

28 March 2025

Submission - Dartbrook Modification 8 - Time Extension

Thank you for the opportunity to provide a submission.

Due to capacity and time-constraints, this submission is focussed on the Scope 1 GHG emissions of the project only.

Having reviewed the likely emissions profile of Mod 8 against NSW's legislated GHG targets, Lock the Gate Alliance **objects** to Dartbrook Modification 8 on climate grounds.

The NSW Parliament's Joint Standing Committee on Net Zero Future, in their first inquiry report - published today - on the 2024 Annual Report of the NSW Net Zero Commission found that:

"there is considerable uncertainty regarding whether emissions targets can be achieved - particularly the 2030 and 2035 interim targets - given what the Net Zero Commission describes as a 'sizeable pipeline' of new coal expansions currently being assessed by the NSW Department of Planning, Housing and Infrastructure."

They are right. There is considerable uncertainty. Minister Sharpe - in her [May 2024 Ministerial Statement](#) - acknowledged *"a significant risk that NSW is not on track to meet its 2030 and 2035 targets without further action by the Government and the private sector"*. Minister Sharpe clearly stated that *"all sectors need to ratchet down their emissions to meet to meet NSW's legislated targets"* and that *"meeting these targets is essential for the future health and wellbeing of the people of NSW, our communities and our environment."*

In this context, it is extremely concerning that coal mining companies continue to advance new projects that are incompatible with legislated targets and which do not comply with key elements of the NSW EPA's Guide for Large Emitters. One of the key objectives of the Guide is to *"help NSW reach its legislated emissions reduction targets"*. If key elements of the Guide are ignored by proponents and decision makers, that fundamentally important, lawful objective is at risk.

Dartbrook Mod 8 is yet another new coal expansion project flouting the requirements of the Guide. HVO Mod 8 and Tahmoor Mod 3 have both stated that they are not planning to, and don't consider they have to, set emissions reduction objectives. To date, they have both failed to make best efforts to first avoid emissions, as clearly required by the mitigation hierarchy. Both have failed to describe the details of any offset strategy to offset residual emissions not avoided or reduced. Both failed to provide an independent review and verification of mitigation plans.

Dartbrook Mod 8 claims that its GHG assessment - and by implication, its Project - is “*generally consistent with the requirements of the GHG Guide*”, but then acknowledges that emissions reduction goals have not been set. As this submission notes, Dartbrook’s proposal is to *increase* Scope 1 emissions at a time when NSW is well off-track to meet emissions. The project is a new coal project that proposes to *increase* fugitive emissions, that sits in a sector that is - sector-wide - projected to also *increase* its fugitive emissions.

We call upon NSW DPHI to hold new high-emitting coal projects to both the letter and policy intent of the key objectives of the NSW Guide for Large Emitters. If proponents are unable or unwilling to comply with the sensible requirements of the Guide, their new, high-emitting coal projects should be refused consent.

Mission of Lock the Gate Alliance

Lock the Gate Alliance's mission is to:

1. Protect and enhance the natural environment by:

- a. protecting, preserving and enhancing the viability and productive capacity of farming and grazing capacity in Australia;
- b. preventing the degradation of farming and grazing lands in Australia by unsustainable development projects, including by resource extraction and related activities;
- c. preserving, protecting, enhancing and restoring the environment from unsustainable development and resource extraction, including ecologically sensitive areas, threatened species, flora and fauna, ground and surface water systems, air quality, climate and the maritime environment;
- d. supporting First Nations peoples, landholders, local residents and organisations representing the interests of those whose properties, livelihoods or health are adversely affected by unsustainable development and resource extraction, including by assisting their engagement with relevant decision-making processes;
- e. ensuring and promoting transparency in decision making processes relating to the approval and regulation of resource extraction;
- f. scrutinising the lawfulness of government decisions relating to approving and regulating resource extraction;
- g. scrutinising and ensuring compliance by developers and operators with applicable laws and regulations relating to undertaking resource extraction;
- h. promoting a unified and coordinated alliance, and bringing together individuals, supporter groups and organisations who are aligned with and share Lock the Gate's mission.

2. provide information and education, and carry out research, on the natural environment:

- a. undertaking research and educating landholders, affected communities and the broader Australian public on the impacts of unsustainable development and resource extraction;
- b. researching, promoting and advocating for the adoption of sustainable energy production, including advocating for economic diversification for communities to move away from reliance on the extractive industries.

Dartbrook Modification 8 is incompatible with NSW reaching its legislated 2030 emissions reduction target and should be refused

Dartbrook is proposing a continual increase in Scope 1 emissions out to 2033

Dartbrook's latest [Annual Review for 2023](#) reports an increase, not a decrease in emissions in FY23 when compared to FY22. This is described as a 'trend' in Table 10 Environmental Management Overview (pg 20). We note that the 'Management Action' that AQC Dartbrook Management Pty Ltd say they are taking to 'mitigate' Scope 1 emissions is not a mitigation action at all: *"Methane and CO2 from the underground workings are released via Ventilation Shaft No. 1"*.

A continual increase does not represent a meaningful contribution to NSW's emission reduction targets

The NSW EPA expects *"emissions reduction trajectories to be broadly consistent with the NSW or industry specific emissions reduction trajectory"*. The EPA's position is that if a new, high-emitting project's emissions trajectory, *"does not align with the overall NSW net zero emissions trajectory, the proponent must explain why the emission reduction trajectory still represents a meaningful contribution to NSW's emission reduction targets and/or supports NSW to decarbonise."*¹

Figure 1 (below) charts total Scope 1 emissions projected by Dartbrook for Mod 8 in blue. The red line represents a Lock the Gate approximation of what a trajectory for Mod 8 might look like if the Project were aligned with NSW DCCEEW's 2024 'abatement as originally designed' scenario. We note that even if a new, high-emitting Project like Dartbrook Mod 8 were aligned with an overall emissions reduction trajectory for NSW (red line), it would still be a burden on the state for the reasons set out in [Lock the Gate's submission](#) to the recent NSW Parliamentary inquiry by the Joint Standing Committee On Net Zero Future into the 2024 Annual Report of the Net Zero Commission.

The Mod 8 Scope 1 emissions trajectory alone is reason enough to refuse consent for this project. As NSW DPHI knows, NSW is not on track to meet legislated targets, including the 2030 target. NSW DCCEEW arrived at this position prior to modelling many additional coal-expansion projects which are currently being assessed by NSW DPHI, including Dartbrook Mod 8. When all of these projects are included in new emissions modelling to be uploaded to the NSW Net Zero Emissions Dashboard in coming weeks, Lock the Gate expects that the emissions gap in 2030 will increase, with Dartbrook Mod 8 emissions a contributing factor.

To state the obvious, the continual increase in Scope 1 emissions proposed for Dartbrook Mod 8 does not represent a meaningful contribution to NSW's emission reduction targets, nor can it be considered action that in any way supports NSW to decarbonise.

¹ NSW EPA, NSW Guide for Large Emitters, pg 17

Figure 1: Dartbrook Mod 8's Scope 1 GHGs (blue) vs Scope 1 GHGs if Mod 8 were tracking to Net Zero Dashboard projections - 'abatement as originally designed' (red)

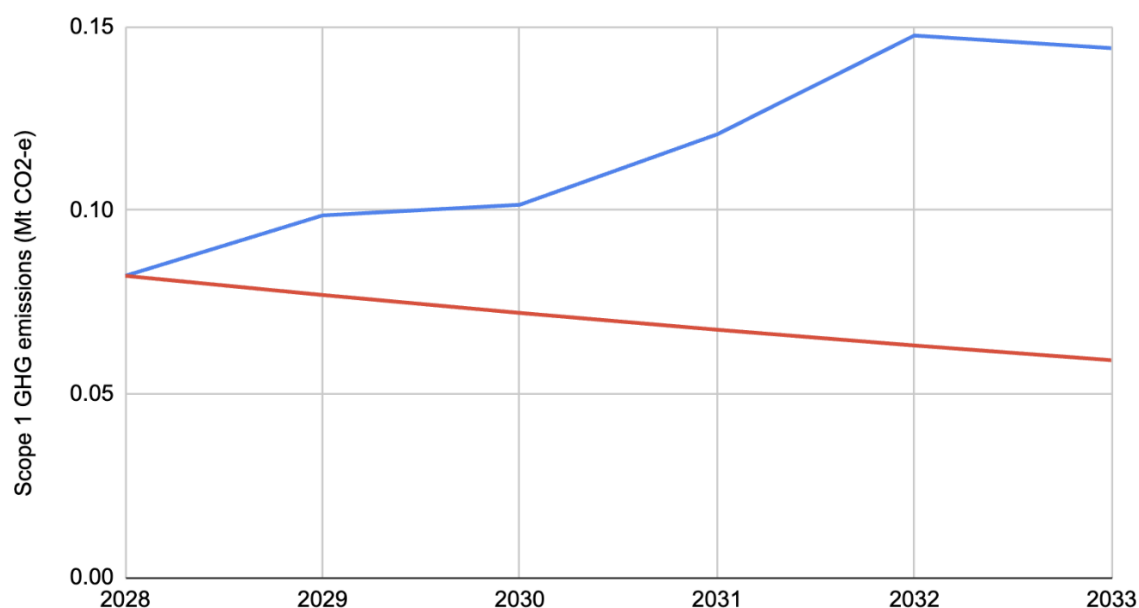


Table 5 Mitigated GHG Emissions during the Extension Period

GHG Emissions Source	Scope 1, 2 & 3 Emissions by Source (t CO ₂ -e/annum)						
	2028	2029	2030	2031	2032	2033	Total
Scope 1							
Fugitive emissions (freely vented)	63,729	77,071	79,422	94,977	116,793	114,006	545,995
Fugitive emissions (treated through flaring)	14,848	17,956	18,504	22,128	27,211	26,562	127,209
Diesel consumption - Stationary use	130	130	130	130	130	130	780
Diesel consumption - Underground equipment	1,299	1,299	1,299	1,299	1,299	1,299	7,796
Diesel consumption - Transport	2,172	2,172	2,172	2,172	2,172	2,172	13,032
Petroleum based oils and greases	8	8	8	8	8	8	46
SF ₆ Leakage	2	2	2	2	2	2	10
Total Scope 1	82,187	98,637	101,536	120,715	147,614	144,178	694,867
Scope 2							
Consumption of purchased electricity	11,927	7,367	5,262	5,262	4,560	3,157	37,535
Scope 3							
Combustion - Coking Coal	4,045,271	4,045,271	4,045,271	4,045,271	4,045,271	4,045,271	24,271,624
Combustion - Thermal Coal	3,569,930	3,569,930	3,569,930	3,569,930	3,569,930	3,569,930	21,419,583
Consumption of purchased electricity	702	702	351	351	351	-	2,456
Rail transport	17,643	17,643	17,643	17,643	17,643	17,643	105,859
Shipping	37,423	37,423	37,423	37,423	37,423	37,423	224,539
Total Scope 3	7,670,969	7,670,969	7,670,618	7,670,618	7,670,618	7,670,268	46,023,710
<i>Note: Columns may not add up exactly due to rounding.</i>							

Source: Dartbrook Operations Pty Ltd Dartbrook Mine Modification 8 report, pg 29

The Safeguard Mechanism appears unlikely to drive emissions reductions at Dartbrook

AQC Dartbrook should clarify what impact - if any - the Safeguard Mechanism will have on Scope 1 emissions at Dartbrook out to 2033. At present, Dartbrook's annual Scope 1

emissions (88,857 t CO₂-e in FY23²) is below the Safeguard threshold, the site has previously had a baseline calculated. Safeguard facilities are subject to a 4.9% annual baseline decline rate, yet Dartbrook anticipates steady increase in onsite emissions.

As the Proponent notes, *"if [our emphasis] its Scope 1 emissions exceed 100,000 t CO₂-e per year it will be covered by the Safeguard Mechanism."*³ At present - see 'Table 5 - Mitigated GHG Emissions during the Extension Period' - Scope 1 emissions would increase, but would still track just under the 100,000 t-CO₂-e threshold for the duration of this decade, meaning Dartbrook would **not be a Safeguard facility until FY2030 and its projections do not appear to bear any relationship to the decline rate.**

VAM abatement appears unlikely at Dartbrook, which means the 2030 emissions gap would increase if Mod 8 is approved

According to the Proponent, *"just under 95%"* of the total Scope 1 emissions associated with the proposed MOD 8 operations are fugitive CO₂ and CH₄ emissions from the underground mine.

The Proponent acknowledges (Table 7 - GHG Mitigation Measures) that they will *only* study VAM viability, if they receive a grant from the NSW Government: *"[c]ommencement of studies in 2025 (subject to receipt of NSW Net Zero Industry and Innovation Program grant)".* Further, they caution that *"[a]t this preliminary stage, it cannot be assumed that VAMMIT / VAMCAT will be available for MOD8."*⁴

Despite the clear need for VAM abatement, Lock the Gate notes an industry-wide failure in NSW to abate ventilation air methane emissions at underground coal mines. We provide a snapshot below of failure to abate VAM emissions at the three highest emitting mines in NSW to illustrate the problem.

1. **Appin:** A VAM abatement trial at Appin has been widely discussed, but if it works, it will only abate ~2% of VAM emissions with no evidence of a timetable, plan or funding to scale this abatement up. Lock the Gate notes that a Scoping Letter for the trial was lodged with NSW DPHI on 7 November 2022. Almost 2 1/2 yrs later, GM3 still hasn't produced a Modification Report to progress the project. Mining at Appin is approved for another 17 years to 2041, so this is a long-term problem.
2. **Mandalong:** 95% of Scope 1 GHGs in 2023 were fugitive methane. A VAM RAB plant was approved 14 years ago but as at March 2024, the project *"is on hold in its commissioning phase"*.⁵
3. **Tahmoor:** Tahmoor is the 3rd highest emitting coal mine in NSW. VAM emissions are the main problem at this mine. SIMEC's current plan is for a *"concept study"* with *"intent"* to progress to a *"pre feasibility level study"* which they suggest may - or may not - set them up to implement VAM abatement *"in the late 2020's, depending on*

² Dartbrook Annual Review 2023, Table 18 Greenhouse Gas Emissions during 2022/2023 NGER period, pg 34

³ Appendix B, Greenhouse Gas Assessment, Mod 8 Report pg 9

⁴ Appendix B, Greenhouse Gas Assessment, Mod 8 Report pg 27

⁵ [Mandalong Mine 2023 Annual Review](#)

whether the process is technically and commercially viable”.

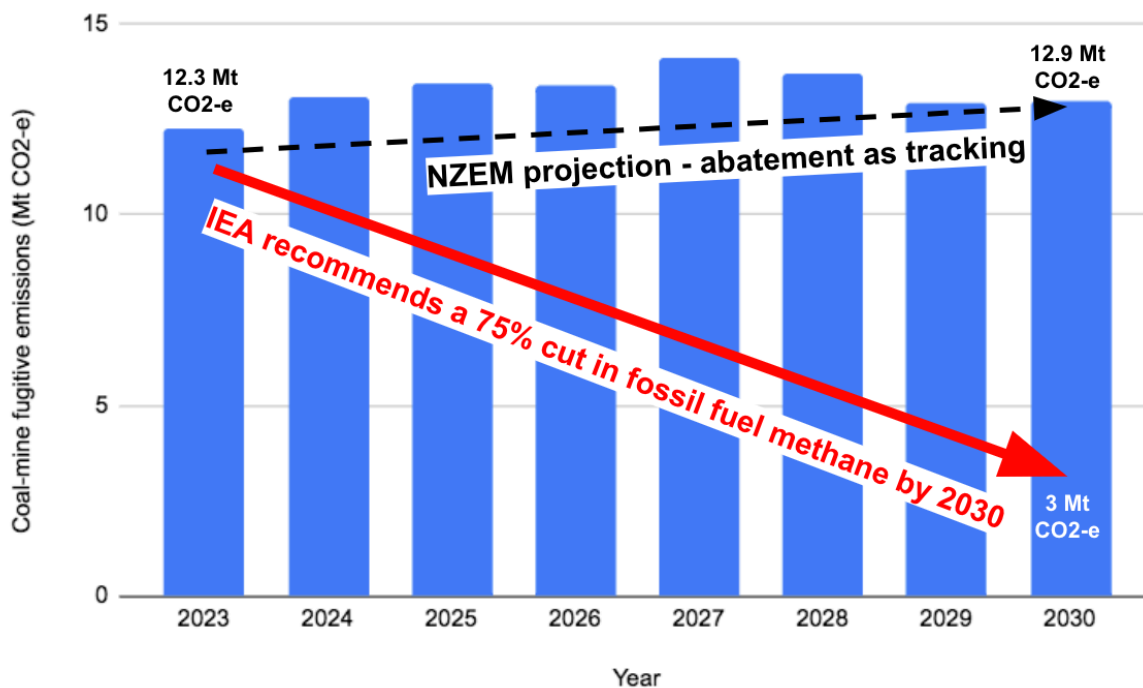
With VAM abatement uncertain / unlikely at Dartbrook, the Proponent is seeking approval to emit additional Scope 1 emissions, which would increase the size of the current 8.5Mt CO₂-e gap between abatement as ‘originally designed’ and abatement as ‘currently tracking’ by 101,536 t CO₂-e in FY2030.

Limiting global warming to 1.5 degrees will require methane emissions from fossil fuels to decline by 75% by 2030

The International Energy Agency has stated that limiting global warming to 1.5 degrees will require methane emissions from fossil fuels to decline by 75% by 2030.⁶ The IEA’s most recent global methane tracker has found that “*global methane emissions remain far too high to meet international climate targets*”.

We note that methane emissions from fossil fuels in NSW are projected to increase out to 2030, with Dartbrook’s Mod 8 proposal a contributing factor. As climate scientist Professor Will Steffen used to say, ‘you can’t reduce emissions by increasing them’.

Figure 2: NSW Fugitive emissions (coal mining) - 2023 to 2030



Data source: NSW NZEM’s April 2024, ‘Abatement as tracking’ scenario (Mt CO₂-e)

⁶<https://www.iea.org/news/after-slight-rise-in-2023-methane-emissions-from-fossil-fuels-are-set-to-go-into-decline-soon>

Conclusion

Having reviewed the likely emissions profile of Mod 8 against NSW's legislated GHG targets, Lock the Gate Alliance **objects** to Dartbrook Modification 8 on climate grounds and recommends that it be refused consent.

If NSW DPHI is inclined to continue considering this development - despite it's incompatibility with meeting the legislated 2030 emissions reduction target - then, at a minimum, assessment should be paused until such time as AQC Dartbrook Management Pty Ltd have produced a VAM abatement study and provided the results of this to NSW EPA and NSW DPHI.

If - upon conclusion of this study - AQC Dartbrook Management Pty Ltd is still unable to demonstrate a credible, downward emissions trajectory for their Scope 1 emissions, then their project should be refused consent.