



# Emission Abatement Plan Audit Report



**P-EA-100658735**

Centurion North Pty Ltd

21 August 2025

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S4	0	A Zhang, I Deng	T. Jefferys		T. Young		21/08/25
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[Status code]							
[Status code]							
[Status code]							

**GHD Pty Ltd | ABN 39 008 488 373**  
Contact: Tom Jefferys, Scientist | GHD  
145 Ann Street, Level 9  
Brisbane, Queensland 4000, Australia  
**T** +61 7 3316 3000 | **E** bnemail@ghd.com | **ghd.com**

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# Auditor's independent verification statement

Peabody Australia Holdco Pty Ltd commissioned GHD Pty Ltd (GHD) to provide an independent compliance audit of the Greenhouse Gas Abatement Plan prepared for an exploration project in Centurion Mine, under the conditions B8 as listed in the Environmental Authority (EA) Permit 100658735, held by Centurion Coal Mining Pty Ltd.

An appropriately qualified person must undertake an annual audit by **30 July** to determine whether the Greenhouse Gas Abatement Plan has been implemented and complied with during the previous 12 months. For clarity, this audit report defines the "previous 12 months" as the period from 1 July to 30 June, in alignment with the NGER reporting period.

The period covered by the audit is 26 March 2025 (date of issue of EA) to 30 June 2025.

The independent verification audit was conducted by Tom Young (Lead Auditor), Tom Jefferys, Izzie Deng and Amber Zhang (audit team). Tom Young is a registered greenhouse and energy auditor with the Clean Energy Regulator who has performed and reviewed multiple audit engagements on coal mining and prepared greenhouse gas estimations. For this audit, no site visit was required.

The methodology used for this audit conforms to the requirements of ISO 19011:2018 *Guidelines for auditing management systems*.

This independent verification audit has a number of limitations:

1. It does not include an assessment as to the quality or appropriateness of the actions undertaken, only that the actions were undertaken.
2. The audit team has only audited the information provided and that it is true and correct at the time.

GHD was not involved in the preparation of the Statement of Compliance. The Lead Auditor and audit team are independent from PAH or Centurion and have not been involved with Centurion during the reporting period that could impair the audit team's independence or objectivity.

Overall, the information supplied by PAH / Centurion was sufficient to verify that it has undertaken actions from the Greenhouse Gas Abatement Plan. A total of eight GHG emission reduction measures were identified in the GHG Abatement Plan, as shown below:

- Operation of flares at >95% availability
- Real-time monitoring of the flare's ignition system with alarms
- Full-time Gas Drainage Engineer employed to monitor and address performance of gas drainage and flare operation
- Use of personal methane gas monitors to detect fugitive emissions
- Tracking response times to alarms
- Use and maintenance of fuel-efficient plant and equipment
- Monitoring of diesel use, and
- Operator training

It should be noted that EA was effective from 26 March 2025, which was approximately three months prior to the end of the audited period, as a result, there has not been significant progress in the Centurion North project, and so not all mitigation measures have needed to be implemented. It is understood that the project had not yet reached the stage where gas drainage would occur. Consequently, infrastructure such as the flare system had not been installed at the time of the audit. Given the early stage of work relative to the project's overall schedule, a number of the requirements outlined in the GHG Abatement Plan were not yet applicable during the audit period.

All implementation actions that had been implemented at the time of the audit were verified and we found no contraventions of the requirements of the EA permit. We found that five out of eight of the proposed mitigation measures were already underway and/or implemented, the remaining three measures were not applicable as the project is not progressed enough to implement measures.

Tom Young  
Lead Registered Greenhouse and Energy Auditor

GHG Pty Ltd  
Level 9/180 Lonsdale St, Melbourne VIC 3000

22 August 2025

# 1. Introduction

## 1.1 Overview

Centurion Coal Mining Pty Ltd proposed a pilot coal seam gas (CSG) exploration and extraction project on ML 1790, which triggered the need to amend its Environmental Authority (EA) permit (P-EA-100658735). Under the Queensland Government's 2024 Greenhouse Gas Emissions Guideline, the project is classified as a 'medium to high' emissions activity. As a result, the EA amendment required Peabody Australia to develop and implement a Greenhouse Gas (GHG) Abatement Plan for Centurion Coal Mining Pty Ltd's Centurion North exploration operations. The GHG Abatement Plan (GHGAP) outlines the project's expected GHG emissions per stage and the mitigation and management measures to be implemented throughout the project's life, as required under the conditions of the amended EA Permit. In response to this, Centurion North submitted the GHG Abatement Plan dated 19 February 2025 (Version 5).

In accordance with its Environmental Authority (EA) Permit requirements, Centurion Coal Mining Pty Ltd is obligated to have its Greenhouse Gas Abatement Plan (GHGAP) audited by an independent and qualified third party. Specifically, Condition B8 of the permit mandates an annual audit to evaluate whether the Plan has been effectively implemented and adhered to over the preceding 12-month period. For clarity, this audit report defines the "previous 12 months" as the period from 1 July to 30 June as this aligns with Australia's National Greenhouse and Energy Reporting (NGER) reporting period timelines. However as the EA was only issued on 26 March 2025 this first audit covers the period 26 March 2025 to 30 June 2025.

To meet this requirement, Peabody Australia has engaged Tom Young of GHD, an independent and accredited lead auditor (Registered Greenhouse and Energy Auditor (RGEA) registration number 0137/2011 with the Clean Energy Regulator), to conduct the audit of the Centurion North Exploration Project's GHG Abatement Plan in alignment with Condition B8.

## 1.2 Audit scope

Condition B8 – EA Permit states:

*'An appropriately qualified person must undertake an annual audit by 30 July to determine whether the Greenhouse Gas Abatement Plan has been implemented and complied with during the previous 12 months.'*

Specifically, the scope of the audit as requested by Peabody, was to verify:

- GHG Management and Abatement
  - Review of GHG inventory and emissions sources to understand how and if the calculations have been performed and if all sources have been included for Centurion North.
  - Verification of abatement measures and technologies in use as listed in the plan.
  - Verification of emissions reduction targets and performances.
  - Evaluation of monitoring and reporting protocols.
- Compliance
  - Alignment with Condition B8 of the EA Permit
  - If the emission reduction program in section 4.4 of the GHG Abatement Plan has begun or completed implementation, and then review and verify evidence of its operation.
  - Review of internal assurance, governance processes and stakeholder engagement and communication strategies.

The audit is required under Condition B8 of the EA Permit, which specifies that the audit must cover the previous 12-month period. In this audit report, the "previous 12 months" is defined as the period from 1 July to 30 June. The audit must be conducted by an appropriately qualified person, which GHD will demonstrate compliance with within this audit report. The GHG Abatement Plan was submitted on 19 February 2025 (version 5), with onsite work beginning at approximately the same time. The data from the project's 3 months operation period has been included in this audit as its first reporting year.

## 1.3 Purpose of this report

The purpose of this report is to present the findings of the compliance audit conducted on Centurion North's GHG Abatement Plan, as required under Condition B8 of the Environmental Authority (EA) Permit. This report aims to assess the extent to which the proponent has implemented the actions and commitments outlined in the approved GHG Abatement Plan during the defined audit period, and to verify compliance with the relevant requirements of the EA.

In accordance with Condition B8, the audit period is defined as 1 July to 30 June in this audit report to align with the NGER reporting period. However, as the Centurion North project was still in its early stage during the audit period, with on-site work having only commenced for three months. This audit covers the period from the EA effective date (26 March 2025) to the end of current reporting period (30 June 2025). A desktop review was undertaken to confirm the measures that have been implemented and to analyse the reasons of those not yet implemented.

This report may also provide recommendations to support continuous, compliant implementation of the GHG Abatement Plan as required by Centurion's Environmental Authority 100658735.

### 1.3.1 Limitations

*This report has been prepared by GHD for Centurion North Pty Ltd and may only be used and relied on by Centurion North Pty Ltd for the purpose described in the Section 1.3 'Purpose of this report' and as agreed between GHD and Centurion North Pty Ltd.*

*GHD otherwise disclaims responsibility to any person other than Centurion North Pty Ltd arising in connection with this report. GHD also excludes implied warranties and conditions, to the extent legally permissible.*

*The services undertaken by GHD in connection with preparing this report were limited to those specifically detailed in the report and are subject to the scope limitations set out in the report.*

*The opinions, conclusions and any recommendations in this report are based on conditions encountered and information reviewed at the date of preparation of the report. GHD has no responsibility or obligation to update this report to account for events or changes occurring subsequent to the date that the report was prepared.*

*The opinions, conclusions and any recommendations in this report are based on assumptions made by GHD described in this report (refer section(s) 1.3.2 of this report). GHD disclaims liability arising from any of the assumptions being incorrect.*

*GHD has prepared this report on the basis of information provided by Centurion North Pty Ltd and others who provided information to GHD (including Government authorities), which GHD has not independently verified or checked beyond the agreed scope of work. GHD does not accept liability in connection with such unverified information, including errors and omissions in the report which were caused by errors or omissions in that information.*

*GHD has not been involved in the preparation of the Centurion North/PAH's Statement of Compliance and has had no contribution to, or review of the Centurion North Statement of Compliance other than in this report. GHD shall not be liable to any person for any error in, omission from, or false or misleading statement in, any other part of the Centurion North Statement of Compliance.*

### 1.3.2 Assumptions

The following assumptions were made in the preparation of this report:

- All available and relevant information was supplied as requested
- The information supplied by Centurion North Pty Ltd, including documented information and interviews, was complete, true and correct at the time it was supplied.
- Centurion North Pty Ltd has brought all relevant matters to the audit team's attention and is not aware of any undisclosed information which may impact the audit findings.

## 1.4 Audit team

The audit team consisted of the following individuals whom are all qualified to conduct a greenhouse gas abatement compliance audit.

Table 1 Audit team

Team member	Role
Tom Young	Lead auditor, RGEA
Tom Jefferys	Audit manager
Izzie Deng	Audit team member
Amber Zhang	Audit team member

Tom Young has over 20 years of experience in emissions reporting across the oil, gas, and coal sectors, with deep expertise in regulatory frameworks and emissions reduction schemes. He has led numerous audits under the National Greenhouse and Energy Reporting (NGER) Scheme, Safeguard Mechanism Australian Carbon Credit Unit (ACCU) Scheme, and has peer-reviewed several coal-related audit engagements.

Tom Jefferys has also led and delivered multiple greenhouse gas assessments, abatement plans, and compliance audits of a very similar nature. The broader audit team has significant experience in preparing greenhouse gas assessments, with industry-specific knowledge in coal mining emission reduction practices, including flaring.

All audit team members were confirmed to be independent at the time the audit was conducted.

## 1.5 Audit criteria

The auditor has adopted the following audit criteria:

- **Compliant:** Evidence reviewed by the audit team supports Centurion North's stated status of implementing commitments within the approved GHG Abatement Plan. This item has been shown by the colour green.
- **Non-compliance:** Evidence reviewed by the audit team does not support Centurion North's stated status of implementing commitments within the approved GHG Abatement Plan. This item has been shown by the colour red.
- **Partial compliance:** Evidence reviewed by the audit team in some areas support Centurion's stated status of implementing commitments within the approved GHG Abatement. This item has been shown by the colour yellow.
- **Not applicable:** Activities are to be undertaken outside of the audit period or specified timeline.

## 2. Audit method and approach

The audit was conducted in two key phases:

### **Desktop review and request for information (RFI):**

An opening meeting was conducted to understand the progress of the Centurion North exploration project. Afterwards, GHD requested relevant documentation from Centurion Coal Mining Pty Ltd, including monitoring data, evidence of the purchased equipment and the uninstalled flares at the site, and compliance records and schedules. An audit checklist was developed in accordance with the Queensland Greenhouse Gas Emissions Guideline (May 2024) and the requirements of Conditions B8 and addressing the compliance criteria of B9 of the EA Permit. The audit team reviewed all submitted materials to assess the suitability, implementation, and compliance of to the GHG Abatement Plan to the EA Permit conditions.

### **Reporting:**

Following the review, GHD compiled the audit findings into a structured report, detailing observations, evidence, compliance status, and any recommended corrective actions. A draft report was provided to Centurion for feedback, with a final version issued upon review.



## 3. Summary of audit findings

### 3.1 Status of works

As at the date of the audit, construction activities for the project had commenced in late 2024, with pre-planning activities completed on 2 November 2024. As of the end of the audit period, approximately 39.7% of the total project scope had been completed, including:

- **SIS wells** – 6 wells completed, located closest to the existing mining lease
- **VPW wells** – 7 wells completed
- **3 downhole progressive cavity (PC) pumps have been installed**
- **Drill holes** – 6 out of 12 drill holes completed, filled with fluid and capped
- **Monitoring skids** – not yet installed

It is understood that dewatering activities have not occurred and that as such the project had not yet reached the stage where gas drainage would occur. Consequently, infrastructure such as the flare system had not been installed at the time of the audit. Given the early stage of work relative to the project's overall schedule, a number of the requirements outlined in the GHG Abatement Plan were not yet applicable during the audit period.

### 3.2 Audit findings

Below in Table 2 is a description of our audit conclusions. For implementations that are not applicable, justification was sought, and reasoning is included in the 'findings' and 'compliant' column. Further detailed findings are available in Table 3.

Compliant	Partial Compliance	Non-Compliance	Not applicable
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Table 2 Table of audit findings

#	Audit Item	Evidence Reviewed	Finding	Compliant
1	<b>Emission reduction measures in the GHG Emissions Reduction Program has been implemented</b>	GHG Abatement Plan version Feb 2025	Emission reduction measures have been implemented to the extent possible given the current stage of the project. Evidence of procurement and site readiness supports the intent to implement the measures as the project progresses.	N/A, Compliant for mitigation measures that are currently applicable.
1.1	Operation of flares at >95% availability	Equipment observed on site via imagery.	<b>N/A – Flares have not yet been installed as the project is still in the early stages.</b> The flare system includes a control skid, referred to Appendix A, which is the skid unit they have already purchased and is currently on site waiting to be installed.	N/A
1.2	Real time monitoring of the flare's ignition system with alarms (1)	Interview performed with onsite staff and gas drainage team.	<b>N/A – Flares for the Centurion North project are not online.</b> Currently, the main complex, Centurion, uses the same real-time monitoring equipment and alarm system. Implementation of this mitigation would appear to be reasonable.	N/A
1.3	Full-time Gas Drainage Engineer employed to monitor and address performance of gas drainage and flare operation	Interview performed with onsite staff and gas drainage team.	A full-time Gas Drainage Engineer, is responsible for overseeing all aspects of the exploration plan, including the management of drilling and completion aspects. The Gas Drainage Engineer also oversees operator training and is ultimately responsible for the gas drainage of this project.	Compliant

#	Audit Item	Evidence Reviewed	Finding	Compliant
1.4	Use of personal methane gas monitors to detect fugitive emissions	Interview performed with onsite staff and gas drainage team.	All crew members are required to wear calibrated Personal Gas Detectors (PGDs) each time before entering the site – including the Centurion North space.	Compliant
1.5	Tracking response times to alarms	Interview performed with onsite staff and gas drainage team.	N/A – These types of alarms are currently in operation in the main complex, but are not installed as part of the expansion that the EA addresses.	N/A
1.6	Use and maintenance of fuel-efficient plant and equipment	SIS 7 and 8 for John	The maintenance schedule has been loaded onto closed loop SAP work order system, allowing for timely maintenance and data recording.	Compliant
1.7	Monitoring of diesel use	Surface Gas Drainage Generators location and Diesel Use NG-SAH-REG-0002-Lucas Drilling - Centurion North	Records of diesel consumption for all field equipment are maintained as part of their financial obligations. Approximately 181 kL have been used by the project so far, resulting in 490 tCO <sub>2</sub> -e of GHG emissions	Compliant
1.8	Operator training	Training logs for surface stack operators.	Training logs of surface stack operators (employees) show relevant trainings.	Compliant

### 3.3 Recommendations

Each year, the authority holder is required to review the GHGAP and have the implementation of the GHGA. We recommend continuing to track each of the emission mitigation strategies so Peabody can remain compliant once each of the mitigation measures comes online.

To make the annual audit process easier and more efficient, we would also recommend maintaining a workbook or folder which holds the evidence and data required to document Peabody's progress towards its mitigation measures.



## 4. Conclusion



We found that five out of eight of the proposed mitigation measures were already underway and/or implemented, the remaining three measures were not applicable as the project is not progressed enough to implement measures.

# **Appendix A**

**Audit Schedule / Findings**

Table 3      Audit Findings

#	Audit Item	Work Performed	Finding/observation
1	<b>Emission reduction measures in the GHG Emissions Reduction Program has been implemented</b>	Reviewed the GHG Abatement Plan (version Feb 2025) and evidence obtained during the course of the audit including interviews with on site staff,	<p>The project is currently in its early stages of development. As such, the majority of the planned emission reduction measures—particularly those related to flaring—have not yet been implemented.</p> <p>Key infrastructure required for emission reduction, including flares and monitoring equipment, has been procured and is present on site. Site staff confirmed that the wells during construction remained capped.</p> <p>While full implementation of the mitigation measures are pending installation and commissioning of the flaring systems, it appears Centurion has taken preliminary steps to enable future implementation.</p> <p><b>Conclusion: Emission reduction measures have been implemented to the extent possible given the current stage of the project. Evidence of procurement and site readiness supports the intent to implement the measures as the project progresses.</b></p>
1.1	Operation of flares at >95% availability	Reviewed project schedule and site photos.	<p>The flare system includes a control skid, indicating that the proposed mitigation measures will be applicable (i.e. alarms, auto-ignition of flare). Site photos below indicate the skid units have already been purchased and is currently on site waiting to be installed.</p> <p>As of this audit period, the flares have not been installed.</p> <p><b>N/A – Flares have not yet been installed as the project is still in the early stages.</b></p> <div>   </div>

#	Audit Item	Work Performed	Finding/observation
			 
1.2	Real time monitoring of the flare's ignition system with alarms (1)	Interviewed the gas drainage team.	<p>Currently, at the main complex, Centurion, uses the same real-time monitoring equipment and alarm system. Implementation of this mitigation would appear to therefore be possible but is not applicable at this point in time.</p> <p><b>N/A – as Flares for the Centurion North project are not online.</b></p>
1.3	Full-time Gas Drainage Engineer employed to monitor and address performance of gas drainage and flare operation	Interviewed the gas drainage team.	<p>A gas drainage engineer is in place for the project, overseeing all aspects of the exploration plan, including the management of drilling and completion aspects. This also includes operator training and overall gas drainage for this project.</p> <p>This role also involves signing off when the skids are commissioned and the automated ignition process. It was reported that if the automated system failed, staff will manually ignite them.</p> <p><b>Implemented</b></p>
1.4	Use of personal methane gas monitors to detect fugitive emissions	Interviewed the gas drainage team.	<p>All crew members gas are required to wear calibrated Personal Detectors (PGDs) prior to entering the site. PGDs are able to detect methane exposure and trigger an alarm if levels exceed the threshold, in which the area will then be evacuated. This detection can indicate gas leaks.</p> <p><b>Implemented</b></p>
1.5	Tracking response times to alarms	Interviewed the gas drainage team.	<p>It was reported that a real-time alarm is triggered in the on-site control room if the flare fails to ignite or there is a flare skid or flow control skid issue. The control room immediately contacts field operators if the alarm is triggered, the field operators are on-site 24/7 to respond to any alarm conditions.</p> <p>These types of alarms are currently in operation in the main Centurion complex, but are currently not in use for the Centurion North project as there are no flares installed.</p> <p><b>N/A – due to the early stage of the expansion works, have not yet been implemented at the project.</b></p>

#	Audit Item	Work Performed	Finding/observation
1.6	Use and maintenance of fuel-efficient plant and equipment	Reviewed maintenance log extract from SAP.	<p>The maintenance schedule has been loaded onto closed loop SAP work order system, this includes all gas calibration, electrical calibration, and both monthly and annual maintenance activities. This allows for timely maintenance and data recording.</p> <p>The extracted maintenance schedule from SAP, as reflected in the maintenance schedule log, shows weekly electrical and mechanical inspection for SIS 07 &amp; 08 and related equipment. This indicates that a well-maintained maintenance program is in place in their SAP system.</p> <p><b>Implemented</b></p>
1.7	Monitoring of diesel use	Reviewed diesel tracking sheets.	<p>Generators for the project consume around 75 litres of diesel per day and is tracked by the gas drainage engineer – this is based off an assumption.</p> <p>Diesel usage for the project is actively tracked, including the power output (wattage) of each generator.</p> <p>Records of diesel consumption for all field equipment are maintained – kept by the project team and retrievable from Finance, as documented in the 'Fuel Usage_Lucas Drilling' and 'Diesel Use of Surface Gas Drainage Generator' spreadsheets. It is tightly controlled as it remains an aspect of emissions and expenditure for the company.</p> <p>Roughly 181,101 L have been used by the project so far, which results in 490 tCO<sub>2</sub>-e of GHG emissions</p> <p><b>Implemented - ongoing</b></p>
1.8	Operator training	Reviewed training logs for two operators.	<p>Surface stack operators hold an RII ORGD304D – the training module provided by Peabody.</p> <p>Personnel also received training in gas monitoring and bag sampling to operate skids. Operators that work on these skids and projects have been given specific training</p> <p>Evidence was obtained of employees who have received the relevant training. Both are employees are surface stack operators (operators of machinery dealing with coal)</p> <p><b>Implemented</b></p>



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