

Hon Tanya Plibersek MP
Minister for the Environment and Water
c/- Department of Climate Change, Energy, the Environment and Water

7 December 2022

Dear Minister,

RE: Comment on Referral – Vulcan Coal Mine Ancillary Infrastructure – EPBC 2022/09361

Thank you for the opportunity to make this submission in response to the referral of the Vulcan Coal Mine Ancillary Infrastructure (**the Proposed Action**) by Vitrinite Pty Ltd (**Vitrinite**) under the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**).

Environmental Advocacy in Central Queensland

Environmental Advocacy in Central Queensland (**EnvA**) is a Central Queensland association concerned about the risks associated with coal mining, coal seam gas and climate change.

EnvA believes that opening new and expanding 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 comments made in this submission have mostly been restricted to the impacts on our local (Central Queensland) environment.

The proposed action (the Project)

Vitrinite proposes to construct and operate a Coal Handling and Processing Plant (CHPP), rail Loop and a new open cut pit called the 'Matilda pit' adjacent to the current Vulcan Coal Mine. This proposed mine extension footprint will cover approximately 93 ha of the 407.46 ha mining lease area.

Vitrinite acknowledges that this mine expansion may change the magnitude of impacts to matters of national environmental significance (**MNES**) and identifies the MNES which will be significantly impacted as:

- (a) Listed threatened species and communities (ss 18 and 18A).

The referral does not contain information about the planned increase in the volume of coal production nor any information on greenhouse gas (**GHG**) emissions. However, it is clear that any fossil fuel extraction and subsequent use of the product contributes to accelerated climate change.



GROUNDINGS FOR SUBMISSION

Significant impact of GHG emissions on MNES

The Project's projected GHG emissions and the contribution of those emissions to global warming is a key matter that underpins the submission that the Project should either be determined clearly unacceptable, or in the alternative, determined to be a controlled action.

The GHG emissions from the Project constitute a significant impact on MNES. This submission can be broken down into two component parts: firstly, whether the GHG emissions constitute an impact, and secondly, whether the impact is significant.

Impact of GHG emissions

The GHG emissions from the Proposed Action constitute an 'impact'. The term 'impact' is defined by [s 527E of the EPBC Act](#).

The Project involves the direct emissions of GHGs and the warming effect of those GHG emissions fall into the category of impact in s 527E(1)(a), as they are an event or circumstance that is a direct consequence of the action.

The Project will emit GHGs which, cumulatively will increase global temperature, resulting in adverse impacts to MNES.

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.

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 following MNES which need to be included as controlling provisions:

- (a) World Heritage (ss 12 and 15A);
- (b) National Heritage (ss 15B and 15C);
- (c) Ramsar Wetlands (ss 16 and 17B);
- (d) Listed threatened species and communities (ss 18 and 18A);
- (e) Listed migratory species (ss 20 and 20A);
- (f) Commonwealth marine areas (ss 23 and 24A);
- (g) Great Barrier Reef Marine Park (ss 24B and 24C); and
- (h) Water resources (ss 24D and 24E).

The specific details and context of the direct and indirect impacts the Project will have on each relevant MNES in Central Queensland is detailed further below.

Significance of the impact

Significant Impact on Declared World Heritage Properties

The Proposed Action's GHG emissions and resulting contribution to climate change will have a significant impact on the World Heritage values of declared World Heritage Properties. Therefore, the Proposed Action should be refused as clearly unacceptable, or in the alternative it should be determined to be a controlled action with sections 12 and 15A of the EPBC Act as controlling provisions.

By contributing to climate change, the Great Barrier Reef World Heritage Property (**the Reef**) will be significantly and adversely impacted by the Proposed Action. Climate change is the greatest [threat](#)

[facing the Reef](#). Water quality entering the Reef is also a significant impact on the World Heritage values of the Reef which is addressed under Significant Impact on Water Resources below.

Vitrinite has claimed that as no World Heritage properties occur within 100km of the Proposed Action and the Reef is approximately 150km to the east, that there will be negligible risk to the Reef. However, the Environment Minister has recently accepted that there is significant scientific evidence that climate change is impacting on MNES, and has agreed to [reconsider the climate impacts](#) of 18 coal and gas projects.

The Minister should be satisfied that the Proposed Action will have a significant impact on Great Barrier Reef World Heritage Property and should decide that the Proposed Action is clearly unacceptable, or in the alternative that sections 12 and 15A of the EPBC Act are controlling provisions.

Significant Impact on National Heritage

The Project's GHG emissions and resulting contribution to climate change will have a [significant impact on multiple Australian National Heritage](#) sites.

Of particular interest to EnvA is the highest level of protection for the Great Barrier Reef which is on our doorstep and a valuable economic and recreational asset in our region.

Another Queensland National Heritage site which will be significantly impacted by climate change is the Wet Tropics of Queensland. Climate change presents a danger to the region's biodiversity and associated endemic species. Weather changes brought on by climate change could seriously affect plant and animal species vulnerable to a warmer and more variable climate. More frequent and severe heatwaves could have rapid, catastrophic impacts on tree-dwelling mammals in some high elevation locations, and the risk of more intense cyclones could further disrupt ecosystem structure and function.¹

The above examples demonstrate that GHG emissions have an influence on global warming and the resulting impacts of climate change are a serious threat to National Heritage sites across Australia.

The Minister should be satisfied that the Proposed Action will have a significant impact on the Great Barrier Reef and other national heritage sites and should decide that the Proposed Action is clearly unacceptable, or in the alternative that sections 15B and 15C of the EPBC Act are controlling provisions.

Significant Impact on Ramsar Wetlands

The Project's GHG emissions and resulting contribution to climate change will have a [significant impact on Ramsar Wetlands](#). Climate change has the potential to cause degradation and lead to the reduction or loss of the critical services and benefits of Ramsar Wetland sites in Australia.

Of particular interest to EnvA is the Shoalwater and Corio Bay Ramsar listed wetlands. The site is one of the largest and most ecologically rich coastal wetland sites in Queensland. This near pristine area covers over 200,000 hectares and stretches along 330 kilometres of coastline here on the central Queensland coast. The wetlands are especially rich in wildlife because tropical and subtropical species overlap on Queensland's central coast. Many wetland types are found in this Ramsar Wetland including:

- fringing coral reefs
- shallow open water with seagrass beds
- rocky shores, beaches and sandbars
- intertidal mudflats and sandflats
- mangrove forests and melaleuca woodland, and
- freshwater lagoons, swamps and streams on elevated sandplains².

¹ Queensland Government, *Climate Change Pressure on the Wet Tropics of Queensland* (September 2021).

² <https://rsis.ramsar.org/rsis/792>

Extended drought means vegetation loss and reduced amounts of open water which reduces the availability of waterbird habitat. Reduction of water volumes and flood frequency may also lead to stagnation of wetlands and changes to nutrient cycling.

Climate change will impact all elements of the water cycle of the region. Reduced rainfall and hotter temperatures produce less water for rivers and storages. Drier soils result in less run-off to waterways, and more evaporation occurring from rivers, channels and storages.

The Minister should be satisfied that the Proposed Action will have a significant impact on the Shoalwater and Corio Bay wetland and other Ramsar Wetland sites and should decide that the Proposed Action is clearly unacceptable, or in the alternative that sections 16 and 17B of the EPBC Act are controlling provisions.

Significant impact on listed threatened species and communities

Vitrinite anticipates that the project will be assessed as a controlled action due to direct impacts on the koala, greater glider and southern squatter pigeon.

EnvA believes that the direct impacts on these listed threatened species alone is a reason for this Project to be refused as clearly unacceptable, or in the alternative it should be determined to be a controlled action.

The Project's GHG emissions and resulting contribution to climate change will also have a [significant impact on these and other threatened species and communities](#). These impacts need to be adequately addressed in an Environmental Impact Statement assessment process.

Koalas are threatened by the increased frequency and intensity of drought and high temperatures, bushfires and reduced habitable area. Forecasting models predict that a large area of koala habitat may be lost, accompanied by a large reduction in the koala population, under current climate change projections.

The Minister should be satisfied that the Proposed Action will have a significant impact on listed threatened species and communities and should decide that the Proposed Action is clearly unacceptable, or in the alternative that sections 18 and 18A of the EPBC Act are controlling provisions.

Significant Impact on listed migratory species

Vitrinite has recorded two migratory species in the vicinity of the Project area and a further eight that are likely to use the Project area, but conclude that the impacts are expected to be minimal.

Climate change threatens migratory species protected in Australian waters under international agreements. By way of examples of migratory species likely to be [significantly impacted](#) by climate change here in Central Queensland:

- Fluctuations of dugong numbers appear to track major changes in the status of the dugong's food supply (seagrass) which is subject to episodic diebacks which is often associated to extreme weather events.
- Listed sea turtles lay their eggs on our local beaches. Researchers have also noted that the warmer the sand, the higher the ratio of female turtles. As the Earth experiences climate change, increased temperatures could result in skewed and even lethal incubation conditions. Climate change scenarios also predict reduced nesting habitat for sea turtles through rising sea levels and increased storm erosion, and the increase in coral bleaching and burning of seagrass will reduce the turtle's food source.
- Many of the migratory waders and shorebird species that visit our Central Queensland wetlands and foreshores will be impacted by changes in sea levels, habitat quality and ocean food supply during their migration will have a significant impact on these internationally important species.

The Minister should be satisfied that the Proposed Action will have a significant impact on listed migratory species through both direct loss of habitat and impacts to a broader number of migratory species outside of the proposed mine site due to climate change.

EnvA believes that the direct impacts on listed migratory species is a reason for this Proposed Action to be refused as clearly unacceptable, or in the alternative it should be determined to be a controlled action with sections 20 and 20A of the EPBC Act as controlling provisions.

Significant Impact on the Great Barrier Reef Marine Park and Commonwealth Marine Areas

The Proposed Action's GHG emissions and resulting contribution to climate change will have a significant impact on the environment in the Great Barrier Reef Marine Park (**GBRMP**).

Please also refer to our comments under "Significant Impact on Declared World Heritage Properties" above.

More specifically, the impacts on the GBRMP of global warming increasing above 2°C have been predicted with very high confidence to include annual bleaching which will result in 'widespread decline and loss of structural integrity'.³

In addition, the submission that the Project will have a significant impact on the environment in the GBRMP is strongly supported by the [State Party Report on the state of conservation of the Australia's Great Barrier Reef](#), as well as by a Position Statement released by the Great Barrier Reef Marine Park Authority in 2019, which notes that:

"Climate change is the greatest threat to the Great Barrier Reef. Only the strongest and fastest possible actions to decrease global greenhouse gas emissions will reduce the risks and limit the impacts of climate change on the Reef. Further impacts can be minimised by limiting global temperature increase to the maximum extent possible and fast-tracking actions to build Reef resilience".

The Minister should decide that the Project is refused as the impacts on the GBRMP are clearly unacceptable, or in the alternative it should be determined to be a controlled action with sections 23, 24A, 24B and 24C of the EPBC Act as controlling provisions.

Significant Impact on Water Resources

Vitrinite has determined that the Project and its associated effects on water resources are of a limited scale and duration.

EnvA believes that the potential to impact surface water resources through direct disturbance associated with open cut mining, diversion of drainage features, creation of new temporary and permanent landforms that affect flood waters and through release of water to the surrounding environment.

The Project also has the potential to impact groundwater resources through direct interaction with aquifers by open cut mining and indirect take from adjacent aquifers due to changes in hydraulic gradients. Potential impacts to groundwater resources may include: potential drawdown of groundwater aquifers, alteration of groundwater flow directions and decrease in baseflow to surface water systems; localised effects on groundwater quality; and long-term changes to groundwater levels and flow direction in the vicinity of final voids.

The Proposed Action's GHG emissions and resulting contribution to climate change will have a significant impact on water resources. Climate change threatens Australia's water resources, as rainfall patterns are shifting, and the severity of floods and droughts has increased.

Coal mine water releases are regulated through Environmental Authorities, although the cumulative impacts from multiple mines of these releases is not considered. While Vitrinite's modelling

³ IPCC, 2022: Technical Summary. In *Climate Change 2022: Impacts, Adaptation and Vulnerability*. Contribution of Working Group II to the Sixth Assessment Report of the Intergovernmental Panel on Climate Change, p 25.

suggests that there will be no water spills to the receiving environment, this modelling does not adequately take into account the extreme wet seasons exacerbated by climate change. Just in the last month, there have been [multiple and concurrent mine water releases](#) from up to five mines within the same catchment area. New and expanding coal mines will result in further simultaneous releases directly flowing into the Reef catchment area.

The Minister should be satisfied that the Project may have a significant impact on water resources and should decide that sections 24D and 24E of the EPBC Act are controlling provisions and require a detailed assessment of the impacts of the Project in a changing climate.

CONCLUSION

The GHG emissions and resulting climate change impacts of the Project are likely to have a significant impact on a number of MNES and needs to be thoroughly assessed through an Environmental Impact Statement by an Independent Expert Scientific Committee.

The Minister should find that the Proposed Action is a controlled action with the following applicable controlling provisions, and an Environmental Impact Statement required for assessment:

- (a) World Heritage (ss 12 and 15A);
- (b) National Heritage (ss 15B and 15C);
- (c) Ramsar Wetlands (ss 16 and 17B);
- (d) Listed threatened species and communities (ss 18 and 18A);
- (e) Listed migratory species (ss 20 and 20A);
- (f) Commonwealth marine areas (ss 23 and 24A);
- (g) Great Barrier Reef Marine Park (ss 24B and 24C); and
- (h) Water resources (ss 24D and 24E).

Thank you again for the opportunity to make comment on this proposal.

Kind regards



Dr Coral Rowston
Director
Environmental Advocacy in Central Queensland