

Statement of Reasons for decision to refuse approval under the *Environment Protection and Biodiversity Conservation Act 1999*

1. I, the Hon Tanya Plibersek MP, Minister for the Environment and Water, provide the following statement of reasons for my decision to refuse approval, under subsection 130(1) and section 133 of the *Environment Protection and Biodiversity Conservation Act 1999* (Cth) (**EPBC Act**), for Central Queensland Coal Pty Ltd (**proponent**) to construct and operate an open-cut coal mine on Mining Lease 80187, a train load-out facility and associated infrastructure (EPBC 2016/7851) (**proposed action**), approximately 130 kilometres north-west of Rockhampton in central Queensland.

LEGISLATION

2. Relevant legislative extracts are at **Annexure A**.

BACKGROUND

Controlled Action Decision

3. On 22 December 2016, the proponent referred the proposed action to the then Minister for the Environment, the Hon Greg Hunt.
4. On 3 February 2017, a delegate of the then Minister decided that the proposed action was a controlled action with the following controlling provisions:
 - 4.1. World Heritage properties (section 12 and 15A);
 - 4.2. National Heritage places (section 158 and 15C);
 - 4.3. Listed threatened species and communities (section 18 and 18A);
 - 4.4. Listed migratory species (sections 20 & 20A);
 - 4.5. Great Barrier Reef Marine Park (section 248 and 24C); and
 - 4.6. A water resource, in relation to coal seam gas development and large coal mining development (section 24D and 24E).

(subsequently referred to as the matters of national environmental significance (**MNES**))

5. On the same day, the delegate decided the proposed action was to be assessed by the Department of Environment and Science (**DES**) under the *Agreement between the Commonwealth and the State of Queensland relating to Environmental Assessment* (**Bilateral Agreement**) with the Queensland Government.

Assessment under the Bilateral Agreement

6. To enable assessment by the DES, the proponent published:
 - 6.1. a draft Environmental Impact Statement on 18 May 2018 (**EIS**);
 - 6.2. an amended Environmental Impact Statement on 20 December 2018 (**Amended EIS**); and

- 6.3. a final amended Environmental Impact Statement on 8 October 2020 (**Final EIS**).
7. On 26 February 2021, the delegate of the Chief Executive of the *Environmental Protection Act 1994* (Qld) (**EP Act**) decided to allow the Final EIS for the proposed action to proceed to the state assessment report (**SAR**) writing stage.
8. On 28 April 2021, the DES released the SAR for the proposed action pursuant to Part 1 of Chapter 3 of the EP Act. The then Department of Agriculture, Water and the Environment (**department**)¹ subsequently sought, and received, clarification from the DES regarding the SAR's conclusions on the impacts of the proposed action, and the suitability of the proposed action.

SAR Recommendations and Conclusions

9. The SAR assessed the impacts of the proposed action on the MNES and made recommendations about the suitability of the proposed action having regard to these impacts.
10. The SAR concluded that there were:
- 10.1. unacceptable risks to the Great Barrier Reef World Heritage Area (**GBRWHA**);
 - 10.2. unacceptable risks to the Great Barrier Reef National Heritage Place (**GBRNHP**);
 - 10.3. with the imposition of conditions, no unacceptable risks to listed threatened species and communities;
 - 10.4. with the imposition of conditions, no unacceptable risks to listed migratory species;
 - 10.5. unacceptable risks to the Great Barrier Reef Marine Park (**GBRMP**); and
 - 10.6. unacceptable risks to a water resource relating to large coal mines and coal seam gas.
11. The particular findings of the SAR which formed part of my reasons for refusing to approve the decision are discussed in my Findings on Material Questions of Fact from paragraph [33].

Further Engagement with the Department and Advice Sought

12. Following the publication of the SAR, there was extensive consultation with, and exchange of information between, the department and the proponent in relation to the impacts of the proposed action on the GBRWHA, GBRMP, water resources and also economic and social matters. This took place between 7 May 2021 and 13 July 2021. The department also invited the DES to respond to the proponent's submissions disagreeing with the conclusions in the SAR.

¹ On 1 July 2022, responsibility for the administration of the EPBC Act moved to the Department of Climate Change, Energy, the Environment and Water. I will refer in this statement to the responsible department at the relevant time as the department.

13. The department also sought, and received, advice from the department's Office of Water Science (**OWS**) in relation to the proponent's 'No Release Strategy'.

Proposed Decision

14. On 1 August 2022, having received and reviewed the briefing materials from the department on 29 July 2022, I accepted the department's recommendation that I should propose to refuse to approve the taking of the proposed action.
15. On 2 August 2022, the department provided a copy of my proposed decision and relevant attachments to the proponent and invited their comments on my proposed decision.

Response to the Proposed Decision

The Proponent

16. The proponent provided a detailed 116 page response on 16 August 2022 (**August Response**). In summary, the August Response stated that:
- 16.1. the approval process was not fair and reasonable and failed to take into account the scientific and technological studies, and the engineering safeguards the proponent provided. Information had been entirely overlooked and the Independent Expert Scientific Committee (**IESC**) advice provided to the department was inaccurate, unfair and failed to take into account or deliberately ignored the studies the proponent had undertaken;
 - 16.2. the IESC is nothing more than a 'set up designed to provide an excuse for the Government to reject our Project,' that there have been public statements (from myself and the Prime Minister) which are misleading and there has been a singling out of the proponent, associated companies and its directors which is unfair and prejudicial treatment;
 - 16.3. the area in which the proposed action is located is already home to two of the largest established coal ports in the world, which have both operated safely for the past five decades contiguous to the GBRMP boundary. The proposed action is located more than 44 km away from the GBRMP boundary and other operating mines are closer;
 - 16.4. the information provided by the proponent in relation to the IESC advice, Mine Affected Water Release, Sediment Release and Transport and Groundwater Drawdown had not been properly considered and the proponent identified particular information which had not been properly considered in relation to these matters;
 - 16.5. the proposed action will operate for 20 years and employ up to 500 people, providing exports up to \$60.0 billion, Commonwealth taxes up to \$10.0 billion and State Coal Royalties up to \$22.0 billion, calculating a Project valuation up to \$20.0 billion. The proposed action exceeds, on multiple levels, the revenue and jobs generated per hectare by the Great Barrier Reef. The proponent provides a comparison that the Great Barrier Reef contributes some \$6.4 billion per year to the economy, providing 64,000 full-time jobs, while the proposed action (a much smaller area) generates up to \$3.1 billion per year and 500 full-time jobs. This equates to the Great Barrier Reef

generating \$1,858 per ha, whereas the proposed action generates up to \$1,618,799 per hectare;

- 16.6. St Lawrence, Ogmore and Marlborough need every opportunity to sustain and grow their populations which will ensure essential health and other services would return to revitalise these towns, and lifesaving organisations such as State Emergency Services or Rural Fire Brigades, and volunteers, are available;
- 16.7. the positive impact and record-high coral cover will ensure commercial and recreational fishers and users of the Great Barrier Reef areas will maintain their living and lifestyle. Emissions from the proposed action will be negligible and when combined with water quality improvements, community jobs and business benefits;
- 16.8. the Department of Transport and Main Roads (DTMR) has accepted the stability analyses for the design of pit wall batters adjacent to the Bruce Highway. The matters raised in the SAR should be disregarded as they are not the concerns of the authorising authority. The safety concerns highlighted by the DES (regarding blast fly rock and fumes from the proposed action towards the Bruce Highway users) are technical issues, where proven engineering solutions are already in use elsewhere and which will be adopted. Blast fumes can be reduced by improved stemming of blast-holes, blast detonation delays, use of low fume explosive and management processes, including avoidance of blasting during inclement weather. While the proponent proposes to mine with open cut mining methods within the 500m buffer zone during years 12, 13 and 14, if the geotechnical assessment indicated adverse impacts to the Bruce Highway, the open cut would not go ahead, the highwall mining extraction method or similar would be used to extract coal reserves within the 500m buffer areas;
- 16.9. the Marine Pollution Bulletin Sediment Report used a sediment model which did not take into account any field information, which leads the proponent to question the relevance of model results and the author's intentions. The reported model assumes run-off water is completely clear before any of the releases are modelled, which is not consistent with real conditions. The proponent's site alone, undeveloped, releases over 5,040 tonnes of sediment annually, and generally the Styx catchment releases 0.7 tonnes of sediment per hectare annually into the Great Barrier Reef from natural and anthropogenic sources. If the report is accepted, these major and irreversible changes must already be occurring. Contrary to the report, the proposed action will reduce sediment loss from the site and the natural turbidity plumes would be less rather than more intense. What is overlooked is that the proposed action will improve water quality and the habitat for marine life in the Great Barrier Reef;
- 16.10. all the evidence provided but not referenced or relied upon by either in the IESC or the SAR report supports the finding that the proposed action does not amount to an 'impact' as that term is defined in the EPBC Act. There would be no impacts from the proposed release strategy on downstream waters, including in the Great Barrier Reef and the AEIS demonstrates that there is a net positive benefit to the downstream receiving environment including the GBRMP. If due and proper attention is given to economic and social matters, then the Minister must find that the balance is for the approval of the proposed action;

- 16.11. the material provided to the DES has not been comprehensively reviewed, analysed or considered. The availability of technical engineering safeguards, and the willingness of the proponent to provide protection mechanisms to protect the Great Barrier Reef, have not been acknowledged, recognised and understood. The DES has relied upon advice provided by the IESC, which failed to understand the information provided;
- 16.12. the IESC advices do not give adequate, and in some cases any, regard to the documentation provided in the AEIS. Between the EIS and the AEIS, a number of project changes were made and at least 42 new studies were undertaken to address concerns. Modelling undertaken by the proponent showed conclusively that downstream water quality was not affected by the proposed release regime. The failure to consider appropriate design and mitigation is a serious failure in the IESC assessment. The IESC advices are riddled with inaccurate and misleading statements. The SAR relied heavily on the IESC advice which has significantly influenced the assessment;
- 16.13. the potential risks of dam and levee failure appears to have been confused with the level of engineering design required, the level of flood immunity provided, and the probability of an overflow over the spillway. The proponent has adopted all required design standards for the level of risk identified, and has committed to good design practice, including materials, to manage events through the system without actual wall failure. The SAR ignored likelihood in assessing risk, ignored that the Queensland Government's regulations and design requirements that explicitly factor in consequence, and ignored the work showing no impact to downstream waters. Further, 'NO DISPERSIVE MATERIAL WILL BE USED IN DAM EMBANKMENT CONSTRUCTION.'. The risk of dam break or seepage is 'very, very low';
- 16.14. the AEIS demonstrates that there is actually a net positive benefit to the downstream receiving environment, including the GBRMP. Controlled releases have been designed to only occur during periods where there is flow in the receiving waters. The volume of discharge will be constrained by the amount of flow in the receiving waters. Any flow over the spillway would only occur during higher than normal flows in the downstream environment and rules have been developed to ensure that outflows from the site are within the assimilative capacity of the downstream waters;
- 16.15. downstream water quality is within the range of natural variability under all release scenarios, and hence will not cause adverse impacts to MNES. Modelling analysis results showed that all parameters were well within the range of the typical historical receiving water concentrations. The peer-reviewed 'Quantifying the environmental impact of a major coal mine project on the adjacent Great Barrier Reef ecosystems' article has a number of substantial issues and, if the article is believed, the major and irreversible changes cited must already be occurring;
- 16.16. the No Release Strategy was to be read with the water balance modelling and Mine Site Water Management Plan. The purpose of the No Release Strategy was to demonstrate that, notwithstanding there would be no significant impacts to the receiving environment, there are a number of feasible and common options available

to further reduce water volumes on site without the need for discharge and the proponent would happily accept conditions to this effect;

- 16.17. the department has chosen to ignore the proponent's information and work undertaken, which show that the drawdown impacts, vegetation impacts and impact on stygofauna communities will not occur, and has instead 'settled' on the headlines. The SAR oversimplified the drawdown impacts on creek flow and ponds and appears to have ignored the proponent's responses in favour of other advice without due consideration of the actual hydrogeological and comprehensive field permeability testing work completed. Similarly, the conclusion on the impacts on vegetation relied on the IESC advice over a peer-reviewed groundwater model, and ignored extensive hydrogeological permeability fieldwork. There are no significant impacts to stygofauna;
- 16.18. the public comments in support of the Minister's decision provide no science or technical evidence and have multiple flaws;
- 16.19. IESC has not provided any evidence as to what the significant risks are, and has not taken into account the evidence which proves that water quality flowing past the mine site would be improved with approval of the proposed action. The proposed action is capable of reducing sediment loads flowing from the proposed action site into the Great Barrier Reef; and
- 16.20. multiple articles, including from Michael Slezak, the Australian Institute of Marine Science and Professor Peter Ridd, suggest that coral cover is at its highest level since records began. Further, the refusal of this project will only mean the opening of another project either here in Australia or other parts of the world to substitute the coal otherwise produced by the proposed action.

Invitation to provide comments

17. I also decided to publish my proposed decision so that public comments could be invited on it. I am advised that there were 9,102 public submissions. Of these, 8,940 were received within the comment period, and 162 were received outside of the comment period. The department advises me that the breakdown of these comments was:
 - 17.1. 92 in favour of me approving the proposed action;
 - 17.2. 8952 in favour of me not approving the proposed action;
 - 17.3. 4 neither for or against refusal; and
 - 17.4. 54 were irrelevant or had insufficient information, from which I am advised means they related to a different action, had no content or lacked the detail needed to conclude whether the individual making the comment was for or against approval of the proposed action.
18. In summary, the comments in favour of approving the proposed action submitted that the proposed action:
 - 18.1. would support economic and community growth, increase jobs and, if refused, would be a missed opportunity for social and economic benefits to local residents;

- 18.2. should be approved similar to the other coal mining projects nearby;
 - 18.3. would result in no significant impacts on water quality on GBRMP after mitigation and meets all required environmental and approvals processes;
 - 18.4. is needed to sell coal to pay for the electricity grid; and
 - 18.5. was refused because of environment reports written by unqualified or biased authors and the biased media.
19. A number of the comments in favour of approving the decision provided attachments. These attachments included more detailed comments from the Australian Mining Engineering Consultants, Minecraft Consulting and Clintel, amongst others. These attachments referred to the absence of any adverse impacts from the proposed action, the social and economic benefits of the proposed action, errors in the IESC advice and there being no climate emergency.
20. In summary, the comments in favour of not approving the proposed action submitted that:
- 20.1. refusing the proposed action would be acting in accordance with 2050 Net Zero Plan and reducing the use of coal and increasing other alternatives;
 - 20.2. the proposed action would contribute to climate change, global warming, emissions and extreme weather events;
 - 20.3. the proposed action would result in impacts on Indigenous heritage values, future generations, the Great Barrier Reef, the GBRMP, the GBRWHA and Broad Sound, water resources, human health or quality of life, threatened flora and fauna, biodiversity and sensitive habitats;
 - 20.4. the proposed action would result in economic costs to businesses reliant on the GBR;
 - 20.5. the proponent had a negative environmental history; and
 - 20.6. no new coal mines should be approved under the EPBC Act.
21. Like the comments in favour of approving the decision, a number of the comments in favour of refusing to approve the proposed action also contained attachments. Many of these attachments were publicly available reports and information regarding the impacts of the proposed action or the effects of fossil fuels. A number of the attachments were personal letters, supporting my proposed decision and emphasising the impact that the proposed action would have on the GBRWHA, GBRNHP and GBRMP. Other attachments from various not-for-profit organisations supported my proposed decision, and urged me to reconsider my proposed findings in relation to the potentially-impacted threatened species, particularly the risks of loss of habitat for the Greater Glider and Koala.
22. Overall, the comments that I received from the public showed the degree of community concern regarding the impacts of the proposed action and supported my proposed decision and findings concerning the likely impacts on the relevant protected matters including the GBRWHA, GBRNHP and GBRMP.

Advice from the Office of Water Science (OWS)

23. Following the proposed decision, I also received advice from the OWS dated 16 September 2022 (**September OWS advice**). That advice responded to what was raised in the August Response (which I have summarised at [16] above). In summary, the OWS advice states:
- 23.1. the proponent does not include any new scientific information specific to the proposed action in their August Response and the information provided in the August Response would not materially alter the risks and impacts identified by the IESC;
 - 23.2. the IESC identified multiple concerns throughout their reviews, with many remaining inadequately resolved as was highlighted in the most recent IESC advice, which acknowledged the proponent had undertaken substantial additional hydrological, water quality and ecological studies;
 - 23.3. the engineering design standards proposed by the proponent are based on a consequence category for a 'typical' downstream environment. The design standards and categories are not project or site-specific and therefore do not consider the unique location and environmental values of the proposed action area (which the IESC advice highlighted);
 - 23.4. the IESC stated that they had limited confidence in the proponent's predictions that the reductions in surface water hydrology and water quality would result in negligible to minor impacts to ecological values;
 - 23.5. the Marine Pollution Bulletin publication was published after the latest IESC advice. The paper clearly highlights the limitations of the research. However, these limitations do not invalidate the findings of the study, which highlight the potential risks and possible extent of fine sediment dispersal from the proposed mine to the nationally and internationally recognised assets and ecosystems of the GBRWHA;
 - 23.6. the OWS had regard to the 'No Release Strategy' document, the previous IESC advice and documents provided in the AEIS when providing its advice previously; and
 - 23.7. even with the relocation of the coal conveyor, there still remains the risks to water quality and other water-related assets identified by the IESC.
24. I agreed with the department that the proponent ought to be provided an opportunity to make further comments on the September OWS advice. The department invited the proponent to do so on 11 November 2022.

Ministerial Comments

25. I received comments from the following Commonwealth Ministers in response to my proposed decision:
- 25.1. Minister for Resources and Northern Australia
 - 25.2. Minister for Agriculture, Fisheries and Forestry
 - 25.3. Minister for Indigenous Australians

26. The Hon Madeleine King MP, Minister for Resources, identified that Australia has abundant, world-class coal reserves and that our mature and competitive resources sector is a leader in environmental, social and governance performance practice. The Minister said that Australian coal supports regional and global energy and development needs, and will continue to play an important role in underpinning energy systems in the region for many years to come, while the globe transitions to renewables.
27. Minister King emphasised that it is crucial that I clearly communicate my reasoning for this decision to demonstrate that the Government continues to support the development of coal projects in Australia where the environmental and economic credentials are appropriate. Minister King stated, and I agree, that it is vital that Australia maintains its reputation as a stable and reliable investment destination for high quality resources projects.
28. Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry had no concerns with my proposed decision.
29. The Hon Linda Burney MP, Minister for Indigenous Australians, offered her support for the proposed decision, and noted the importance of protecting the Great Barrier Reef and our First Nations cultural values.
30. I also received a response from the DES. The DES referred to the conclusions in the SAR and confirmed that my proposed decision to refuse to approve the taking of the proposed action was supported.

Proponent's response to the OWS advice

31. The department received the proponent's response to the OWS advice on 25 November 2022 (**November Response**). The proponent referred back to its August Response, and its criticisms of the IESC throughout the November Response. I do not repeat those matters and refer to [16] above. The November Response otherwise included the following points:
 - 31.1. the proponent has provided me with the same information on numerous occasions, only for the department to not properly assess and consider this information. The assessments found that there would be no significant impact to the downstream environment (using the department's own guidelines) and the proposed action has been assessed in accordance with all government standards, guidelines and conservative assumptions under all weather conditions;
 - 31.2. the proponent is frustrated with the misinformation contained within the OWS advice, and the knowledge and information that the proponent has expertly gathered, processed and articulated to the department, without the department considering this information properly. The approval process has not been fair, proper and expeditious;
 - 31.3. there is precedence already set in Australia that no coal mine has not been approved. Accordingly, the proponent has had a legitimate expectation to have the support of the government, and the government approving the proposed action;
 - 31.4. the OWS was asked the incorrect question, and should instead have been asked to consider whether the IESC properly considered all of material provided by the proponent, and whether their conclusions with reference to the proposed action were

fair and supported by the scientific assessments provided by the proponent, government reports and the peer reviewed scientific literature;

- 31.5. there does not appear to have been substantial consideration of the August Response, but rather the vast majority of OWS advice appears to have ignored the August Response and simply reiterated the findings of the IESC advice;
- 31.6. the August Response was not seeking to provide new information to the IESC or the OWS but, rather, was presenting information to demonstrate that the review undertaken by the IESC failed to consider the findings of several of the technical studies carried out for the proposed action and studies that were key to understanding the project and its impacts. The August Response was seeking to either have the IESC comprehensively consider the material already provided, or to have a review of the IESC advice;
- 31.7. there is no evidence that there has been a considered response to the criticisms of the IESC advice given in the August Response. The proponent has a right to a transparent assessment of the project, and to have all relevant information, documentation and scientific evidence considered and it is contended that this has not occurred;
- 31.8. the fact that the IESC acknowledged in their 2020 advice that the proponent had undertaken 'substantial additional hydrological, water quality and ecological studies' in the Final EIS is not evidence that the IESC considered this material. In particular, references were made in the 2020 advice to earlier configurations of the proposed action that were changed post the 2018 advice;
- 31.9. offsets are not proposed as mitigation options. The proponent has undertaken avoidance and mitigation measures. Due to a possible minor impact upon riparian vegetation around Deep Creek (being a reduction as opposed to a loss of vegetation), the proponent has undertaken extensive work to provide an offsets package for the entire 165.23 ha that may possibly be affected. Offsets for the removal of up to 8.35 km of a minor tributary of Deep Creek has been devised in accordance with the State policy;
- 31.10. the statement that there are no feasible mitigation measures is flawed as there are a range of mitigation measures, which are used at other mine sites and other operators in the GBR catchment. The Final EIS demonstrates that there is actually a net positive benefit to the downstream receiving environment including the GBRMP and any controlled or uncontrolled releases will not cause adverse impacts to any downstream MNES;
- 31.11. the engineering standards are not based on a typical downstream environment (as the OWS states, but explicitly factor in the nature of the downstream environment in determining the level of design required for such a structure. The 'Consequence . Category Assessment' used specifically includes for areas of MNES;
- 31.12. the limitations of the research article do not appear to have been completely considered by the department when finding that the project would 'pose a serious risk and threat' (using the example that the 'most obvious issues is where both the

modelling and the assessment of impacts assume that existing waters have zero sediment content'). It would have been more suitable to find that further studies were required to understand existing sediment processes. The department appears to have neglected these limitations in forming its opinions based on the paper;

- 31.13. the lack of transparency and disregarding without cause of the large amount of highly specialised works in the Final EIS has led to an erroneous and flawed assessment, that did not adequately consider, and also incompletely considered, the available information provided in the Final EIS;
- 31.14. the OWS advice appears to delegate the decision on the acceptability of the impacts to others (the IESC and the regulator) without making any comment itself;
- 31.15. the OWS continues to focus on the title of the 'No Release Strategy' rather than the content within. The aim of the No Release Strategy was to demonstrate removal of the need for controlled releases for almost all of the mining operational conditions;
- 31.16. the IESC stating that the coal conveyor 'will be a constant source of coal dust into the waterway' implies that the IESC did not understand that the conveyor has been relocated to be more than 560 m away from Deep Creek or that the conveyor would only be affected by rare to extremely rare (1% to 0.1%) flood events;
- 31.17. the OWS should have looked further in the documents at the 'developed' flood mapping, in particular for the late phase development, where mining on the southern side of the highway has two pre-requisites – use of the coal conveyor, and diversion of upslope runoff. This shows that the coal conveyor is nowhere near any flood impacts. Cyclone Debbie in 2017 did not see flood waters breach the banks of either Tooloombah creek or Deep creek; and
- 31.18. the area surrounding the coal conveyor is not subject to any flood inundation. Furthermore, the moisture content of the coal will be 15% as a minimum which will result in no dust from the conveyor or associated infrastructure. As such, the OWS advice is patently false and misleading.

EVIDENCE OR OTHER MATERIAL ON WHICH MY FINDINGS WERE BASED

- 32. My decision under subsection 130(1) and section 133 of the EPBC Act to refuse to approve the taking of the proposed action is based on consideration of the final refusal decision brief prepared by the department, and all of its attachments (**refusal decision brief**). The contents of the refusal decision brief are set out at **Annexure B** to this statement.

FINDINGS ON MATERIAL QUESTIONS OF FACT

- 33. In deciding whether to approve the proposed action, I have considered all impacts that the proposed action would have or was likely to have on each matter protected by the controlling provisions for the action (being sections 12 and 15A, 15B and 15C, 18 and 18A, 20 and 20A and 24B and 24C and 24D and 24E of the EPBC Act).
- 34. I agree with the department that the documents set out in Annexure B provide sufficient information for me to decide whether or not to approve the proposed action.

World Heritage properties (section 12 and 15A), National Heritage places (section 15B and 15C) and Great Barrier Reef Marine Park (section 24B and 24C)

35. I have considered these 3 MNES together. I note that my proposed decision did so, that each of these controlling provisions concerns the Great Barrier Reef and that the proponent addressed the GBRWHP and GBRNHP together in the EIS.
36. I note that:
- 36.1. the GBRWHA is located approximately 10km downstream of the project area; and
- 36.2. the GBRMP marine national park zone is located approximately 40km downstream of the project area.
37. I acknowledge that some of the attachments in favour of approving the action challenged the distance from the proposed action to the GBRWHA. I also understand that, during an interview I participated in on 23 August 2022, I stated incorrectly the distance of the proposed action from the Great Barrier Reef.
38. I accept that the distances identified at [36] are accurate. These distances were provided by the proponent in the Final EIS and cited in the SAR.
39. The proponent acknowledged in the Final EIS that the proposed action had the potential to affect downstream ecological values impacting the:
- 39.1. GBRWHA;
- 39.2. GBRNHP; and
- 39.3. GBRMP.
40. In making my decision, I am aware that I must not act inconsistently with
- 40.1. Australia's obligations under the World Heritage Convention; or
- 40.2. the Australian World Heritage management principles (**WHM Principles**); or
- 40.3. a plan that has been prepared for the management of a declared World Heritage property under section 316 or as described in section 321. However, I note that a plan has not been prepared for the management of the GBRWHA.
41. The World Heritage Convention aims to promote cooperation among nations to protect heritage around the world that is of such outstanding universal value that its conservation is important for current and future generations. Australia's key obligations under the World Heritage Convention include to identify and avoid or mitigate any potential significant impacts to Outstanding Universal Values of World Heritage places and to use the best scientific, technical and community advice to maintain and protect Australia's cultural and natural heritage of outstanding universal value.
42. The Australian Government submitted a progress update on the implementation of the Reef 2050 Plan and the establishment of the Investment Strategy to the World Heritage Centre and IUCN in December 2016, with the World Heritage Committee welcoming this report at its meeting in July 2017. The Committee noted that, while progress in implementing the Reef 2050 Plan was being made, progress in achieving water quality targets had been slow. The

Committee strongly encouraged Australia to accelerate its efforts to ensure intermediate and long-term water quality targets are met.

43. The WHM Principles provide a guiding framework for excellence in managing heritage properties. They set the standard for the way places should be managed in order to protect heritage values for future generations. These principles should be used when preparing and implementing management plans and programs. In the absence of a management plan, they should guide the management of heritage values of a property.
44. I am also conscious that I must not act inconsistently with:
 - 44.1. the National Heritage management principles (**NHM Principles**); or
 - 44.2. an agreement to which the Commonwealth is party in relation to a National Heritage place; or
 - 44.3. a plan that has been prepared for the management of a National Heritage place under section 324S or as described in section 324X.
45. I note that the Commonwealth has not reached agreement with any party in relation to the management of the National Heritage Values of the Great Barrier Reef. Further, a management plan has not been prepared.
46. In summary, the NHM Principles relate to:
 - 46.1. assessment and approval of actions, which requires:
 - 46.1.1. the identification, protection, conservation, presentation and transmission of National Heritage values (Principles 1);
 - 46.1.2. the use and presentation of National Heritage places consistent with the conservation of their values (Principle 4); and
 - 46.1.3. for decisions and actions that may have a significant impact on the values, the use of best available knowledge, skills and standards and community and technical consultation (Principle 2).
 - 46.2. management planning for National Heritage places, which requires management to:
 - 46.2.1. use the best available knowledge, skills and standards for those places, and include on-going technical and community input on decisions and actions that may have a significant impact on their National Heritage values (Principle 2);
 - 46.2.2. respect all heritage values and seek to integrate, where appropriate, any Commonwealth, state, territory and local government responsibilities for those places (Principle 3);
 - 46.2.3. ensure that the use and presentation of National Heritage places is consistent with the conservation of their values (Principle 4); and
 - 46.2.4. provide for regular monitoring, review and reporting on the conservation of National Heritage places (Principle 7).
 - 46.3. community involvement and public consultation, which requires:

46.3.1. management to provide for community involvement, especially with people with a particular interest in the place and or who may be affected by the management of the place, recognising that the participation of indigenous people in the identification, assessment and management of indigenous heritage values is integral to the protection of those values. (Principles 5 and 6).

47. I note that a substantial number of the public comments that I received, in excess of 6,500, referred to the impacts on the GBRWHA, GBRNHP and GBRMP. I accept that these comments were not 'authoritative', in the sense that they generally did not demonstrate or corroborate the significance of impacts, so I did not afford them weight in determining whether the impacts of the proposed action were, in fact, significant.

48. Nevertheless, these comments, and the other opportunities for public review, enabled the public to comment on how the World Heritage values of the GBRWHA might be affected, and those with interests in the GBRNHP to voice their views on how they may be affected. This was a key aspect to ensuring that any decision I make would be consistent with the WHM Principles and the NHM Principles.

Analysis

49. The SAR noted that the proposed action has the potential to indirectly impact on the GBRWHA, GBRNHP and GBRMP from surface water runoff and/ or changes to groundwater levels and groundwater quality. These impacts were identified within the EIS and include:

49.1. impacts to surface water quality from controlled and uncontrolled releases, erosion and sedimentation, changes to the catchment affecting flooding and hydrology and changes to the freshwater-saltwater interface in downstream tidal waters; and

49.2. impacts from groundwater drawdown.

50. I note that the IESC identified more specifically the risks falling into those two general categories, as follows:

- significant and irreversible damage to internationally valued estuarine and near-shore ecosystems subjected to mine-affected water;
- changes to surface water quality from controlled and uncontrolled discharges, with the potential to impact aquatic environments within, adjacent to, and downstream of the proposed action site;
- impacts from drawdown below some 165 ha of riparian groundwater-dependent ecosystems (**GDEs**) and to stygofauna communities in the Styx River alluvium;
- drawdown (of up to 4.7 m along sections of Tooloombah Creek and up to 60 m along 11.8 km of Deep Creek) that will reduce the volume and persistence of dry-season pools and reduce baseflow in both creeks for decades post-mining;
- groundwater interaction with the backfilled voids that could mobilise contaminants from the waste rock and coal rejects within the voids and discharge these contaminants to surface waterways, posing a legacy water quality issue;
- direct loss of approximately 8.35 km of waterways that provide fish passage during periods of high rainfall and flood; and

- disturbance of sodic soils, which are prone to erosion, potentially increasing sediment loads in local waterways and contributing sediment to the GBRWHA.

51. The SAR concluded that the proposed action would result in unacceptable risks to the GBRWHA, GBRNHP and GBRMP.

52. This conclusion was based upon:

- 52.1. the risk of impacts to surface water quality associated with contaminated water from controlled and uncontrolled releases or dam failure which the proponent described as 'the potential risks of dam and levee failure';
- 52.2. the impacts of sedimentation to the GBRWHA, due to groundwater drawdown and the degradation of groundwater dependent ecosystems along Tooloombah and Deep Creeks, described by the proponent as 'the potential risks from releases from Dam 1'; and
- 52.3. despite the proposed mitigation measures, that there remains a real risk that releases would not be able to meet the water quality targets as per the Great Barrier Reef 2050 Plan, described by the proponent as 'the potential risks on water resources near to the mine, being primarily an area of terrestrial GDEs and riparian vegetation'.

53. The proponent responded to the SAR. The department provided a summary of the reasons the proponent disagreed with the SAR within the briefing material associated with my proposed decision, however the proponent also disagreed with that summary in their August Response. Considering the department's previous summary and the proponent's further discussion, the proponent's disagreement with the SAR can be summarised as follows:

- 53.1. the potential risks of dam and levee failure appear to have been confused with the level of engineering design required, the level of flood immunity provided and the probability of an overflow over the spillway;
- 53.2. Dam 1 has been designed in accordance with the requirements of the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures. According to the Manual, a 1:1000-year flood immunity plus suitable freeboard, must be, and has been, incorporated into the design of Dam 1. The design allows for up to the 1:1000-year event with no flood inflows and the ability to pass without issue the 1:1000-year flow through the spillway. Events above this may overtop flood levees, but would still be conveyed through the site without gross failure;
- 53.3. the dam would be constructed to Queensland Department of Natural Resources, Mines and Energy standards, incorporating a failure impact assessment (and consequence category re-assessment) of the design, along with the use of appropriate material in construction and appropriate engineering standards;
- 53.4. it is not fair or reasonable to single out a particular mine dam from hundreds of other existing cases and reject it on hypothetical grounds;
- 53.5. sodic (dispersive) soils will not be used to construct the dam;
- 53.6. modelled water quality in the receiving creeks (in terms of trace metals and other contaminants) is predicted to not change as a result of the proposed releases. The

proponent's No Release Strategy proposes substantial reductions in releases in light of the department's stance that any release will result in an impact, regardless of water quality or flow, and receiving water will dilute the mine-affected water if released; and

- 53.7. contaminant levels in the dam will not be high, and detailed modelling shows that there will be no change to downstream concentrations. Stating that the proponent is merely 'diluting' discharges is misleading and simplistic. Every single discharge in the world into any flowing waters is diluted. That does not impact on whether it is acceptable.
54. DES responded to the proponent's comments on the SAR, stating that:
- 54.1. the chance of a 1:1000-year flood event occurring within the 20-year life-of-mine operations is 2% and that such a risk cannot be ignored;
- 54.2. the 2% chance of a 1:1000-year flood event occurring during the life-of-mine operations was calculated by multiplying the chance of a 1:1000-year flood event occurring in any given year (0.1%) by the 20-year life-of-mine operations, which gives 2%;
- 54.3. the AEIS stated that the consequences of levee failure due to an extreme flooding event would be significant to humans and the environment.
- 54.4. the receiving environment is sensitive as it occurs only 9.7 km from the GBRWHA.
55. The proponent provided two geotechnical reports to the department as additional explanation that the materials they plan to use for construction of the containment dams do not contain dispersive soils. The department provided both reports to DES for their comment. The DES responded stating that the geotechnical reports do not change their views in relation to the risk of dam failure expressed in the SAR. I place some weight on this response.
56. The proponent also stated that dispersive sediments would not be used for construction of the containment dams. The department considered that this statement was inconsistent with the geotechnical report for a 'turkey nest dam', which stated that dispersive material will be stockpiled and spread on the dam embankment batters. In their August Response, the proponent stated that that dispersive material would need to be removed, and would be used as growth medium, with suitable amelioration, but 'would not be used for structural material'. Although the proponent has stated that dispersive materials would not be used for structural material of the containment dams, this response did not adequately resolve the concerns of the department. The department advised that sodic materials spread on dam embankment batters is likely to be washed downstream under rain events of varying magnitudes, which would result in impacts to water quality and the GBRWHA. I place some weight on the department's conclusions on this matter.
57. The proponent provided a No Release Strategy to the department which it states was intended to identify that water releases could be substantially reduced, in an effort to overcome the idea that any discharges whatsoever and regardless of the work completed constitutes an 'impact'. The OWS provided a response to the No Release Strategy (dated 2 August 2021) (**August OWS advice**) stating:

- 57.1. an updated water balance was not provided and OWS cannot confirm if the reductions stated will reduce the amount of mine affected water being discharged into the receiving environment by controlled and uncontrolled releases;
 - 57.2. the methods used to dewater the open cut pit, such as the irrigation of waste rock stockpiles, could lead to increased turbidity in the receiving environment and would require ongoing mitigation;
 - 57.3. the mine spoil also has elevated concentrations of aluminium, arsenic and selenium, which could be mobilised through irrigation methods applied to the spoil. It is unclear if the proponent intends to irrigate the mine spoil;
 - 57.4. the proposed adaptive management practice of irrigation occurring during wet season could lead to increased sedimentation and mobilisation of mine contaminants into the receiving environment and the GBRWHA;
 - 57.5. the proponent's claim that controlled releases *could* be limited to 1 in 1000-year rain events appears to contradict the proponent's stated adaptive management approach, and there being no impact as a result of the proposed action; and
 - 57.6. the mitigation measures set out in the No Release Strategy will not safeguard the GBRWHA and the Broad Sound Fish Habitat Area.
58. I acknowledge and accept the proponent's comments that the No Release Strategy was not a 'standalone' document. However, the OWS confirmed in the September OWS advice that it considered the No Release Strategy with the other documents that the proponent provided. That is, it did not consider the No Release Strategy as a 'standalone' document relating to the impacts on the GBRWHA, GBRNHP and GBRMP and mitigation measures. I therefore give significant weight to the concerns in the September OWS advice. Nothing in the November Response persuades me to give less weight to the September OWS advice.
59. Having considered the submissions provided by the proponent, information from DES and the August OWS advice, the department considered:
- 59.1. a 2% risk of a 1:1000-year flood occurring within the operation period of the mine is significant;
 - 59.2. dam failure and the release of mine-affected water (containing trace metals and coal particulates) would result in potentially catastrophic impacts to the GBRWHA, GBRNHP and GBRMP;
 - 59.3. the risk of this occurring, and the consequences if it were to, represent unacceptable impacts to the Great Barrier Reef; and
 - 59.4. impacts from these processes to the GBRWHA, GBRNHP and GBRMP would be significant, and unable to be adequately avoided, mitigated or offset, primarily because of the location of the proposed action, and would be irreversible and unacceptable.
60. In response to this, the proponent expressed:
- We trust that the department understands that the risk of a 1:1000-year event occurring is the same for every single project anywhere (i.e. around 2% over 20 years in every single location

on the planet), and that should this be a defining feature for future approvals, then no approvals should ever be granted where regulated dams exist, as they will always have significant or high consequences, by definition.

While consequences of regulated dams are always significant or high (by definition), the risk depends on both consequence and likelihood as should be well understood by the agency's involved, and it is for this situation that the regulated dam guidelines (including the Manual for Assessing Consequence Categories and Hydraulic Performance of Structures) includes appropriate design and certification requirements, which have been and will continue to be fully adopted. Furthermore, stating that a risk represents an unacceptable impact is obviously faulty, and taken together, the reasoning appears to be that any project with a consequence should not go ahead, regardless of the likelihood.

Finally, it appears that the agencies have not considered the nature of the waters in the dams. Should a significant volume of this water be released (which would only occur under environmental conditions that would be considered biblical), the nature of the dam waters (specified within the AEIS) and the receiving waters would mean that impacts from such a small component of the catchment would be dwarfed by those from the larger surrounding catchments – in particular freshwater and turbidity from surrounding catchments would be the most significant impacting agents in this situation. In any smaller events, the modelling shows no change and no impacts to downstream waters.

61. While I acknowledge the proponent's comments, and am willing to accept that the risk of a 1:1000-year event occurring is the same for 'every single project anywhere', I disagree with the proponent's response.
62. The likelihood of dam failure is one aspect, it is not the only aspect. The impacts and consequences that would arise from a dam failure in this proposed action (bearing in mind the location, the surrounding environment and other matters) would be significant. This is reflected in the categorisation by Engeny Water Management of several of the proposed dams being either significant or high. These ratings were assigned due the potential of environmental harm and/or property damage associated with dam overtopping and dam break.
63. Further, the IESC advices, the OWS advices and SAR made specific references to the release of mine-affected water (which would be stored in Dam 1). The SAR states:

Uncontrolled releases from Dam 1 would contain a large quantity of water with elevated salinity that could result in material environmental harm to the highly sensitive receiving environment. Salinity, as measured by electrical conductivity (EC), would be the target contaminant due to the very high salinity recorded in groundwater and the estimated rates in pit floor, waste rock stockpiles and mine infrastructure area (MIA) runoff that comprise mine-affected water (MAW).
64. The 2020 IESC advice stated that the key potential impacts of the proposed action were 'significant and irreversible damage to internationally valued estuarine and near-shore ecosystems subjected to mine-affected water'.
65. It was the combination of circumstances of this proposed action which I understand led to the conclusion of the SAR, the OWS and the IESC, that impacts to the GBRWHA, GBRNHP and GBRMP would be significant. Some dams may not contain mine affected water. Other dams may not be located near highly sensitive environments. This proposed action had both

aspects, and I give considerable weight to the discussion of 'material harm' and 'significant and irreversible damage'.

66. The potential environmental impact of the proposed action on the Great Barrier Reef and adjacent ecosystems was also explored in a peer-reviewed research article published in the Marine Pollution Bulletin. The research evaluated the dispersal potential of mine-affected waters from the proposed action to Broad Sound and the adjacent Great Barrier Reef through the Styx River. The key research findings, as summarised by the department, were:
- 66.1. sediments finer than 32 μm can be transported over dozens of kilometres in a few weeks by the strong tidal currents present in Broad Sound;
 - 66.2. the proximity of this project means that any release of sediments in nearby wetlands would reach Broad Sound, which is 10 km downstream;
 - 66.3. up to 60% of the fine sediments from the simulations settled along the western coast of Broad Sound, where the Clairview Dugong Sanctuary exists; and
 - 66.4. the influx of sediments in these environments could impact sea grasses (which dominate the diet of green sea turtles) via smothering, burying and reduced light penetration.
67. In their August Response (and repeated in the November Response), the proponent identified that there were 'substantial issues' with this paper. The department acknowledged that there were limitations associated with the article, however the department did not consider that these invalidated the conclusions reached. The September OWS advice noted that the risks highlighted in the article regarding sediment transportation into the GBRWHA are consistent with those highlighted in the 2020 IESC advice, specifically the disturbance of sodic soils, which are prone to erosion, potentially increasing sediment loads in local waterways and contributing sediment to the GBRWHA.
68. The article is consistent with the conclusions of the SAR, the IESC and the OWS. I find it significant that these four separate bodies came to the same conclusions. I agree with the department that any limitations identified do not invalidate their conclusions. I therefore accept and consider that the article was evidence supporting my finding the proposed action would have a significant impact on the GBRWHA, GBRNHP and GBRMP.
69. I consider that the assessment of the impacts of the proposed action on the GBRWHA, GBRNHP and GBRMP, as reported in the SAR, the IESC advices, the OWS advices and the research article were authoritative. While the proponent indicated that their own modelling was undertaken, and that this was peer-reviewed and the reviewer found the model 'generally suitable and did not identify any fundamental flaws which were likely to significantly affect model predictions', I note that the IESC identified the following concerns with the proponent's model (even after peer review):
- a. inadequacies in the improved model, both in terms of the inability to fit all historical measurements (e.g. Figures 7-10a-c, Hydro Algorithmics 2020), and of the high levels of parameter non-uniqueness (e.g. Attachment 16, Hydro Algorithmics 2020);
 - b. the lack of observed head differences in nested monitoring facilities and estimated baseflows at the Tooloombah Creek and Deep Creek gauges within the history matching dataset which exacerbates the uncertainty of some simulated predictions;

- c. the incomplete representation of all uncertain model parameters and boundary conditions within the uncertainty analysis such as the riverbed conductance parameters and the coastal boundary conditions, including along the Styx River mouth. This is likely to underestimate prediction uncertainties, hampering reliable risk assessment of the proposed action;
- d. the incomplete representation of potential model prediction structural error in the uncertainty analysis;
- e. the lack of long-term pump testing to provide a more laterally extensive estimate of the integrated hydraulic properties of the aquifer (Central Queensland Coal 2020, Chapter 11, p. 47);
- f. that the risk of aquifer seawater intrusion has not been quantified or characterised to a sufficiently high resolution, given the six delineated hydrolithologic units at the coastal boundary;
- g. the uncertainty of the simulated potential impact of climate change which also does not account for the model parameter and boundary condition uncertainties listed above;
- h. the hydraulic conductivity of the backfilled material was modelled (using time-varying material properties) with a higher hydraulic conductivity compared to the undisturbed material (Hydro.Algorithmics 2020, Table 8-2, p. 164). However, it is not clear if the modelled hydraulic conductivity of the emplaced spoil decreases over time (due to consolidation) and how this compaction will affect the predicted long-term groundwater mounding of the final landform; and
- i. no information was provided on the reinjection methods and quality of the mine-affected water reinjected into groundwater.

70. The proponent provided their first response to this advice on 9 March 2021, however this response largely referred to information which the IESC had already reviewed. That is, most of the above concerns from the IESC were raised having regard to the information the proponent referred to in its August Response. In the November Response, the proponent maintained that any controlled or uncontrolled releases will not cause adverse impacts to any downstream MNES. I note the proponent's criticisms of the IESC advices, however for reasons explained at [167]-[174], I do not accept these matters. Given the concerns of the IESC with the proponent's modelling, and in light of the consistency in the views expressed in the IESC, SAR, OWS and research article about impacts, I give more weight to the advice from these bodies than to the information that was provided by the proponent.
71. While the proponent maintained there were no impacts, I also considered mitigation measures. The proponent took issue with the IESC finding that there are 'no feasible mitigation measures, including offsets, that could safeguard significant ecological assets and their associated water resource'. The proponent stated that 'there are a range of mitigation measures available (proven mitigation measures used at other mine sites and other operators in the GBR catchment)'. The proponent did not provide any information on such measures that was additional to the measures provided in the AEIS, and which the IESC had already considered were not feasible.
72. As such, I am not satisfied that these proposed avoidance or mitigation measures would be effective in addressing the IESC's concerns.

Conclusion - World Heritage properties, National Heritage places and Great Barrier Reef Marine Park

73. Having considered the materials, I accept the department's advice that the impacts to the GBRWHA, GBRNHP and GBRMP would be unacceptable. The department considered that the proximity of the proposed action to the Great Barrier Reef means the impacts on the GBRWHA, GBRNHP and GBRMP are unable to be adequately avoided or mitigated. The department also considered that offsets to compensate (and not mitigate) for these impacts are not possible due to the irreplaceable nature of the GBRWHA, GBRNHP and GBRMP.
74. I agree with the department's conclusions. The department's advice is consistent with the IESC advices (and the other authoritative sources) to which, for the reasons given above and also discussed below at [167]-[174], I give significant weight. I am, therefore, satisfied that the impacts to the GBRWHA, GBRNHP and GBRMP would be unacceptable.
75. In circumstances where any avoidance and mitigation measures (including imposing conditions) were considered to be inadequate, I am satisfied that the only decision which would be consistent with the WHM Principles and NHM Principles would be to refuse to approve the taking of the proposed action.
76. For these reasons, I refuse to approve the taking of the proposed action for the purposes of the controlling provisions World Heritage properties (section 12 and 15A), National Heritage places (section 15B and 15C) and Great Barrier Reef Marine Park (section 24B and 24C).
77. For the avoidance of doubt, had I considered the GBRWHA, GBRNHP and GBRMP controlling provisions separately, I would have come to the same conclusions for the same reasons. In summary, the potential impacts on downstream ecological values of any of the GBRWHA, GBRNHP and GBRMP are sufficient to satisfy me that the impacts would be unacceptable and the proposed action should be refused.

Listed threatened species and communities (section 18 and 18A)

78. The following species and communities were identified in the SAR as 'known or likely to occur' within the proposed action area and were considered likely to be significantly impacted by the proposed action:
- 78.1. Squatter Pigeon – (southern subspecies, *Geophaps scripta scripta*) – vulnerable
- 78.2. Greater Glider (*Petauroides volans*) – vulnerable
- 78.3. Koala (*Phascolarctos cinereous*) – vulnerable.
- 78.4. Ornamental Snake (*Dennisonia maculata*) – vulnerable
79. The SAR concluded that, with consideration of the proposed mitigation and management measures of the proponent, environmental offsets and the recommended conditions of approval, the impacts of the proposed action on listed threatened species and communities would not be unacceptable.
80. However, the department considered that additional analysis of the relevant conservation advices and Threat Abatement Plans, which I am required to take into account under the EPBC Act, was required for me to come to a conclusion on whether or not to approve the proposed action for the purposes of s 18 and 18A.

81. I note that a number of the attachments to the submissions received under s 131A requested that I change my proposed decision to refuse to approve the taking of the proposed action on the basis of the significant impacts to listed threatened species. These submissions referred to the 'State of the Environment' report and emphasised that the habitat of both the Koala and Greater Glider faced destruction by the proposed action, and it was imperative that improved protections against the cumulative impact of habitat loss be considered in my assessment.

Squatter Pigeon (southern) (Geophaps scripta scripta) – vulnerable

82. The SAR concluded that, with consideration of the proposed mitigation and management measures, environmental offsets and recommended conditions of approval, the impacts of the proposed action on the Squatter Pigeon (southern) are not unacceptable.
83. In considering the Squatter Pigeon I have had regard to the:
- 83.1. Approved conservation advice in effect from 27 October 2015;²
 - 83.2. Threat abatement plan for predation by feral cats, in effect from 23 July 2015;³
 - 83.3. Threat abatement plan for competition and land degradation by rabbits, in effect from 7 January 2017;⁴ and
 - 83.4. Threat abatement plan for predation by the European red fox in effect from 1 October 2008.⁵
84. I note that there were no recovery plans for the Squatter Pigeon.
85. The Squatter Pigeon (southern) is a medium-sized ground dwelling bird with, according to the SAR, a population of approximately 40,000. A number of Squatter Pigeon (southern) were recorded within the proposed action area, mostly in open eucalypt woodlands (narrow-leaved ironbark, poplar box and ghost gum poplar box) and in cleared areas dominated by introduced pasture grasses.
86. The impacts of the proposed action identified in the AEIS and the SAR included:

² Threatened Species Scientific Committee (2015). conservation advice *Geophaps scripta scripta squatter pigeon (southern)*. Canberra: Department of the Environment. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/64440-conservation-advice-31102015.pdf>. In effect under the EPBC Act from 27-Oct-2015.

³ Department of the Environment (2015). Threat abatement plan for predation by feral cats. Canberra, ACT: Commonwealth of Australia. Available from: <http://www.environment.gov.au/biodiversity/threatened/publications/tap/threat-abatement-plan-feral-cats>. In effect under the EPBC Act from 23-Jul-2015.

⁴ Department of the Environment and Energy (2016). Threat abatement plan for competition and land degradation by rabbits. Canberra, ACT: Commonwealth of Australia. Available from: <http://www.environment.gov.au/biodiversity/threatened/publications/tap/competition-and-land-degradation-rabbits-2016>. In effect under the EPBC Act from 07-Jan-2017.

⁵ Department of the Environment, Water, Heritage and the Arts (DEWHA) (2008). Threat abatement plan for predation by the European red fox. DEWHA, Canberra. Available from: <http://www.environment.gov.au/biodiversity/threatened/publications/tap/predation-european-red-fox>. In effect under the EPBC Act from 01-Oct-2008.

- 86.1. direct and indirect impact arising from clearance of 306.5ha resulting in a loss of remnant breeding, foraging and dispersal habitat;
 - 86.2. dust, lighting and noise impacts;
 - 86.3. erosion and sedimentation of habitats;
 - 86.4. increased predation, including by feral species (including cats and foxes as discussed in the threat abatement plans;
 - 86.5. direct mortality (during vegetation clearing and vehicle collision);
 - 86.6. inappropriate fire regimes; and
 - 86.7. impacts on hydrology.
87. I note that the department had concerns that the impact area of 306.5ha had underestimated the impact area and did not adequately describe or quantify the regrowth vegetation within and adjacent to the proposed action site which can provide foraging value for the species.
88. The key threatening processes identified in the conservation advice are ongoing vegetation clearance/fragmentation, overgrazing of habitat by livestock and feral herbivores such as rabbits, introduction of weeds, inappropriate fire regimes, thickening of understorey vegetation, predation by feral cats and foxes, trampling of nests by livestock and illegal shooting.
89. Key actions recommended in the conservation advice include identifying sub-populations of high conservation priority, protecting and rehabilitating areas of vegetation that support important sub-populations, protecting sub-populations through the development of covenants, developing stock management plans for key sites, developing management plans to control feral herbivores, raising awareness of the Squatter Pigeon (southern) within the local community, particularly among land managers.
90. The proponent proposed the following mitigation measures which largely were proposed to be set out in the Land Use Management Plan:
- 90.1. pre-clearing surveys and management for nesting birds in breeding habitats;
 - 90.2. project-wide procedures to manage weeds and pest animals;
 - 90.3. fire management under the proposed action Environmental Management Plan;
 - 90.4. erosion and sediment control measures;
 - 90.5. dust suppression measures;
 - 90.6. noise reduction measures;
 - 90.7. ecological considerations in lighting design; and
 - 90.8. traffic management and driver awareness of native fauna on road.
91. The SAR considered a combination of avoidance and mitigation measures, including offsets, for the management of the Squatter Pigeon. It expressed that the proponent needed to work with the department to better describe the mitigation measures.

92. The department's advice stated that, should the proposed action be approved, conditions could be attached to such an approval that require the proponent to undertake mitigation measures and provide environmental offsets in accordance with the approved conservation advice for, and threat abatement plans relevant to, the Squatter Pigeon (southern).
93. Having had regard to the approved conservation advice, the threat abatement plans, the SAR and the proponent's materials, I consider that, if the proposed action were approved subject to appropriate conditions to avoid, mitigate and rehabilitate impacts of the proposed action, it would not have an unacceptable impact on the Squatter Pigeon (southern). I am satisfied that approval of the action with the appropriate conditions would not be inconsistent with the conservation advice or the threat abatement plans.

Greater Glider (Petauroides volans) – vulnerable

94. The SAR concluded that, with consideration of the proposed mitigation and management measures, environmental offsets and recommended conditions of approval, the impacts of the proposed action on the Greater Glider are not unacceptable.
95. In considering the Greater Glider, I have had regard to the approved conservation advice in effect from 5 July 2022.⁶ There were no threat abatement plans or recovery plans that I am required to consider.
96. I note that the Greater Glider is now listed as 'endangered'. A number of the public comments which I received referred to this occurrence. The EPBC Act provides that I am unable to consider the elevation of the Greater Glider to 'endangered' during my assessment and so I have not done so.
97. The Greater Glider is the largest gliding possum in eastern Australia. During surveys, 2 Greater Gliders were spotted. The approved conservation advice states the following habitats are critical for survival of the Greater Glider:
- large contiguous areas of eucalypt forest, which contain mature hollow-bearing trees and a diverse range of the species' preferred food species in a particular region; and
 - smaller or fragmented habitat patches connected to larger patches of habitat, that can facilitate dispersal of the species and/or that enable recolonization; and
 - cool microclimate forest/woodland areas (e.g. protected gullies, sheltered high elevation areas, coastal lowland areas, southern slopes); and
 - areas identified as refuges under future climate changes scenarios; and
 - short-term or long-term post-fire refuges (i.e. unburnt habitat within or adjacent to recently burnt landscapes) that allow the species to persist, recover and recolonise burnt area

⁶ Department of Climate Change, Energy, the Environment and Water (2022). conservation advice for *Petauroides volans* (greater glider (southern and central)). Canberra: Department of Climate Change, Energy, the Environment and Water. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/254-conservation-advice-05072022.pdf>. In effect under the EPBC Act from 05-Jul-2022

98. The approved conservation advice states that the key threats impacting the Greater Glider are frequent and intense bushfires (something which many of the public comments referred to), inappropriate prescribed burning, climate change, land clearing and timber harvesting.
99. I note that the impacts of bushfires are a matter which leads me (for reasons explained below) to apply the precautionary principle.
100. The approved conservation advice states that the primary conservation objective is, within the next three generations, the population size as well as the extent, quality and connectivity of habitat required to maintain the population will have increased. The conservation advice also identifies (but is not limited to) the following conservation and recovery actions:
- 100.1. identify important fire refuge areas, protecting hollow-bearing trees from post-fire salvage timber harvesting and clean-up operations and avoid hazard reduction burns in these areas;
 - 100.2. re-assess and revise current prescriptions used for prescribed burning to ensure the frequency and severity of fires in Greater Glider habitat are minimised;
 - 100.3. protect and maintain sufficient areas of suitable habitat;
 - 100.4. restore habitat connectivity;
 - 100.5. protect all habitat likely to be climate change refuges; and
 - 100.6. undertake habitat restoration to improve micro-climate conditions in areas at high risk of extreme temperatures and drought.
101. The SAR assessed that approximately 281ha of Greater Glider habitat would be impacted, including the direct loss of 115.7ha of suitable habitat which would be cleared for the proposed action's mining activities and infrastructure.
102. The proponent proposed the following avoidance and mitigation measures:
- 102.1. habitat clearing protocols including pre-clearing surveys, sequential vegetation clearing and the use of a suitably qualified and experienced ecologist to ensure the appropriate method for removal of any hollow-bearing habitat trees;
 - 102.2. to minimise the barrier risk from the clearing for the haul road the AEIS proposes to minimise clearing widths and install wooden glider poles along the length of the riparian habitat edge corresponding with the haul road crossing;
 - 102.3. a range of design options for reducing night lighting impacts on adjacent habitat areas;
 - 102.4. a fire management plan to reduce the risk of high-intensity wild fires;
 - 102.5. control of invasive weeds, particularly for lantana infestations in Deep Creek habitat areas, including specific hygiene procedures designed to prevent the introduction/ spread of *Phytophthora cinnamomi*; and
 - 102.6. the preferential exclusion of barbed wire for any new fencing within or adjacent to retained habitats.

103. The SAR concluded that staged offsets aligning with proposed staged clearing was recommended for any condition of approval, and that any future offset proposal should include conditions that require monitoring of the riparian restoration program. The SAR supported the proposed mitigation measures of the proponent, and ultimately considered that the impacts of the proposed action on the Greater Glider would not be unacceptable.
104. The department's advice stated that, if the proposed action is approved, conditions could be attached to such an approval that require the proponent to undertake mitigation measures and provide environmental offsets in accordance with the approved conservation advice for the Greater Glider. I agree with the department's advice. I find that, were the proposed action approved, subject to appropriate conditions to avoid, mitigate and repair impacts of the proposed action, it would not have an unacceptable impact on the Greater Glider.
105. I also consider that approval of the action with the appropriate conditions would not be inconsistent with the approved conservation advice.

Koala (Phascolarctos cinereus) (combined populations of Qld, NSW and the ACT) – vulnerable

106. The SAR concluded that, with consideration of the proposed mitigation and management measures, environmental offsets and recommended conditions of approval, the impacts of the proposed action on the Koala are not unacceptable.
107. In considering the Koala I have had regard to the:
- 107.1. approved conservation advice in effect from 12 February 2022;⁷ and
- 107.2. recovery plan in effect from 8 April 2022.⁸
108. There were no threat abatement plans I am required to consider.
109. I note that the Koala is now listed as 'endangered'. A number of the public comments which I received referred to this occurrence. The EPBC Act provides that I am unable to consider the elevation of the Koala to 'endangered' during my assessment and I have not done so.
110. The Koala is a medium-sized marsupial with a stocky body, large, rounded ears, sharp claws and variable but predominantly grey-coloured fur. The SAR states that habitat is broadly defined as any forest or woodland that contains known Koala food tree species, or shrubland with emergent food trees, including modified and regenerating native vegetation. Surveys

⁷ Department of Agriculture, Water and the Environment (2022). conservation advice for *Phascolarctos cinereus* (Koala) combined populations of Queensland, New South Wales and the Australian Capital Territory. Canberra: Department of Agriculture, Water and the Environment. Available from: <http://www.environment.gov.au/biodiversity/threatened/species/pubs/85104-conservation-advice-12022022.pdf>. In effect under the EPBC Act from 12-Feb-2022.

⁸ Department of Agriculture, Water and the Environment (2022). National Recovery Plan for the Koala *Phascolarctos cinereus* (combined populations of Queensland, New South Wales and the Australian Capital Territory). Department of Agriculture, Water and the Environment, Canberra. Available from: <http://www.awe.gov.au/environment/biodiversity/threatened/publications/recovery/koala->

undertaken by the proponent were reported to have resulted in 8 sightings, and observations of other activities suggesting the presence of the species.

111. The approved conservation advice and recovery plan identified the following threats impacting the Koala:
 - 111.1. impacts to individuals and habitat caused by climate change impacts, including loss of climatically suitable habitat;
 - 111.2. natural systems modification associated with forestry operations, altered fire regimes, increased intensity/frequency of drought and heatwaves and increased intensity/frequency of bushfire (with bushfires being a recurring theme in public submissions);
 - 111.3. declining nutritional value of foliage;
 - 111.4. clearing and degradation of Koala habitat;
 - 111.5. encounter mortality with vehicles and dogs; and
 - 111.6. the prevalence of Koala retrovirus (KoRV) and Chlamydia (*Chlamydia pecorum*).
112. The department advised me that it was appropriate to consider the precautionary principle in relation to the Koala in light of the impact of bushfires. As such, I have done so and the impact of this is set out in further detail below (at [129]-[132]).
113. The approved conservation advice also identifies the following conservation and recovery actions:
 - 113.1. build and share knowledge;
 - 113.2. strong community engagement and partnerships;
 - 113.3. increase habitat protection;
 - 113.4. ensuring conservation is integrated into policy, and statutory and land-use plans;
 - 113.5. strategic habitat restoration; and
 - 113.6. active metapopulation management.
114. The AEIS reports that the proposed action would have:
 - 114.1. a direct impact on 159.4ha of habitat; and
 - 114.2. an indirect impact on 165.2ha of habitat.
115. The proponent identified a number of mitigation measures in the EIS, which were summarised in the SAR as follows:
 - 115.1. habitat clearing protocols include pre-clearing surveys, sequential vegetation clearing and the use of Koala spotters to ensure Koalas move out of a clearing site without human intervention. Measures would be consistent with Part 3 of the Nature Conservation (Koala) Conservation Plan 2017;
 - 115.2. a range of dedicated road crossing treatments would be implemented where the proposed access road from the Bruce Highway traverses the riparian areas of Deep

Creek to reduce Koala mortality and injury from vehicle strike. This would include grade-separated crossings with dedicated fauna movement underpasses (including underpass 'furniture') and specific roadside treatments such as Koala directional and exclusion fencing, refuge poles, and vegetation management;

- 115.3. access and internal speed limits and the provision of Koala awareness signage at strategic locations are also proposed;
 - 115.4. feral animal management strategies would be implemented including wild dog control measures as predation by wild dogs is a known major threat to koalas. Domestic dogs would be prohibited from the proposed action area;
 - 115.5. a bushfire management plan would be implemented for the life of the proposed action in order to reduce the risk of high-intensity fires. In addition, reducing the risk of spontaneous combustion of product coal would be managed by routine monitoring of coal stockpiles, compacting stockpiles and minimising coal stockpile stagnancy; and
 - 115.6. implementation of the significant species management plan which has a range of mitigation, management and monitoring strategies that reflect the extensive broad practical experience of the report's ecologist authors.
116. The SAR recommended that an offset is provided for the total direct and indirect significant impacts on 324.6ha of Koala habitat, and that there be ongoing monitoring of the effectiveness of the measures, which should also be incorporated into conditions of approval.
117. I acknowledge the public comments on the adequacy of offsets, which state that the proposed action would have unacceptable impacts on listed threatened species. However, having had regard to the approved conservation advice and recovery plan, the SAR, the public comments and the proponent's information, I agree with the department that if the proposed action were approved subject to appropriate conditions to avoid, mitigate and rehabilitate the impacts of the proposed action, it would not have an unacceptable impact on the Koala.
118. I am satisfied that approval of the action with the appropriate conditions would not be inconsistent with the approved conservation advice or the recovery plan.

Ornamental Snake (Denisonia maculata) – vulnerable

119. The SAR concludes that, with consideration of the proposed mitigation and management measures, environmental offsets and recommended conditions of approval, the impacts of the proposed action on the Ornamental Snake are not unacceptable.
120. In considering the ornamental snake, I have had regard to the approved conservation advice in effect from 29 April 2014.⁹ There were no threat abatement plans or recovery plans that I am required to consider.

⁹ Department of the Environment (2014). Approved conservation advice for *Denisonia maculata* (Ornamental Snake). Canberra: Department of the Environment. Available from:

121. The Ornamental Snake is a brown, grey/brown or black snake with lighter coloured body scales often with darker streaks that grows to 50cm in length. The Ornamental Snake can be found on floodplains, undulating clay pans and along the margins of swamps, lakes and watercourses. It also occurs on adjoining areas of elevated ground and has been recorded in woodlands and open woodlands of coolabah, poplar box, and brigalow, and in fringing vegetation along watercourses. Three Ornamental Snakes were recorded in or around the proposed action area in 2011. Since that time, none have been observed.
122. The key threatening processes identified in the approved conservation advice are large scale clearing and habitat degradation, destruction of wetland habitat by feral pigs, the destruction of frog habitat and direct competition for their main food source.
123. Key actions recommended in the approved conservation advice include conducting further research into the population size, distribution and ecological requirements, identifying populations of high conservation concern, minimising adverse impacts from land use at known sites, controlling introduced pests such as feral pigs and raising awareness of the Ornamental Snake and other reptiles of the Brigalow Belt.
124. The AEIS indicated that the proposed action would result in the following impacts:
- 124.1. loss of 18.79ha of potential habitat that is habitat critical to the survival of the Ornamental Snake;
 - 124.2. dust, lighting and noise impacts;
 - 124.3. erosion and sedimentation of habitats;
 - 124.4. increased predation, including by feral species;
 - 124.5. direct mortality (during vegetation clearing and vehicle collision);
 - 124.6. impacts on prey species; and
 - 124.7. impacts on hydrology of floodplain.
125. While the proponent did not accept that the proposed action would result in a significant impact to the Ornamental Snake, they did propose mitigation measures including:
- 125.1. an offset for the full 18.79ha impacted;
 - 125.2. project-wide procedures to manage weeds and pest animals;
 - 125.3. erosion and sediment control measures;
 - 125.4. dust suppression measures;
 - 125.5. noise reduction measures;
 - 125.6. ecological considerations in lighting design; and
 - 125.7. traffic management and driver awareness of native fauna on roads.

126. The SAR recommended that further investigation into the offset be undertaken, noting that the department had some concerns about underestimation of habitat, however otherwise considered the mitigation measures were appropriate.
127. The department recommended that, should the proposed action be approved, conditions should be attached to such an approval that require the proponent to undertake mitigation measures and provide environmental offsets in accordance with the approved conservation advice. I consider that this would likely involve further consultation about offsets.
128. Having had regard to the approved conservation advice, the SAR and the proponent's information, I consider that, if the proposed action is approved then, subject to appropriate conditions to avoid, mitigate and repair impacts of the proposed action, it would not have an unacceptable impact on the Ornamental Snake. I am further satisfied that approval of the action with the appropriate conditions would not be inconsistent with the conservation advice.

Precautionary principle

129. The department advised me that, in applying the precautionary principle I should be satisfied that two threshold issues have been met in relation to the Koala and the Greater Glider:
- 129.1. there is a threat of serious or irreversible environmental damage; and
- 129.2. there is a lack full scientific certainty about the environmental damage.
130. In considering the precautionary principle, the department considered the proposed action in the context of listed threatened species that have been in the pathway of bushfire, in particular the Koala and Greater Glider. In relation to a threat of serious or irreversible environmental damage, the department noted:
- 130.1. the combined Koala population in Queensland, New South Wales and the Australian Capital Territory and the Greater Glider population in Victoria, New South Wales, and Queensland has experienced a substantial decline, exceeding the threshold of greater than and/or equal to 50% over three generations;
- 130.2. significant areas of Koala and Greater Glider habitat across New South Wales, the Australian Capital Territory, Victoria, South Australia, and to some extent Queensland, have been impacted by large-scale bushfires in late 2019 and early 2020. These events have caused widespread species mortality and impacts to habitat;
- 130.3. preliminary information released by the department on 20 January 2020 indicates approximately 12% of the modelled distribution of EPBC-listed Koala habitat is within the bushfire extent and up to 30% of the modelled distribution of Greater Glider habitat is within the bushfire extent; and
- 130.4. there is a specific threat of serious or irreversible environmental damage posed by the proposed action. This includes the permanent clearance of 159.4 ha and 115.8 ha of habitat critical to the survival of the Koala and Greater Glider respectively.

131. The department advised that, at this stage, there is uncertainty on the extent to which local populations of the two species will recover from the effects of bushfires or whether there will be a long-term reduction in the extent of habitat or population numbers.
132. Noting the substantial loss of habitat from the bushfires and uncertainty over the resulting implications for the Koala and Greater Glider, and given the threat posed by the clearance which would be undertaken as part of the proposed action, the department considered that the precautionary principle applied, and recommended that a precautionary approach be taken to the assessment of the proposed action as it will result in impacts to these species.
133. The department considered that, if the proposed action were approved, any lack of certainty related to the potential impacts of the proposed action would be addressed by proposed conditions of approval that required the proponent to avoid, mitigate, repair and offset impacts on the Koala and Greater Glider. I agree with the department's analysis and, therefore, I agree that the proposed action, if approved, would not have an unacceptable impact on the Koala and Greater Glider.

Conclusion – listed threatened species and communities

134. In light of the above, I am satisfied that, if approved, the proposed action would have a significant impact on listed threatened species. I come to this conclusion having regard not only to the individual impacts, but the cumulative impacts, as the comments encouraged me to do.
135. However, I agree with the conclusion in the SAR and, having further engaged with the relevant recovery plans, conservation advices and threat abatement plans (as I have discussed above), I am satisfied that, with the imposition of appropriate conditions, the impacts would not be unacceptable.
136. Were I proposing to approve the taking of the proposed action, I would have considered in detail the appropriate form of conditions which would be necessary or convenient to protect or repair or mitigate damage to listed threatened species. However, given that I consider, for the reasons stated above that the proposed action should not be approved, I have not engaged with any proposed conditions.

Listed migratory species (sections 20 & 20A)

137. The SAR identifies 11 species of migratory birds, 16 species of migratory shorebirds known or likely to occur in the proposed action area, 4 marine mammals known or likely to occur in the proposed action area and 3 migratory marine reptiles known or likely to occur in the proposed action area.
138. In considering whether to approve the proposed action for the purposes of ss 20 and 20A, and what conditions to attach to the approval, I take into account that I must not act inconsistently with Australia's obligations under the:
- 138.1. Bonn Convention, which aims to conserve terrestrial, aquatic and avian migratory species throughout their range;
- 138.2. China-Australia Migratory Bird Agreement (**CAMBA**), which requires the signatory parties to protect migratory birds by limiting the circumstances under which migratory

birds are taken or traded, protecting and conserving important habitats, exchanging information and building cooperative relationships;

- 138.3. Japan- Australia Migratory Bird Agreement (**JAMBA**), which similarly requires the signatory parties to protect migratory birds by limiting the circumstances under which migratory birds are taken or traded, protecting and conserving important habitats, exchanging information and building cooperative relationships; and
- 138.4. the Republic of Korea on the Protection of Migratory Birds (**ROKAMBA**), an international agreement approved under subsection 209(4) of the EPBC Act.
139. Despite some concerns about the absence of baseline surveys of terrestrial or marine migratory species in Broad Sound being undertaken, DES was satisfied that no direct impacts would occur to migratory species. However, there was likely to be indirect impacts. The SAR stated:

I am not satisfied that the EIS has presented sufficient baseline information on marine migratory species. I would recommend that the proponent provide additional baseline population demographic information for any future approval. This would include information on the location, extent/ density and condition of habitats used by marine migratory species such as foraging, nesting and inter-nesting habitats for the marine turtles. A survey methodology must be appropriate to the biology of the species of interest in terms of behaviour (e.g., foraging or inter-nesting for marine turtles), habitat type (including consideration of depth and substrate) and seasonality of habitat use. For marine turtles, it must be consistent with the requirements of the Queensland Marine Turtle Conservation Strategy (DES, 2018).

Baseline survey results would inform consequential monitoring programs and plans such as the REMP. Monitoring programs must be capable of accurately quantifying any water quality impacts from the proposed action on marine migratory species habitats. The REMP must be amended to adequately survey and monitor the identified marine migratory species and additional habitats such as intertidal mudflats, seagrass meadows and mangroves in line with the Monitoring and sampling manual (DES, 2018a)

140. The SAR concluded that impacts of the proposed action on listed migratory species would not be unacceptable.
141. Having considered the SAR, I am satisfied that, if the action is approved then conditions requiring further surveys and studies would be needed, and relevant plans would need to be created, to address the concerns in the SAR. I consider that, if the proposed action were to be approved, with the appropriate conditions, my decision would not be inconsistent with Australia's obligations under the Bonn Convention, the CAMBA, the JAMBA or the ROKAMBA.
142. With such conditions, I am satisfied that the proposed action would not present an unacceptable impact to migratory species.

Conclusion – migratory species

143. For the above reasons, I am satisfied that, with the appropriate conditions, the impacts on migratory species would not be unacceptable.
144. Were I proposing to approve the action, I would have considered in detail the appropriate form of conditions which would be necessary or convenient to protect or repair or mitigate

damage to migratory species. However, given that I consider, for reasons stated above, that the proposed action should not be approved, I have not engaged with any proposed conditions.

A water resource, in relation to coal seam gas development and large coal mining development (section 24D and 24E).

145. There was no dispute that this action was a coal seam gas development and large coal mining development. As such, IESC advice was required to be obtained and considered. As noted above, IESC advice was obtained on 3 occasions:

145.1. advice to decision maker on coal mining project IESC 2017-091: Central Queensland Coal Project (EPBC 2016/7851) – New Development (**2017 IESC advice**);

145.2. advice to decision maker on coal mining project IESC 2018-094: Central Queensland Coal Project (EPBC 2016/7851) – New Development (**2018 IESC advice**)

145.3. advice to decision maker on coal mining project IESC 2020-118: Central Queensland Coal Project (EPBC 2016/7851) – New Development (**2020 IESC advice**)

146. There was a significant amount of commentary made by the proponent on the IESC advices, and the conclusions in relation to impacts on water resources which I discuss below.

2017 IESC advice and response

147. The 2017 IESC advice identified a total of 58 issues with the water resources assessment in the EIS, with the majority regarding inadequate assessment and insufficient information. The 2017 IESC advice advised additional work that the proponent needed to undertake address the deficiencies.

148. The proponent responded to this by making amendments (which were incorporated into the AEIS), including:

148.1. changing the mine sequencing plan so that mine pit OC2 is mined and rehabilitated first – with anticipated recharge benefits;

148.2. two residual voids are no longer proposed and would be backfilled;

148.3. the proposed coal conveyor location under the Deep Creek Bridge has been moved outside of the riparian corridor;

148.4. the installation of groundwater monitoring bores on site; with one additional bore upstream and one bore downstream to better capture the extent of impacts and provide a baseline for comparison post-mining;

148.5. additional parameterisation and aquifer analysis to upgrade the groundwater model;

148.6. monitoring and reporting commitments based on the additional groundwater monitoring and data analysis from project site monitoring bores providing continuous logging information;

- 148.7. further mapping and assessment of GDEs, updates to the groundwater conceptual model and providing a peer-review of the groundwater model used in the EIS. The proponent also committed to further monitoring of groundwater to model and predict the localised impacts of dewatering and/or contaminants on natural ecosystems including waterways and GDEs; and
- 148.8. reduction in the size of the raw water dam on the second order tributary of Deep Creek;
- 148.9. water harvesting from Tooloombah Creek is no longer proposed; and
- 148.10. a new train loading design and veneering of coal in wagons to reduce coal dust.

2018 IESC advice and response

- 149. The 2018 IESC advice considered the amendments, and found that the AEIS had not adequately addressed the 2017 IESC advice. Several new concerns were also raised, including:
 - 149.1. contaminants contained within the waste rock and tailings could be mobilised and transported by groundwater through the backfilled voids potentially leading to a long-term legacy risk to sensitive ecological receptors;
 - 149.2. changes in the mine plan have altered the magnitude and nature of key risks and potential impacts associated with surface water and the final landform; and
 - 149.3. proposed water infrastructure would be ineffective in containing sediment-laden water during most flood events.
- 150. The proponent responded to this advice and made further amendments to the AEIS including
 - 150.1. reducing the disturbance area of the waste rock stockpiles;
 - 150.2. redesigning CO₂ to avoid impacts to SEVT and providing a buffer width of 100m;
 - 150.3. relocating the coal conveyor outside of the Deep Creek channel; and
 - 150.4. removing dam 5, providing two additional water supply dams and moving environmental dam 2a to better capture sediment from the waste rock stockpile.

2020 IESC advice and response

- 151. The 2020 IESC advice reiterated the risks and concerns raised in the previous two advices, advising:
 - 151.1. the substantial amount of additional work undertaken by the proponent reinforced the very significant risks of the proposed action to nationally and internationally recognised assets with high ecological values, including the Great Barrier Reef, Broad Sound, watercourses and wetlands;
 - 151.2. it cannot envisage feasible mitigation measures, including offsets, that could safeguard these irreplaceable and internationally significant ecological assets and their associated water resources;

151.3. recent changes in project design are likely to be inadequate to mitigate potential groundwater impacts, including groundwater drawdown; and

151.4. key potential impacts included:

151.4.1. significant and irreversible damage to internationally valued estuarine and near-shore ecosystems subjected to mine-affected water;

151.4.2. changes to surface water quality from controlled and uncontrolled discharges, with the potential to impact aquatic environments within, adjacent to, and downstream of the proposed action site;

151.4.3. impacts from drawdown below some 165 ha of riparian groundwater-dependent ecosystems (GDEs) and to stygofauna communities in the Styx River alluvium;

151.4.4. drawdown (of up to 4.7 m along sections of Tooloombah Creek and up to 60 m reduction along 11.8 km of Deep Creek) that will reduce the volume and persistence of dry-season pools and reduce baseflow in both creeks for decades post-mining;

151.4.5. groundwater interaction with the backfilled voids that could mobilise contaminants from the waste rock and coal rejects within the voids and discharge these contaminants to surface waterways, posing a legacy water quality issue;

151.4.6. direct loss of approximately 8.35 km of waterways that provide fish passage during periods of high rainfall and flood; and

151.4.7. disturbance of sodic soils, which are prone to erosion, potentially increasing sediment loads in local waterways and contributing sediment to the GBRWHA.

152. The proponent responded:

152.1. based on detailed geochemical assessment which fed into water quality modelling work undertaken by WRM Water and Environment, the water management system was shown to not affect downstream water quality due to controlled and uncontrolled releases and sediment generation from the proposed action area will actually reduce due to various measures;

152.2. considering the large tidal influence in the Styx River estuary, flow conditions in downstream estuarine areas will not change as a result of the proposed action. Groundwater drawdown is not predicted to occur beneath the estuarine areas of the Styx River, and in fact does not extend to (or beyond) the Deep and Tooloombah Creek confluence, and therefore there will be no drawdown related impacts to downstream estuarine areas as a result of the proposed action;

152.3. two unnamed tributaries of Deep Creek mapped as moderate and low risk waterways for fish passage will be permanently removed through the establishment of Dam 1 and the mine pits, resulting in the permanent loss of aquatic habitat and

riparian vegetation. An offset has been proposed for the removal of this waterway area providing fish passage, by way of a financial settlement offset;

- 152.4. the assessments and the data above show that while seasonally elevated water tables recharge bank storage, which feeds back to the pools during part of the dry season, the water table declines typically to below the creek bed during the dry season, and so an unsaturated zone exists underneath most sections of the creeks. Therefore, direct drawdown impacts on the pools within both creeks are unlikely;
- 152.5. the risk assessment shows that for all areas of Tooloombah Creek, any changes in vegetation as a result of groundwater drawdown are expected to be insignificant. The proponent will implement an adaptive management and monitoring program in areas that may be affected, aimed at increasing resilience of the vegetation communities through improved management of weeds and pests. In addition, the riparian corridors will be subject to revegetation to increase their width and to replace any loss of major structural elements of the vegetation community with alternative species that are not groundwater dependent. Offsets for impacted protected matters have been tailored specifically to the attribute of the protected matter that is impacted in order to deliver a conservation gain;
- 152.6. the groundwater model has been substantially improved, and while improvements were identified by the peer reviewers, their overall finding was that the assessment and modelling work has *'been carried out in a professional and rigorous manner that meets current industry standards the peer reviewers consider that the revised model is suitable to be used to assess the potential groundwater related impacts of the proposed action'* and it is unclear why the IESC asserts that *'inherent uncertainties limit the reliability of groundwater predictions for drawdown.'* The peer review identified that the modelling met the requirements as laid out in the IESC Uncertainty Analysis Guidance Note, other than two items;
- 152.7. the proposed action will not cause a mobilisation of the groundwater-saltwater interface. In assessing this issue, the proponent has drawn upon a large number of sampling bores and events (21 sites at 30 rounds each, and a further 30 sites drilled in 2018 and sampled 8 times), covering the full spectrum of hydrostratigraphic units;
- 152.8. it is not understood why the IESC believes time lags of several decades would result between any detection of change and mitigation measures being undertaken. Given the frequency and timeframes of monitoring, changes would be expected to be detectable immediately for groundwater drawdown and water management system releases, with larger changes in ecological processes and water quality detectable over perhaps a year. ongoing management and monitoring of vegetation health, weed presence and riparian zone integrity will ensure that this system retains its fundamental ecosystem processes. Any changes would be gradual, detectable and able to be managed and mitigated before any substantial deleterious changes occur;
- 152.9. it is unclear why the IESC has *'limited confidence in these predictions'* and it does not follow that because changes could affect GDE persistence, that the predictions themselves therefore have limited confidence. There are no predictions of any significant changes to surface water hydrology or water quality, which in turn are not

expected to affect the persistence of GDEs, so the IESC should explain why they believe that *'changes to surface water hydrology and water quality are likely to affect the persistence of GDEs in the areas where additional mitigation measures are likely to be required'*;

152.10. the IESC fails to recognise that the coal conveyor has been relocated specifically to avoid any impact or interaction with Deep Creek. The relocation arose to address comments from the department in regard to potential flooding of the conveyor. Given that the conveyor will be immune to a flood event with an average recurrence interval of 1000 years (i.e. 0.1% AEP) and the life of the conveyor will be less than 15 years, it is considered highly unlikely that the conveyor would be flooded during mine operation. Therefore, the risks to the downstream environment from flooding of the conveyor are negligible;

152.11. given that the conveyor will be well away from interaction with Deep Creek and will not be running in flood events, coal dust is considered to pose a minimal threat to water quality as compared with the naturally occurring outcropping of the coal seam within Tooloombah Creek;

152.12. potential impacts will be mitigated and managed through the implementation of a range of actions outlined in the proposed action's Environmental Management Plan and relevant sub-plans. The plans of particular importance for impacts of the proposed action on Greater Glider, Squatter Pigeon and Koala habitat are the Draft Significant Species Management Plan and the Draft Groundwater Dependent Ecosystem Management and Monitoring Plan;

152.13. considerable work has been undertaken on offsets and the proponent has prepared a Biodiversity Offset Strategy to provide a detailed account of how the proposed action's anticipated offset requirements will be acquitted as well as the proponent's approach to delivering the offsets;

152.14. the risks of long-term mobilisation of contaminants has been addressed through the geochemical assessment which included static and dynamic leachate testing, as well as whole element minerology. The Groundwater Model and Assessment Report concludes that no deleterious effect in terms of water quality from waste rock and rejects would occur to groundwater; and

152.15. overall, the impacts on stygofauna are considered to be acceptable, as they will result in the localised loss of assemblages that are likely to be well represented in adjacent areas and are unlikely to be short range endemics.

153. In the comments received under s 131A, the Australian Mining Engineering Consultants provided a detailed review of the IESC advice, and the 'mistakes' made. The submission attached a report prepared in November 2020 undertaken by AMEC. A summary of the comments provided in this submission is provided at [18]-[19].

SAR and the proponent's response

154. After the considering each version of the IESC's advice on the proposed action and the proponent's subsequent responses, the SAR concluded that the proposed action would

result in unacceptable risks to water resources in relation to a large coal mining development. This recommendation was based on:

- 154.1. the impacts of groundwater drawdown to groundwater dependent ecosystems and stygofauna communities, permanent pools along Tooloombah and Deep Creeks and stream/riparian biota;
 - 154.2. the proposed discharge of mine-affected water from controlled and uncontrolled releases; and
 - 154.3. the downstream impacts to the Great Barrier Reef resulting from sedimentation associated with riparian habitat loss along Tooloombah and Deep Creeks.
155. The proponent responded to the SAR and its response is summarised as follows:
- 155.1. flows from bank storage are predicted to supply Tooloombah Creek for a period of 150 days during dry periods;
 - 155.2. some pools bordering Tooloombah Creek may be connected to the Styx Coal Measures (permanent groundwater source);
 - 155.3. groundwater modelling predicts a 1.5 m or more drawdown in the water table aquifer along 4.4 km of Tooloombah Creek, with a maximum drawdown of 4.7 m;
 - 155.4. groundwater drawdown along Tooloombah Creek is not likely to significantly affect bank storage due to an impermeable layer existing between the bank sediments and the Styx Coal Measures;
 - 155.5. bank flow storages do not return to Deep Creek and therefore it does not support permanent pools along it;
 - 155.6. groundwater modelling predicts 1.5 m or more drawdown in the water table aquifer along 11.5 km of Deep Creek with a maximum drawdown of 60 m at some locations;
 - 155.7. with no mitigation measures in place, the EIS indicates it is possible that insignificant and or minor impacts could occur to three stream reaches along Tooloombah and Deep Creek;
 - 155.8. up to 83% of the impacts associated with the 165 ha of stream sections where groundwater dependent ecosystems occur would be insignificant.
156. DES did not respond to the proponent's comments in relation to groundwater drawdown in its response dated 1 June 2021.
157. I note that the proponent's August Response, stated that their basis for disagreement with the SAR was due to a disregard of key hydrogeological understandings of the system. The proponent (in their August Response), highlighted the following points:
- 157.1. flows from bank storage have been shown to be the primary form of return flow (i.e. baseflow) to the creek systems, with 150 days being a measure of the length of flow return from this system following storm recharge (the primary form of recharge to these systems). In fact, for flow within the creeks, continued flow due to 'baseflow' is entirely due to this bank storage system. Stating that 150 days is a basis for disagreement is disingenuous;

- 157.2. some pools may be connected to the underlying Styx Coal Measures, however the rate of inflow is slow (and highly saline), and does not impact the number of flow days (this is influenced by bank storage). This linkage is limited to a very small number of pools in the very lower reaches;
- 157.3. for drawdown to have an effect on flow in creeks, the groundwater level must be at or above the base of the creek, and thereafter (due to the proposed action) be drawn down. The groundwater table is below the level of the creeks and so drawdown will have no appreciable effect. For Deep Creek, recharge from storms is lost into the banks (permeable material) and so no bank storage return occurs. When drawn down, any Styx Coal Measures water would still not influence the creek (i.e. no change). The work predicts some reduction in pool permanence for a small number of pools in the lower reaches, but not widespread drying out; and
- 157.4. the Final EIS did indicate the stated minor and insignificant impacts. However, the finding was that the bulk would be insignificant. Mitigation measures were highly conservative, which ensured no loss of riparian vegetation and all of the identified area was offset.

No Release Strategy

- 158. The proponent provided a 'No Release Strategy' to the department, which provided measures to mitigate the impacts on surface water quality from controlled and uncontrolled discharges of mine affected water associated with the proposed action. In summary, the No Release Strategy stated:
 - 158.1. water levels within Dam 1 will be reduced prior to the wet season each year to prevent uncontrolled releases of mine affected water occurring during wet years;
 - 158.2. water releases from Dam 1 will be significantly reduced through adaptive management practices. In a high rainfall event or period, controlled releases could be released into the open cut pit for dewatering rather than into Deep Creek;
 - 158.3. irrigation of waste rock stockpiles would occur during the wet season where evaporative demand allows;
 - 158.4. water evaporators could be used to quickly dispose of excess water as needed;
 - 158.5. water could be provided for use in cattle grazing and crop irrigation with an allowance to use a reverse osmosis plant (RO plant) to treat water to a level suitable for this use;
 - 158.6. release of non-mine-affected water could be done from sediment dams instead of Dam 1; and
 - 158.7. controlled releases could be limited to only very wet years, for example a 1 in 100-year rain event.
- 159. The OWS provided a response to the strategy on 2 August 2021 (**August OWS advice**) stating, in summary:

- 159.1. the methods used to dewater the open cut pit, such as the irrigation of waste rock stockpiles, could lead to increased turbidity in the receiving environment and would require ongoing mitigation;
 - 159.2. in low rainfall periods, the irrigated water will allow the mine affected water to enter the groundwater environment;
 - 159.3. the No Release Strategy will not safeguard the GBRWHA and the Broad Sound Fish Habitat Area. Other high-value environments near the site (including Tooloombah Creek, Deep Creek, the Styx River estuary and two state-listed wetlands) will also not be safeguarded by the measures detailed in the strategy; and
 - 159.4. the mitigation measures proposed as part of the 'No Release Strategy' do not adequately address the risks identified in the IESC advice previously provided to the department regarding the environmental impacts of the proposed action.
160. In the September OWS advice, OWS confirmed that, contrary to the statements of the proponent in their August Response, the OWS had considered the No Release Strategy together with the previous IESC advice and documents provided in the Final EIS from the proponent in coming to its conclusions at [23] above.

Proposed decision and further OWS advice

161. The proponent made a number of assertions in their August Response about the IESC advice and OWS advice (and its reliability). As a result, I sought further information from the OWS (summarised at [23] above). The department invited the proponent to comment on the September OWS advice.
162. The proponent's November Response stated that the 2020 IESC advice is flawed and cannot be relied upon (summarised at [31]). The proponent contended that the IESC did not consider all of the information properly, or fairly having regard to the matters raised in the proponent's assessments and other information.

Analysis

163. Having considered the information and advice provided by the proponent, DES (including in the SAR), the IESC, the OWS, and the department, I am satisfied that the impacts associated with the proposed action to a water resource in relation to a large coal mining development would be unacceptable.
164. In particular, I accept the department's advice that:
- 164.1. a significant portion of Tooloombah and Deep Creeks will be affected by groundwater drawdown;
 - 164.2. groundwater drawdown will impact on up to 165 ha of groundwater dependent ecosystem vegetation, as well as permanent pools and stygofauna communities associated with these systems;
 - 164.3. lowering of the water table is likely to affect perched aquifers, particularly along Tooloombah Creek, through depressurisation and leakage of the perched aquifer associated with groundwater drawdown;

- 164.4. the impacts of leakage of perched aquifers will result in reduced bank vegetation condition and vegetation loss, which will result in increased sedimentation into the Styx River and ultimately the GBRWHA; and
- 164.5. groundwater drawdown impacts will interact with those related to water quality impacts from mine-affected water (associated with controlled and uncontrolled releases of mine-affected water, or dam failure), amplifying the impact to water resources in the region.
165. While I accept the department's advice as outlined above, I acknowledge the proponent's detailed August Response. The proponent stated that 'as a summary':
- 165.1. the work showed that drawdown would not affect the creeks (the water table was naturally below the creek base, among other things); and
- 165.2. the impact to 165ha of GDEs (and to the permanent pools) was found to be mostly insignificant at worst (the assessment was conservative). In relation to stygofauna, as stated in Appendix 10a of the Final EIS, 'Overall, impacts on stygofauna are considered to be acceptable, as they will result in the localised loss of assemblages that are likely to be well represented in adjacent areas', based on a number of aspects, including that 'it unlikely that the stygofauna taxa sampled as part of the proposed action investigations are short range endemics'.
166. The proponent did not provide any new substantive evidence on the proposed action as part of their August Response, which relied upon the same information that was previously provided by the proponent (and considered by the IESC and OWS) and emphasised particular aspects of this information that it considers were not properly considered.
167. Advice received from the OWS (September OWS advice) confirmed that the proponent's August Response did not include any new scientific information specific to the proposed action. The September OWS advice stated that the IESC had reviewed all the scientific information relevant to the proposed action. The September OWS advice subsequently concluded that, in the opinion of the OWS, the proponent did not present any information that would materially alter the advices of the IESC, particularly its final advice.
168. I do not accept the proponent's statement that the IESC, or the OWS, did not consider all of the relevant information. Nor do I accept that the IESC did not understand the information (or recognise, for example, that the coal conveyor had been relocated in their proposal).
169. The department noted that the information provided to the IESC to consider in providing their 2020 advice was the Final EIS. The IESC acknowledged the substantial further investigation and analyses undertaken by the proponent in response to the IESC's 2018 advice. The IESC referred to specific parts of the Final EIS which were relevant to its advice.
170. The proponent takes issue with the fact that the IESC did not accept the conclusions of the assessments it had undertaken. This does not mean that the IESC did not consider those assessments, or the materials. Rather, the IESC came to a different conclusion. This appears to have been because, for example, it had concerns about the assessments (for example, the incomplete representation of potential model prediction structural error in the uncertainty analysis), such that it did not accept the conclusions those assessments made.

171. While the proponent has raised issues with the IESC, the IESC is the statutory body comprising individuals who possess appropriate scientific qualifications or expertise in areas of geology, hydrology, hydrogeology and ecology.

172. I note that the underlying concerns of the IESC have remained consistent since their first advice in 2017, despite extensive surveying and assessments by the proponent and changes being made. As the IESC has advised:

Results of the proponent's additional studies reinforce the IESC's extreme concern that the predicted impacts are not readily mitigated, especially the discharge of mine-affected water into Broad Sound and the GBRWHA. Proposed mitigation options primarily entail offsetting residual impacts (e.g., for the 8.35 km of stream-length that will be removed) and are likely to be completely inadequate for this region because of its relatively undisturbed setting.

Additional investigations, modelling and analyses will not alter the material risks associated with this project, in particular the potentially severe consequences for local and downstream water-related assets. The IESC cannot envisage any feasible mitigation measures, including offsets, that could safeguard these irreplaceable and internationally significant ecological assets and their associated water resources.

173. The views of the IESC were supported by DES and OWS, both separate to the IESC who themselves have specialised expertise. The department considers, and I agree, that the fact the DES came to the same conclusion, having considered the same information as the IESC and the advices and responses, reflects that the conclusions reached by IESC are endorsed by 'peers'. Further, I note that the IESC expressed agreement with the proponent's own expert about the groundwater model requiring 'revisiting the history matching and uncertainty quantification of the groundwater model'.

174. I am therefore satisfied that the impacts outlined in the IESC advices are properly informed and were arrived at having considered all of the information provided by the proponent.

175. I accept the IESC advice that there were no feasible mitigation measures, including offsets, that could safeguard these irreplaceable and internationally significant ecological assets and their associated water resources, and therefore the imposition of conditions would not be appropriate. As I have stated (at [71]), the proponent referred to possible offsets based on other mine sites but provided no additional information to that included in the AEIS for me to consider.

176. Accordingly, I am satisfied that the impacts associated with the proposed action to a water resource in relation to a large coal mining development would be unacceptable, and on that basis, I find that the proposed action should be refused for the purposes of s 24D and 24E.

Economic and social matters (section 136(1)(b) of the EPBC Act)

Economic matters

177. The Final EIS states that it is expected that the proposed action will contribute:

177.1. up to approximately \$8.2 billion to Queensland's export economy if all coal product is exported;

177.2. between \$703 million and \$766 million in royalties to the Queensland Government over the life of the proposed action; and

- 177.3. indicates that an estimated 222 employees would be required during the initial construction period and 150 employees at the second construction. As such, an operational workforce from 100 to 500 employees would be required during mining operations.
178. In the August Response, the proponent stated that the proposed action would:
- 178.1. employ up to 500 people;
 - 178.2. providing exports up to \$60.0 billion;
 - 178.3. provide Commonwealth taxes up to \$10.0 billion; and
 - 178.4. provide State Coal Royalties up to \$22.0 billion.
179. The proponent also highlighted that local rural communities in the Marlborough, St Lawrence and Ogmoo districts were 'economically depressed', and that the proposed action would be a greater 'economic powerhouse' than the Great Barrier Reef itself.

Social matters

180. Section 4.13.2. of the SAR identifies the key issues raised by stakeholders during the consultation program for the proponent's Social Impact Assessment, including:
- 180.1. ongoing engagement and collaboration with local stakeholders;
 - 180.2. existing demand for local short-term accommodation and potential impacts to the tourism industry;
 - 180.3. potential project impacts on community health and wellbeing;
 - 180.4. capacity of community and health services to accommodate increased demand by the proposed action's workforce;
 - 180.5. workforce recruitment, accommodation, and management;
 - 180.6. cumulative workforce demands resulting from other projects in the area; and
 - 180.7. need for detailed management strategies and associated action plans.
181. The SAR concluded:
- I consider the effective implementation of the SIMP [Social Impact Management Plan] would address the potential negative social impacts identified in the SIA [Social Impact Assessment], such as increased demand for housing and accommodation in the local and regional study area, and enhance potential social benefits, such as opportunities for local/regional employment and business procurement.
- I recognise the proponent's commitments ensure that potential negative social impacts of the project are avoided, minimised and/or mitigated, and that potential social benefits are realised. I expect the proponent to deliver on these commitments and implement these recommendations.
182. In the August Response, the proponent discussed a number of matters in relation to the social impacts. These can be summarised as follows:
- 182.1. the need for the proposed action and the positive impact on local communities;

- 182.2. indigenous and cultural matters;
 - 182.3. public consultation and submissions;
 - 182.4. greenhouse gas emissions (I note that these were discussed in the context of the public consultation held by the proponent in 2019); and
 - 182.5. impacts on the Bruce Highway.
183. The comments received under s 131A which supported the approval of the proposed action expressed that attention must be given to the positive social impacts of the proposed action.

The need for the proposed action and the impact on local communities

184. In the August Response, the proponent referred me to a news article from Mr Nick Evans dated 9 August 2022. Mr Evans is a Senior Business writer for *The Australian* and, in his article, he discussed that an Indian steel producing company stated it would be turning to Russia for coal supplies to meet demand, and other companies may do the same.
185. The proponent also emphasised that the local community needed an 'injection' which the proposed action could bring. The proponent states that the areas surrounding the proposed action, in particular St Lawrence, Ogmore and Marlborough are dwindling in population, such that essential services are likely to become unavailable. An example provided is that there remains only 1 paramedic to service these regions. With the proposed action in operation, workers will be encouraged to move to the area and the essential services can, the proponent argues, be better resourced.

Indigenous and cultural matters

186. The proposed action area is located in an area known to hold Aboriginal connection to country.
187. The SAR summarised the proponent's assessment of Indigenous and cultural values, as follows:
- 187.1. the EIS reported that a Native Title search identified the Barada Kabalbara Yetimarala People #1 (QC2013/004) as claimant over the proposed mine pits and ancillary infrastructure area;
 - 187.2. another claim by the Barada Kabalbara Yetimarala People #2 (QC2013/005) exists over the proposed train load-out facility area. That claim is described as a shared country claim with the Darumbal People's active Native Title Claim (QC2012/008);
 - 187.3. the Darumbal People also have a Native Title claim to the east of the proposed action area;
 - 187.4. the *Aboriginal Cultural Heritage Act 2003* (Qld) imposes a duty of care on proponents when carrying out an activity to take all reasonable and practicable measures to ensure the activity does not harm Aboriginal cultural heritage;
 - 187.5. the Indigenous cultural heritage assessment was undertaken as a desktop assessment only;

- 187.6. it was considered highly probable that some Indigenous cultural heritage values would be present, such as stone artefacts in remnant vegetation near watercourses;
- 187.7. no field archaeological surveys were planned or undertaken for the proposed action area for the Final EIS;
- 187.8. the Final EIS stated that a Cultural Heritage Management Plan (CHMP) has not been finalised as negotiations are continuing with the Aboriginal parties associated with the action; and
- 187.9. an EIS submission from Darumbal Enterprises expressed concern over the lack of engagement with Aboriginal parties, the limited relevant research data on regional cultural heritage values, and reasons why a CHMP had not been completed.
188. There were 6 non-indigenous cultural heritage items identified by the proponent, though none had been considered by the proponent to have cultural heritage significance.
189. The SAR concluded:

I have determined that the amended EIS has not adequately addressed the cultural heritage section of the TOR [Terms of Reference]. I am not satisfied with the proponent's lack of progress towards finalising the required Indigenous CHMP for the project. I note there has been no update as to what stage negotiations have reached, and with which Aboriginal parties, over the three versions of the amended EIS dating from 2017. There have been no Indigenous cultural heritage surveys undertaken on the site. There has been no additional Indigenous cultural heritage research provided in the amended EIS.

To address this issue, I recommend that the proponent complete the required Indigenous cultural heritage surveys to identify Aboriginal cultural heritage matters in the project area and for the protection of any Aboriginal cultural heritage values identified in the project area. The proponent must also provide evidence of negotiations undertaken with relevant Aboriginal parties. This should take the form of written confirmation from relevant Aboriginal parties that further consultation has taken place to their satisfaction; and that an executed CHMP adequately addresses their concerns in relation to the project's mining activities.

I consider the non-indigenous cultural heritage assessment sufficient for the project. I recommend the development and implementation of a protocol for unexpected archaeological finds and the provision of cultural heritage inductions for employees and contractors, in accordance with the Queensland Heritage Act 1992 be implemented by the proponent.

190. The proponent's August Response stated that the proponent had engaged with traditional owners and would continue to do so when the mine was approved.
191. The Minister for Indigenous Australians, the Hon Linda Burney, expressed her support for my proposed decision.

Public submissions

192. There has been an extensive amount of public consultation in relation to the proposed action. I note that:
- 192.1. the public was invited to comment on the draft EIS on 6 November 2017 and a total of 32 submissions were received;

- 192.2. approximately 12,000 identical campaign submissions to the former Minister for the Environment were received prior to the proposed decision. These all opposed approval of the proposed action;
- 192.3. 73 unique letters were provided to the former Minister. 11 were in support and 62 were in opposition to the proposed action. One letter received from the Department of Defence was neither for nor against the proposed action, but highlighted some inaccuracies within the SAR;
- 192.4. the proponent provided an additional 45 letters of support for the proposed action. These included four letters from Commonwealth, State and local government officials, 11 letters from local landowners and graziers, 13 letters from business owners and 17 letters and resumes from individuals. The 45 letters of support provided by the proponent increased the total unique letters received prior to my proposed decision to 118, of which 56 were in support and 62 were in opposition to the proposed action; and
- 192.5. 9,102 public submissions following my proposed decision. Of these, 92 were in favour of approving the proposed action and 8,952 in favour of refusing the proposed action.
193. I note that, on 23 July 2021, the department received a letter from Environmental Justice Australia, on behalf of Ms Ava Shearer, a 17-year-old high school student and Great Barrier Reef snorkelling instructor. Ms Shearer relied upon the finding in *Sharma v Minister for the Environment* [2021] FCA 560 (**Sharma**), stating that I had a duty of care to avoid injury to Ms Shearer from the impacts of the proposed action.
194. The Sharma judgment was overturned by the Full Court of the Federal Court on appeal, in a decision cited as *Minister for the Environment v Sharma* [2022] FCAFC 35. While I acknowledge Ms Shearer's comment, I consider that her submission, like many others I have received, is a statement of opposition to the proposed action.
195. In addition to written public comments, I understand that the former Minister for the Environment met with representatives of the Capricorn Conservation Council (**CCC**) to discuss their concerns about the proposed action. The reasons which the CCC cited as to why the proposed action would be inappropriate were similar to those which I have discussed in my consideration of the MNES above. Additional matters the CCC identified included:
- 195.1. the proposed action is detrimental to tourism associated with the Great Barrier Reef. The Bruce Highway is the gateway from the southern to the northern end of the Great Barrier Reef. The proposed action would result in two large coal pits on either side of the highway, which is not a promotion of the GBRWHA.
- 195.2. there are sufficient coal mines in the area to meet all coal needs for many years.
- 195.3. the world is watching Australia's credentials on the Great Barrier Reef protection at this time, particularly in relation to water quality and climate change. Australia needs to show the world that we are serious about transitioning off fossil fuels and embracing clean energy.

- 195.4. Locals want options to work in sustainable and long-term industries of the future – such as renewables, Great Barrier Reef tourism, and in fisheries.
- 195.5. The mining industry is facing a labour shortage in Queensland, with more than 1300 jobs available.
- 195.6. Risking the Great Barrier Reef under the guise of jobs or coal demand is rhetoric and not fact.

Impacts on users of the Bruce Highway

- 196. I note that, within the SAR, DES considered comments from the DTMR on the EIS, which stated that users of the Bruce Highway may be at risk from damage caused by blasting, including from flyrock and blast fumes.
- 197. The SAR stated that flyrock from blasting poses an unreasonable safety risk up to 1000 m, depending on the nature of the blast, making the proposed 500 m buffer associated with the proposed action inadequate. The SAR also stated that non-dispersing blast plumes with high concentrations of nitrogen dioxide (NO₂) means that the proposed 500 m buffer is inadequate for public safety regarding the Bruce Highway. The SAR concluded that Mr Christopher Loveday (Director, Technical and Assessment Services, DES, Queensland) is unable to approve the proposed mine in its current form, which assumes a 500 m buffer area on each side of the Bruce Highway.
- 198. I note that the proponent strongly disputed the conclusions in the SAR, and considered that the concerns highlighted were 'technical issues, where proven engineering solutions already in use and which will be adopted, together with appropriate conditions applied to an Environmental Authority will ensure the safety of road users and nearby residents.' The August Response provided an analysis of the proposed action area and the Bruce Highway, and the measures that would be put in place to avoid or mitigate any impacts on it as a result of the proposed action.
- 199. The department's advice stated that the arguments made by the proponent in their August Response regarding mitigating impacts on users of the Bruce Highway, were also raised in their submission to the department in response to the SAR.
- 200. I note that the DES were provided an opportunity to comment on the proponent's submission regarding the SAR. In their conclusion, the DES stated that the proponent's submission did not change the views expressed in the SAR.

Greenhouse Gas Emissions

- 201. The proponent did not appear to dispute the information I considered in making my proposed decision regarding the projected greenhouse gas emissions of the proposed action.
- 202. That information, in summary, was that:
 - 202.1. the proposed action will produce greenhouse gas (**GHG**) emissions. These include scope 1 (direct emissions from coal mining), scope 2 emissions (indirect emissions from burning coal at another facility to generate electricity associated with the project site) and it will result in scope 3 emissions (downstream coal use), and the public comments indicated a concern about this (and its contribution to climate change);

- 202.2. the SAR noted that modelling associated with GHG emissions adopted the peak production of year 12 of the operation as the worst-case scenario. The modelling estimated the annual scope 1 emissions to be 428,460 tonnes CO_{2-e} and the life of project scope 1 emissions to be 53,450,730 t CO_{2-e}. The SAR noted that the operation phase emissions estimate would represent 0.08% of Australia's most recent greenhouse inventory;
- 202.3. the Final EIS states that the project will generate 51 million tonnes of semi-soft coking and high-grade thermal coal over the life of the project. The vast majority of the coal produced over the life of the project will be semi-soft coking coal, with high-grade thermal coal only being produced during 2033 and 2035;
- 202.4. the GEN LESS CO₂ Emission Calculator estimated that 137 million tonnes (or 137 metric megatons (Mt)) of CO₂ would be produced from the consumption of 51 million tonnes of bituminous coal. Coking coals are generally medium to high-volatile bituminous coals that are relatively unreactive toward oxygen;
- 202.5. on 28 February 2022, the Intergovernmental Panel on Climate Change report "Climate Change 2022: Impacts, Adaptation and Vulnerability" was published (**2022 IPCC report**), which sets out the latest scientific advice on observed and projected impacts of climate change, including as they relate to people and communities. The 2022 IPCC report describes the relationship between increasing global GHG emissions, rising global average surface temperatures and impacts to natural and human systems. The report finds that increases to global GHG emissions pose a risk to people and communities by increasing total global average surface temperatures;
- 202.6. to better adapt to these climate risks and impacts, the Australian Government released the National Climate Resilience Adaptation Strategy 2021-2025 (Strategy) in October 2021. The Strategy sets out what the Australian Government will do to support efforts across all levels of government business and the community to better anticipate, manage and adapt to the impacts of climate change; and
- 202.7. the SAR states that a project-based GHG abatement strategy is proposed to be developed to reduce emissions, energy consumption and energy costs.

Conclusion on social and economic matters

- 203. I accept that the proposed action would provide social and economic benefits by contributing to the regional and Queensland economy and providing opportunities for direct and indirect employment and export trade to Queensland and Australia. I accept that there is some local public support for the proposed action as outlined above.
- 204. However, I also note that, as demonstrated by the number of comments received from the public which supported my proposed decision, there is an overwhelming amount of public concern and opposition to the proposed action. I am also concerned about the extent of Indigenous engagement in relation to the proposed action.
- 205. Overall, while there are social and economic benefits of the proposed action, they do not outweigh the significant impacts to the MNES identified in my reasons above. I think that the social and economic benefits fall far short of making the impacts on the MNES acceptable.

Additional considerations

206. In considering the above matters, I am required to take into account:

- the principles of ecologically sustainable development (set out in section 3A of the EPBC Act), including the precautionary principle (set out in sections 3A(b) and 391(2) of the EPBC Act) (section 136(2)(a));
- the SAR, being the assessment report relating to the proposed action (section 136(2)(b));
- any other information I have on the relevant impacts of the proposed action (section 136(2)(e));
- any relevant comments given to me in accordance with an invitation under section 131, 131AA or 131A ((section 136(2)(f) and section 131AA(6)); and
- any information given to me in accordance with a notice under section 132A (section 136(2)(g)).

Principles of ecologically sustainable development

207. In considering the above matters I am required to take into account the principles of ecologically sustainable development, including the precautionary principle (s 391(2)) in the following ways.

Decision-making processes should effectively integrate both long-term and short-term economic, environmental, social and equitable considerations

208. I acknowledge that the proposed action has gone through an extensive assessment process since the referral was made.

209. I accept that the proposed action would contribute to the regional and Queensland economy, provide social and economic benefits to resident in relevant areas, provide opportunities for direct and indirect employment, and facilitate export trade to Queensland and Australia.

210. However, I am satisfied that, these economic benefits do not outweigh the unacceptable environmental impacts of the proposed action. I agree with the department that, if approved, the proposed action would not be satisfactory having regard to its long-term social and equitable effects.

If there are threats of serious or irreversible environmental damage, lack of full scientific certainty should not be used as a reason for postponing measures to prevent environmental degradation

211. I have taken into account the precautionary principle in relation to the proposed action.

212. In light of my findings above that the proposed action will or is likely to have unacceptable impacts on the GBRWHA, GBRNHP, GBRMP and a water resource related to a large coal mining project, the application of the precautionary principle cannot affect my decision to refuse to approve the taking of the proposed action.

The principle of inter-generational equity – that the present generation should ensure that the health, diversity and productivity of the environment is maintained or enhanced for the benefit of future generations

213. I note that a number of the public comments I received referred to the need to ensure future generations (or the 'children') experience the 'magic of the reef'.
214. The department advised that it considered that the proposed action, if approved, will not be able to be delivered and operated in a sustainable way to protect MNES and the environment for future generations. I agree with this conclusion.

The conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making

215. I acknowledge that the proponent had made commitments to avoid, mitigate and manage the impacts of the proposed action and I am satisfied that appropriate conditions could adequately mitigate the impacts on listed threatened species and migratory species as discussed above. However, the IESC advice (to which I attributed significant weight) considered that any measures would not prevent serious impacts on the GBRMP, GBRWHA and GBRNHP. I am satisfied that the proposed action would likely have serious or irreversible impacts on the ecological integrity of the GBRMP, GBRWHA and GBRNHP.

Improved valuation, pricing and incentive mechanisms should be promoted

216. I have taken into account the promotion of improved valuation, pricing and incentive mechanisms.

The evaluation report, being the assessment report relating to the proposed action

217. The DES provided the SAR to the department on 28 April 2021, which detailed the relevant impacts of the proposed action on MNES. I have considered the SAR in detail, and it is referred to throughout my reasons.

Any other information the Minister has on the relevant impacts of the action

218. The additional information on the relevant impacts of the action which I take into account is listed in Annexure B and, where it has formed part of my decision, I have also identified it above.

Any relevant comments given to the Minister in accordance with an invitation under section 131, 131AA or 131A

219. I am required to take into account any comments provided by any Commonwealth Ministers, the proponent and the Public.
220. I invited the following Commonwealth Ministers to comment on my proposed decision.
- 220.1. Minister for Resources and Northern Australia;
- 220.2. Minister for Agriculture, Fisheries and Forestry; and
- 220.3. Minister for Indigenous Australians.

221. A summary of the responses of the relevant Ministers, and the DES, is found at [26]-[31] above.
222. I also invited the proponent to comment on my proposed decision. The proponent's response has been summarised at [16] above. I have referred to that response throughout my reasons above, and considered it in making my decision.
223. I also invited the public to comment on my proposed decision. The public comments received in accordance with the s 131A invitation are summarised at [18] above. I have considered the public comments in making my decision, and have referred to them throughout my reasons where relevant.

Any relevant advice obtained by the Minister from the IESC in accordance with section 131AB

224. I have summarised the relevant advices (and the proponent's responses to those advices) at [147]-[152] above. I give significant weight to these advices when making my decision.

Requirements for decisions about World Heritage – section 137

225. For the reasons I have given at [75], I do not consider that my decision to refuse to approve the taking of the proposed action would be inconsistent with the relevant considerations in relation to World Heritage areas (as summarised at [40]-[43]).

Requirements for decisions about National Heritage places – section 137A

226. For the reasons I have given at [75], I do not consider that my decision to refuse to approve the taking of the proposed action would be inconsistent with the relevant considerations in relation to National Heritage places (as summarised at [44]-[46]).

Requirements for decisions about listed threatened species and communities (section 139 of the EPBC Act)

The Biodiversity Convention

227. I am required to take into account the Biodiversity Convention. The objectives of the Biodiversity Convention, to be pursued in accordance with its relevant provisions, are the conservation of biological diversity, the sustainable use of its components and the fair and equitable sharing of the benefits arising out of the utilisation of genetic resources, including by appropriate access to genetic resources and by appropriate transfer of relevant technologies, taking into account all rights over those resources and to technologies, and by appropriate funding.
228. Relevant to my decision is Article 8 of the Biodiversity Convention:
- Each Contracting Party shall, as far as possible and as appropriate:
- ...
- (c) Regulate or manage biological resources important for the conservation of biological diversity whether within or outside protected areas with a view to ensuring their conservation and sustainable use;
- ...

- (l) Where a significant adverse effect on biological diversity has been determined pursuant to Article 7, regulate or manage the relevant processes and categories of activities; and

...

229. For the reasons I have given above, I am satisfied that the proposed action is likely to have significant impacts on the Ornamental Snake, Squatter Pigeon, Greater Glider and Koala. If approved, the proposed action would result in land being cleared which is considered to be habitat critical to the survival of these species. I agree with the department that this habitat is a biological resource that is important for the conservation of these species, the ecosystems and natural habitats that support them, and the maintenance of viable populations of these species in their natural surroundings, and therefore the conservation of biological diversity.
230. I also found above that, with appropriate conditions, the impacts on these species would be acceptable. I consider that approving the action with conditions would, as far as possible and as appropriate, be regulating biological resources important for the conservation of biological diversity with a view to ensuring their conservation and sustainable use. The conditions would regulate activities that are likely to have significant impacts on the conservation of biological diversity, and I am satisfied that Australia would be acting consistently with the Biodiversity Convention if the proposed action were approved.
231. However, I have decided to refuse to approve the taking of the proposed action on the basis of unacceptable impacts on the GBRWHA, the GBRMP, GBRNHP and a water resource associated with a large coal mining development. I find that a decision to refuse to approve the proposed action would be consistent with the Biodiversity Convention because not approving the action would prevent significant impacts on the Ornamental Snake, Squatter Pigeon, Greater Glider and Koala.

Convention on the Conservation of Nature in the South Pacific (Apia Convention)

232. The Apia Convention encourages the creation of protected areas which together with existing protected areas will safeguard representative samples of the natural ecosystems occurring therein (particular attention being given to endangered species), as well as superlative scenery, striking geological formations, and regions and objects of aesthetic interest or historic, cultural or scientific value.
233. I am advised that the Apia Convention has been suspended. As Australia currently has no international obligations under the Apia Convention, I agree that I cannot act inconsistently with them.

Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES)

234. The objective of CITES is to regulate trade in animals or plants that are endangered or threatened with extinction to ensure that such trade does not threaten their survival.
235. The department considered Australia's obligations under CITES, and concluded that, if the proposed action were to be approved, the approval would not be inconsistent with Australia's obligations under CITES as the proposed action does not involve international trade. I agree with this conclusion.

Recovery Plans, Threat Abatement Plans and conservation advices

236. I am required to consider any Recovery Plans, Threat Abatement Plans and approved conservation advices (**statutory documents**) relevant to my decision, and ensure that I do not act inconsistently with these statutory documents.
237. I have had regard to these statutory documents in making my decision as discussed above at [78]-[136]. I am satisfied that refusing to approve the taking of the proposed action would not be inconsistent with any of the statutory documents.

Requirements for decisions about listed migratory species – section 140

238. In deciding whether or not to approve for the purposes of section 20 or 20A the taking of an action relating to a listed migratory species, and what conditions to attach to such an approval, I must not act inconsistently with Australia's obligations under the:
- 238.1. Bonn Convention;
- 238.2. CAMBA;
- 238.3. JAMBA; and
- 238.4. ROKAMBA.
239. I found, at [137]-[144], that if I were to approve the taking of the proposed action, my decision would not be inconsistent with any of these agreements.

Bioregional plans (section 176(5) of the EPBC Act)

240. I am required to have regard to a bioregional plan in making any decision under the EPBC Act to which the plan is relevant. The proposed action is not located within or near an area designated by a bioregional plan, and therefore there are no bioregional plans for me to consider.

Factors that may be taken into account

Environmental history (section 136(4) of the EPBC Act)

241. The department advised me that it did not consider I had enough information to determine whether the proponent is a suitable person to be granted an approval. However, in circumstances where I am refusing to approve the taking of the proposed action, I have not considered it necessary for me to take into account the environmental history of the proponent.
242. I acknowledge that some of the public comments raised the proponent's environmental history, however I have formed the view that it is unnecessary to reach a concluded view on these matters in light of the conclusions I reached on the unacceptable impacts above.

CONCLUSION

243. In making my decision, I consider each of the matters I have discussed above. There were no other matters which I take into account.
244. For the reasons I have detailed above, I find that:

- 244.1. if approved, the proposed action is likely to have unacceptable impacts on the GBRWHA, GBRNHP, GBRMP and a water resource relating to a large coal mine;
- 244.2. the social and economic benefits would not result in this proposed action being acceptable; and
- 244.3. if the proposed action were to be approved, it would be inconsistent with the WHM Principles and the NHM Principles (and therefore I am prevented from approving the taking of the proposed action).
245. Having considered all matters required to be considered under the EPBC Act, I agree with the department that the proposed action should be refused, and I decide to refuse to approve the taking of the proposed action.



Tanya Plibersek

Minister for the Environment and Water

ANNEXURE A

130 Timing of decision on approval

Basic rule

- (1) The Minister must decide whether or not to approve, for the purposes of each controlling provision for a controlled action, the taking of the action.

133 Grant of approval

...

Notice of refusal of approval

- (7) If the Minister refuses to approve for the purposes of a controlling provision the taking of an action by the person who proposed to take the action, the Minister must give the person notice of the refusal.

136 General considerations

Mandatory considerations

- (1) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must consider the following, so far as they are not inconsistent with any other requirement of this Subdivision:
- (a) matters relevant to any matter protected by a provision of Part 3 that the Minister has decided is a controlling provision for the action;
 - (b) economic and social matters.

Factors to be taken into account

- (2) In considering those matters, the Minister must take into account:
- (a) the principles of ecologically sustainable development; and
 - (b) the assessment report (if any) relating to the action; and
- ...
- (c) if Division 5 (public environment reports) of Part 8 applies to the action:
 - (i) the finalised public environment report relating to the action given to the Minister under section 99; and
 - (ii) the recommendation report relating to the action given to the Minister under section 100; and

...

- (e) any other information the Minister has on the relevant impacts of the action (including information in a report on the impacts of actions taken under a policy, plan or program under which the action is to be taken that was given to the Minister under an agreement under Part 10 (about strategic assessments)); and
- (f) any relevant comments given to the Minister in accordance with an invitation under section 131 or 131A; and
- (fa) any relevant advice obtained by the Minister from the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development in accordance with section 131AB; and (g) if a notice relating to the action was given to the Minister under subsection 132A(3)—the information in the notice.

Note: The Minister must also take into account any relevant comments given to the Minister in response to an invitation under paragraph 131AA(1)(b). See subsection 131AA(6).

Person's environmental history

- (4) In deciding whether or not to approve the taking of an action by a person, and what conditions to attach to an approval, the Minister may consider whether the person is a suitable person to be granted an approval, having regard to:
- (a) the person's history in relation to environmental matters; and
 - (b) if the person is a body corporate—the history of its executive officers in relation to environmental matters; and
 - (c) if the person is a body corporate that is a subsidiary of another body or company (the parent body)—the history in relation to environmental matters of the parent body and its executive officers.

Minister not to consider other matters

- (5) In deciding whether or not to approve the taking of an action, and what conditions to attach to an approval, the Minister must not consider any matters that the Minister is not required or permitted by this Division to consider.

137A Requirements for decisions about National Heritage places

In deciding whether or not to approve for the purposes of section 15B or 15C the taking of an action, and what conditions to attach to such an approval, the Minister must not act inconsistently with:

- (a) the National Heritage management principles; or
- (b) an agreement to which the Commonwealth is party in relation to a National Heritage place; or
- (c) a plan that has been prepared for the management of a National Heritage place under section 324S or as described in section 324X.

139 Requirements for decisions about threatened species and endangered communities

- (1) In deciding whether or not to approve for the purposes of a subsection of section 18 or section 18A the taking of an action, and what conditions to attach to such an approval, the Minister must not act inconsistently with:
- (a) Australia's obligations under:
 - (i) the Biodiversity Convention; or
 - (ii) the Apia Convention; or
 - (iii) CITES; or
 - (b) a recovery plan or threat abatement plan.
- (2) If:
- (a) the Minister is considering whether to approve, for the purposes of a subsection of section 18 or section 18A, the taking of an action; and
 - (b) the action has or will have, or is likely to have, a significant impact on a particular listed threatened species or a particular listed threatened ecological community;
- the Minister must, in deciding whether to so approve the taking of the action, have regard to any approved conservation advice for the species or community.

140 Requirements for decisions about migratory species

In deciding whether or not to approve for the purposes of section 20 or 20A the taking of an action relating to a listed migratory species, and what conditions to attach to such an approval, the Minister must not act inconsistently with Australia's obligations under

whichever of the following conventions and agreements because of which the species is listed:

- (a) the Bonn Convention;
- (b) CAMBA;
- (c) JAMBA;
- (d) an international agreement approved under subsection 209(4).

176 Bioregional plans

...

- (5) Subject to this Act, the Minister must have regard to a bioregional plan in making any decision under this Act to which the plan is relevant.

391 Minister must consider precautionary principle in making decisions

Taking account of precautionary principle

- (1) The Minister must take account of the precautionary principle in making a decision listed in the table in subsection (3), to the extent he or she can do so consistently with the other provisions of this Act.

Precautionary principle

- (2) The precautionary principle is that lack of full scientific certainty should not be used as a reason for postponing a measure to prevent degradation of the environment where there are threats of serious or irreversible environmental damage.

ANNEXURE B

Attachments to the refusal decision brief

- A:** Copy of the proposed refusal decision brief (full briefing package with all attachments, including the legal considerations report)
 - A:** Legal considerations
 - A1: Legal considerations report
 - A2: DES state assessment report conclusions on each controlling provision
 - B:** Statutory document report
 - B1: Statutory documents report
 - B2: Statutory documents report correspondence - 20210517
 - C:** Environmental history check
 - C1: EPBC environmental history check
 - C2: EPBC environmental history check – parent companies
 - C3: Environmental history check – parent companies and executive directors
 - D:** Queensland state assessment report (received by the department on 28 April 2021)
 - E:** Amended Environmental Impact Statement
 - E1: Introduction
 - E2: Project Alternatives
 - E3: Project Description
 - E4: Climate
 - E5: Land
 - E6: Traffic and Transport
 - E7: Waste Management
 - E8: Waste Rock
 - E9: Surface Water
 - E10: Groundwater
 - E11: Rehabilitation
 - E12: Air Quality
 - E13: Noise and Vibration
 - E14: Terrestrial Ecology

E15: Aquatic Ecology

E16: MNES

E17: Biosecurity

E18: Cultural Heritage

E19: Economic

E20: Social

E21: Health and Safety

E22: Hazard and Risk

E23: Commitments

E24: Draft EA Conditions

E25: References

E26: Appendix 1 Project Terms of Reference

E27: Appendix 2 Project Alternatives

E28: Appendix 3a Land Suitability Assessment

E29: Appendix 3b Waste Rock and Rejects

E30: Appendix 3c Land Stability Assessment

E31: Appendix 4a Road Impact Assessment

E32: Appendix 4b Geotechnical Assessment

E33: Appendix 4c-Road Use Management Plan

E34: Appendix 5a Surface Water Quality Technical Report

E35: Appendix 5b Flood Study and Water Balance

E36: Appendix 5c Draft Mine Water Management Plan

E37: Appendix 5d Fluvial Geomorphology

E38: Appendix 5e Preliminary Dams Consequence Category Assessment

E39: Appendix 6a Numerical Groundwater Model Technical Report Summary

E40: Appendix 6b Numerical Groundwater Model and Groundwater Assessment Report

E41: Appendix 6c Groundwater Quality Data Summary

E42: Appendix 6d Surface Water Groundwater Interactions Report

E43: Appendix 6e GW Model Peer Review

E44: Appendix 6f Transient Electromagnetic Survey Report

E45: Appendix 6g Core Permeability Tests

E46: Appendix 6h Cross Sections of Regolith

E47: Appendix 7 Air Quality and GHG

E48: Appendix 8 Noise and Vibration

E49: Appendix 9a 2011-2012 Terrestrial Fauna Reports

E50: Appendix 9b Flora and Vegetation Assessment

E51: Appendix 9c Threatened Fauna Investigations - Deep Creek

E52: Appendix d MNES and MSES Supplementary Impact Assessments

E53: Appendix 9e Significant Species Management Plan

E54: Appendix 9f 2016 and 2020 Database Searches

E55: Appendix 9g Composite Fauna Species List (2011 to 2019)

E56: Appendix 9h Migratory shorebird count data appendix

E57: Appendix 10a Aquatic & Marine Ecology, GDE and GBR Impact Assessment

E58: Appendix 10b 2011 Baseline Monitoring Program

E59: Appendix 10c Stygofauna Assessment

E60: Appendix 10d Groundwater Dependent Ecosystem Assessment

E61: Appendix 10e GDEMMP

E62: Appendix 10f Draft Receiving Environment Monitoring Program

E63: Appendix 10g Waterway Barrier Works Map Amendment Request

E64: Appendix 10h Preliminary Isotope Study Results

E65: Appendix 10i Estuarine Benthic Study

E66: Appendix 11a Biodiversity Offset Strategy redacted

E67: Appendix 11b Draft Offset Delivery Plan redacted

E68: Appendix 11c Draft Mamelon Offset Area Management Plan redacted

E69: Appendix 11d Draft Offset Area Management Plan for Offset 2 redacted

E70: Appendix 12 Draft EMP

E71: Appendix 13 EIS and SEIS v1 submissions register

E72: Appendix 14a Economic Model Outputs

E73: Appendix 14b Stakeholder Engagement Report

E74: Appendix 14c Social Impact Assessment

E75: Appendix 15a Draft Erosion and Sediment Control Plan

E76: Appendix 15b Styx Catchment Sediment Budget
E77: Appendix 16a Styx Mine Access Road Civil Drawings (G2001-01)
E78: Appendix 16b Styx Mine Dam #1 Civil Drawings (G2001-01)
E79: Appendix 16c Styx Mine Haul Road Civil Drawings (G2001-01)
E80: Appendix 16d Styx MIA CHPP & Dam 1 Access Rd Civil Drawings (G2001-01)
E81: Executive Summary
E82: Glossary
E83: Table of Contents

F: Additional information

F1: Response DES Assessment Hon Sussan Ley – 20210507
F2: Central Queensland Coal email to department RE SAR – 20210507
F3: Attachment 1 responding to DES key thresholds
F4: Attachment 2 Response to DES section 5
F5: Attachment 3 DES errors misleading
F6: Delegate's meeting with the CQCP proponent – 20210524
F7: AMEC geotechnical reports – 20210524
F8: Proponent letter to DAWE summarising 24 May 2021 meeting
F9: Central Queensland Coal Project Overview
F10: Stop clock DES response – 20210601
F11: Stop clock DES response to errors – 20210601
F12: Delegate's meeting with the CQCP proponent – 20210616
F13: DES flood risk clarification – 20210629
F14: Proponent's summary response to DAWE question – 20210708
F15: Department request for DES response to geotechnical report – 20210720
F16: DES response to geotechnical report – 20210720
F17: Department requirement for consideration of CQC NRS – 20210723
F18: Central Queensland Coal No Release Strategy – 20210723
F19: Department request for OWS advice on No Release Strategy – 20210726
F20: OWS advice on No Release Strategy – 20210802

F21: Quantifying the environmental impact of a major coal mine project on the adjacent Great Barrier Reef ecosystems

F22: Letter from proponent to former Minister on 6 April 2022

F23: Notes from 8 April 2022 meeting with the proponent

F24: Request for referral reconsideration – Environmental Justice Australia – 20220708

G: Public submissions received prior to the proposed decision

G1: Example of campaign submission

G2: Table of Correspondence

G3: MC21-003336

G4: MC21-004050

G5: MC21-004051

G6: MC21-004073

G7: MC21-004097

G8: MC21-004118

G9: MC21-004176

G10: MC21-004193

G11: MC21-004202

G12: MC21-004251

G13: MC21-004311

G14: MC21-004395

G15: MC21-004399

G16: MC21-004402

G17: MC21-004483

G18: MC21-004489

G19: MC21-004491

G20: MC21-004594

G21: MC21-004665

G22: MC21-004697

G23: MC21-004724

G24: MC21-004726

G25: MC21-004733

G26: MC21-004734

G27: MC21-004740

G28: MC21-004749

G29: MC21-004752

G30: MC21-004756

G31: MC21-004759

G32: MC21-004760

G33: MC21-004815

G34: MC21-004816

G35: MC21-004818

G36: MC21-004860

G37: MC21-004864

G38: MC21-004878

G39: MC21-004880

G40: MC21-004881

G41: MC21-004882

G42: MC21-004883

G43: MC21-004916

G44: MC21-004920

G45: MC21-004921

G46: MC21-004926

G47: MC21-004971

G48: MC21-005146

G49: MC21-005259

G50: MC21-005737

G51: MC21-006807

G52: MC21-010886

G53: MC21-017043

G54: Letters of support provided by the proponent – 20210610

G55: Letter from Environmental Justice Australia – 20210723

G56: MC21-028159

G57: MC21-028840

G58: MC21-028132

G59: MC21-028065

G60: MC21-028147

G61: MC21-029087

G62: MC21-029092

G63: MC21-032567

G64: MC21-005012

G65: MC21-033676

G66: MC21-045059

G67: MC21-040809

G68: MC21-080559

G70: MC21-069083

G71: MC21-093289

G72: MC21-092767

G73: Letter from Department of Defence – 20211117

G74: Map of the Shoalwater Bay Expansion Area

G75: Meeting notes for the Minister's meeting with the Capricorn Conservation Council - 20210922

G76: MC21-093968

G77: MC22-001489

G78: MC22-001910

G79: MC22-002208

G80: MC22-004272

G81: MC22-004222

H: IESC advice and responses

H1: IESC advice (received by the department 15 December 2017)

H2: IESC advice (received by the department 31 July 2018)

H3: IESC advice (received by the department 11 December 2020)

H4: Proponent response to IESC advice (dated 11 December 2020)

I: Environment Reporting Tool (ERT)

I1: ERT Report (22 December 2016)

I2: ERT Report (9 July 2021)

J: Statutory documents for threatened species

J1: Conservation Advice - Ornamental Snake

J2: Conservation Advice - Squatter Pigeon

J3: Conservation Advice - Greater Glider

J4: Conservation Advice - Koala

J5: Commonwealth listing advice-Koala

J6: Threat abatement plan for predation by the European red fox

J7: Threat abatement plan for predation by feral cats

J8: Threat abatement plan for competition and land degradation by rabbits

J9: Conservation Advice – Koala – Updated 20220211

J10: Recovery Plan – Koala – Released 20220408

J11: Conservation Advice – Greater Glider – Released 20220705

K: Proposed decision notice – NOT FOR SIGNATURE

L: Letters to the proponent and relevant Ministers

L1: Letter to the proponent

L2: Letter to the Minister for Indigenous Australians

L3: Letter to the Minister for Agriculture, Fisheries and Forestry

L4: Letter to the Minister for Resources and Northern Australia

L5: Letter to the Department of Environment and Science (Qld)

B: Statement of reasons

C: Supplementary information

C1: News clipping 24 September 1924 regarding Styx State Coal Mine

C2: News clipping 26 September 1924 regarding Styx State Coal Mine

C3: News clipping 17 August 1938 regarding Bowman Coal Mine

C4: News clipping 29 November 1934 regarding Styx State Coal Mine

C5: 2007-3702 Referral decision – Kunwarara Magnesite Mine – MNES

C6: Central Queensland Coal – distance to GBRWHA

- C7: Kunwarara Magnesite Mine – distance to GBRWHA
- C8: AIMS Annual Summary Report 2021-2022
- C9: September 16 2022 OWS advice
- C10: NSW EPA fines coal mine for dirty water discharge
- C11: Statutory documents check – 20221128
- C12: ERT Report (5 December 2022)

D: Comments received from relevant Commonwealth and State Ministers in regard to my proposed decision

- D1: Minister Burney – Minister for Indigenous Australians – 20220901
- D2: Minister King – Minister for Resources and Northern Australia – 20220816
- D3: Minister Watt – Minister for Agriculture, Fisheries and Forestry – 20220916
- D4: Mr Loveday – Director of Technical Services – DES – 20220816

E: Comments received from the proponent

- E1: Proponent comment – cover letter – 20220816
- E2: Proponent response to your proposed decision – 20220816
- E3: Proponent response to the 16 September 2022 OWS advice – 20221117
- E4: Proponent confirming request for comment – 20221111
- E5: Proponent request for extension regarding the 16 September 2022 OWS advice – 20221111
- E6: CQC response to the Minister's ABC radio interview – 20220824
- E7: Department response to CQC regarding the Minister's ABC radio interview – 20221107
- E8: Invitation to comment on 16 September OWS advice – 20221111

F: Public comments received on my proposed decision

- F1: Public comment summary spreadsheet
- F2: AMCS report regarding the impacts of the CQC mine on the GBR
- F3: EJA referral reconsideration letter
- F4: AMEC hydrogeological report on the CQC Project
- F5: AMEC submission on the CQC Project
- F6: Comment 41

F7: Comment 42

F8: Comment 59 – Australian Academy of Science

F9: Comment 60

F10: Comment 64 – IESC

F11: Comment 74 – Queensland Conservation Council

F12: Comment 76

F13: Comment 88

F14: Comment 90

F15: Comment 91

F16: Comment 99

F17: Comment 103

F18: Comment 122 – Undermined Inc

F19: Comment 140

F20: Comment 182

F21: Comment 185

F22: Comment 192 – GBRMPA

F23: Comment 199

F24: Comment 201

F25: Comment 203 – GetUp

F26: Comment 223

F27: Comment 234 – Fossil Fuel Non-Proliferation Treaty

F28: Comment 241

F29: Comment 242

F30: Comment 243

F31: Comment 249

F32: Comment 269 – Environmental Advocacy in Central Queensland

F33: Comment 272

F34: Comment 283

F35: Comment 288

F36: Comment 300

F37: Comment 304 – North Queensland Conservation Council

F38: Comment 310

F39: Comment 311

F40: Comment 336

F41: Comment 339 – AMCS

F42: Comment 344

F43: Comment 345

F44: Comment 361 – Wildlife Preservation Society of Queensland

F45: Comment 362

F46: Comment 363

F47: Comment 369 – Climate Council

F48: Comment 374 – Australian Conservation Foundation

F49: Comment 377 – Pacific Islands Climate Action Network

F50: Comment 379

F51: Comment 380

F52: Comment 381 – Peoples Climate Assembly

F53: Comment 385

F54: Comment 386

F55: Comment 387

F56: Comment 388

F57: Comment 389 – Australian Parents for Climate Action

F58: Comment 9004

F59: Comment 9005

F60: Comment 9006

F61: Comment 9007

F62: Comment 9011

F63: Comment 9012

F64: Comment 9013

F65: Comment 9014

F66: Comment 9015

F67: Comment 9018

F68: Comment 9019

F69: Comment 9020
F70: Comment 9021
F71: Comment 9035
F72: Comment 9036
F73: Comment 9037
F74: Comment 9038
F75: Comment 9039
F76: Comment 9040
F77: Comment 9041
F78: Comment 9042
F79: Comment 9043
F80: Comment 9044
F81: Comment 9045
F82: Comment 9046
F83: Comment 9048
F84: Comment 9050
F85: Comment 9052
F86: Comment 9053
F87: Comment 9054
F88: Comment 9056
F89: Comment 9057
F90: Comment 9058
F91: Comment 9059
F92: Comment 9060
F93: Comment 9061
F94: Comment 9063
F95: Comment 9062
F96: Comment 9065
F97: Comment 9066
F98: Comment 9067
F99: Comment 9068

F100: Comment 9069
F101: Comment 9070
F102: Comment 9071
F103: Comment 9072
F104: Comment 9073
F105: Comment 9074
F106: Comment 9075
F107: Comment 9076
F108: Comment 9077
F109: Comment 9078
F110: Comment 9079
F111: Comment 9080
F112: Comment 9081
F113: Comment 9082
F114: Comment 9083
F115: Comment 9084
F116: Comment 9085
F117: Comment 9086
F118: Comment 9088
F119: Comment 9089
F120: Comment 9090
F121: Comment 9091
F122: Comment 9092
F123: Comment 9095
F124: Comment 9096
F125: Comment 9097
F126: Comment 9098
F127: Comment 9099
F128: Comment 9008
F129: Comment 9009
F130: Comment 9010

F131: Comment 9016
F132: Comment 9017
F133: Comment 9033
F134: Comment 9102
F135: Comment 9034
F136: Comment 9049
F137: Comment 9051
F138: Comment 9055
F139: Comment 9087
F140: Comment 9093
F141: Comment 9100
F142: Comment 9101
F143: Comment 9103
F144: Comment 9094 – GetUp campaign submission

G: Notice of decision

H: Letters to relevant parties

H1: The proponent
H2: The Hon Linda Burney MP, Minister for Indigenous Australians
H3: The Hon Madeleine King MP, Minister for Resources and Northern Australia
H4: Senator the Hon Murray Watt, Minister for Agriculture, Fisheries and Forestry
H5: Queensland Department of Environment and Science