The Chief Executive
Department of Environment and Science
Attention: The EIS Coordinator (Lake Vermont Meadowbrook Project)
GPO Box 2454
Brisbane Qld 4001

eis@des.qld.gov.au

17 May 2023

Dear Chief Executive,

Re: Submission on the proposed Environmental Impact Statement for the Lake Vermont Meadowbrook Project

Thank you for the opportunity to make this submission on the draft Environmental Impact Statement **(EIS)** for Bowen Basin Coal Pty Ltd **(the Proponent)** Lake Vermont Meadowbrook extension project **(the Project)**.

Environmental Advocacy in Central Queensland (**EnvA**) is a Central Queensland association with an interest in ensuring that all land use is sustainable and does not significantly impact on the environment. We are particularly concerned about the risks associated with coal mining, coal seam gas and climate change.

EnvA believes that opening new or expanding existing coal and gas projects:

- is contrary to meeting Australia's emission targets and Queensland's emission targets,
- is likely to result in irreparable damage to our local landscape and result in stranded assets,
- will put our local community at further risk of extreme weather such as increasing the intensity and frequency of storms, floods, droughts and bushfires,
- will damage our significant coastal resources including our beaches and the Great Barrier Reef through storm surge and increased coral bleaching events,
- will further degrade wildlife habitats of state and national significance through both habitat loss and climate change, and
- rarely take into consideration the views of Traditional Owners and local communities who are concerned about protecting their land from fossil fuel development.

The Lake Vermont Meadowbrook Project

The proponent proposes to develop an underground coal mining development and a satellite open-cut pit as an expansion the existing Lake Vermont mine. The project would be located approximately 30 km northeast of Dysart and approximately 180km southwest of Mackay, within the Isaac Regional Council in Central Queensland.

The proposed project covers approximately 8,235 hectares, covered by the northern portion of MDL303 and southern portion of MDL429, as well as involving the existing Lake Vermont Coal Mine on mining lease ML70528, ML70477 and ML70331.

The project would enable production from the existing Lake Vermont Mine to be maintained at the currently approved levels of up to 12 million tonnes per annum (Mtpa) of run of mine (ROM) coal (equivalent to approximately 9 Mtpa of product coal) for an extended period of approximately 20 years. The recoverable coal reserve in the underground mining area is approximately 108.6 Mt and approximately 13.3 Mt in the open-cut mining area.

Our specific concerns and recommendations are outlined below.

Assessment status

A determination was made under section 72 of the *Environmental Protection Act 1994* (EP Act) that assessment of the proposed Lake Vermont Meadowbrook Project would be by EIS.

The project was also determined to be a controlled action (EPBC 2019/8485) under the *Environment Protection and Biodiversity Conservation Act 1999* (Commonwealth), with the controlling provisions listed as:

- listed threatened species and communities (section 18 and section 18A);
- listed migratory species (section 20 and section 20A); and
- a water resource in relation to a large coal mining development (section 24D and 24E).

In parallel to the bilateral EIS assessment process, the Project is one of the 14 fossil fuel projects that federal environment Minister Tanya Plibersek has agreed to reconsider following a request by the Environment Council of Central Queensland. This reconsideration is in relation to the substantial new information about the impacts of climate change on Matters of National Environmental Significance (MNES).

The Federal Environment Minister is yet to make a decision on the review of the Project and hence it would be premature to endorse this draft EIS until it is clear on further information that might be required from the proponent.

Recommendation

That the Department delay any decision on the draft EIS until the Federal Environment Minister has made a decision on the reconsideration of the Project under the EPBC Act.

Terrestrial ecology

The area proposed to be directly disturbed by the Project is 827.8 ha, primarily comprising development of the infrastructure corridor, the mine infrastructure and the Project's open-cut mining area. The Project open-cut mining area accounts for 666.4 ha of the direct disturbance. A further 15.3 ha of the direct disturbance is proposed within the existing Lake Vermont leases to support the southern connection of the infrastructure corridor to the existing Lake Vermont Mine infrastructure area. The area expected to be indirectly disturbed (through subsidence induced ponding impacts and associated mitigation measures) is 214.0 ha.

This level of disturbance will result in significant impacts on the terrestrial ecology of the site through a combination of direct impacts, fragmentation and loss of habitat quality through disturbance, subsidence and changes to the water table.

Vegetation

The Proponent has identified 15 regional ecosystems across the study area of which four are listed as 'endangered' and six are listed as 'of concern'.

Specifically, vegetation communities identified in the study area include:

- 177 ha of **endangered** brigalow (RE 11.3.1, 11.4.8 and 11.4.9),
- 110.3 ha of high-quality regrowth of **endangered** brigalow
- 21.3 ha of **endangered** Palustrine swamp with fringing Blue Gum woodland in depressions on Cainozoic sand plains and remnant surfaces (RE 11.5.17),
- 1,150 ha of **of concern** eucalypt woodland on alluvials (RE 11.3.2, 11.3.3 and 11.3.4),
- 1,865.6 ha of eucalypt woodland ecosystems of least concern,
- 135.8 ha of riparian vegetation (RE 11.3.25), and
- 21.7 ha of least concern wetland ecosystems.

The Proponent has identified that the Project would require the clearance of approximately 12.2 ha of remnant vegetation, and the subsidence ponding areas are predicted to affect approximately 96.9 ha.

The direct clearing and subsidence ponding will impact on:

- 24.3 ha of 'endangered' brigalow;
- 33.2 ha of 'of concern' eucalypt woodland;
- 2.5 ha of wetlands,
- 6.7 ha of riparian vegetation,
- 20.6 ha of 'least concern' eucalypt woodland.

These vegetation communities have been subject to historic clearing for agriculture and mining. The cumulative impacts of the removal of over threatened vegetation communities must be considered clearly inappropriate.

Fauna

This Project will have some impact on 167 native fauna species through the loss and fragmentation of important habitat. Of significance is the impact to the habitat of conservation significant species including:

- 207.1 ha of ornamental snake (*Denisonia maculata*) habitat,
- 100.6 ha of greater glider (*Petauroides volans*) habitat,
- 109.2 ha of koala (*Phascolarctos cinereus*) habitat,
- echidna (*Tachyglossus aculeatus*),
- 15.5 ha of squatter pigeon (*Geophaps scripta scripta*),
- white-throated needletail (*Hirundapus caudacutus*), and
- 38.4 ha of Australian painted snipe (*Rostratula australis*) habitat.

The EIS acknowledges the highly cleared and fragmented vegetation in the Bowen Basin but fails to acknowledge the high functional significance of all vegetation on the project site, including non-remnant and regrowth vegetation that provides linkages for wildlife movement between areas of remnant vegetation.

All remaining vegetation, remnant or regrowth, is significant to species survival in such a landscape and this is well recognised in the scientific literature. In support of the value of regrowth vegetation, specimens of the endangered (NC Act) *Solanum adenophorum* were identified in brigalow regrowth within the project area as was the ornamental snake, *Denisonia maculata*.

Cumulative impacts on threatened species and communities

The assessment of the cumulative impacts on threatened species and communities is misleading and does not adequately demonstrate that the cumulative impacts are "minimal and not significant".

The pre-clearing cover for the Isaac-Comet Downs subregion is estimated at approximately 2,693,397 ha compared to 574,501 ha of remnant vegetation (Accad *et al.* 2021). 78.7% of vegetation cover has already been cleared in this Brigalow Belt subregion which means that every extra of habitat clearing and disturbance is highly likely to impact on threatened species and ecosystems.

This Project will result in the disturbance of 562 ha, including direct disturbance to 109.1 ha of remnant vegetation. At the same time, further clearing and disturbance within the subregion include the Olive Downs Coking Coal Project and the Vulcan Coal Complex Project are currently occurring, with the proposed Saraji East Project and the Winchester South Projects under assessment at present.

In the last two years, the koala and greater glider have been reclassified from vulnerable to endangered, largely due to the loss and fragmentation of habitat, and the impacts on climate change and the consequent severe weather and fire events. With less than 574,500 hectares of fragmented remnant vegetation in the Isaac-Comet Downs subregion, along with the contribution of this Project to greenhouse gas emissions (see emissions section below), a more thorough assessment of the cumulative impacts is required before even more of our Queensland ecosystems and species are added to the endangered list, or worse, they make the extinct list.

Recommendation

That the EIS be rejected on the basis of that the Project is clearly unacceptable in respect to the direct and cumulative impacts on threatened species and communities. In the alternative, the Proponent must be required to provide a through assessment of the cumulative impacts of remnant vegetation clearing and disturbance and outline a more appropriate rehabilitation plan which reinstates critical habitat and movement corridors.

Offsets

Offsets are typically of minimal success, short duration, and certainly do not address the cumulative impacts from the loss and disturbance of habitat in areas such as the Bowen Basin.

The significant biodiversity impacts are proposed to be dealt with through offsets as set out in the 'MNES Biodiversity Offsets Strategy'. EnvA is concerned that the proposed offsets are not suitable for the following reasons:

- The proposed offset area is on the same property as the Project and represent an area that has been subject to timber harvesting, vegetation clearing and cattle grazing. It has been over-sown with buffel grass which is known to reduce re-establishment of native vegetation and increases the risk of hot bushfire.
- The proposed management of the area is minimal and includes introduction of a managed fire regime to allow for understory vegetation development, additional fencing and water infrastructure to allow the continuation of managed grazing, thinning of poplar box and some additional pig control.
- The proposed internal fencing is of concern in limiting the ability for some species to be able to move freely through the landscape and involves a risk to fauna of entrapment.
- The quality of the habitat is not forecast to significantly improve for at least 10 years under the proposed management actions.
- The Proponent has identified connectivity corridors from the offset area as principally riparian corridors associated with Boomerang Creek, Hughes Creek, One Mile Creek and Phillips Creek. Of these connections, only Boomerang Creek directly connects within the proposed offset area. There will be constraints for fauna accessing the other creek corridors due to the existing Lake Vermont mine and the disturbance footprint of the underground coal component and infrastructure corridors of this proposed Project.

- There is recognition that there will need to be an additional offsets for the open-cut pit mine, but this will be negotiated at Stage 4 of the Project scheduled for 2045.
- The proposed offsets appear to involve 'averted loss' offsets, whereby areas of existing habitat are allegedly preserved to compensate for the destruction of habitat elsewhere. Such averted loss offsets are widely considered to be ineffective and have recently been explicitly rejected by the Federal Government.

EnvA believes that this is an unsuitable offset that does not effectively provide for quality habitat for threatened ecosystems and species and has limited connectivity to other suitable habitat.

Recommendation

That the Proponent is required to prepare a detailed and justified offset management strategy which adequately compensates the significant loss of threatened species and communities, and the fragmentation of movement corridors along waterways.

Greenhouse gas emissions and climate change

The Project will make a significant contribution to global greenhouse gas emissions, especially methane emissions, and will make the task of decarbonising Queensland's economy materially more difficult. Approximately 2.5Mt CO2-e must be cut from Queensland's annual emissions inventory between now and 2030 to meet the state's emissions reduction target.

The EIS fails to properly describe the climate impacts of the Project and no tangible mitigation measures are proposed to address these impacts, meaning that multiple aspects of the EIS Terms of Reference ('ToR') have not been met.

Scope 1 and 2 emissions

The existing Lake Vermont coal mine already reports its annual scope 1 and emissions to the Clean Energy Regulator as it produces more than 100,000t CO2e p/a and triggers reporting obligations under the NGER scheme's Safeguard mechanism (SGM).

The 2021-22 SGM facility data records that Lake Vermont coal mine reported 369,934t CO2e emissions in the reporting period. It also records Lake Vermont coal mine baseline as 394,117t CO_2e.

Appendix L to the EIS is the Air Quality and Greenhouse Gas Assessment details the project's estimated scope 1 emissions on a year-by-year breakdown alongside the emissions from the existing Lake Vermont mine. The vast majority of scope 1 emissions are anticipated to come from fugitive emissions.

Some key points from the estimates provided in Table 12 are:

- The estimated Scope 1 emissions from the proposed extension only are estimated to be as high as 829,373 t CO2e in year 12 of the project. **This is more than double the current SGM baseline.**
- Even when averaged over the 20 years, the annual emissions from the proposed extension are estimated at to average 303,200t CO2e per year. **This accounts for 77% of the current baseline.**
- Scope 1 emissions from the Lake Vermont project (the existing mine and the proposed Meadowbrook extension project) are estimated to peak in year 12 of the project at 1,187,029t CO2e**. This is more than three times the current baseline.**
- Even when averaged over the 20 years, (the existing mine and the proposed Meadowbrook extension project) are estimated to average 552,778t CO2e per annum. **This is 1.4 times higher than the current baseline.**

These figures suggest that Lake Vermont's SGM baseline will need to significantly increase and that scope 1 and 2 emissions from the project would make a significant contribution towards threatening the 'hard cap' on emissions.

Given the existing scope 1 & 2 emissions profile of the Lake Vermont mine (260,325 - 455,483t CO2e/year), winding down the mine instead of extending its life could deliver virtually the entire emissions reduction needed to meet Queensland's 2030 target. In contrast, **proceeding with the Project would use up just over 5Mt or 25% of Queensland's entire remaining emissions budget for the 2030 target**.

The bulk of additional emissions from the Project will occur after 2030, during the period in which Queensland - along with the rest of the world - will be attempting to reduce its emissions to net zero by 2050. These emissions will make that task significantly more difficult.

Scope 3 emissions

The Project will contribute to over 294 million tonnes of scope 3 greenhouse gas emissions over its life, averaging about 7.8Mt per year for 35 years. For comparison, that's almost twice the annual emissions impact of Australia's entire domestic aviation industry as reported in 2021 (4.4Mt CO2-e).

The latest analysis from the Global Carbon Project found that to have a 50% chance of limiting global warming to 1.5°C, the total remaining carbon budget was 380Gt CO_2 (as of 2022), with an annual reduction of 1.4Gt CO_2 required to reach zero emissions by 2050.

Australia, and of particular concern to EnvA, Central Queensland (where this mine is proposed), is already experiencing climate change impacts that include an increased frequency and severity of coral bleaching, storms, heat waves and wildfires, and an increase in the number of endangered species and ecosystems. If warming increases to 1.5°C and above, these impacts will increase in severity.

In a recent Queensland Land Court decision, Land Court President Fleur Kingham, found that as a matter of law, GHG emissions can be taken into account in applying the principles of ecologically sustainable development and in considering whether the applications are in the public interest. Wherever the coal is burnt the emissions will contribute to environmental harm, including in Queensland. This same court decision notes that the climate science demonstrates that the remaining carbon budget for keeping temperatures to 1.5°C in 2100 will be exhausted in 8 years at the current rate of emission, and to keep temperatures to well below 2°C by 2100, will be exhausted in 15.5 years. This proposal will contribute to an increase in the current rate of emissions and consequently will result in a failure of Australia and Queensland to meet emission reduction targets and our responsibilities under the Paris agreement.

Therefore, it is our submission that the GHG emissions of this Project, and the warming effect of those GHG emissions, will have a significant impact on the environment at the regional, state and country level, including significantly impacting on the Great Barrier Reef, most listed threatened species and communities, migratory species and wetlands.

Inconsistencies with the Terms of Reference

The Terms of Reference (ToR) require the EIS to assess the impacts of the Project on environmental values, including a description of the nature and scale of each impact, its intensity and duration, the cumulative effects of the Project in combination with other developments, and the potential for secondary, permanent and/or irreversible impacts.

The EIS does not recognise the environmental value of a stable climate, nor does the proponent describe the impact the emissions from its project will have on this value. There is no description of the risks climate change poses to Queensland's ecosystems, industries and communities, despite Queensland being in store for the largest increase in costs stemming from climate-related

natural disasters. There is also no acknowledgement of the link between continued fossil fuel production and the increasing severity and frequency of climate impacts. There is no assessment of the risk that continued fossil fuel production and use pushes the global climate over irreversible 'tipping points', permanently damaging the health and stability of ecosystems and biodiversity in Queensland and around the world.

The ToR required the proponent to 'propose greenhouse gas abatement measures', including 'preferred and alternative measures to avoid and/or minimise greenhouse gas emissions directly resulting from activities of the proposed project'.

The EIS should have included an 'assessment of how the preferred measures minimise emissions and achieve energy efficiency', a comparison of the preferred measures with best practice, and a description of opportunities for offsetting.

The section of the EIS devoted to 'GHG mitigation and management' consists almost entirely of a list of generic points about ways the resources sector could, possibly, contribute to economic decarbonisation copied directly from various Queensland Government documents. This is patently inadequate.

The proponent states that it will 'investigate' preferred and alternative measures to contribute to the emission reduction target, rather than identifying the preferred and alternative measures to avoid or minimise greenhouse gas emissions.

The potential 'measures' listed as candidates for this investigation appear to merely replicate a generic list of actions suggested by the Queensland Government and do not include technologies to actually reduce the emissions impact of the Project, beyond the potential to produce energy on-site.

The proponent does 'commit' to implement some initiatives, none of which entail anything other than standard business efficiencies. Maintaining equipment, efficiency-focussed procurement and planning logistics to minimise fuel consumption can hardly be claimed as anything more than cost minimisation for the proponent. These proposals are hardly proportionate to the enormous scale of climate damage set to be caused by the Project.

As a result of these omissions, the EIS fails to meet the requirements of the ToR.

Recommendation

That this Proponent be required to prepare a detailed decarbonisation plan that meets the ToR and which includes at a minimum:

- Identification of mechanisms, and committing to taking action, to reduce Scope 1 and 2 emissions including a credible plan to achieve zero emissions by 2050,
- An assessment of the Project's compatibility with the emissions reduction required to meet Queensland and Australia's emissions targets,
- An assessment of the impacts of climate change on all matters of State and National Environmental Significance, and
- A meaningful analysis of the economic, social and environmental cost-benefit of this project to justify the project proceeding given the significant contribution to emissions to accelerating climate change induced weather events.

Ground and Surface Water

The Project is within the Isaac-Connors Sub-catchment of the greater Fitzroy Basin. The Isaac River is the main watercourse in the vicinity of the Project area, with a catchment of approximately 4,100 km^2. The Isaac River flows converges with the Connors River and then the Mackenzie River

approximately 150 km downstream of the Project. Ultimately, the Mackenzie River joins the Fitzroy River, which discharges into the Great Barrier Reef Marine Park near Port Alma.

The EIS describes potential physical consequences of the Project on surface waterways, but does not assess how these impacts will affect local and regional ecosystems. This means that the EIS does not provide sufficient information to support an informed decision on the environmental authority.

Examples of this incomplete approach to the required impact assessment are found throughout the sections of the EIS discussing water impacts. For example:

- The EIS describes the level of subsidence modelled to occur under the floodplains of the various creeks crossing the project area, and notes that this will increase floodplain storage and reduce downstream flows but does not describe how this may affect fauna or flora inhabiting the surrounding or downstream areas.
- Similarly, the EIS notes that subsidence will reduce flood flow velocities across these floodplains, and that this will increase the deposition of sediment, but does not assess the flow-on impacts of this sedimentation to local or surrounding ecosystems.
- The EIS does not assess whether the downstream impacts of subsidence on flows into the Isaac River could be worsened in changing climate scenarios, such as after periods of sustained drought.

The EIS also notes that there are wetlands in the vicinity of the Project, including some that are within the areas expected to be affected by subsidence or groundwater drawdown, but does not identify the environmental values of these wetlands or how these values could be affected by subsidence/drawdown.

A mere description of the physical consequences of the Project gives only a partial understanding of the ways in which the Project could be expected to harm affected ecosystems and is not sufficient to inform proper decision-making on whether the Project has either adequately minimised environmental impacts.

Recommendation
That the Proponent is required to provide additional information in relation to the impact of the changed surface water flows on the ecological values in the surrounding and downstream areas as outlined above.

The Queensland Government's position is that "Coal projects in Queensland will continue to be supported as long as they stack up economically, environmentally, and socially". Each project must proceed on its own merits, based on demand and economic viability, and meet the highest environmental and community standards. The draft EIS for the Project does not provide a reasonable assessment on which to base a decision that the mine 'stacks up'.

Thank you for the opportunity to make a submission on the Lake Vermont Meadowbrook Extension projects draft EIS.

Yours sincerely,

Dr Coral Rowston
Director
Environmental Advocacy in Central Queensland