LOCK THE GATE ALLIANCE
AUSTRALIANS WORKING TOGETHER TO PROTECT OUR LAND, WATER, AND FUTURE

Reply to: Georgina Woods
Head of Research and Investigations
george@lockthegate.org.au

17 November 2025

Re: Mod 8 - Ulan West Continued Operations

Thank you for the opportunity to make this submission.

Lock the Gate Alliance is a network of over 120,000 farmers, Traditional Owners, conservationists and community members from across Australia, affected by and concerned about the impacts of coal and unconventional gas mining. We live and work in the communities affected by these industries and undertake research, advocacy and support to protect the environment, cultural heritage and society from damage. Many of our members are regionally-based, and are also experiencing first-hand the consequences of global warming.

Ulan Coal Mine Pty Ltd is proposing to extend its coal operations and continue mining for an additional six years to 2041. This would involve widening the approved Ulan West Underground Mine's longwall panel LW12 by 180m and constructing four additional longwall panels presented as two optional alignments, to the west of the existing mine to extract an additional 43Mt of product coal. It would also require the installation of new upcast ventilation shafts and fans, dewatering infrastructure, service boreholes, a tailings storage facility, communication and monitoring services and electrical powerlines, switch rooms and substations.

The Modification Report claims that Mod 8 is substantially the same development as the already approved Ulan mine. However, as it involves a significant extension of mining operations over 1,743ha to extract an additional 43Mt of product coal, we strongly disagree that this is the case and believe that it should be submitted as a new development application. Environmental impacts associated with the proposal pose a significant threat to roosting habitat for threatened bats and Aboriginal cultural heritage through subsidence and vibration impacts. Modification 8 would also impact surface water flows through subsidence and groundwater drawdown, with potential severe consequences for Mona Creek and the Talbragar River aquatic and groundwater dependent ecosystems.

Modification 8 follows hot on the heels of Modification 6 that was approved in May 2025 to extract an additional 16.3Mt of product coal. This approval has now been declared invalid for failing to address the local impacts of climate change. The owner of this mine, by virtue of seeking two separate modification applications, was seeking to effectively be granted an eight-year extension to this mine to 2041 with extensive additional volume of coal removed almost equal to a doubling of the extraction approved under the original development application. This is no longer substantially the same development as the 2010 approval. Applying for a significant spatial and temporal

extension of mining activities as separate Modification applications reduces the apparent severity and extent of environmental impacts associated with the overall project. While Modification 8 has significant environmental impacts in its own right, the cumulative impacts associated with Modification 6, together with those for the approved Ulan/Moolarben/Wilpinjong mine complexes, are also significant for threatened bats, cultural heritage and surface and groundwater.

Given that the approval of Modification 6 has now been declared invalid because the decision to grant it did not consider the climate change impacts of this activity on the locality, we urge the Department to refuse this application and advise the proponent that its expansion plans must be lodged as a new development application.

Biodiversity

The open-ended nature of Ulan Mod 8 and 6, where the final siting of infrastructure and the location and configuration of final offsets are unknown, makes it impossible to accurately predict environmental impacts, or to confirm long-term habitat connectivity and functionality in the landscape. However, even the broadly described impacts described in the application documents will have significant impacts on biodiversity.

Mod 8 would have direct impacts on 101.45ha of native vegetation including 31.77ha of Box Gum Woodland CEEC, of which 2.43ha meets the EPBC criteria. Subsidence estimated to be 1.7 to 2.1m is predicted to occur below up to 634.4ha, including 205.3ha of Box Gum Woodland CEEC habitat. Section 1.1.1 of the BDAR admits that Mod 8 would interfere with the recovery of the CEEC claims this interference would be "minor." This is not an acceptable qualification for a critically endangered community that is at risk of serious and irreversible impacts. Conservation advice states that any habitat that supports Box Gum Woodland that meets the EPBC criteria is critical to its survival.[1]

We also take issue with the claim made in the Modification report that "*rehabilitation conforming to Box Gum Woodland also indicates that the rehabilitation practices employed at UCC are able to meet the objectives including the establishment of native ecosystems that have the composition, structure and function commensurate with CEEC*." To our knowledge, this has never been achieved for any mine site. Conservation advice for this community notes that restoration pathways are more likely to be successful in cases where the understorey is depleted but the overstorey is intact or where there are elements of both remaining. It also reports that, while decades-old restoration projects may attract similar suites of bird fauna as are found in remnants, this does not apply to other fauna groups. In other words, they do not meet functional criteria even after decades.

As amended in 2024, the Mod 6 disturbance area covered 942.4ha and proposed to directly impact 17.4ha of native vegetation, including 5.9ha of Box Gum Woodland CEEC. Cumulative loss of this community needs to be viewed within the context of the proposed removal of 401ha for Moolarben OC3 and another 120.5ha for Wilpinjong Mod 3. There is no evidence that this community can be recreated through mine site rehabilitation practices. NSW BCS considers that the Box Gum Woodland is at risk of SAII from the proposed Moolarben OC3 project alone.[2]

---

[1] Conservation Advice White Box - Yellow Box - Blakely's Red Gum grassy woodlands and derived native grasslands. https://www.environment.gov.au/biodiversity/threatened/communities/pubs/43-conservation-advice.pdf

[2] DCCEEW (2025). Moolarben OC3 Extension Project - Advice on Assessment (SSD-33083358). Letter from DCCEEW to DPHI dated 12 February 2025
2025.https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=PAE-78226233%2120250212T063700.052%20GMT

Mods 8 and 6 would impact habitat supporting the same threatened fauna species. Both sites support a high density of woodland bird species, including nationally significant Diamond Firetail, Brown Treecreeper and Painted Honeyeater, indicating that the existing habitat is intact with suitable mid- and understorey. Both Mods will have direct and indirect impacts on threatened Barking Owl and Long-eared Pied Bat habitat.

Sandstone specialist species

Mod 8 is likely to have significant indirect impacts on surrounding roost habitat for the threatened Large-eared Pied Bat and Eastern Cave Bat through subsidence and vibrational impacts associated with blasting. Moderate to high quality roosts for both species are found in the eastern part of the modification area. The impacts of proposed additional mining operations on this habitat is unknown. The subsidence performance indicators that accept that up to 20% of clifflines will be subject to rockfalls and 50-70% can exhibit perceptible cracking, will do nothing to protect threatened bat habitat as roosts could be damaged or destroyed within those arbitrary limits. Both the Large-eared Pied Bat and the Eastern Cave Bat are at risk of Serious and Irreversible Impacts (SAII) under Principle 4 because their cave habitats cannot be recreated in offset areas. Therefore any loss of roosting or breeding caves for these species would have a significant impact.

The Large-eared Pied Bat has high roost fidelity and very selective microclimate requirements during the breeding season. The BDAR concludes that damage to rocky habitat from indirect impacts would be minor. Conservation advice notes that the Large-eared Pied Bat was uplisted to Endangered in 2023 due to its restricted geographic distribution and the continuing decline in its extent of occurrence (EOO) and area of occupancy (AOO).[3] Approximately 27% of its habitat was impacted by the 2019-20 Black Summer fires with 10% being subject to severe fire. The advice also states roosting habitat in close proximity to foraging habitat is likely to be critical for the survival of the species. It names interference with Large-eared Pied Bat roosts by energy extraction and mining developments as a key threat to the species that is likely to have major consequences.

The Eastern Cave Bat is listed as Vulnerable under the NSW *Biodiversity Conservation Act.* The species has low roost fidelity but very selective microclimate requirements during the breeding season. This species is at the western extent of its range in the area, with few records observed west of Ulan Road. Conservation Advice states that threats include loss of rocky roosting habitat, clearing of foraging habitat near roosting/breeding sites and damage to roosting/maternity sites from mining operations.[4]

The BDAR has described at length the results of bat monitoring that has been ongoing since 2015. However, as bats forage within two or more kilometres from roosting caves, nocturnal surveys are not a reliable indicator of roost damage or behavioural response to diurnal noise and blasting. Moreover, bat activity is highly variable. Although the reduction in bat activity between 2015-19 was attributed solely to drought conditions, the monitoring method is too crude to determine the exact cause/s of activity fluctuations. No explanation is provided to explain the 80% decline in Large-eared

[3] DCCEEW (2023). Conservation Advice Large-eared Pied Bat.
https://www.environment.gov.au/biodiversity/threatened/species/pubs/183-conservation-advice-15112023.pdf
[4] NSW OEH (2024). Profile - Eastern Cave Bat.
https://threatenedspecies.bionet.nsw.gov.au/profile?id=10829

Pied Bats near the Ulan mine during the 2019 monitoring period.[5] The dramatic increase in bat activity observed post-2019 is attributed to population recovery post-drought but is much more likely related to monitoring adjustments in 2020 which significantly increased survey effort.[6] This included increasing the number of impact sites being monitored and other factors that cast serious doubt on the adequacy and accuracy of previous monitoring (see Appendix F in Ulan Mod 6 BDAR). Table 1 in the same document shows a 98% increase in Large-eared Pied Bat activity post-mining but does not mention that the survey effort was three times higher than pre-mining survey effort. Furthermore, Figure 3 shows much lower activity for Large-eared Pied Bats at impact sites compared to control sites between 2013-2022. These anomalies are not discussed in the context of mining activity.

An instance of cave collapse was recorded at the Ulan Mine in 2020 that involved the complete collapse of a 41-m wide section of sandstone cliffline at a monitoring site 811, located above Ulan West Longwall 5.[7] It was apparently the "largest continuous rock fall" observed to date at Ulan West. Although no bat roosts were discovered within the collapsed cliffline, all cave roosts within the subsidence area would be at risk of damage or eventual collapse.

The cumulative impacts of the Ulan Modifications, together with blasting and noise impacts associated with the approved Moolarben, Wilpinjong and Ulan mine complexes on sensitive bat roosting habitat are significant. Agency comments for Moolarben OC3 indicated that the Department has ongoing concerns about the impact of blasting on bat roosts and has strongly recommended that a 500m setback and an upper level PPV be implemented such that no impacts occur adjacent rocky habitat. If approved, the proposed Wilpinjong Mod 3 will destroy several known and potential diurnal and maternity roosts and will expose others to significant indirect impacts as mining operations are expected to approach to within 30m of 'avoided' rocky habitat.

It is surprising that neither Mods 8 or 6 included Broad-headed Snake as an ecosystem credit species even though suitable habitat is found in Munghorn Gap NR and surrounding areas. Seven sightings have been recorded within 10kms of Munghorn Gap and Wilpinjong Mine area since 2017, with five being recorded in 2024-5. Although targeted searches have failed to detect this cryptic species, the fact that searches were undertaken at all implies that suitable habitat occurs. Conservation advice states that all populations are important to the species survival and recovery.[8]

Aboriginal cultural heritage

Surveys detected 71 sites of Aboriginal cultural significance, including 10 isolated finds, 11 artefact scatters and 50 rock shelters were found within the disturbance area for this development. It has the potential to impact up to 30% of these sites, including 21 rock shelters, mostly through indirect impacts of subsidence and vibration. One site could be directly impacted if Alignment 1 goes ahead. Although the overall cultural significance of the modification site is considered to be low, one telling

[5] Hoye et al. (2020). Microbat Monitoring of the Ulan Coal Mine Lease during 2019. Report prepared for Ulan Coal Mines Limited.

[6] Umwelt (2023). Ulan Coal Complex Modification 6 Amended BDAR. https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=MP08_0184-MOD-6%2120230815T233851.200%20GMT

[7] Pacific Environmental (2020). 2020 Ulan West Cliff Line Monitoring Report. https://www.glencore.com.au/.rest/api/v1/documents/e04495b1d9f0e8aabf092c7c9ff25b19/Attachment+J2+Cliff+Line+Report.pdf#:~:text=2.4%20Perceptible%20Change%20A%20qualitative8%20assessment%20for,comparing%20the%20pre%2Dmining%20condition%20photographs%20(Appendix%20A).

[8] DCCEEW (2023). Conservation Advice Broad-headed Snake. https://www.environment.gov.au/biodiversity/threatened/species/pubs/1182-conservation-advice-15112023.pdf

comment expressed during the consultation process was that "piecemeal landscape change on Wiradjuri country was 'eroding' the Wiradjuri cultural landscape, bit by bit." There was also a strong opinion that rock shelters in the vicinity of the Mod area (but outside it) were at risk of vibration and subsidence damage.

The Aboriginal Cultural Heritage Assessment Report (Appendix 10) states that Ulan West shelter 01 with PAD has had a substantial roof collapse. The 2020 subsidence monitoring report concluded that, with the exception of heritage site 1258, other heritage sites had signs of cracking and rockfalls and "risk further instabilities." Importantly, the assessment points out that "*Regardless of any observed changes to rock shelters following subsidence, rock shelters may become unsafe to enter, and therefore while the rock shelter may be essentially unchanged, it is no longer available for further research or for visitation by the Aboriginal community*." Therefore even apparently undamaged rock shelters will be effectively lost to the Wiradjuri community.

While the cultural heritage impacts of Mod 8 are significant in their own right, the cumulative impacts of Ulan Mod 6 and Wilpinjong Mod 3 are highly significant for the Wiradjuri community. Surveys undertaken for Mod 6 as part of the Aboriginal cultural heritage assessment (Appendix 12) revealed an additional 51 Aboriginal sites/PADs.[9] Overall 66 sites/PADs occur within an area susceptible to subsidence including: 61 rock shelters (including two of medium-high significance), three potential grinding grooves, an ochre quarry of high significance and a possible stone arrangement. Mod 6 would result in a material increase in the probability of perceptible impacts for 52 sites/PADs. The assessment noted that the traditional use of the area of the north-eastern Wiradjuri people demonstrated "an ongoing cultural and spiritual connection to the land and resources of the study area" and that there exists a "tangible link with the traditional past and with the lifestyle and values of community ancestors." The Ulan Mods threaten this tenuous link.

The Wilpinjong Mod 3 ACHA (Appendix H) reports that since 2006, there have been 61 Aboriginal heritage assessments undertaken that have uncovered approximately 1,095 sites and potential archaeological deposits (PADs) in the local area. Of the 70 new sites discovered as part of the ACHA, the 12 that would be disturbed within the footprint comprise nine of low significance and three of moderate-high scientific significance. Two other sites are located within 100m of the proposed surface disturbance and are at risk of indirect impacts. Two of these, WCP1129 and WCP1143, are located immediately adjacent to the disturbance area and are at high risk of blasting vibration. All five rock shelters at risk of damage and destruction are recognised "as places of focussed habitation that may contain a wealth of cultural material including rock art, hearths, lithic artefacts, and utilised faunal bone" and have the potential to contribute greatly to our knowledge of Wiradjuri culture and its expression in the area.

We refer the Department to observations provided by the then Office of Environment and Heritage for the Bylong Coal Project:

> *"Notwithstanding the mitigation actions of previous mine projects and those of the proposed Bylong Coal Project, Office of the Environment and Heritage is concerned that harm to*

[9]Umwelt (2021). Aboriginal Cultural Heritage Assessment Report and Addendums. Appendix 12 in Ulan Coal Complex Modification 6
https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=MP08_0184-MOD-6%2120221107T024200.091%20GMT

Aboriginal cultural heritage is approaching unacceptable thresholds for the region. Unless adequately compliant with a measured conservation regime, an imbalance of this scale may have permanent intergenerational consequences."[10]

That advice was given eight years ago. The Department must stop this ongoing loss of cultural heritage by mining damage. The Ulan and Wilpinjong modifications alone will have a significant cumulative impact on cultural heritage. It is noteworthy that the Mod 6 cultural heritage assessment also noted that the modification would have a "small impact" compared to the approved Ulan coal mine.

Water resources

Mod 8 would directly impact three tributaries of Cockabutta Creek that traverse the development footprint. The Surface Water Impact Assessment (Appendix 7) describes the impacts of Mod 8 on surface water as "localised and minor." It does not assess these within the context of temperature increases and reduced rainfall that are occurring with climate change. The IESC guidelines (Appendix A) require "modelling to demonstrate the infrastructure's adequacy under a range of potential climatic conditions, including extremes associated with climate change." However the model description in Section 7.1 confirms that it relies on historical temperature data from 1889-2024 but does not project temperature/rainfall to 2041 when Australia is on track to exceed 2°C average warming.

Mod 8 would result in a reduction in streamflow to tributaries of the Talbragar and Goulburn Rivers and an increase in no flow days for the Talbragar River. It is expected that subsidence ponds created by Mod 8 will result in the evaporation of 14.2ML/year of water that would normally drain into Cockabutta Creek and the Talbragar River. Subsidence also impacts surface water by diverting overland flow into sub-surface strata, changing the length of time that ephemeral streams and pools hold water and increasing flow velocities and erosion. Although several IESC guidelines direct the assessment to consider the impacts on ecological processes and water dependent ecological assets (i.e. terrestrial and aquatic GDEs), this was not undertaken in the surface water assessment. Terrestrial GDEs are not assessed in the BDAR or in the Surface Water Assessment. The supporting documents do not include an aquatic ecology assessment.

The Stygofauna Impact Assessment (Appendix 9) is incomplete and inconclusive. Although stygofauna are potentially found in the Cockabutta Creek alluvium and the Mona Creek alluvium and colluvium that are at risk of dewatering, these were not sampled for stygofauna. The assessment concludes that the impact of Mod 8 on stygofauna would be "localised and minimal" even though no evidence is presented to support this claim.

Based on the surface water and stygofauna assessment it is clear that the impacts of Mod 8 on streamflow, ecological processes and GDEs are unknown. However the predicted subsidence of 634ha resulting from Ulan Mod 8 and Mod 6 will have a significant cumulative impact on streamflow and aquatic ecology. These two applications together present a substantial escalation in impacts

[10] Quoted in IPC Statement of Reasons: Bylong Coal Project. Paragraph 511. https://www.ipcn.nsw.gov.au/sites/default/files/pac/projects/2018/10/bylong-coal-project/determination/bylong-coal-project-ssd-6367--statement-of-reasons-for-decision.pdf

from the original approval and the Department must inform the proponent that it must submit a new development application if it wishes to seek consent for this expansion.

The March 2023 IESC review of Ulan Mod 6 expressed major concerns about the impact of Mod 6 on Mona Creek including permanent changes to the local catchment topography from vertical subsidence of up to 2.1m, groundwater drawdown and baseflow reduction and cumulative impacts on the aquatic and riparian biota of Mona Creek and possibly the Talbragar River.[11] The committee also predicted that the high-potential GDE would be impacted by groundwater drawdown below and near the Talbragar River, a headwater catchment of the Murray-Darling Basin. The IEAPM review of Mod 6 had limited confidence in the groundwater modelling and concluded that there was a risk of significant drawdown beneath Mona Creek in all underlying groundwater systems.[12] Given these serious concerns, it is astounding that the ecology of these important waterways was not assessed as part of Mod 8. As both of these Mods are having incremental significant impacts on the same waterways and ecosystems, the Department should not have accepted them as separate applications.

Greenhouse gas emissions

Modification 8 alone would generate an additional 105Mt $CO_{2\text{-}e}$ of downstream emissions which represents an increase of about 44% of downstream greenhouse emissions from the approved project. This is a material escalation of impact and given that it is proposed to occur over the next decade, when global average temperature rise and its consequences may exceed tipping points, this additional mining area is clearly not "substantially the same development" as the Extension project that was assessed and approved in 2025.

Ulan Coal Mine Extension approved in 2010 was approved to extract 65Mt of coal until 2033. We note that the Department granted approval to Modification 6 to extract a further 16.3Mt of product coal until 2035 (42Mt CO2-e) but that approval of that modification has now been declared invalid because the decision to grant it did not consider the climate change impacts of this activity on the locality. This application is seeking approval to extract an additional 43Mt of product coal until 2041. Combined with modification 6 the total run of mine coal to be extracted is nearly equal to the original application for the Ulan coal mine extension. These two modifications should be assessed by the Department as a single development application.

Non-compliance with the Large Emitters Guide

The proponent has stated that it will not adopt emissions reduction goals. This is contrary to the requirements of the Large Emitters Guide. Furthermore, the proponent does not propose an emissions pathway consistent with New South Wales' goals. The company claims the "expected overall declining trajectory in emissions from the UCC with the UWCO Modification aligns with the NSW net zero emissions trajectory" but this is not correct. Ulan is projecting the equivalent of a 0.5% annual reduction in Scope 1 emissions between 2024 and 2030 (Scope 1 emissions in 2024

[11] IESC (2023). Advice to decision maker on coal mining project IESC 2023-141: Ulan Coal Mine Expansion Modification 6 (EPBC 2022/09292 and MP08_0184 Mod 6) – Expansion
https://www.iesc.gov.au/sites/default/files/2023-03/iesc-advice-ulan-coal-mine-expansion-2023-141.pdf
[12] IEAPM (2024). Advice re: ULAN COAL EXPANSION PROJECT (08_0184)
https://www.planning.nsw.gov.au/sites/default/files/2025-06/ieapm-ulan-coal-expansion-project-20241029.pdf

were 53,550 t CO2-e, whilst projected Scope 1 emissions for 2030 are 52,000 t CO2-e). This in no way aligns with the 6.5% annual reduction trajectory required for NSW to meet its 2030 target overall. NSW's legislated target requires a cut of 50% on 2005 emissions by 2030. In 2005, NSW emitted 152.74Mt CO2-e. By 2030, to meet a 50% cut, emissions will need to be 76.4Mt $CO_{2\text{-}e}$. In 2024, the NSW Net Zero Emissions Dashboard projected that under current policy, NSW would emit 114.33Mt $CO_{2\text{-}e}$. In order to get from 114.3 Mt to 76.4 Mt, an average 6.5% annual reduction is required.

Given there are no effective abatement measures proposed, projected Scope 1 emissions are tied to production. If Ulan were to mine more than the 47.5Mt of ROM coal indicated in its application, the mine's Scope 1 emissions will be higher than projected.

The company has also failed to provide an offset strategy and incorrectly asserts that this is not required. The section of the Modification Report entitled "6.10.7.5 Offset Strategy" simply and inaccurately states that such a strategy is not required: "There is currently no requirement for UCC to implement an offset strategy for either compliance purposes under Safeguard, or for voluntary purposes to achieve Glencore's emissions reduction targets." The company is flouting the requirements of the NSW Large Emitters Guide.

The company makes no mitigation commitments other than to "maintain" current measures. These current "management practices" include:

- consideration of energy efficiency as a criterion in equipment selection
- Optimising mine layout
- coal mining mostly conducted using electrified production equipment with haulage via electrified conveyors (noting that ancillary equipment is "typically diesel-fuelled")
- Maintaining equipment to ensure optimal performance and energy efficiency

No new measures are proposed. As an illustration of the appropriateness of these measures, when the NSW EPA reviewed GHG mitigation measures proposed for Ulan Mod 6 in June 2024 its assessment was that it was "unlikely these measures will substantially reduce the greenhouse gas footprint of the UCC." In regard to existing operations, Ulan has a GHG mitigation plan but is not reducing Scope 1 emissions, which in FY24 were at a five year high.

The company promises a vague plan to "monitor and evaluate existing and emerging technologies to reduce GHG emissions" on a "three yearly basis." Existing measures are failing to drive emissions reductions that would be aligned with or better than what is required in NSW overall to meet legislated targets. Maintaining these same measures will therefore be equally ineffective.

Scope 2 emissions

Ulan has an unusual GHG profile in that reported scope 2 GHG emissions are about three times higher than direct emissions. A simple, feasible and practicable measure that would have an immediate impact to reduce Scope 2 emissions at Ulan, would be to buy 100% renewable energy to power the mine. Of the coal mines in NSW that publicly report their Scope 2 emissions, Ulan's are second only to Appin. They are consistently in excess of 100,000t $CO_{2\text{-}e}$. And yet, even this

straightforward measure is not adopted. The company instead states that “at present” renewable energy is not “considered practicable or feasible for implementation.” This is not a credible claim.

Glencore is, for example, buying renewable energy in South Africa through a 20-year deal with Discovery Green, and has also entered a 20-year deal with Pele Green Energy for its ferroalloys division. These agreements will power several of its mining and ferrochrome operations with solar and wind energy, starting in 2027.

Scope 3 emissions

Following the Court of Appeal’s judgement in *Denman Aberdeen Muswellbrook Scone Healthy Environment Group Inc v MACH Energy Australia Pty Ltd* [2025] NSWCA 163 (the Denman judgement) NSW DPHI is required to assess the impact of this Project’s downstream emissions on the locality. Such an assessment must address environmental and social and economic impacts of these emissions. The Modification report fails to respond to this requirement. The Economic Assessment for this modification does not include costs accruing as a result of the local impacts of downstream emissions. The proponent concedes in the Modification Report (pg 129) that “any new or continuing source of GHG emissions, including the UWCO Modification, would contribute to climate change globally” but claims “It is not possible to conclude that the UWCO Modification’s GHG emissions will lead to a net increase in global emissions, and therefore contribute to an increase in climate change impacts…”

The assertion here falsely invokes the concept of “net emissions” - implying that the increase in greenhouse gas emissions resulting from this modification may be ameliorated by a reduction in greenhouse gas emissions by some other unrelated party. The emissions reductions activities of other parties are out of scope of this assessment. It is incumbent upon the Department to assess the consequences of worsening climate change as a result of this project on its own merits, including the possibility that the greenhouse gas emissions resulting from this project may contribute to global and local tipping points.

Glencore argues in this assessment that “the local manifestation of climate change impacts” will be influenced less by any “individual facility or project” like UWCO and more by “global and national emissions trajectories.” This convenient but logically unsupportable argument runs counter to the Denman judgment, which has clearly established that such manifestations must form part of the Department’s consideration of this application.

Glencore claim local climate impacts “won’t be materially impacted” by the UWCO, but the severity of climate impacts in the Hunter region and NSW are materially impacted by the degree of global warming and there is a clear and causal link between additional greenhouse gas emissions and higher rates of global warming. The Denman judgment clarifies that “a causal enquiry as to the impacts on the locality was required” in the evaluation of impacts of the Mount Pleasant Continued Operations project, regardless of the scale of the emissions at stake. In our submission, the precarious state of the global climate, which is now breaching various tipping points, materially influences this consideration. Although there is a linear relation between the concentration of carbon dioxide equivalent greenhouse gases in the atmosphere and global average temperature, there is not

a linear relation between those concentrations, global average temperature and impacts to the environment.

Due to the causal connection between climate harm and coal production, export and burning, climate harms are a mandatory relevant consideration for the consent authority when looking at the likely impacts of this application under s4.15(1)(b). The proponent argues in its Modification Report that these impacts are not material:

> *"... many of the climate impacts predicted to occur in the locality as described above are projected to occur under a range of global emissions pathways, including where the UWCO Modification does not proceed. Therefore, these projections of impacts of climate change on the locality are not expected to be materially impacted by the UWCO Modification."*

Contrary to this claim, we refer the Department in its deliberations on this matter to the judgment on appeal in *Sharma v Minister for the Environment*.[13] The appeal judgment found that the late Professor Will Steffen "gave uncontroverted evidence that in order to stabilise global average surface temperatures at or around 2°C, over 90% of Australia's existing coal reserves should not be burned, currently operating coal mines should be quickly phased out, and no new coal mines or extensions to existing coal mines should be allowed." [407] This evidence was not challenged by the Minister on appeal. Prof Steffen also provided unchallenged evidence that there was "a real (albeit small) risk of triggering a tipping cascade from about 2°C global warming above pre-industrial levels due to non-linear feedback processes." [283]

The Federal Appeal judges in *Sharma* upheld the findings of the primary judge that "there is a real (being a small but not-zero) risk that an increase in CO_2 emissions which caused an even infinitesimal increase in global average temperature above 2°C could trigger a tipping cascade and consequently an irreversible 4°C future world trajectory." A tipping point refers to a state beyond which changes to the Earth's climate become self-perpetuating, such as loss of sea ice reducing the cooling albedo effect and thereby accelerating warming. Current average global warming of ~1.2°C above the pre-industrial average already lies within the lower end of uncertainty ranges for five climate tipping points. Six climate tipping points become likely, and a further four possible, within the Paris Agreement range of 1.5 to <2°C warming.[14] On the question of climate tipping points, the CSIRO has found that:

> *If, when and how climate tipping points may be triggered is often poorly understood, and the confidence around tipping points can often not be assigned due to a lack of understanding and adequate modelling. But because these effects are so consequential, the possible triggering of these tipping points and their effects must be acknowledged and considered when managing risk, despite the uncertainty.*[15]

---

[13] *Minister for the Environment v Sharma* (No 2) [2022] FCAFC 65 https://www.judgments.fedcourt.gov.au/judgments/Judgments/fca/full/2022/2022fcafc0065

[14] Armstrong et al. Exceeding 1.5 °C global warming could trigger multiple climate tipping points. *Science* 377(6611). https://doi.org/10.1126/science.abn7950.

[15] CSIRO, 5 February 2024. *Understanding the risks to Australia from global climate tipping points: workshop report.*

The existence of this material uncertainty around a very high consequence impact of this proposed coal mine expansion clearly invokes the precautionary principle.

Despite its claim that climate change impacts of the modification are not material, Glencore does describe climate change impacts generally on the locality, citing the National Climate Risk Assessment (NCRA) and NARCLiM project projections for the Central West and Orana regions. However, this assessment does not provide necessary context about the causal link between the project and these impacts, nor does it describe the socio-economic consequences of different degrees of global warming on the locality. One way for the Department to establish this causal link is to examine the proponent's expectation of coal demand in the context of different global warming trajectories. As cited above, scientific literature indicates that avoiding the catastrophic consequences of global warming above 2°C is only possible with a rapid reduction in coal production and use, generally consistent with avoiding the extraction of over 90% of Australia's existing coal reserves, no new coal mines or extensions to existing coal mines being permitted and responsible closure of currently operating coal mines. Given this context, the proponent must establish exceptional arguments as to why this mine extension, this coal, is somehow distinct from the above scenario. In the absence of such an argument being established, the Department can reasonably assume that any additional extraction of thermal coal for use in power generation is consistent with a warming trajectory over 2°C and any avoidance of such extraction is consistent with avoiding this harm.