



Mr Stephen Barry
Planning Director - Independent Planning Commission
Via email: Stephen.Barry@ipcn.nsw.gov.au

30 March 2022

Dear Mr Barry

Glendell Continued Operations Project (SSD 9349) and Mount Owen Continued Operations (SSD 5850) Modification

I refer to your recent letter (dated 11 March 2022) requesting additional information in relation to the Glendell Continued Operations Project (SSD 9349) and Mount Owen Continued Operations (SSD 5850) Modification 4.

The Department has reviewed your request and prepared a detailed table responding to each of the questions raised by the Commission (see Enclosure 1).

Please note, a number of the responses rely on information prepared and provided by Glencore. The Department has made it clear in the responses where this is the case.

If you have any questions or wish to discuss further, please contact me on [REDACTED] or by email at stephen.odonoghue@planning.nsw.gov.au.

Yours sincerely

A handwritten signature in black ink, appearing to be "SOD", written over a white background.

Steve O'Donoghue

**Director
Resource Assessments**

Enclosure 1: Further Information Regarding the Glendell Continued Operations Project.

Enclosure 2: Letter from Glencore dated 21 January 2022 regarding Updated GHG Emissions.

Enclosure 1

Further Information Regarding the Glendell Continued Operations Project

Heritage	
<p>1) <i>What distance could the mine encroach towards Ravensworth Homestead without causing damage to the Homestead (from blasting and dust etc.)?</i></p>	<p>The Department has recommended conditions requiring the Ravensworth Homestead be relocated prior to undertaking any mining operations within 1.2 km of the homestead. This is on the basis that the Blasting Impact Assessment (Appendix 15 to the EIS) states (emphasis added):</p> <p style="text-align: center;"><i>The vibration modelling indicates that to limit constraints on blasting, relocation of the Ravensworth Homestead is required by <u>the end of Year 5</u> (approximately 2025) according to the proposed mining progression; this corresponds to an approximate minimum distance from blasting of 1,100 m.</i></p>
<p>2) <i>If the Broke relocation option were to be supported by the Commission, could planning, approvals and relocation of the Homestead be implemented prior to the mine extension reaching the point identified by (1) above?</i></p>	<p>Yes, the Department understands that all relevant planning approvals may be able to be obtained, subject to environmental assessment and approval by the consent authority, prior to mining within 1.2 km of the Homestead (i.e. by the end of Year 5 of the Project).</p> <p>For further context, the additional information prepared by Glencore in relation to the proposed relocation to Broke (dated August 2021 and available here: https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=RFI-20460811%2120210820T055654.228%20GMT), indicates that all relevant planning approvals required to relocate the Ravensworth Homestead to Broke would need to be obtained by the end of Year 2 of the Project. This is to allow sufficient time for Glencore to commence landscaping work on the alternative Ravensworth Farm site prior to operating with 1.1 km of the Ravensworth Homestead in order to prepare that location for the relocation should the planning approvals not be obtained for the relocation to Broke.</p> <p>The Department understands, through discussions with both Singleton Council and Glencore, that this timing would be achievable (i.e. all relevant planning approvals should be able to be obtained, subject to further environmental assessment and determination by the consent authority, prior to the end of Year 2 of the Glendell Continued Operations Project).</p>
<p>3) <i>If the Broke relocation option were to be supported by the Commission, how could this option be conditioned?</i></p>	<p>Should the Broke relocation option be supported by the Commission, the Department suggests that conditions could be prepared that require relocation to Broke, subject to all relevant planning approvals being obtained, but also maintaining the Ravensworth Farm option as a 'default' should the required approvals not be granted.</p> <p>The Department suggests the conditions could be worded as follows:</p> <ul style="list-style-type: none"> B1. <i>Prior to undertaking any mining operations within 2 kilometres of the Ravensworth Homestead, or other such timing as may be agreed by the Planning Secretary, the Applicant must use its reasonable endeavours to obtain a valid planning approval/s for relocation of the Ravensworth Homestead to Broke Village.</i> B2. <i>The Applicant must relocate the Ravensworth Homestead prior to undertaking any mining operations within 1.2 kilometres of the existing homestead structures, in accordance with the Historic Heritage Management Plan required under condition B77, and to the satisfaction of the Planning Secretary.</i> B3. <i>The Applicant must relocate the Ravensworth Homestead to Broke Village (as described in the document/s listed in condition Error! Reference source not found.), or to an alternative site at Ravensworth Farm if the Applicant is unable to obtain valid planning approval/s for the Broke Village relocation site.</i>

Mine Design	
<p>4) <i>What are the commercial considerations (including up front capital costs) for each of the mine design options and why are options that involve leaving Ravensworth Homestead in situ prohibitive?</i></p>	<p>The Department understands that a response to this question has also requested from the Applicant and that a detailed response has been provided to the Commission. The Department considers that Glencore is best-placed to respond to this question, however, the Department has also provided a brief response below.</p> <p>As indicated in Glencore's response (dated 23 March 2022), the Department understand that early years of mining require high upfront capital investment and high mining costs which results in negative cash flows in the first few years of development. Additional commercial-in-confidence information provided to the Department demonstrates that the Project cash flows take a number of years to become positive, and the negative cash flow is only substantially offset by the revenue generated in the later years of the mine life. Glencore asserts that shortening the mine plan does not provide enough revenue later in the mine life to offset this initial negative cash flow.</p> <p>This assertion was a key focus of the Department's independent economic analysis (as discussed in points 209-211 of the Department's Assessment Report). The analysis undertaken by CIE of the additional commercial-in-confidence information regarding the internal rate of return associated with the various mining options concluded that the alternative mine plan options (i.e. smaller the mine plans which leave the Homestead in-situ) are not considered to be economically viable as the high upfront costs are not offset by the revenue generated in these smaller projects.</p>
<p>5) <i>What is the typical mine fleet replacement cycle in terms of providing an indication for the up-front capital costs of this Project?</i></p>	<p>The Department understands that this question has also been posed to the Applicant and that a detailed response has been provided to the Commission. The Department considers that Glencore is best-placed to respond to this question, however, the Department has also provided a brief response below.</p> <p>The Department understand that mining fleet is typically replaced within 15 to 20 years, depending on the specific equipment and the number of hours each item of equipment is operated each year.</p>
GHG Emissions	
<p>6) <i>What are potential options for mitigating the escape of fugitive emissions from the coal seam as part of the mine closure plan?</i></p>	<p>The Department understands that this question has also been posed to the Applicant and that a detailed response has been provided to the Commission. The Department considers that Glencore is best-placed to respond to this question, however, the Department has also provided a brief response below.</p> <p>The Department understands that the exposed seams in the final void would be approximately 100m below ground level and would be situated in the 'low gas zone' and any emissions from the pit floor would be accounted for in the Method 2 gas domain estimates as required by NGERs.</p> <p>Although specific measures to mitigate any emissions from the final landform (e.g. sealing of any exposed coal seams) have not been proposed, Glencore asserts that the emplacement of overburden and recovery of water levels within the spoil and final void (and associated recovery of water levels within surrounding strata) would act to limit any fugitive emissions from exposed seams in the medium to long term. The Department considers that this is consistent with contemporary mining practice and the sealing of coal seams to avoid fugitive emissions from the final landform is not common practice.</p> <p>Notwithstanding, should the Commission wish to ensure that fugitive emissions from the final landform are minimised, it could include an additional objective in the 'Final Landform' row of Table 8 of the recommended conditions which states:</p> <p><i>Minimise post mining fugitive emissions from the exposed coal seam</i></p> <p>This would be consistent with the final conditions prescribed by the Commission in its determination of the Mangoola Continued Operations Project (SSD 8642).</p>

<p>7) <i>What process has been used to establish the Commonwealth emissions baseline, and what is the current emissions baseline for the existing Glendell operations?</i></p>	<p>As mentioned by the Department during its discussion with the Commission on 10 March 2022, the establishment of the calculated emissions baseline is undertaken in accordance with Commonwealth legislation, namely the <i>National Greenhouse and Energy Reporting (Safeguard Mechanism) Rule 2015</i>. Further information on the process of establishing baseline values can be found on the Commonwealth Government website at: http://www.cleanenergyregulator.gov.au/NGER/The-safeguard-mechanism/Baselines/Calculated-baseline#How-is-a-calculated-baseline-set</p> <p>The Department understands that this question has also been posed to the Applicant and that a detailed response regarding the current emissions baseline for the existing Glendell operations has been provided to the Commission.</p>
<p>8) <i>What alternative options to truck haulage to transport ROM coal have been considered (such as the use of conveyors) to the Mount Owen CHPP in order to reduce emissions?</i></p>	<p>The Department understands that this question has also been posed to the Applicant and that a detailed response has been provided to the Commission. The Department considers that Glencore is best-placed to respond to this question, however, the Department has also provided a brief response below.</p> <p>It is the Department's understanding that alternative options to truck haulage of ROM coal to the Mount Owen CHPP have been contemplated and are not considered to be a viable options. In particular, the Commission's suggested use of a coal conveyor, rather than transport via internal haul roads, is largely restricted by the fact that the location which the ROM coal would be transported from is continuously moving over the life of the Project. As the pit progresses to the north, a coal conveyor, should one be used in place of trucking, would need to be continuously relocated to avoid large transport distances from the pit face to the conveyor's location.</p> <p>The Department agrees with Glencore's position that continual relocation of a coal conveyor is not a feasible option, and would likely not provide much benefit in the way of minimising GHG emissions.</p>

9) Please provide a revised Table 6 from the Department's Assessment Report to reflect the current GHG emission estimates.

As discussed with the Commission, the Department has identified a typographical error in Table 6 of our Assessment Report. The fugitive emissions value in the top row should read 3.8 (not 3.4). This value was updated just prior to referring the Project to the Commission in a letter provided by Glencore (dated 21 January 2022) and was amended based on a revised global warming potential of 28 (rather than 25). The revised table, including updated percentage calculations and total estimated emissions values is provided below:

Table 1| Estimated Project Greenhouse Gas Emissions (Mt CO₂-e)

GHGs	Sources	Estimated Emissions	Percentage of Total Emissions (%)
Scope 1	Fugitive emissions from exposed coal seams	3.8	2.8
	On-site diesel consumption	2.6	
Scope 2	On-site electricity consumption	0.45	0.2
Scope 3	Downstream burning of product coal, downstream transport and electricity	220.4	97
Total		227.25	100

Note: Mt CO₂-e = million tonnes carbon dioxide equivalent.

Please note, the letter provided by Glencore only includes GHG emissions from the Glendell Mine (i.e. updates to Table 3.2 of the revised GHG Assessment provided in the Submissions Report), it does not include the GHG emissions associated with the ongoing processing of Project coal undertaken at Mount Owen (i.e. Table 3.3 of the revised GHG Assessment). The table above provides the combined totals for both components.



Enclosure 2

Letter from Glencore dated 21 January 2022 regarding Updated GHG Emissions

MGO

MT OWEN / GLENDELL

GLENCORE

21 January 2022

Joe Fittell
 Team Leader - Resource Assessments
 Department of Planning, Industry and Environment (DPIE)

Dear Joe,

Glendell Continued Operations Project (GCOP) – Updated Greenhouse Gas Emissions

We refer to the Revised Greenhouse Gas and Energy Assessment (May 2020) (Revised GHGEA) appended to the GCOP Response to Submissions Part A Report (May 2020) and note that the Scope 1 fugitive emissions estimate has been superseded following an amendment to the Global Warming Potential (GWP) parameter for methane from 25 to 28 under the *National Greenhouse and Energy Report Regulations 2008* (Cwth) and the *National Greenhouse and Energy Reporting (Measurement) Determination 2008* (Cwth), and which applies from 1 July 2020.

Table 1 shows the previously reported GCOP greenhouse gas emissions as documented in Table 3.2 of the Revised GHGEA including fugitive emissions for a methane GWP of 25, along with updated greenhouse gas emissions based on a methane GWP of 28 for fugitive emissions. In summary, the Scope 1 fugitive emissions (and GCOP total greenhouse gas emissions) have increased by 409,095 t CO₂-e as a result of this increase in the methane GWP parameter.

Table 1: GCOP Greenhouse Gas Emission Summary

Stage	Scope	Source	Revised GHGEA [^] Source Totals (t CO ₂ -e)	Updated Source Totals (t CO ₂ -e)	Updated Scope Totals (t CO ₂ -e)
Operation	Scope 1 (Direct)	Diesel use	2,630,968	No change	6,465,648
		Fugitive emissions	3,425,585 ^{^^}	3,834,680 [#]	
	Scope 2 (Indirect)	Electricity	37,050	No change	37,050
	Scope 3 (Indirect)	Product use	209,864,104	No change	220,372,162
		Associated with energy extraction and distribution	141,889	No change	
		Product transport	10,354,195	No change	
		Materials transport	11,973	No change	
Total operational emissions associated with GCOP			226,465,765		226,874,860

[^] Revised Greenhouse Gas and Energy Assessment, May 2020

^{^^} Based on Global Warming Potential for methane of 25

[#] Based on Global Warming Potential for methane of 28

GLENCORE

Should you require any further information or clarification on the above then please do not hesitate to contact the undersigned.

Yours sincerely,




Shane Scott
Coal Assets Australia, GLENCORE

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E: 