plan review, as per condition D4 of SSD6456</p>
Condition B51	<p>Observation No. 42– Figure 1.1 in the BMP does not consider the Water Management Plan as referenced in condition B51(d). Santos could update Figure 1 to include to the Water Management Plan.</p> <p>Observation No. 43 – For condition B51(d), Santos could consider updating Table 6.1 in the BMP to identify the relevant Management Plan or protocol for each mitigation measure.</p> <p>Observation No. 44 – For condition B51(d), Santos could update Table B1 in the BMP to include a reference to section 6.7.</p> <p>Observation No. 45 – For condition B51(f), Santos could update Table B1 in the BMP to be consistent with Table 1.1 of the BOS.</p> <p>Observation No. 46 – The current biodiversity monitoring program occurs annually in spring (Section 9.3.2.1 of the BMP). A reoccurring monitoring program during the same season in every year may restrict the recording of some species which may be present at other times of the year. Santos could conduct additional monitoring during other seasons in each year.</p> <p>Observation No. 47 – For condition B51(l), Santos could update Table B1 to include the correct section reference as the current reference of BOS Section 3.4 is not relevant.</p>	<p>O42 – O45 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p> <p>O46 – BMP monitoring surveys are conducted in spring because Spring represents the highest activity period for most fauna species, and the highest diversity for native plant communities (including weeds). Santos considers the current approved monitoring program commensurate with Phase 1 activities.</p>

		O47 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.
Condition B59	<p>Observation No. 48– For improved compliance with condition B59(a) and consistent with other management plans, Santos should include the name(s) and qualification(s) of the person(s) who prepared the ACHMP in the body of the Plan. The Auditors noted that the Santos-redacted Plan cover page has blanked out the ‘Author’ detail.</p> <p>Observation No. 49 – For improved compliance with condition B59(b) and consistent with other management plans, Santos should include a “Consultation Records” Appendix in the ACHMP which includes a summary of issues raised during consultation and how those issues were addressed.</p>	<p>O48 - Santos has redacted personal details for privacy reasons.</p> <p>O49 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p>
Condition B65	<p>Observation No. 50 – As part of the next external lighting installation/maintenance works at the NGP site, Santos could engage the contractor to assess and provide a written report regarding compliance of the Project against relevant requirements in:</p> <ul style="list-style-type: none"> • <i>AS 4282-1997 – Control of obtrusive effects of outdoor lighting;</i> • <i>AS 1158-2010 – Lighting for roads and public spaces for roadways and plant;</i> and • <i>Dark Sky Planning Guideline (2016) – Protecting the observing conditions at Siding Spring.</i> 	Santos considers lighting as part of its detailed design ahead of campaigns. Assurance by way of light surveys is conducted at each lease during activity.
Condition B70	Observation No. 51 – Santos should consider updating Section 8 of the Waste Management Plan by including a table to consolidate all monitoring and testing requirements of the various waste streams that have been identified in Section 6.	Santos will consider this during the management plan review, as per condition D4 of SSD6456.
Condition B71	<p>Observation No. 31 – During the field inspection at Dewhurst 43 in August 2023, the Auditors observed poor waste segregation and management practices by a drilling contractor who was using a dedicated spill kit bin as a general waste bin and discarding empty drink bottles on the ground. Santos should implement refresher training; e.g. toolbox talks, with all NGP employees and contractors to reinforce the required waste management practices and workplace behaviours.</p> <p>Observation No. 32 – The Narrabri Shire Council requested ongoing and routine liaison by Santos with the Council's Waste and Water Divisions to ensure the Council's water treatment and waste facilities can appropriately manage the volume and product type. Despite the Project's low volumes of waste at the current stage, Santos should ensure that this engagement is formalised.</p> <p>Observation No. 54 – The Waste Management Plan requires monthly monitoring of waste volumes. Despite the low waste volumes during Phase 1 of the Project, Santos should review its current processes to confirm that this monitoring occurs.</p>	<p>O52 - Inappropriate storage of items onsite can be a potential hazard. The potential hazards were observed and rectified as soon as practical (i.e. the following day). No incident or potential for material environmental harm had occurred at this site.</p> <p>A follow-up site inspection was conducted with the Auditor to demonstrate housekeeping concerns were addressed and the items onsite were handled in accordance with the Waste Management Plan.</p> <p>Santos welcomed the observation as an opportunity for improvement. The matter was raised in the “Toolbox” pre-start meeting as an EHS issue- on 31 August 2023. Specific Environmental Hazard training was delivered to NGP staff on 19 October 2023 reinforcing the Santos hazard reporting requirements.</p> <p>O53 – Santos meets with Narrabri Shire Council monthly to discuss project related matters. The last meeting was 07 November 2023.</p> <p>O54 - Santos waste contractors report waste volumes along with other waste metrics monthly. This is to comply with Santos Management System (SMS) operating procedure on Waste Monitoring and Reporting (SMS-EXA-OS01-PD02-PD01) and has been in effect since September 2021.</p>
Condition B78	Observation No. 55 – Section 7.6.1 of the Fire Management Plan states that the RFS Bushfire Awareness Training package is required to be completed by relevant NGP personnel, whilst these personnel are potentially required to also complete Level 1 - Fire Management training. It is unclear if these training packages differ or if one or both are required to be completed.	Section 7.6.1 of the Fire Management Plan states “All Santos staff and contractors who are required to conduct works in bushfire prone land (i.e. any area within 100 m of bushland or grassland) are required to complete the RFS Bushfire Awareness training package designed for support personnel not directly involved in firefighting. This section goes further to state “Both the Bushfire Awareness and Fire Management Level 1 programs provide accredited training and a nationally recognised statement of attainment.”
Condition B83	Observation No. 56 – Due to the drafting of the Rehabilitation Objectives in the third column of Table 9.1 – Rehabilitation Completion Criteria in the Rehabilitation Management Plan, it is difficult to confirm alignment with the approved rehabilitation objectives detailed in Condition B81 of SSD 6456 and reproduced in Table 1.1 of the	

	<p>RMP. Santos should consider updating Table 9.1 in the Rehabilitation Objectives column of the RMP to demonstrate alignment with the Project Rehabilitation Objectives (Table 1.1).</p> <p>Observation No. 57 – Santos should consider updating the RMP (Table 9.1) and provide specific references to the monitoring program in the BMP. This would support demonstrating how the BMP integrates with the RMP.</p> <p>Observation No. 58 – A Completion Criterion in Table 9.1 of the Rehabilitation Management Plan includes: “Seed has been collected from the local area for a diversity of species. Seed has been dried, sorted and refrigerated in accordance with Appendix D of this RMP.” However, Appendix D does not include this information. Santos should resolve this inconsistency and update Appendix D accordingly.</p>	<p>O56 & O57 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p> <p>O58 - Santos will update references during the management plan review, as per condition D4 of SSD6456</p>
Condition D1	<p>Observation No. 59 – The EMS does not describe the internal Environmental Incident reporting requirements. Santos should consider updating the EMS to reference internal reporting procedures and provide operational staff and contractors with the required awareness training.</p> <p>Observation No. 60 – The EMS should describe how Project obligations and communication records are managed e.g. Landfolio and SRM, to ensure all obligations are met and relevant records maintained.</p>	<p>O59 - The Santos contractor and employee onboarding process includes mandatory training specific to the environmental values and constraints of the NGP. Additionally, Santos delivers pre-start training sessions to contractors prior to commencement of development activities. Santos delivers internal Environmental awareness training to Santos field staff periodically; this includes the use of Santos incident management system and notifications of environmental hazards and incidents.</p> <p>O60 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p>
Condition D2	<p>Observation No. 61 – There is no consolidated Environmental Risk Register for the NGP. Each Management Plan includes a table of relevant environmental risks; however, inherent and residual risks have not been documented. Santos should consider developing a consolidated Environmental Risk Register and assess the inherent and residual risks on an annual basis.</p>	<p>Noted. Santos will consider a consolidated risk register for the NGP.</p>
Condition D3	<p>Observation No. 62 – Table B4 in the EMS should be amended to refer to condition D3. The EMS does not have to have a contingency plan under this condition.</p>	<p>Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p>
Condition D12	<p>Observation No. 63 – Recently published NGP Quarterly Monitoring Reports (completed and reported against Santos’s EPL 20350) reference an obsolete version of the EPL (issued 17 November 2022). The current issue date of the EPL (as of the issue date of the draft version of this independent environmental audit report) is 28 September 2023.</p> <p>Observation No. 64 – Table 6 – Groundwater Level Monitoring in the Santos NGP Quarterly Monitoring Reports (completed and reported against Santos’s EPL 20350) defines (in column 1) that “samples” are taken. This is potentially incorrect, as no actual groundwater samples are collected, only a record of continuous Standing Water Level (SWL) for the six locations defined in this table. Santos should consider replacing the word “sample” with “record” to better define the information and data being collected and presented within this Table 6.</p> <p>Observation No. 65 – For ease of interpretation by the public, a legend should be provided underneath Table 1 in the Santos NGP Quarterly Monitoring Reports (completed and reported against Santos’s EPL 20350) to define the locations for the abbreviations listed in these reports (i.e. BWD, LWD, TFD, WPK, DWH, NYO, TUL, BHN, LWW etc.).</p> <p>Observation No. 66 – The Santos NGP Quarterly Monitoring Reports (completed and reported against Santos’s EPL 20350) do not provide any indication if the tabulated results are compliant with the limits/criteria defined in the EPL. For example, the data is not colour coded (red or green) demonstrating compliance or non-compliance, nor are the EPL limits defined within the individual tables provided in these quarterly reports.</p> <p>Observation No. 67 – A total of 116 Water monitoring locations are listed in Table 1 of the Santos NGP Quarterly Monitoring Reports (completed and reported against Santos’s EPL 20350). It is difficult for the reader to determine which locations were: a) sampled for water quality; and b) measured for SWL. Two additional columns could be added to Table 1 defining yes/no if: a) a water quality sample was taken; and b) if a SWL was recorded.</p>	<p>O63 - Santos will amended the EPL version date on the quarterly monitoring reports on future publications.</p> <p>O64 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p> <p>O65 - Santos Environmental Protection Licence 20350 is freely available from either the public register on the NSW EPA website or Santos Narrabri Gas Project website and includes location descriptions for the abbreviations mentioned.</p> <p>O66 – EPL 20350 does not impose limits in relation to water monitoring.</p> <p>O67 - Santos Environmental Protection Licence 20350 is freely available from either the public register on the NSW EPA website or Santos Narrabri Gas Project website and details required sampling methods, frequency and locations.</p> <p>O68 – Santos’ EPBC Approval (EPBC 2014/7376) contains 41 conditions within Annexure A – Conditions of Approval. Conditions 49 and/or 53 do not exist. This observation is inconsistent with Santos EPBC approval conditions.</p>

	<p>Observation No. 68 – As of September 2023, the Santos GLNG Coal Seam Water Monitoring and Management Plan (CWMMP) Annual Report 2022 had not been published on the Santos NGP website (i.e. the previous 2021 annual report was issued and published on 31 March 2022). This is potentially a non-compliance against Conditions 49 and/or 53 of Santos’s EPBC Approval (i.e. publishing of the 2022 report is required by the 31st March 2023). The Auditors noted that the CWMMP Annual Reports published on the Santos NGP website do not include any content or reference to the Narrabri Gas Project.</p>	
Condition D13	<p>Observation No. 69 – The Santos NGP website contains comprehensive information including the current Phase 1 of the Project; however, Santos should consider creating a simple infographic on the home page of the website to provide a simple timeline of the Project and create a link to an information page for each Project Phase.</p> <p>Observation No. 70 – The Environmental Approvals web page includes links to the <i>Bibblwindi and Dewhurst Pilot project consents</i> which have now been surrendered. Santos should consider removing these redundant consents from the Santos NGP website.</p> <p>Observation No. 71 - Santos should include the Instruments of Variation dated 29 August 2023 for PEL 238, PAL 2 and PPL 3 on the Santos NGP website.</p>	<p>O69 - Santos will consider an infographic for the project website.</p> <p>O70 – Santos will remove in due course.</p> <p>O71 – Instruments of variation for NGP Tenures have been included on NGP website.</p>

Petroleum Exploration Licence 238 (PEL 238), Schedule 2 – Petroleum Exploration Licence Conditions (excluding Instrument of Variation dated 29 August 2023)		
Condition	Independent Audit Observations	Santos Response
2	<p>Observation No. 33 – Santos could review and update the Stakeholder Risk Register to include up-to-date agency and stakeholder information (i.e. agency name, contact person and email address) in the consultation register which was developed in preparation for this audit.</p> <p>Observation No. 34 – Santos should update the Narrabri Community Engagement Plan to ensure it complies with all requirements of the <i>Exploration Code of Practice: Community Consultation</i> (May 2023) including:</p> <ul style="list-style-type: none"> consideration of the CCC and Advisory groups as stakeholders; identification of planning processes to assist in informing the schedule of the proposed works; e.g. Field Development Plan (see mandatory requirement 3(c) iii) of the Code); detail of the mechanism for revising the community consultation strategy to ensure it continues to meet the requirements of the Code. 	<p>O72 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p> <p>O73 - Santos will consider this during the management plan review, as per condition D4 of SSD6456.</p>
5	<p>Observation No. 74 – The Auditors understand that all Well Pads that have been partially rehabilitated will be disturbed by either ongoing well workovers or future well abandonment activities. Santos should ensure the temporary nature of partial</p>	<p>ESG4 reports the status of exploration activities and rehabilitation as; total area disturbed and, area rehabilitated and signed off by the Department. Santos does not report on partial rehabilitation for the reasons outlined in the Auditors observation.</p>

	rehabilitation areas are noted in future ESG4 reporting and Annual Reviews (as referred to in condition D8 of Development Consent SSD 6456).	
8	Observation No. 75 – The Auditors note that this condition is not time-bound, and Santos has not conducted petroleum exploration activities within these overlapping tenure areas. Current evidence as of August 2023 demonstrates Santos's efforts to enter into a Cooperation Agreement with Whitehaven Coal.	Noted.
18	Observation No. 76 – EMS Table B1 (page 69) incorrectly references Section 3.4 of the PWMP to address the requirements of the <i>Exploration Code of Practice: Environmental Management</i> (Department of Regional NSW, June 2021).	Santos will update references during the management plan review, as per condition D4 of SSD6456

Petroleum Assessment Lease 2 (PAL 2) (excluding Instrument of Variation dated 29 August 2023)		
Condition	Independent Audit Observations	Santos Response
2	Observation No. 77 – The submission of the POP (30 August 2022) was prior to the approval of the Environmental Management Plans required by Development Consent SSD 6456. Santos should ensure that future POP revisions refer to the approved strategy, management plans and programs.	Noted. Future POP's will refer to current and approved management plans, strategies and programs.
3	Observation No. 78 – The AEMR duplicates the Annual Review required by Development Consent SSD 6456. Santos should consider consulting with the Resources Regulator to discuss the opportunity to align reporting with the Annual Review. Observation No. 79 – The AEMR includes historical information not relevant to the reporting period. Santos may wish to reduce this to information only applicable to the reporting period subject to additional requirements requested by the Director-General. Observation No. 80 – The AEMR and ESG 4 reporting dates are inconsistent. Santos may wish to consult with the Resources Regulator about aligning reporting periods.	O78 - Noted. Santos may raise this with the Resources Regulator in due course, however annual reporting requirements originate from separate approval conditions and draw authority from different legislation. O79 – Noted. Santos will consider this for the next AEMR. O80 – Noted.
5	Observation No. 81 – The Auditors understand that all wells that have been partially rehabilitated will be disturbed during either ongoing well workovers or future well abandonment activities. Santos should ensure the temporary nature of partial rehabilitation areas is reported in Annual Reviews (as per condition D8 of Development Consent SSD 6456) and not reported as completed rehabilitation (as per ESF2 certification).	Acknowledged. Santos has not submitted an Annual Review of the NGP as the project commenced in February 2023, the first annual review will be submitted in March 2024 and report on the previous calendar year, consistent with SSD6456 condition D8. ESF2 forms are submitted for the relinquishment of sites that have completed rehabilitation, not reporting on partial rehabilitation.
11	Observation No. 82 – The current letter dated 19 December 2022 from NSW Mining, Exploration and Geosciences is relevant to specific wells for determining the mineability of coal seams. Using current geological data and other relevant information, Santos should consult MEG to seek a determination on the mineability of coal seams for all of PAL 2.	Noted. Santos may consult MEG on this matter.

Petroleum Production Lease 3 (PPL 3) (excluding Instrument of Variation dated 29 August 2023)		
Condition	Independent Audit Observations	Santos Response
2	Observation No. 35 – The submission of the POP (18 May 2022) was prior to the approval of the Environmental Management Plans required by Development Consent SSD 6456. Santos should ensure that future POP revisions refer to the approved strategy, management plans and programs.	Noted. Future POP's will refer to current and approved management plans, strategies, and programs.
3	Observation No. 36 – Section 2.2 in the PPL 3 AEMR does not acknowledge the 2008 and 2010 amendment to the PPL 3 instrument. This history should be documented. Observation No. 37 – The AEMR duplicates the Annual Review required by Development Consent SSD 6456. Santos should consider consulting with the Resources Regulator to discuss the opportunity to align reporting with the Annual Review.	O84 - Noted. This is inconsistent with O79 regarding providing historical information in AEMR's. O85 - Noted. Santos may raise this with the Resources Regulator in due course, however annual reporting requirements originate from separate approval conditions and draw authority from different legislation.

	Observation No. 38 – The AEMR and ESG 4 reporting dates are inconsistent. Santos may wish to consult with the Resources Regulator about aligning reporting periods.	O86 - Noted.
5	Observation No. 39 – The Auditors understand that all wells that have been partially rehabilitated will be disturbed during either ongoing well workovers or future well abandonment activities. Santos should ensure the temporary nature of partial rehabilitation areas is reported in Annual Reviews (as per condition D8 of Development Consent SSD 6456) and not reported as completed rehabilitation (as per ESF2 certification).	Acknowledged. Santos has not submitted an Annual Review of the NGP as the project commenced in February 2023, the first annual review will be submitted in March 2024 and report on the previous calendar year, consistent with SSD6456 condition D8. ESF2 forms are submitted for the relinquishment of sites that have completed rehabilitation, not reporting on partial rehabilitation.

Water Access Licence No. 15819 – BWD1		
Condition	Independent Audit Findings and Recommendations	Santos Response
1	Observation No. 88 – This WAL 15819 references the same Water Supply Works number (90WA811395) as WAL 15847. Santos should seek to clarify this anomaly to prevent administrative confusion.	Santos will review and investigate this anomaly.

Water Access Licence No. 15847 – BWD1, BWD5, Leewood WB		
Condition	Independent Audit Findings and Recommendations	Santos Response
1	Observation No. 89 – This WAL 15847 references the same Water Supply Works number (90WA811395) as WAL 15819. Santos should seek to clarify this anomaly to prevent administrative confusion.	Santos will review and investigate this anomaly.

