



Statement of Reasons for Approval under the *Environment Protection and Biodiversity Conservation Act 1999*

I, SUSSAN LEY, Minister for the Environment, provide the following statement of reasons for my decision of 31 August 2021, under subsection 130 (1) and section 133 of the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)*, to approve the extension of mining operations at the existing Russell Vale Colliery (EPBC 2020/8702) (**proposed action**).

LEGISLATION

1. Relevant legislation is set out in Annexure A. This legislation does not form part of my reasons but is provided as contextual background to my decision.

BACKGROUND

Description of proposed action

2. Wollongong Coal Limited (**WCL**) proposes to extend underground mining operations at the existing Russell Vale Colliery in Russell Vale, approximately 8 km north of Wollongong, NSW. The proposed action is also known as the Russell Vale Revised Underground Expansion project.
3. The Russell Vale Colliery is located within the Cataract Reservoir catchment, which is a designated source of drinking water for Sydney. No mining is proposed underneath the full supply level of the Cataract Reservoir.
4. The proposed action will involve extraction of coal from the Wongawilli Seam. This seam lies beneath the Bulli and Balgownie Seams which have already been historically mined in some areas. To provide stability and reduce the likelihood of subsidence the proponent is proposing to use bord and pillar mining. This method involves leaving in place supportive pillars that are designed for long term stability.
5. The proposed action involves extracting approximately 3.7 million tonnes (Mt) of Run of Mine (**ROM**) coal over five years not exceeding 1.2 Mt annually and a production rate not exceeding 1 Mt of product annually. The action also includes the emplacement of 200,000 tonnes per annum of reject rock material within the underground mine workings, if it cannot be beneficially reused.
6. The proposed action will not involve additional surface disturbing activities or the clearing or removal of vegetation. The water treatment facilities required to treat adit discharge water are not included as part of the proposed action. An Adit Discharge Water Management Plan will establish the processes for implementing the necessary treatment measures. It is expected that the treatment facilities will be located within existing disturbed area, however an assessment will be undertaken to ensure the treatment facilities meet State and Commonwealth regulatory requirements.
7. The proposed action study area covers the surface and subsurface areas of Wonga East and Wonga West. While Wonga West is considered part of the existing colliery and has been historically mined, the proposed action would occur only at Wonga East.

8. Wonga East is located on the Illawarra Escarpment, with the colliery pit top on the lower slopes of the escarpment bound by Princes Highway to the east, and the residential areas of Russell Vale and Corrimal to the east and south. The development footprint is approximately 970 ha.
9. The proposed action area includes 39 upland swamps. Each of the 39 swamps are considered to meet the EPBC Act listing criteria for the Coastal Upland Swamps in the Sydney Basin Bioregion (**Coastal Upland Swamps**) ecological community. These swamps have an average size of 1.26 ha and cover a total area of approximately 49 ha. Twenty-seven of these Coastal Upland Swamps are located over the proposed bord and pillar workings. All references to 'swamps' in these reasons are references to swamps that meet the EPBC Act listing criteria for Coastal Upland Swamps.

NSW assessment and approval

10. The proposed action has been assessed and approved under the *Environmental Planning and Assessment Act 1979* (NSW).
11. An earlier iteration of the proposed action was submitted to the NSW Government in 2009. It was assessed as a transitional Part 3A project under the *Environmental Planning and Assessment (Savings, Transitional, and Other Provisions) Regulations 2017* (NSW).
12. During the assessment process, the proponent made changes to the proposed action that were detailed in a Revised Preferred Project Report. The proposed action that was referred under the EPBC Act reflects these changes, as captured in the Revised Preferred Project Report. That Report was publicly exhibited from 1 to 20 August 2019. A total of 213 submissions were received, including 11 government agency submissions.
13. The proponent provided a response to these submissions to NSW Department of Planning, Industry and the Environment (**DPIE**), and DPIE undertook an assessment.
14. On 15 September 2020, DPIE provided an assessment report to the NSW Independent Planning Commission (**IPC**). The IPC conducted a 12 week public hearing.
15. On 8 December 2020, the NSW IPC approved the proposed action subject to conditions (**NSW development consent**).
16. As part of this process, the Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (**IESC**) provided advice on the proposed action to DPIE on 19 November 2019 and 5 March 2020.

Procedural background

EPBC Act referral and controlled action decision

17. On 4 August 2020, WCL referred the proposed action under section 68 of the EPBC Act.
18. On 2 September 2020, my delegate determined that the proposed action was a controlled action under section 75 of the EPBC Act, and that the controlling provisions for the proposed action were:
 - a. sections 18 and 18A (listed threatened species and ecological communities)
 - b. sections 24D and 24E (water resources).

19. On the same date, the delegate also decided under section 87 of the EPBC Act that the proposed action would be assessed by Public Environment Report (**PER**) under Division 5 of Part 8 of the EPBC Act.

Public environment report and request for other information

20. The PER guidelines were provided to the proponent on 5 November 2020. The proponent submitted a draft PER on 16 December 2020 and the Stage 2 fee payment was received on 13 January 2021. The department determined the draft PER met the requirements in the PER guidelines, and subsequently, the draft PER was published for a public comment period of 20 business days from 28 January 2021 to 25 February 2021.
21. The proponent received 28 submissions on the draft PER. All of the submissions were opposed to the proposed action. The key issues raised in the submissions were:
 - a. The proposed action's impacts on the environment;
 - b. Impacts on Sydney's drinking water catchment;
 - c. The proponent's financial stability;
 - d. Community health and safety; and
 - e. The proponent's environmental history.
22. On 22 December 2020, the department submitted the draft PER to the IESC for consideration of the proposed action's potential impacts on water resources.
23. On 8 February 2021, the IESC provided advice on the potential impacts of the proposed action on water resources, including the long-term impacts associated with subsidence and discharge from adits. The IESC advice was provided to the proponent on 12 February 2021.
24. On 26 March 2021, the department wrote to the proponent and to DPIE requesting information about the proponent's environmental history. A response was received from the proponent on 13 April 2021, and from DPIE on 27 April 2021.
25. On 14 April 2021, the proponent submitted the final PER, including the response to submissions on the draft PER, to the department. The proponent paid Stage 3 and 4 cost recovery fees on 19 February 2021.
26. On 20 April 2021, the department sought further information from the proponent relating to social matters (Aboriginal heritage) and greenhouse gas emissions. The proponent provided the information on the same day.
27. On 21 April 2021, the PER was published in accordance with section 99(4) of the EPBC Act.
28. On 3 May 2021, the department sought additional information from the proponent in relation to formal enforcement actions for environmental audits in 2013. On 5 May 2021, the proponent advised that these matters had been addressed.
29. On 5 May 2021, the department requested further clarification regarding the treatment of adit discharge water. The proponent provided a response on 7 May 2021.

Proposed decision, consultation and further information

30. On 12 May 2021, the department gave my delegate a recommendation report relating to the proposed action in accordance with section 100 of the EPBC Act.
31. On the same day, the delegate proposed to approve the proposed action subject to conditions. In accordance with sections 131 and 131AA of the EPBC Act, the delegate wrote to and invited comments on the proposed decision and conditions from:
 - a. the proponent,
 - b. the Minister for Energy and Emissions Reduction,
 - c. the Minister for Indigenous Affairs, and
 - d. the Minister for Resources, Water and Northern Australia
32. The delegate also notified and invited comments on the proposed decision from the NSW Minister for Planning and Public Spaces, the Hon Rob Stokes MP.
33. The proponent responded on 18 May 2021, and suggested a number of amendments to the proposed conditions. I decided to adopt most of these suggested amendments, and they are reflected in the conditions that I have attached to the approval. I address the more substantive changes in the discussion about the conditions below. Additional minor changes included changes to the timing of reporting to align with the impacts of the proposed action, and changes to definitions for clarity and consistency with the NSW development consent conditions. A revised copy of the conditions was provided to the WCL on 8 July 2021, and WCL responded on the same day stating that they had no further comments.
34. On 25 May 2021, the Department of Industry, Science, Energy and Resources replied on behalf of the Minister for Energy and Emissions Reduction stating a nil response.
35. On 26 May 2021, the Department of Industry, Science, Energy and Resources replied on behalf of the Minister for Resources, Water and Northern Australia and provided comments from Geoscience Australia. I address these comments below under water resources.
36. On 27 May 2021, the National Indigenous Australians Agency responded on behalf of the Minister for Indigenous Australians. I consider these comments below under economic and social matters.
37. On 12 August 2021, the department wrote to WCL and its parent company (Jindal Steel and Power Limited) requesting further information regarding management actions to reduce emissions for the proposed action and the steelmaking plant in India. The further information provided in response to this request is addressed below under duty of care and human safety.

Decision

38. On 9 June 2021, the statutory period to make this decision was extended to 8 July 2021. On 8 July 2021, the statutory period was extended again to 31 August 2021.
39. On 31 August 2021, I decided to approve the taking of the proposed action for the purposes of sections 18, 18A, 24D and 24E, subject to conditions.

EVIDENCE OR OTHER MATERIAL ON WHICH MY FINDINGS WERE BASED

40. My decision to approve the taking of the proposed action was based on consideration of the final approval decision brief prepared by the Environment Assessments (NSW, ACT) Branch of the Department dated 31 August 2021.

41. This final approval decision brief comprised the following:

A		Proposed decision brief -
	A	Recommendation report
	B	Proposed decision notice
	C1	Final PER
	C2	GHG additional information
	C3	Indigenous heritage additional information
	C4	Clarification on water treatment facility
	D1	Environmental history
	D2	Species and communities
	D3	Bushfire mapping
	E1	IESC advice February 2021
	E2	IESC advice March 2020
	E3	IESC advice November 2019
	E4	OWS advice
	E5	Summary of IESC advice and proponent's response
	E6	Independent Technical Assessment process
	F	NSW development consent
	G1	Summary of public submissions
	G2	Public submissions
	H1	Relevant approved conservation advice
	H2	Threat abatement plans
	H3	Recovery plans
	I	ERT Report
	J1	Letter to proponent
	J2	Letter to NSW
	J3	Letter to the Minister for Resources, Water and Northern Australia
	J4	Letter to the Minister for Energy and Emissions
	J5	Letter to the Minister for Indigenous Australians
B1		Proponents' responses to invitation for comment on proposed decision; and supporting information.
B2		Proponents' response to final conditions
C1		Minister for Energy and Emissions Reduction response to invitation to comment on proposed decision.
C2		Minister for Indigenous Australians response to invitation to comment on proposed decision.
C3		Minister for Resources, Water and Northern Australia (including GeoScience Australia comments) response to invitation to comment on proposed decision.
D1		Change to conditions tables

D2		Marked up version of final Conditions
E		Approval notice
F		Consideration of human safety and duty of care, attaching
	1	Steffen Report (dated 6 July 2021)
	2	Department of Industry, Science, Energy and Resources (DISER) advice.
	3	WCL draft Air Quality and Greenhouse Gas Management Plan
	4	WCL Letter dated 13 August 2021 and confirmation email
	5	JSPL Response to RFI
	6	WCL Sustainability and Emission Reduction Strategy
	7	WCL Letter dated 5 July 2021
	8	DISER Supplementary information – Russell Vale Underground Expansion Project
	9	NSW Independent Planning Commission (IPC) Approval dated 8 December 2020
	10	IPC Statement of Reasons dated 8 December 2020
	11	NSW Department of Planning, Industry and Environment Assessment Report
	12	WCL advice on sealing the pillars of coal dated 20 August 2021
G1		Letter notifying Proponent (WCL)
G2		Letters notifying Ministers

FINDINGS ON MATERIAL QUESTIONS OF FACT AND REASONS FOR DECISION

Water resources (sections 24D & s 24E)

IESC advice

42. On 8 February 2021, the IESC provided advice on the proposed action to the department.

43. The IESC identified that the key potential impacts from the proposed action are:

- a. altered water regimes (including drying) with irreversible effects on Coastal Upland Swamps;
- b. long-term effects on Bellambi Gully Creek and nearshore marine environments downstream from the discharge of adit water that exceeds Australian and New Zealand Guidelines (ANZG) (2018) default guideline values for freshwater aquatic ecosystems for some metals and metalloids; and
- c. long-term impacts on groundwater levels and quality post-mining where discharge from adits may occur in perpetuity.

44. The IESC identified key areas in which work was required to address the key potential impacts of the proposed action, which it summarised as follows:

- further work to assess the status of pillar stability in seven of the 14 [Bulli Seam] goaf areas;
- swamp-specific ecological monitoring should commence at least two years before mining resumes to establish baseline data, then continue during the life of the mine and for a suitable period afterwards until the risk of any further ground movements can be demonstrated to be negligible;

- swamp-specific water balances for potentially impacted swamps and multiple corresponding reference ones should be calculated based on monitoring data collected over an adequate time period. These multiple reference swamps are needed to differentiate changes caused by mining from those associated with natural climatic variability and will be required to demonstrate negligible impact from the project;
 - further monitoring of the adit water quality to address the potential risks associated with the discharge of either untreated or treated water into Bellambi Gully Creek. This monitoring should occur at more than one site downstream of the release point and should include analysis of sediment-bound contaminants; and
 - groundwater and surface water monitoring focusing on the multi-seam extraction areas should quantify the drawdown response during mining and for a long enough period after mining ceases to confirm that no delayed significant impacts occur on aquatic environments, or, if they do, until recovery is complete. These monitoring data should be assimilated into updated models.
45. The IESC also recommended a subsidence limit of 100 mm at swamps as was suggested in the PER. The IESC noted that greater than 100 mm of vertical subsidence at the Coastal Upland Swamp would increase the risk of catastrophic loss of that swamp, and so a conservative threshold should be applied.

NSW development consent conditions relating to impacts on water resources

46. Conditions B12 to B20 of the NSW development consent relate to managing potential impacts to water resources. This includes a requirement for the approval holder to ensure that the proposed action does not exceed water management impact performance measures. The performance measures are grouped under general water management, erosion and sediment control works, clean water diversions and storage infrastructure, flood protection works, mine water storages, chemical and hydrocarbon storage, and aquatic and riparian ecosystems.
47. Condition B17 of the NSW development consent requires that WCL prepare a Water Management Plan in consultation with relevant agencies. This plan will ensure that monitoring is undertaken in a manner that enables assessment against performance measures. The Water Management Plan must include:
- a. baseline data on surface water flows that could be affected and groundwater levels, yield, and quality in the region;
 - b. surface and groundwater impact assessment criteria, including trigger levels for investigating any potentially adverse impacts on water resources or water quality;
 - c. surface and groundwater monitoring programs;
 - d. adaptive management practices implemented to guide future mining activities in the event of greater than predicted impacts on aquatic habitat;
 - e. a program to validate the surface water and groundwater models for the development, and
 - f. a plan to respond to any exceedances of the surface water and groundwater assessment criteria.

48. The Water Management Plan requires a program to periodically validate the surface water and groundwater models for the proposed action and compare monitoring results with modelled predictions. This is consistent with the IESC recommendations about groundwater and surface water monitoring.
49. Condition B19 requires that WCL submit an Adit Discharge Water Management Plan to the NSW Planning Secretary for approval within 12 months of commencing mining.
50. Conditions C1-C3 and C10-C11 of the NSW development consent require WCL to ensure that the proposed action does not exceed the subsidence impact performance measures set out in table 6 of the NSW development consent. The performance measures include, but are not limited to, negligible subsidence impacts or environmental consequence including diversion of flows or changes in the natural drainage behaviour of pools; and changes to the structural integrity of the bedrock base or any controlling rock bar of the Coastal Upland Swamp. Condition C1 of the NSW development consent includes specific performance measures for subsidence-related impacts, including that vertical subsidence from the proposed action must not exceed 300 mm.
51. Under condition C10 of the NSW development consent, WCL must prepare an Extraction Plan which must:
 - a. provide details of the mine plan including the consideration of final pillar design dimension (pillar height to width ratio) and the long-term stability of pillars;
 - b. provide revised predictions of the potential subsidence effects, subsidence impacts and environmental consequences and validate them;
 - c. describe in detail the performance indicators that would be implemented to ensure compliance with performance measures;
 - d. confirm the status of the Bulli Seam goaf area;
 - e. provide a groundwater monitoring program to monitor and report on the permeability, hydraulic gradient, flow direction and connectivity of deep and shallow groundwater aquifers;
 - f. include a trigger action response plan which contains appropriate triggers to warn of increased risk of exceedances of any performance measures and/or indicators;
 - g. provide contingency plans that provide for adaptive management where monitoring indicates that there have been exceedances; and
 - h. provide a Subsidence Monitoring Program, and Swamp Monitoring Plan. The plans must include monitoring, triggers, and adaptive management to ensure the performance measures are not exceeded.

Water resource impacts

Subsidence - altered water regimes

52. A key potential impact of the proposed action on water resources is via subsidence.
53. Subsidence-induced cracks occurring beneath a creek or other surface water body can have subsequent effects on surface and groundwater hydrology, including:

- a. loss of, or change in surface flow, and loss of standing water and near-surface groundwater
 - b. changes to the quality of surface water when it is diverted into the subsurface and then re-emerges downstream, including in relation to dissolved oxygen levels and pH, concentrations of metals and salinity.
 - c. changes to surface water quality through increased sedimentation, bank instability and loss, creation or alteration of riffle and pool sequences, changes to flood behaviour and, increased rates of erosion with associated turbidity impacts.
54. In relation to Coastal Upland Swamps, subsidence may damage the low permeability material underlying the perched aquifers which support the swamps.
 55. The proposed action uses a long-term stable bord and pillar mine design, which is intended to have imperceptible subsidence and subsidence related impacts. Monitoring will be implemented to confirm predicted low levels of subsidence and inform adaptive mine management measures if required.
 56. A peer reviewed subsidence assessment report (**subsidence assessment report**) and a quantitative assessment of the risk of pillar failure report (**pillar risk assessment report**) in the Russell Vale East Area were provided in the PER. On 5 March 2020, the IESC recommended that the pillar risk assessment report be independently peer reviewed. In accordance with this recommendation, the pillar risk assessment report was peer-reviewed by Professor Bruce Hebblewhite.
 57. On the basis of these reports and the other material before me, I found that the proposed action could cause subsidence-related impacts via incremental subsidence, and pillar collapse.
 58. In relation to incremental subsidence, I found, on the basis of the subsidence assessment report, that the proposed action has the potential to result in low-level-deformation within the Wongawilli Seam, regardless of the strength, load and behavior of the pillars used. This low-level deformation may result in gradual, imperceptible low-level vertical subsidence movements of up to 100 mm.
 59. I note that previous mining means that several areas within the proposed action study area are on the verge of moving, and there may be ongoing low-level ground movement that could cause perceptible low level impacts. This movement may continue irrespective of any further mining in the Wongawilli Seam, and will not be influenced by the proposed action.
 60. In relation to the collapse of pillars within the proposed mining workings in the Wongawilli Seam, I found, on the basis of the pillar assessment report, that subsidence impacts are unlikely. The majority of the proposed Wongawilli Seam pillars have been assessed to have a probability of failure of well below 1 in 100,000; the failure of these pillars would result in vertical subsidence impacts of up to 140 mm. Two panels of bord and pillar workings located outside the overlying Balgownie Seam goaf area have been assessed to have a risk of failure of less than 1 in 1,000. These two panels are not located beneath Coastal Upland Swamps. Should failure occur, the maximum subsidence for these panels is predicted to be less than 100 mm and likely less than 30mm.
 61. In relation to the collapse of pillars in the historic workings of the overlying seams, I found that subsidence impacts are very unlikely. I was satisfied on the basis of the pillar risk

assessment report that record tracings and mine plans for the Balgownie Seam indicate there are no areas in the proposed action study area where Balgownie Seam pillars might be unstable. Further, the proposed action has been designed to avoid mining directly below the chain pillars in this seam, so there is little potential for the proposed action to destabilize pillars in that seam.

62. The situation in respect of the Bulli Seam is more complicated. It has not been confirmed that all of the goaf areas in the Bulli Seam have collapsed, but following receipt of the IESC advice, WCL did additional work to map areas where collapse is possible. The NSW conditions of consent also require monitoring to occur during the early stages of underground development to confirm the status of pillars where uncertainty exists. The eventual failure of these pillars is almost certain, if it hasn't occurred already. The proposed action may accelerate the inevitable failure of these pillars, but I am satisfied it is unlikely to increase the consequences associated with these pillars failing (beyond the incremental subsidence described above).
63. The subsidence assessment report assumes that collapse has already occurred in all Bulli Seam goaf areas. If there are standing pillars which fail during the life of the proposed action, observed subsidence may reach 300mm.
64. The subsidence assessment report concluded that "the small subsidence movements that are forecast for the proposed mining layout are not expected to cause perceptible impacts to any natural surface features including Coastal Upland Swamps, cliffs, steep slopes, drainage lines, creeks, Cataract Creek and Cataract Reservoir".
65. In summary, I found that the subsidence associated with the proposed action is unlikely to exceed 100 mm, but up to 300 mm may occur in some areas, if pillars fail in historic workings.
66. In the PER, WLC stated that vertical subsidence of more 100mm had the potential to cause the catastrophic loss of a single swamp. The IESC agreed that this was an appropriate conservative threshold.
67. Noting that the extent of vertical subsidence at which catastrophic loss of a swamp could occur is uncertain, and the application of the precautionary principle, I found that vertical subsidence in excess of 100 mm below any swamp may have significant adverse impacts on that swamp
68. I decided that these possible adverse impacts could be addressed by attaching conditions which impose a subsidence limit of 100 mm, and other requirements to manage any subsidence. I discuss these conditions further below under listed threatened species and ecological communities.
69. I found that the proposed action will not otherwise have significant subsidence impacts on surface or groundwater systems, and that any such impacts would most likely occur in the immediate vicinity of the Wongawilli Seam.

Groundwater impacts – depressurization

70. Mining of the Wongawilli Seam will require dewatering to allow mining to occur safely. This will reduce groundwater pressures within the coal seam and immediately adjacent groundwater systems. The proposed action will cause depressurisation within the Wongawilli Seam, and of the overburden immediately above the Wongawilli Seam, to atmospheric pressure. On the basis of the groundwater assessment and modelling in the

PER, I find that there will be a maximum drawdown of up to 50 m within and immediately above the Wongawilli Seam, out to a distance of approximately 0.5 km from the proposed action.

71. The proposed action will have limited depressurization impacts on the Balgownie or Bulli Seams, which have already experienced significant depressurization due to historical mining. On the basis of the groundwater assessment and modelling in the PER I found that the proposed action will result in maximum predicted drawdown of up to 5 m within the Balgownie Seam, localized over the proposed bord and pillar workings. The Bulli Seam is generally dry in the proposed action study area.
72. I found that the proposed action will delay depressurization recovery within the historical workings, but will not affect the final level of the long-term recovery.

Groundwater impacts – post-closure recovery

73. After a mine closes, groundwater levels recover over time. If groundwater levels recover sufficiently at the site of the proposed action, there is potential for seepage or outflows of groundwater at the escarpment through existing adits (from historical mining). Adit water outflows will have interacted with coal reject material that has been placed in the underground workings after mining is completed, and so may contain a range of dissolved metals.
74. At Russell Vale Colliery, the adits (accesses to underground mining areas) are located in the Bellambi Gully catchment, and discharges from the adits would flow into Bellambi Gully.
75. Adit outflows will not occur for several decades after the cessation of mining, and the cessation of discharges to Bellambi Gully associated with Pit Top facilities and dewatering activities.
76. The proposed action will result in underground disposal of reject material, which groundwater that subsequently flows out via adits may interact with. Under condition B35 of the NSW development consent, WCL must ensure that reject material is tested, is prioritized for beneficial reuse where suitable, and is only emplaced underground following leachate testing to confirm it is suitable for underground emplacement. The Groundwater Management Plan to be included in the Water Management Plan required by condition B17 will detail the monitoring and management requirements related to the disposal of reject material underground.
77. The Adit Discharge Water Management Plan required under condition B19 of the NSW development consent will include plans for the control and treatment of groundwater seepage from existing adits post-mining, and additional monitoring and modelling to inform the detailed design of arrangements for the treatment and discharge of water to Bellambi Gully. This management plan will ensure that adit outflows are managed to prevent further adverse impacts on environmental values of Gully.
78. On the basis of the analysis in the recommendation report and the documents it refers to, and the advice provided by the IESC, I found that water quality may be adversely impacted by untreated adit outflow water interacting with surface water within Bellambi Gully. I determined that these impacts could be addressed by attaching conditions to the approval, which I discuss below.

Surface water impacts – discharge during mining operations

79. The proposed action does not involve any changes to the existing Pit Top surface water management system.
80. The proposed action will result in the need to dewater mine workings for an extended period of time. The predicted rates of dewatering that will be required during the proposed action are well below the previous rate of dewatering in the Wongawilli Seam. Water discharged as a result of the proposed action will be managed under the existing NSW Environment Protection Licence. Condition B15 of the NSW development consent requires WCL to comply with the existing dewatering discharge limits under this licence in relation to volume and quality.
81. The conditions I have decided to attach in relation to water quality include conditions which strengthen the water quality requirements for all discharges to the Bellambi Gully. These are discussed further below.

Conditions to minimize the impacts of the action on water resources

82. In light of the possible impacts of the proposed action described above, I considered that it was necessary to attach conditions to the approval to protect water resources.
83. I decided to attach conditions that build upon the conditions of the NSW development consent, and which require that WCL:
 - a. comply with conditions B12-B20, C1-C3 and C10-11 of the NSW development consent (condition 1)
 - b. notify the department within 2 business days of requesting changes to the conditions of the NSW development consent, and within 10 business days of the modifications having been approved by the NSW Planning Secretary (conditions 3-4)
 - c. provide the Department with the Water Management Plan required under condition B17, the Adit Discharge Water Management Plan required under condition B19 and the Extraction Plan required under condition C10 of the NSW development consent, and notify the department of any proposed and approved changes to these plans (conditions 5 and 6).
84. In relation to the groundwater impacts, I decided to attach conditions which require that in addition to the groundwater monitoring requirements specified in condition B17 of the NSW development consent, WCL must:
 - a. establish and maintain groundwater monitoring across the project site including in Coastal Upland Swamps at least 12 months before potential impacts (condition 7a);
 - b. monitor groundwater levels every 3 months until after mining ceases (condition 7b) and publicly report the monitoring results (condition 7c);
 - c. establish monitoring prior to potential impact in swamps for determining the condition of each swamp and swamp water balances including at reference swamps (condition 7d) and continue this monitoring until after mining ceases (condition 7e);
 - d. publicly report the results of the swamp monitoring (condition 7f) and provide compliance reporting my department (condition 7g).

85. Condition 7, in combination with the NSW conditions of consent, also addresses recommendations made by the IESC in relation to swamp specific monitoring, including at reference swamps.
86. When the proposed decision was made, it was proposed that conditions about drawdown limits and individual water balances for each swamp would be attached. These conditions were proposed to address possible impacts on Coastal Upland Swamps. I decided not to attach these conditions to the approval, and set out my reasons for this further under listed threatened species and ecological communities below.
87. In relation to surface water impacts from operational discharges to Bellambi Gully, I decided to attach conditions which require that, in addition to the requirements of condition B19 of the NSW development consent, WCL must:
- a. ensure that all water discharges to Bellambi Gully do not result in water quality in the Gully exceeding the *Australian and New Zealand guidelines for fresh and marine water quality* (2018) (or subsequent version) limits for relevant metals and metalloids (condition 8a);
 - b. monitor discharges to Bellambi Gully weekly to ensure the water quality limits are met (condition 8b), and publicly report the results of the monitoring (condition 8c);
 - c. if water quality limits are exceeded, report this to the department (condition 10) and cease discharges of water within 2 business days (condition 11);
 - d. not recommence discharges until monitoring data is provided which I agree demonstrates that the water quality limits are met (condition 12).
88. Likewise, in relation to potential impacts to surface water in Bellambi Gully from groundwater discharges from the adits post-mining, I decided to attach conditions which require that in addition to the requirements of condition B19 of the NSW development consent, WLC must:
- a. provide to the department for my approval water quality limits, (including about the concentration of relevant metals) for adit water discharges, which must be consistent with the *Australian and New Zealand guidelines for fresh and marine water quality* (2018) (conditions 9a and 9b);
 - b. monitor adit water discharges regularly to ensure the water quality limits are met (condition 9c), and publicly report the results of the monitoring (condition 9d);
 - c. if water quality limits are exceeded, report this to the department (condition 10) and prevent any adit water discharge that reaches or exceeds the water quality limit from entering any waterway (condition 13) within 2 business days;
 - d. not recommence discharges until monitoring data is provided which I agree demonstrates that the water quality limits are met (condition 14).
89. Conditions 8 and 9, in combination with the NSW development consent conditions, address recommendations made by the IESC in relation to surface water quality monitoring and management throughout the life of the project.
90. These conditions concerning water quality are slightly different to the conditions set out in the proposed decision. At WCL's request I decided to modify proposed condition 8 by

splitting it into final conditions 8 and 9, to clearly identify the requirements for water quality at the different project stages.

91. In deciding the conditions to attach to the approval, I noted the comments received from Geoscience Australia on 26 May 2021 in relation to the proposed decision. Geoscience Australia stated that the proposed conditions were generally outcomes-focused, well-conceived and clearly written. Geoscience identified three key concerns as follows.
92. First, the performance measures set by the NSW development consent may not be applicable to the protection of water resources under the EPBC Act. To the extent that I consider that the performance measures in the NSW development consent are not appropriate to protect matters of national environmental significance, I have decided to attach additional conditions.
93. Second, the Water Management Plan does not require approval from the Commonwealth regulator and, as such, the conditions may not provide the Commonwealth regulator with a role in determining how potential impacts will be monitored or how limits will be derived. Geoscience Australia suggested that the conditions could be refined to provide a mechanism to allow the department to be involved in approving the monitoring system. I decided that it was not necessary to require that management plans required under the NSW development consent also be approved by me or the department, in addition to the NSW Planning Secretary. I consider that the conditions that I have decided to attach to the approval include sufficient 'cease work' triggers to ensure that impacts on protected matters are adequately monitored, and these matters are protected.
94. Third, the conditions required subsidence to be monitored and limits to be set but the Minister was not required to approve limits. Geoscience Australia suggested that consideration could be given to providing the Commonwealth with a role in approving subsidence limits given the subsidence threat to the Coastal Upland Swamp community. I have decided to attach conditions that include a subsidence level, and this is discussed under listed threatened species and ecological communities below.

Conclusion about water resources

95. I found that, if the proposed action is undertaken in accordance with the conditions I have attached to the approval, the impacts of the proposed action on water resources, including the Coastal Upland Swamps, will not be unacceptable.

Threatened species and ecological communities (sections 18 & s 18A)

96. As I noted above, the proposed action area covers 39 swamps that meet the listing criteria for the Coastal Upland Swamps ecological community. Twenty-seven of these Coastal Upland Swamps are located over the proposed bord and pillar workings.
97. Most of the swamps within the proposed action study area have previously been undermined by workings in the Bulli Seam with a number also undermined by workings in the Balgownie Seam and Wongawilli Seam. Four swamps within the proposed action study area have existing high levels of tensile strain as a result of previous mining activities. This means that they are at greater risk of environmental consequences as a result of future mining activity. Of these four swamps, two will not be directly undermined by the proposed action.
98. There are 12 swamps wholly or partly located over the goaf areas of the Bulli Seam where pillar collapse is unconfirmed, and in the proposed action area.

99. Coastal Upland Swamps, and other water resources in or in the vicinity of the proposed action area including the Cataract Creek, provide habitat for various listed threatened species. On the basis of the Environment Report Tool (ERT) report, information from the department's Species Profile and Threats Database (SPRAT), Departmental advice and conservation advice and recovery plans referred to in and attached to the recommendation report, I considered that the proposed action may impact upon the following listed threatened species, in addition to the Coastal Upland Swamps ecological community:

- a. Prickly Bush-pea (*Pultenaea aristata*) – Vulnerable;
- b. Macquarie Perch (*Macquaria australasica*) – Endangered;
- c. Silver Perch (*Bidyanus bidyanus*) – Critically Endangered;
- d. Trout Cod (*Maccullochella macquariensis*) – Endangered;
- e. Murray Cod (*Maccullochella peelii*) – Vulnerable;
- f. Giant Burrowing Frog (*Heleioporus australiacus*) – Vulnerable;
- g. Littlejohn's Tree Frog (*Litoria littlejohni*) – Vulnerable;
- h. Stuttering Frog (*Mixophyes balbus*) – Vulnerable;
- i. Broad-headed Snake (*Hoplocephalus bungaroides*) – Vulnerable; and
- j. Large-eared Pied Bat (*Chalinolobus dwyeri*) – Vulnerable.

Approved conservation advice, recovery plans and threatened abatement plans for listed threatened species and ecological communities

Coastal Upland Swamps in the Sydney Basin Bioregion

100. This ecological community includes a range of vegetation and fauna associated with periodically waterlogged soils on the Hawkesbury sandstone plateau. It is characterised by highly diverse and variable mosaics of vegetation depending on soil condition, size of the site, recent rainfall, fire regimes and disturbance history.
101. The approved Conservation Advice (including listing advice) for Coastal Upland Swamps states that given the very specific set of variables required for Coastal Upland Swamps to develop and persist, the areas currently occupied and the associated sub-catchments are considered to be areas critical to the survival of the ecological community.
102. The approved Conservation Advice for Coastal Upland Swamps states that changes in hydrology such as those induced by mining subsidence are one of the key threats to Coastal Upland Swamps. The approved Conservation Advice notes that subsidence impacts may be sufficiently low for impacts to be considered negligible where mining techniques such as bord and pillar are used rather than longwalls. Other threats to Coastal Upland Swamps include invasive species, risk of fires, habitat loss, disturbance, and modification.
103. One threat abatement plan was identified relevant to the Coastal Upland Swamps; Threat abatement plan for disease in natural ecosystems caused by *Phytophthora cinnamomi*. This threat abatement plan provides strategies to prevent *Phytophthora* spreading into areas that are free of disease and strategies to reduce the impacts in infested areas.

104. There is no approved or adopted recovery plan for the Coastal Upland Swamp ecological community.

Prickly Bush-pea

105. The Prickly Bush-pea is a small shrub, usually less than 40 cm tall. The species is often associated Coastal Upland Swamps vegetation complex and is also known to occur in dry sclerophyll woodland and gully forest plant communities. The species is known to be widely distributed throughout the proposed action study area and locality, and occurs in a variety of vegetation communities, particularly drier margins of upland swamps and surrounding sandstone woodland. The Prickly Bush-pea was recorded at a number of Coastal Upland Swamps within the proposed action study area.
106. The approved conservation advice for the Prickly Bush-pea notes the main threats to the species are inappropriate fire regimes, understorey clearing, widening and easement maintenance practices. The advice also identifies actions to minimise the impacts of these threats including managing changes to hydrology, weed management, surveys of known and suitable habitat.

EPBC Listed fish species

107. The PER notes that targeted aquatic surveys undertaken between 2009 - 2019 identified Macquarie Perch and Silver Perch in lower reaches of Cataract Creek approximately 12 m upstream of the full supply level of Lake Cataract. The surveys also identified a species of freshwater cod which was assumed to be either Murray Cod or Trout Cod.
108. The Murray cod is the largest freshwater fish found in Australia. The Murray cod was translocated into Cataract Dam (Nepean River NSW), have hybridised, and the cod population existing there is composed largely of hybrids.
109. The trout cod is a moderately large freshwater fish endemic to the Murray Darling River system in south-eastern Australia. The species was translocated into several waters outside its recorded range, including Cataract Dam on the Nepean River prior to 1910.
110. There are no approved Conservation Advices, recovery plans or threat abatements plans for the Murray cod or trout cod.
111. The Silver Perch are endemic to the Murray-Darling system however a self-sustaining population of Silver Perch occurs in Cataract Dam in the Hawkesbury-Nepean system.
112. The approved Conservation Advice for the Silver Perch identifies the key threats to the species as river regulation blackwater events (resulting from floods), alien pathogens and fish entering the waterway, and habitat degradation. These threats are largely related to the habitat in the Murray-Darling River system.
113. There is no recovery plan or threat abatement plan for the Silver Perch.
114. Extant populations of the Macquarie Perch are known to occur in the Hawkesbury-Nepean catchment on the east coast, but populations are often small and geographically separated.
115. The main threats to Macquarie Perch identified in the approved Conservation Advice include human activity-induced sedimentation increases; competition and predation by alien fish species including carp, gambusia, redfin perch and trout; barriers to fish movement; and altered flow regimes. The advice also states a number of priority actions

for the recovery and management of threats including managing changes to hydrology including the quality of water.

116. The National Recovery Plan for the Macquarie Perch provides a framework to guide and coordinate the recovery of the species throughout its range within Australian waters. The plan identifies the following key actions to achieve this goal:

- prompt action to mitigate the key threats to the Macquarie Perch and also provide valuable information to help identify long-term population trends. This involves protecting the species from competition, impact of recreational fishing and disease; restoring connectivity through breeding and translocation programs
- provide a more informed basis for the long-term management and recovery of the Macquarie Perch. Key task includes undertaking rehabilitation, managing appropriate flow regimes, minimising cold water pollution and instream habitat improvement.
- assessment of trends in recovery including investigating methods to promote recruitment in naturally occurring populations and gain a better understanding of competition and predations on Macquarie Perch. The recovery plan notes that this is desirable but not critical to the Macquarie Perch.

EPBC listed frogs

117. The PER identified potential breeding and non-breeding habitat for three EPBC listed frog species in the proposed action study area. Habitat for the Giant Burrowing Frog and Littlejohn's Tree Frog was recorded in small sections of the upper tributaries within the proposed action study area. The habitat suitable for the Stuttering Frog was found to exhibit pollution due to run-off from Mount Ousley Road, as well as high levels of iron flocculent from past mining, so is sub-optimal.

118. During ecological surveys the Giant Burrowing Frog was recorded in pools in an unmapped tributary of Costal Upland Swamp (CRUS2) located on the southern boundary of the proposed action study area. No records of the Littlejohn's Tree Frog or the Stuttering were found in the proposed action study area.

119. The approved conservation advice for the Giant Burrowing Frog identifies the key threats as habitat loss through clearing of vegetation, hydrological changes due to subsidence from longwall mining, forestry operations and infection from chytrid fungus.

120. The main threats identified in the approved conservation advice for the Littlejohn's Tree Frog includes habitat disturbance, fragmentation and degradation, frequent fires from chytrid fungus.

121. There is no approved conservation advice for the Stuttering Frog. The adopted national recovery plan for the Stuttering Frog notes the species has suffered an extensive decline in distribution and abundance. Formerly occurring from north-eastern NSW to far eastern Victoria, the species is now rare or absent throughout much of its former range. The key threats to the species are considered to be habitat destruction and disturbance, altered hydrological regimes, disease, and pollution. The recovery plan also identifies a number of actions required for the species including:

- determine the distribution, habitat requirements, conservation status, taxonomy, population demography and genetic structure of Stuttering Frog populations.

- identify and address the causal factors of the decline and prevent the local extinction of important populations of the Stuttering Frog across its geographic range.
- build community support for the Stuttering Frog recovery program.

122. There is no recovery plan for the Giant Burrowing Frog or Littlejohn's Tree Frog.

123. The threat abatement plan relevant to all EPBC listed frog species is the Threat Abatement Plan for infection of amphibians with chytrid fungus resulting in chytridiomycosis.

Broad-headed snake

124. The Broad-headed Snake occurs on exposed rocky sites on sandstone outcrops and benching within woodland, open woodland and /or heath.

125. The Broad-headed Snake was not recorded during the targeted ecological surveys, and suitable habitat for the species within the proposed action study area is limited due to historic removal of bush rock and lack of northwest facing sandstone benching with exfoliating sandstone.

126. The habitat assessment identified isolated patches of habitat for Broad-headed Snake with some sandstone benches and overhangs. The PER notes that these areas were monitored across two years, although no Broad-headed Snakes or their prey were detected.

127. The approved conservation advice for the Broad-headed Snake identifies the key threats as disturbance of habitat (particularly tree removal and bush rock), urban development of the cliff tops and inappropriate fire regime. There are no adopted or made recovery plans for the Broad-headed Snake.

128. The threat abatement plans relevant to the Broad-headed Snake, include the Threat abatement plan for predation by feral cats and Threat abatement plan for predation by the European red fox.

Large-eared Pied Bat

129. The Large-eared Pied Bat is a medium-sized insectivorous bat measuring approximately 100 mm. The species is known to predominantly roost in caves and overhangs in sandstone cliffs and forage in nearby high-fertility forest or woodland near watercourses.

130. Targeted surveys were undertaken for microchiropteran bats within the proposed action study area, and no Large-eared Pied Bats were recorded. Furthermore, a habitat assessment noted that cliffs providing suitable roosting habitat for Large-eared Pied Bat are limited within the proposed action study area, with suitable cliffs restricted to an area in the north of Cataract Creek.

131. There is no approved Conservation Advice for the Large-eared Pied Bat, and no threat abatement plans have been identified as being relevant for this species.

132. The national recovery plan for the Large-eared Pied Bat notes the species is dependent on the presence of diurnal roosts for shelter. Roosts are utilised during the day and also at night when not feeding, as well as for the raising of young. Sandstone cliffs and fertile wooded valley habitat within close proximity of each other should be considered habitat critical to the survival of the Large-eared Pied Bat.

133. The recovery plan sets out a number of threats to the species, including mine induced subsidence of cliff lines. Much of the habitat of the Large-eared Pied Bat occurs in sandstone escarpments, large parts of which are underlain by coal seams and potentially at risk of collapse from underground mining. This could be particularly problematic if a nursery roost collapsed, especially during the breeding season, as this could cause large losses to local population.

134. The recovery plan also identifies a number of actions required for this species including:

- reviewing all available species information identifying, mapping and modelling bat colonies
- identifying priority colonies for conservation management; surveying the species to clarify distribution and abundance to inform management
- protecting known roosts and associated foraging habitats
- managing threats through installation of bat gates, establishing fire management plans and control of introduced species
- initiating public education and extension programs to encourage the public to be involved in the recovery process
- developing press releases to promote the recovery program
- conducting further research into the biology and ecology of the species; and analysing population genetics.

Impact of proposed action on listed threatened species and communities

135. In determining the impact of the proposed action on listed threatened species and communities, I have had regard to the analysis in the Recommendation Report of the extent of the 2019/2020 bushfires on the relevant species.

136. The proposed action will not involve additional surface disturbance or the clearing or removal of vegetation. The nature of the proposed action means that it will not result in the spread of flora or fauna, or the release of alien pathogens or fish into the environment that may threaten listed threatened species. The proposed action accordingly will not have any direct impact on the Coastal Upland Swamp or the listed threatened species.

137. The proposed action may have indirect impacts on listed threatened species associated with subsidence, drawdown of groundwater (specifically the shallow water table), and adverse impacts on surface and groundwater quality from discharge during mining operations, and via adit outflows.

138. As discussed above, subsidence may result in altered water regimes (including drying) within the Coastal Upland Swamps. Subsidence from the proposed action may result in fracturing of bedrock beneath Coastal Upland Swamps, and changes in water distribution resulting from surface deformation. The fracturing of the bedrock can lead to water loss from the perched aquifer. This may result in the Coastal Upland Swamp drying out, and therefore a change in the extent and composition of the vegetation and fauna habitats. This may change the ecological character of the threatened ecological community and result in a loss and/or degradation of habitats for threatened flora and fauna.

139. Furthermore, surface deformation may result in minor changes to the topography due to tilts and uplifting. Some parts of the swamp may subside more than others leading to localised redistribution of water. Tilting of sufficient magnitude can also result in scour and erosion, potentially allowing water to escape from the swamp (possibly affecting the whole swamp) or to alter water distribution in parts of the swamp, thus favouring some vegetation associations over others.
140. The pillar risk assessment report states that the likelihood of mining in the Wongawilli Seam resulting in a 'catastrophic loss of a single swamp' is 'very rare' (less than 0.1%) in the Bulli Seam goaf areas where pillar collapse is unconfirmed, and is otherwise 'extremely rare' (0.028%). The department has advised, and I accepted, that the predicted levels of subsidence for the proposed action (100mm) are expected to have negligible environmental consequences, including on Coastal Upland Swamps. However, based on the IESC advice, I considered that vertical subsidence in excess of 100mm may have adverse impacts on the Coastal Upland Swamps. I decided to attach conditions to the approval to address this, which are discussed below.
141. As I have explained above, I did not consider that the proposed action would otherwise have significant subsidence impacts on surface or sub-surface groundwater systems, including creeks and tributaries, Cataract Creek or Cataract Reservoir. Nor will it result in any cliff line instability or the cracking of rock features.
142. The PER identified the potential for groundwater drawdown within the shallow water table. However, I am satisfied from information provided by WCL following the proposed decision in relation to the conditions to be attached to the approval that the Coastal Upland Swamps mapped in this area are associated with a perched aquifer and are not connected with the underlying water table, so any potential drawn down is unlikely to impact the swamps.
143. As noted above in my findings concerning impacts on water resources, I decided not to attach any conditions about drawdown limits. I was satisfied on the basis of the data and information provided by WCL in relation to the proposed conditions that it would be technically difficult to develop useful limits linked to the impact of the proposed action on the relevant Coastal Upland Swamps, because they experience frequent cycles of drying. Furthermore, I was satisfied that a subsidence limit would provide earlier warning of potential impacts on Coastal Upland Swamps.
144. I also decided to alter the conditions that had been proposed to be attached which related to swamp water balances, on the basis of information provided by WCL about the variable saturation conditions in the swamps. I was satisfied from this information that using swamp water balances as an early warning of potential impacts would be technically difficult, and that it would be difficult to develop useful limits linked to impacts from the proposed action. Instead, I decided to attach conditions which required WCL to collect data that can be used to develop swamp water balances to assist with the assessment of any potential impact (conditions 7d). Again, I was satisfied that a subsidence limit would provide earlier warning of potential impacts on Coastal Upland Swamps.
145. In relation to water quality, I found that the conditions attached to the approval in relation to water resources will ensure that the proposed action does not have an adverse impact on water quality which would indirectly impact threatened species. I also noted that the Bellambi Creek flows into the Pacific Ocean, and so discharge is not expected to impact on the Cataract Creek, Lake Cataract or Nepean River where the EPBC listed fish are known to occur.

NSW development consent conditions relating to impacts on listed threatened species and ecological communities

146. Under condition C10 of the NSW development consent, WCL must prepare an Extraction Plan that includes:
- a. a Biodiversity Management Plan developed in consultation with DPIE Biodiversity Conservation Division
 - b. an Upland Swamp Ecological Monitoring Program developed in consultation with DPIE Biodiversity Conservation Division, DPIE Water and Water NSW.
147. Conditions C4-C6 of the NSW development consent provide for offsetting to compensate for the subsidence impact or environmental consequences if the subsidence impact performance measures set out in table 6 of the NSW development consent are exceeded and remediation is not possible or effective.

Conditions of approval in relation to listed threatened species and ecological communities

148. In light of the possible impacts of the proposed action described above, I considered that it is necessary to attach conditions to the approval to protect this ecological community, in addition to the conditions in relation to water resources discussed above.
149. To address the risk of subsidence-related impacts, I decided to attach conditions which require that in addition to the performance measures in the NSW development consent conditions, require WCL to:
- a. undertake surveys to determine a subsidence baseline at each potentially impacted Coastal Upland Swamp (condition 15a, and Attachment B);
 - b. monitor vertical subsidence weekly when mining approaches within 350 m (horizontal distance from the closest boundary) of the Coastal Upland Swamp and continue monitoring until mining ceases (condition 15b);
 - c. publicly report the results of the monitoring (condition 15c);
 - d. if subsidence exceeds 100 mm, report this to the department and cease second workings (extraction of coal) within 2 days (condition 16);
 - e. not recommence second workings until it can be demonstrated that new or increased impacts will not occur and I have given me approval (condition 17).
150. When the proposed decision was made, it was proposed that subsidence monitoring would be required when mining approached within 600m. On the basis of further information provided by WCL, I decided that 350 m was a sufficiently conservative buffer given the mining approach being implemented. I also decided to update Attachment B, which identifies the Coastal Upland Swamps that will potentially be impacted by the proposed action, at WCL's request.
151. In addition to the changes above, in its comments on the proposed decision WCL requested the subsidence limit of 100 mm across be restricted to the four swamps previously impacted by historic mining. For all other swamps, the proponent suggested a subsidence limit of 300 mm which was consistent with advice provided to the NSW IPC by the NSW Independent Advisory Panel for Underground Mining's (IAPUM).

152. I noted that the 100 mm subsidence limit was based on the vertical subsidence predictions provided in the proponent's PER. I considered that subsidence would be the key lead indicator in determining the impacts associated with the proposed action and agreed with the department's advice that the first observable indicator that unapproved impacts could occur to Coastal Upland Swamps would be subsidence. I found that the conservative threshold of 100 mm would provide an early warning system and protection of the greatest number of Coastal Upland Swamps. I noted that the IESC also recommended that a conservative threshold of 100 mm be applied. For these reasons, I decided that the 100 mm subsidence limit would be applied to all Coastal Upland Swamps.

153. I also decided to attach a condition that requires WCL to provide the department with details of any offset(s) approved by the NSW Planning Secretary under condition C4 of the NSW development consent (condition 18).

154. I noted that the IESC recommended swamp-specific ecological monitoring should commence at least two years before mining to establish baseline data, then continue during the life of the mine and for a suitable period afterwards until the risk of any further ground movements can be demonstrated to be negligible. Ecological swamp monitoring has been undertaken in the proposed action study area since 2005. The department's Office of Water Science (OWS) has reviewed and confirmed that the existing monitoring data provides a suitable established baseline for future monitoring. Based on this advice, I considered that two years of baseline monitoring data was not required.

Conclusion on listed threatened species and ecological communities

155. If the proposed action is undertaken in accordance with the conditions I have attached to the approval, the impacts of the proposed action on listed threatened species and ecological communities will not be unacceptable.

Greenhouse gas emissions relevant to matters of national environmental significance

156. I have considered all completed assessments and NSW development consent conditions relating to the Greenhouse Gas (GHG) emissions of the proposed action. GHG emissions are categorised into three different types:

- Scope 1: direct emissions from owned or controlled sources of an organisation/ development;
- Scope 2: indirect emissions from the generation of purchased energy electricity, heat and steam used by an organisation/ development; and
- Scope 3: all other upstream and downstream emissions related to an organisation/ development.

157. The PER noted that scope 1 emissions associated with the proposed action relate to the combustion of diesel and release of fugitive emissions. The proposed action is forecast to generate approximately 1,419,000 t CO₂-e of Scope 1 emissions during its operational phase, with annual average Scope 1 emissions forecast at approximately 284,000 t CO₂-e per annum.

158. Scope 2 emissions are those emissions associated with the production of electricity used by the proposed action including underground mining equipment, conveyor belts, ancillary equipment, and administration facilities. This consumption of electricity is expected to attribute approximately 103,500 t CO₂-e of Scope 2 emissions. The PER stated that the

proposed action is expected to require approximately 573,000 GJ of energy from diesel and grid electricity, and this is consistent with the industry average energy use for an underground mine.

159. The PER noted that scope 1 and 2 emissions represent approximately 13 per cent of the overall emissions from the proposed action. The greatest source of emissions associated with the project relate to scope 3.

160. The proposed action is forecast to be associated with approximately 9,600,000 t CO₂-e of scope 3 emissions, which would be generated by third parties who transport and consume the extracted coal. The ROM coal will be exported to India to be used in the production of iron and steel.

161. The PER stated that forecast emissions relating to the proposed action are expected to contribute 0.0005 per cent of annual global GHG emission estimates. Based on this estimate, the PER considers that the proposed action, in isolation, is unlikely to influence global emissions and climate change trajectories.

162. In addition, the PER noted Australia's commitments under the Paris Agreement. I have discussed the international and national frameworks below at [224]-[248]. The PER stated that the forecast emissions relating to the proposed action would increase the required national mitigation effort by approximately 0.19 per cent. The PER noted that this increase is unlikely to affect Australia achieving its national mitigation targets in any material way. DISER subsequently advised that the inclusion of the emissions from the proposed action would increase Australia's projected emissions by less than 0.1% and would not impact on Australia's efforts to meet its 2030 Paris target of 26-28% reduction on 2005 levels.

163. The IPC noted that Australia does not require monitoring or reporting of scope 3 emissions and they are not counted in Australia's national inventory of greenhouse gas emissions under the Paris Agreement. The IPC noted that scope 3 emissions become the consumer country's scope 1 and 2 emissions and would be accounted for under the Paris Agreement in their respective national inventories.

164. DPIE's assessment report noted that the coal produced during the proposed action would most likely be used for steelmaking in India, which is a signatory of the Paris Agreement. The IPC was of the view that in the absence of a viable alternative to the use of metallurgical coal in steel making, on balance the impacts associated with the emissions from the combustion of the proposed action's metallurgical coal are justified.

165. Conditions B8-B10 of the NSW development consent concern air quality and greenhouse gas regulation and require that WCL must:

- not exceed GHG emission criteria (1,148,997 t CO₂-e of Scope 1 emission; 103,500 t CO₂-e of Scope 2 emissions);
- take all reasonable steps to improve energy efficiency and reduce Scope 1 and Scope 2 GHG emissions;
- ensure that major mobile diesel mining equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology; and
- prepare and implement an Air Quality and Greenhouse Gas Management Plan.

166. I found that these conditions were sufficient to protect matters of national environmental significance, and it was not necessary to impose further conditions in relation to GHG emissions in respect of the applicable controlling provisions.

Social and economic matters (section 136(1)(b))

167. I considered the following economic and social matters relevant to the proposed action.

Economic matters

168. The PER noted that the proposed action is expected to deliver 205 jobs and provide an estimated total net economic benefit for the NSW community of approximately \$174.3 million in net present value (**NVP**). This includes \$116.9 million in direct benefits to NSW through company tax payments, and royalties. In addition, a further \$57 million is expected from indirect benefits comprising \$43.6 million of worker benefits and \$13.8 million of supplier benefits.

169. The PER stated that a significant portion of workers are likely to reside in the local and regional areas, contributing to an overall net benefit due to the potential for salaries to be reinvested and circulated in the Wollongong region. The PER noted that the proposed action is estimated to deliver a benefit of \$14.3 million (NVP) to local suppliers and employees.

170. The economic benefits of the proposed action in the PER were calculated using the 'worst case scenario', on the basis of the most pessimistic assumptions around coal prices, capital expenditure, operational expenditure as well as worker and supplier benefits. Based on the best-case scenario, the estimated benefit to NSW is predicted to be \$220.1 million (NPV), and \$17.4 million (NPV) benefit to the local economy.

Social matters

171. WCL undertook a social impact and opportunities assessment to determine the issues and concerns of importance within the community. The assessment included face-to-face meetings, analysis of existing stakeholder data (e.g. complaints) and a review of secondary resources (e.g. local media, historical records).

172. The following matters were identified as potential negative social risks/impacts:

- noise emissions from construction impacting social amenity, health and wellbeing;
- operational traffic impacting on social amenity;
- greenhouse gas emissions;
- mining in the water catchment;
- financial viability of the proponent; and
- the proponent's ability to meet regulatory requirements.

173. Many of these concerns were also raised in public submissions on the draft PER.

174. The PER noted that the community also identified positive social perceptions related to local employment and increased opportunities for community investment.

175. Russell Vale Colliery has been operating in 'care and maintenance' since mining operations ceased in 31 December 2015. The IPC noted that the proposed action's surface facilities pre-date the development of the existing residential area, however, potential impacts experienced by local residents would increase if coal production recommences.
176. The NSW development conditions require that WCL prepare a Social Impact Management Plan to monitor social impacts and commitments. These conditions also require that WCL ensure air quality and noise criteria are met, prepare noise, traffic and air quality management plans and comply with restrictions on timing of transport.
177. The issue of mining in the water catchment was raised during the social assessment and also in the public submissions. The IESC noted that uncertainties were raised regarding the previous proposal to long wall mine in the catchment and the potential impacts on the catchment.
178. The DPIE assessment report noted that the water catchment is managed by WaterNSW, which has a legislative function to protect and enhance the quality and quantity of water within the catchment. Consistent with my findings about water resources above, Water NSW considered that:
- the proposed action's bord and pillar mining technique is considered safer and is unlikely to cause significant surface subsidence or interaction with the overlying coal seams
 - the mining method is likely to minimise the potential groundwater impacts by limiting depressurisation within and immediately above the mined coal seam; and
 - the proposed workings are likely to have negligible impacts on natural surface features including upland swamps, cliffs, steep slopes, drainage lines, creeks, Cataract Creek, Cataract River, and Cataract Reservoir.
179. The DPIE assessment report noted that the proponent is required to provide subsidence monitoring, aquatic health and stability assessments, and meet performance measures required under the NSW development consent conditions. The DPIE assessment report concluded that Water NSW and the DPIE are satisfied that the proposed action would have a neutral impact on water quality within the catchment.
180. The conditions I decided to attach to the approval will further minimise the impacts of the proposed action on the issues raised by the community.
181. WCL's environmental history is considered below at [309]-[320].

Indigenous and Cultural Matters

182. DPIE noted that consultation on the proposed action was undertaken with Aboriginal groups in accordance with the NSW government requirements.
183. I noted that several Aboriginal heritage sites have been previously identified within the proposed action study area. These sites are mainly associated with rock shelters in sandstone cliff formations and grinding groove sites on upland sandstone outcrops. I have found that subsidence associated with the proposed action will not cause perceptible impacts to any natural surface features, including Aboriginal Heritage sites. The

conditions I decided to attach to the approval in relation to subsidence will further minimise this risk.

184. Mitigation measures to minimise the impacts on Aboriginal heritage sites were outlined in the assessment documentation provided to the DPIE. These measures included monitoring of heritage sites pre and post-mining, photographic archival recording, and relocation of artefacts where possible. The NSW development consent conditions require WCL to ensure that the proposed action does not cause any direct or indirect impacts on identified heritage items, and to prepare an Aboriginal Cultural Heritage Management Plan.

185. Consistent with my findings in relation to subsidence, the DPIE Assessment Report concluded that the proposed bord and pillar mining method substantially reduces the risk of subsidence-related impacts on Aboriginal heritage sites. However, DPIE recommended that the Aboriginal Cultural Heritage Management Plan required under condition B24 of the NSW development consent be updated to include baseline data, subsidence risk and consultation outcomes; and detailed indicators to ensure compliance with the subsidence impact performance measures prohibiting harm to Aboriginal objects.

186. I also considered the comments on the proposed action received from the National Indigenous Australians Agency which raised the following matters:

- The proponent should engage with the South Coast People native title group and the Illawarra Local Aboriginal Land Council.
- The proponent should consider the engagement of Indigenous employees and businesses in this project.
- In addition to the statutory requirements, all parties should ensure the preservation of Aboriginal cultural heritage materials by applying the best practice standards embedded in the *Dhawura Ngilan: A Vision for Aboriginal and Torres Strait Islander Heritage in Australia and the Best Practice Standards in Indigenous Cultural Heritage Management and Legislation*.
- The project is located within the South Coast People native title determination area and a portion of the project covers crown land. The NSW Government may wish to seek legal advice as to whether the future acts regime of the *Native Title Act 1993* applies to the crown land and what steps it may need to take to validly extinguish or suppress native title rights and interests through the regime.

187. The letter to WCL notifying it of my decision included this advice, and encouraged ongoing Indigenous stakeholder consultation.

Conclusion on social and economic matters

188. The PER concluded that the proposed action is estimated to result in an economic benefit to the NSW community with modest indirect costs, and with appropriate management and mitigation, negative social impacts can be managed to achieve the benefits of the proposed action.

189. I agreed with the assessment of social and economic impacts as outlined in the PER.

Duty of care and human safety

190. Notwithstanding I have appealed the Federal Court decision in *Sharma v Minister for Environment* [2021] FCA 560 (**Sharma No 1**) and *Sharma v Minister for Environment* (No 2) [2021] FCA 774 (**Sharma No 2**), in making my decision I have had regard to the impacts of the proposed action on the lives and safety of Australian children and my duty to take reasonable care, in the exercise of my powers under ss 130 and 133 of the EPBC Act, to avoid causing personal injury or death to persons under 18 years of age and ordinarily resident in Australia, arising from emissions of carbon dioxide into the Earth's atmosphere. I have given human safety elevated weight in making my decision,

Relevance of Sharma decision

191. On 8 July 2021, the Federal Court of Australia declared that I have a duty to take reasonable care, in the exercise of my powers under ss 130 and 133 of the EPBC Act in respect of the Vickery Extension Project (EPBC 2016/7649) (**Extension Project**), to avoid causing personal injury or death to persons under 18 years of age and ordinarily resident in Australia, arising from emissions of carbon dioxide into the Earth's atmosphere: *Sharma No 2*. On 27 May 2021, the Court published its reasons for making that declaration: *Sharma No 1*. These decisions are collectively referred to as **Sharma**.
192. The Court also found that human safety is a mandatory relevant consideration in relation to a controlled action that may endanger human safety, including through the emission of greenhouse gases (**GHG**).
193. The Court found that I owed the applicants and other Australian children a duty to take reasonable care to avoid causing them personal injury when deciding whether to approve the Extension Project. The relevant risk of personal injury was the real risk of harm to Australian children arising from heatwaves and bushfires, brought about by increases to global average surface temperatures: see *Sharma No 1* at [247]. The Court found that the Extension Project would lead to the emission of 100 million tonnes of CO₂, which the Court found would cause a small but measurable increase to global average temperatures and that the project's emissions would increase the risk of harm to Australian children arising from climate change. While the Court accepted that the contribution of the Extension Project to the increase in global average surface temperature might be characterised as "tiny", there was a "real risk that even an infinitesimal increase in global average surface temperature may trigger a 4°C Future World" and, in that context, "the Minister's prospective contribution is not so insignificant as to deny a real risk of harm to the Children": *Sharma No 1* at [253].
194. I am appealing the whole of the Federal Court's judgment in *Sharma*, except for that part concerning the dismissal of the application for an injunction. The grounds for the appeal are set out in the notice of appeal that has been filed with the Federal Court. The basis of the appeal is generally that the trial judge made an error at law.
195. Although I am appealing the Federal Court's judgment in *Sharma*, I noted the advice of the department that the reasoning in *Sharma* as to the existence of a duty of care is presently relevant in the circumstances of the current proposed action.
196. This part of my reasons addresses the risks to human safety posed by the proposed action and my duty to take reasonable care to avoid causing death or injury to Australian children in making my decision. This section is structured as follows:

- a. Global coal markets and the likelihood of the proposed action's emissions increasing global GHG emissions;
- b. How GHG emissions are managed under international and national frameworks;
- c. Summary of GHG emissions for the proposed action, measures being undertaken by the company to manage the proposed action and Independent Planning Commission (IPC) Assessment;
- d. Risks to human safety of a warming climate;
- e. Social and economic considerations;
- f. Conclusion.

Global coal markets and the likelihood of the proposed action's emissions increasing global GHG emissions

197. The department sought the advice of the Department of Industry, Science, Energy and Resources (**DISER**) in relation to the extent to which, if at all, the approval of certain coal projects would affect the global level of consumption of coal in possible future scenarios (**DISER Advice**). I have taken this advice into account, in addition to considering publications of the International Energy Agency that analyse trends in global markets including the 'World Energy Outlook 2020' (**WEO 2020**), 'Iron and Steel Roadmap 2020' (**2020 IEA Iron and Steel Roadmap**) and 'Net Zero by 2050'. I also had regard to the report of Professor Will Steffen submitted by the EDO and dated 6 July 2021 (**Steffen Report**).
198. The DISER Advice explains that the two primary uses of coal are for energy and steelmaking. Coal used for steelmaking is referred to as metallurgical or coking coal. Coke makers use multiple coals when formulating a coking coal blend in order to meet these specifications. Coal used for energy is referred to as thermal coal.
199. The proposed action will produce coal for use in steelmaking.

Global demand for steel

200. Steel is and will be critical for supplying the world with energy, as it is an integral ingredient for energy transition, with solar panels, wind turbines, dams and electric vehicles all depending on it to varying degrees. Steel is the main material used in onshore and offshore wind turbines.
201. Steel is also a fundamental building block for modern and developing economies. The construction of homes, schools, hospitals, bridges, cars and trucks rely heavily on steel. The DISER Advice notes that steel demand is driven by construction and infrastructure development.
202. OECD modelling predicts that global steel demand is not expected to peak until mid-century, with a growth rate for steel demand from about 1.4% per annum to 1.1%. Demand in mature economies will show zero to slightly negative growth rates over the period, while demand growth in emerging economies will be in the range 2.5% to 4%. Further, the modelling predicts that iron ore demand for steel making will peak in 2025-2030.
203. The steel sector is currently responsible for about 8% of global final energy demand and 7% of energy sector CO₂ emissions (including process emissions). However, through innovation, low-carbon technology deployment and resource efficiency, iron and steel

producers have opportunities to reduce energy consumption and GHG emissions, develop more sustainable products and enhance their competitiveness.

Global demand for coal

204. The WEO 2020 identifies a number of scenarios for future global energy demand and supply to 2040. These scenarios include the:

- a. Sustainable Development Scenario (SDS): which assumes that global coal consumption will be constrained to a level consistent with the aims of the Paris Agreement and energy-related sustainable development goals (these are: affordable and clean energy (SDG 7), to reduce the severe health impacts of air pollution (part of SDG 3) and climate action (SDG 13)); and
- b. Stated Policies Scenarios (STEPS): which assumes that global coal consumption will not be constrained to a level consistent with the aims of the Paris Agreement or address sustainable development goals. This scenario takes into account the policies and implementing measures affecting energy markets that have been adopted as of mid-2020, together with relevant policy proposals which have not been fully implemented.

205. The DISER Advice notes that global demand for coal will gradually decrease to 2040 in either SDS or STEPS scenario. Global demand for coal is estimated to be 1850 Mtce in 2040 in the SDS scenario and 4735 Mtce in 2040 in the STEPS scenario. However, demand for coal varies by region.

206. DISER Advice details predicted coal demand in the STEPS scenario and demonstrates that demand for coal in the Asia Pacific region (including India and China) will remain relatively steady up to 2040. The DISER Advice states:

Coal consumption in India is expected to grow over the next 20 years by 182 Mtce. Coal consumption in South East Asia is also expected to grow rapidly over the same period, increasing by 157 Mtce. Coal use rebounds in China in the near term, peaking around 2025, before declining to 2040. Japan is expected to see the largest reduction in coal consumption over the period, declining by 55 Mtce. By 2040, the Asia Pacific region will account for 85 per cent of global coal consumption.

207. DISER Advice details predicted coal demand in the SDS scenario and demonstrates that demand for coal in India will decrease from 590 Mtce in 2019 to 516 Mtce in 2025, 454 Mtce in 2030 and 298 Mtce in 2040. In China, demand will decrease from 2864 Mtce in 2019 to 2539 Mtce in 2025, 1952 Mtce in 2030 and 1045 Mtce in 2040. Although in this scenario there is a decline in overall demand, this decline is much less significant for the life of the proposed action which is 5 years. The WEO 2020 also projects those countries exporting to emerging Asian markets with higher exposure to coking coal will be less affected by lowered demand. Australia is also projected to remain the largest exporter of metallurgical coal.

208. The DISER Advice notes that, in either the SDS or STEPS scenario, the global demand for coal up to 2040 can be met by alternative sources of coal. Alternative sources of coal include all currently approved Australian coal mines, as well as all known or likely coal mines and coal deposits outside Australia, but excludes the Russel Vale project and other unapproved Australian coal mining developments.

Iron and Steel Roadmap and Net Zero by 2050

209. China is the largest steel producer and India is the second-largest steel producing country in the world. Steel production is expected to continue to grow in India in coming years.
210. The proponent has advised that 84% of the coal is to be used for steelmaking in India, with rejects accounting for the remaining 16%. That is, that all the coal produced will be metallurgical coal for the purpose of steelmaking. As noted by the IPC in its statement of reasons, metallurgical coal is an essential input for current steel production.
211. The 2020 IEA Iron and Steel Roadmap developed in conjunction with industry indicated that opportunities to reduce emissions from the sector in the next 10 years will primarily rely on improvements in material efficiency (light weighting of steel requirements in buildings) greater recycling of steel and iron (electric arc furnace), energy efficiency and performance improvements. Additionally, alternatives to steel (such as carbon fibre, engineered timber) and new methods for making steel without metallurgical coal, using hydrogen or electrolysis (using electricity) are being developed and piloted globally. However, these methods are not currently projected to be operating at scale until the 2030s.
212. The DISER Advice also notes that Direct Reduction Iron (DRI) and electric arc furnace technologies currently present technical and cost challenges and are not yet available at the scale needed to meet global demand for steel.

NSW Strategic Statement on Coal

213. The NSW Government has developed a Strategic Statement on Coal Exploration and Mining in NSW. The statement identifies that coal mining in NSW is anticipated to continue for the next few decades. Although recognising that emissions reduction measures will be required, the statement notes that ending or reducing NSW thermal coal exports while there is still strong global demand for coal is likely to have little to no impact on global carbon emissions. The use of coking coal is likely to be sustained longer than thermal coal, as there are currently limited practical substitutes available.

Alternative sources of coal and related GHG emissions

214. The DISER Advice differentiates between the global coal market for thermal coal and metallurgical coal. The long term demand for metallurgical coal depends primarily on its price and the demand for steel. The long term demand for thermal coal depends primarily on its price and demand for energy (including the cost of alternative energy products and consumer preferences for energy types). Supply of both metallurgical and thermal coal depends on availability in nature, the technology used for extraction, the labour and capital costs associated with production, the cost of transporting the coal to the demand source (normally by rail and ship) and the regulatory costs associated with environmental protection and worker health and safety. However, the prices of metallurgical and thermal coal are linked because there is a degree to which the different coal types can be used in the alternative market. Steelmakers may substitute some metallurgical coal with high-end thermal coal.
215. Based on DISER's advice, the metallurgical coal from the proposed action is of high quality with a sulphur content of 0.42-0.45%, at the low end of the national range of 0.3–1.3% for Australian metallurgical coal. Sulphur is deleterious to the quality of steel and costly to remove during the steel making process.

216. I accepted the conclusion of the DISER Advice that my decision to approve the proposed action would not affect any of the demand factors identified. I took into account that the DISER Advice states that recent trade disruptions have demonstrated the substitutability of coal, where coal destined for China has been resold or redirected to various countries and China has managed to source its coal needs in the absence of previously substantial Australian supply. The DISER Advice concludes:

Regardless of any feasible scenario of future global demand, this small fraction of current global supply, combined with the relatively flat global seaborne metallurgical coal cost curve indicates that the Decision will not have any discernible impact on global coal prices. The alternative sources of coal identified in sub-question 1 are readily substitutable for any coal that might be produced by the Coal Mining Projects.

Impact of a decision to approve or refuse the proposed action on global GHG emissions and climate change

217. I accepted the department's recommendation that I find that the available evidence indicates that a decision to approve the proposed action would be unlikely to lead to an increase in global average surface temperatures. This is because the proposed action is not likely to cause more coal to be consumed globally (and therefore more GHG emissions) than if the proposed action was not approved.

218. The DISER Advice states that 'any decision of the Minister to approve one or more of the Coal Mining Projects (Decision) is not expected to materially impact on the total amount of coal consumed globally'. I agreed with this conclusion. DISER states that the approval or refusal of the proposed action will not affect global demand for coal (see DISER Advice) and there are sufficient alternative sources of coal to supply future demand for coal in projected future scenarios. In those circumstances, I am satisfied that the rejection of the proposed action is unlikely to have an impact on total global coal consumption, or to impact the price of coal.

219. I also took into account the Steffen Report in reaching the above conclusion. Professor Steffen acknowledges the argument that 'if a proposed new coal development is not allowed to proceed, another new coal resource, either in Australia or overseas, will be developed to take its place'. Professor Steffen states that this argument is flawed because it presumes that there is and will continue to be a demand for new coal resources beyond those that already exist, whereas he is of the view that evidence demonstrates that coal production is in steady decline. The department advised, and I accepted, that this is inconsistent with other available evidence which indicates that demand for coal is likely to continue to be significant in countries including India and China for the life of the proposed action (see paragraphs [204]-[208] above). I also took into account that demand for metallurgical coal in particular is likely to continue in circumstances where alternative steelmaking methods are not available at scale, and are not anticipated to be available until the 2030s, and steel is required for the construction of safe buildings, infrastructure and energy in developing economies.

Conclusion on coal markets and substitution

220. The Court in *Sharma* decided an increase to total global GHG emissions poses a risk to human safety by increasing total global average surface temperatures. The relevant risk to human safety found to exist in *Sharma* was the risk of death or personal injury from heatwaves or bushfires.

221. As previously noted, I have appealed the *Sharma* decision, which is pending.

222. I have accepted the department's conclusion that the approval of the proposed action is not likely to cause harm to human safety because, if the proposed action is not approved, it is likely that a comparable amount of coal will be consumed in substitution of the proposed action's coal. Therefore, the proposed action will not result in an increase to global GHG emissions.

How GHG Emissions are managed under international and national frameworks

223. Out of the abundance of caution, and in the event that (contrary to the above conclusion) the small amount of emissions from the proposed action are additional and are not substituted by emissions from other coal production, I have considered the national and international frameworks within which those emissions will be managed and measures to mitigate their impacts. I have summarised these frameworks below. These matters have further informed my consideration of my duty of care and my consideration of the impact of the proposed action on human safety.

International framework for climate change

224. The international climate treaties, the Paris Agreement, done at Paris on 12 December 2015, the Kyoto Protocol, done at Kyoto on 11 December 1997, and the United Nations Framework Convention on Climate Change (UNFCCC), done at New York on 9 May 1992, are the primary multilateral mechanisms governing the international response to climate change.

225. The Paris Agreement entered into force on 4 November 2016. 191 countries are Party to the Paris Agreement, including Australia.

226. The temperature goal of the Paris Agreement is to limit the increase in global average temperature to well below 2°C and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels. All parties must prepare, communicate and maintain successive nationally determined contributions (NDCs) and pursue domestic mitigation measures, with the aim of achieving the objectives of such contributions.

227. The department advised that projections in the IPCC Special Report, 'Global Warming of 1.5°C' (8 October 2018) indicate that, if NDCs in place in 2018 were implemented successfully, the world would reach 2.7-3.2 degrees Celsius above pre-industrial levels by 2100. Under the Paris Agreement, successive NDCs are required to represent a progression beyond the current NDC and reflecting its highest possible ambition (Article 4.3).

228. Importantly, under Article 4 of the Paris Agreement, parties aim to reach global peaking of GHG emissions as soon as possible, and to undertake rapid reductions thereafter in accordance with best available science, so as to achieve a balance between anthropogenic emissions by sources and removal by sinks of GHG in the second half of this century, on the basis of equity, and in the context of sustainable development and efforts to eradicate poverty. 137 governments around the world, including Australia, have announced intentions to reach net zero emissions which better align with the Paris Agreement temperature goal.

229. To respond to climate change, industry, legal and financial fiduciary bodies have also called on business to recognise, understand and respond appropriately to the risks and consequences posed by climate change, potentially independent of government policy. Many companies and businesses have also announced intentions to reach net zero by

2030 – 2050. Industry is increasingly acknowledging that effort across the whole supply chain is required to enable sectors to decarbonise.

Climate change framework in India

230. Metallurgical coal from the proposed action is intended to be used for steelmaking in India. India is a party to the Paris Agreement and has submitted its NDC, which includes commitments to:

- reducing the emissions intensity of its GDP by 33% to 35% by 2030 from 2005 levels;
- achieving about 40% cumulative electric power installed capacity from non-fossil fuel based energy resources by 2030 with the help of transfer of technology and low cost international finance including from Green Climate Fund;
- creating an additional carbon sink of 2.5 to 3 billion tonnes of CO₂ equivalent through additional forest and tree cover by 2030.

231. India's domestic climate change policy is centred around the National Environment Policy 2006 (**NEP**), and the National Action Plan on Climate Change (**NAPCC**) which outlines 'intergenerational equity' as a priority, and highlights 8 national missions relating to solar energy promotion, energy efficiency, reduction in vehicle emissions, water efficiency measures, protection of the Himalayan region, re-forestation, sustainable agriculture and measures to improve understanding of climate change and develop measures to mitigate and adapt to its impacts

232. Each of the states in India also have their own State Action Plans for Climate Change (**SAPCCs**). Jindal Steel and Power Limited (**JSPL**) (the parent company of Wollongong Coal Limited (**WCL**)) is the anticipated end-user of the metallurgical coal produced by the proposed action. JSPL has operations in Orissa, India, (now known as Odisha).

233. Odisha has a Renewable Energy Policy (current until 2022) that outlines a number of schemes to reduce carbon emissions including:

- under the Odisha Electricity Regulatory Commission (Procurement of Energy from Renewable Sources and its Compliance) Regulations 2015 and Indian Electricity Act 2003, anyone who produces or purchases power from a plant that has a capacity of 1MW or greater must source a certain percentage of their power purchases from renewable energy sources;
- implementing renewable goals for 2022, including 2200MW solar, 200MW wind, 150MW small hydro, 180MW biomass, 20MW WTE, for a total of 2750MW renewable energy by 2022; and
- investment and incentives for solar, wind, small hydro, biomass, Waste-to-Energy.

Domestic measures

234. Under the UNFCCC, Kyoto Protocol and Paris Agreement, the Australian Government has committed to reduce national GHG emissions, track progress towards those commitments, and report annually on Australia's GHG emissions.¹ Australia first

¹ <https://www.industry.gov.au/policies-and-initiatives/australias-climate-change-strategies/tracking-and-reporting-greenhouse-gas-emissions>.

communicated its NDC under the Paris Agreement in 2015, committing to an economy-wide target to reduce GHG emissions by 26 to 28% below 2005 levels by 2030.

235. In preparing the decision brief for my decision, the department consulted with DISER, who advised:

Australia has a strong record of overachieving on its emissions reduction targets – we overachieved on our two previous targets, under the Kyoto Protocol and UNFCCC.

Australia has in place a comprehensive suite of emissions reduction policies, which are working to reduce emissions in all sectors of the economy. Building on these policies, the government is currently focused on low emissions technologies globally scalable, commercial, and achievable.

Australia's Technology Investment Roadmap will drive down the cost of low emissions technologies and accelerate their deployment, both in Australia and overseas. The Roadmap brings a strategic and system-wide view to future investments in low emissions technologies, in partnership with the private sector, states and territories, and key international partners.

The Roadmap's first annual Low Emissions Technology Statement articulates five priority technologies (clean hydrogen, carbon capture and storage, low carbon materials like steel and aluminium, energy storage and soil carbon) and accompanying stretch goals – ambitious but realistic goals to bring priority low emissions technologies to economic parity with existing mature technologies.

These technologies are expected to avoid in the order of 250 million tonnes of emission per year by 2040, through deployment in Australia and low emission exports. The Roadmap will guide the deployment of an estimated \$20 billion of Government investment between now and 2030, including through the CEFC, ARENA, the Climate Solutions Fund, and the Clean Energy Regulator. The Government's investments through the Roadmap will help to secure around \$80 billion in total investment from the private sector and governments over the next 10 years.

236. Commonwealth legislation relating to the Australian Government's policies and programs to reduce emissions and fulfil its emissions reporting and target tracking obligations are regulated by the Clean Energy Regulator (**CER**). The CER is responsible for administering the *National Greenhouse and Energy Reporting Act 2007 (NGER Act)*, the *Carbon Credits (Carbon Farming Initiative) Act 2011*, the *Greenhouse and Energy Minimum Standard Act 2012*, and the *Australian National Registry of Emission Units Act 2011*.

237. GHG emissions are categorised into three different types:

- scope 1: direct emissions from owned or controlled sources of an organisation/ development;
- scope 2: indirect emissions from the generation of purchased energy electricity, heat and steam used by an organisation/ development; and
- scope 3: all other upstream and downstream emissions related to an organisation/ development.

238. Australia's National Inventory System (**NIS**) estimates and reports Australia's GHG emissions in accordance with Intergovernmental Panel on Climate Change (**IPCC**) guidelines and rules adopted by the Parties to the Paris Agreement. The NIS comprises an independent national monitoring system to compile Australia's national GHG inventory. The UN climate treaties, including the Paris Agreement, specify that Parties are responsible for the emissions occurring within their jurisdictions.

239. The department advised that this means that emissions across each jurisdiction, conceptually equivalent to scope 1 emissions, are aggregated to fulfil Paris Agreement emission reporting and target accounting obligations. Scope 2 and scope 3 emissions that occur within the same jurisdiction are not added to this calculation as it would result in double counting of emissions: one facility's scope 2 and 3 emissions are another facility's scope 1 emissions. Scope 3 emissions associated with Australian facilities that occur outside Australia's jurisdiction (e.g. emissions from the combustion of Australia's coal in an export destination) are accounted for in the countries where those emissions occur.

NSW

240. The NSW government has developed the NSW climate change policy framework (**CCPF**) and NSW Net Zero plan which provides guidance and measures to achieving net zero emissions in NSW by 2050.

241. The aim of the NSW Climate Change Policy Framework (**CCPF**) is to maximise the economic, social and environmental wellbeing of NSW in the context of changing national and international policy, with the aim to achieve net-zero emissions by 2050.

242. The Net Zero Plan builds on the CC PF and sets out a number of initiatives to deliver a 35% cut in emissions by 2030, compared to 2005 levels.

243. In addition to the above policies, the NSW State Environmental Planning Policy (**SEPP**) for mining (**Mining SEPP**) requires the NSW consent authority to consider, in approving a development application:

- whether conditions should be attached to consents to ensure that the development is undertaken in an environmentally responsible manner, including conditions to ensure that GHG emissions are minimised to the greatest extent possible (clause 14(1) of the Mining SEPP); and
- an assessment of GHG emissions (including downstream emissions) from the development and must do so having regard to any applicable State or national policies, programs or guidelines concerning GHG emissions (clause 14(2) of the Mining SEPP).

244. When undertaking its assessment, the IPC assessed the GHG emissions of the proposed action and imposed conditions relating to air quality and GHG regulation (B8, B9, B10 and B11), including that the approval holder must:

- not exceed GHG emission criteria (1,148,997 t CO₂-e of Scope 1 emission; 103,500 t CO₂-e of scope 2 emissions);
- take all reasonable steps to improve energy efficiency and reduce scope 1 and scope 2 GHG emissions;
- ensure that major mobile diesel mining equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology; and
- prepare and implement an Air Quality and Greenhouse Gas Management Plan.

245. I noted that the IPC concluded that the GHG emissions of the proposed action were adequately considered and that the impacts associated with the GHG emissions of the proposed action were acceptable and in the public interest.

New technologies

246. Ventilation air methane (**VAM**) is a source of fugitive emissions. VAM is ultimately vented into the atmosphere, significantly adding fugitive GHG emissions. Methane is the second most abundant GHG following carbon dioxide, and 28-times more potent than carbon dioxide per molecule in trapping heat in the atmosphere.
247. I noted the department's advice that the CSIRO have been developing VAM technologies to mitigate methane emissions associated with underground mining by either destroying, enriching or capturing VAM.
248. I noted the department's advice that the Australian Government's low emissions technology roadmap² will be looking further into how such technologies can be further supported and developed for commercial use, as fugitive methane from coal mines continues to be a significant contributor to our national GHG emissions representing 4.8% of emissions in 2019.

Summary of measures to manage the proposed action and IPC assessment

249. The proponent submitted a draft Air Quality and Greenhouse Gas Management Plan prepared by EEM Consulting (**Management Plan**), which outlines how the proponent will manage and control project risks associated with air quality and GHGs. The preparation of a comprehensive Air Quality and Greenhouse Gas Management Plan is a condition of the development consent granted for the proposed action under the *Environmental Planning and Assessment Act 1979* (NSW) (**EP&A Act**) (Condition B9). Condition B10 requires the proponent to implement the Air Quality and Greenhouse Gas Management Plan as approved by the Planning Secretary.
250. The Management Plan identifies actions the proponent will take to reduce emissions and the main objectives of the plan are to:
- describe how WCL will manage and control project risks associated with air quality and GHGs;
 - ensure the protection of nearby sensitive receptors when carrying out the proposed action activities;
 - ensure that relevant stakeholders are involved in the formulation and implementation of this Management Plan; and
 - address the requirements of applicable legislation, this approval, and statements of commitments.

Scope 1

251. Scope 1 emissions from the proposed action are expected to occur through the combustion of diesel (0.4%) and the release of fugitive emissions (99.6%). Some gas is also expected to be released fugitively post-mining from coal stored in the stockpile.
252. The expected emissions from the use of diesel are approximately 6,097t CO₂-e over the five year life of the proposed action. The proponent has committed in the Management Plan to reduce the emissions associated with the combustion of diesel including through the following routine site management practices:

² Technology Investment Roadmap: First Low Emissions Technology Statement 2020

- regular maintenance of vehicles;
- use of low sulphur diesel and exhaust scrubbers for all underground equipment;
- pre-start inspections for each shift for all plant and vehicles; and
- tracking and reporting fuel usage.

253. The Management Plan states that the largest sources of scope 1 emissions are expected to be from the coal seam gas vented during the underground coal extraction. The Management Plan provided by the proponent states that the mine ventilation will return air with a methane content ranging from 0.1% to 0.15% based on previous mine ventilation emissions data from 2013 to 2016.

254. The proponent has explored options to utilise VAM technology for electricity generation, however, given the small quantities and low densities of methane, they indicated it is not currently a feasible alternative. The department advised that they consulted with CSIRO who confirmed the proponent's conclusion that this technology is not feasible for the proposed action.

255. The proponent further advised on 20 August 2021 that they have investigated and are committed to sealing the pillars of coal which is estimated to reduce the proposed action's scope 1 methane emissions by 40%.

256. The proponent has committed to measures to monitor the scope 1 emissions through scheduled monthly ventilation surveys and real time monitoring. The monitoring data will be used to:

- assess the ongoing impact of the mine on GHG emissions;
- investigate and implement reasonable measures for minimising GHG emissions; and
- quantify GHG emissions and data for reporting purposes.

257. The proponent advised that the following strategies for Diesel Emission Reduction have been implemented to reduce diesel emissions:

- Introduction of a hired diesel vehicle fleet, with machinery within a 2000-hour overhaul schedule. This will enable the retirement of the current fleet of diesel machinery that are reaching the end of their overhaul life;
- Proposed introduction of long-life particulate filters to assist further in the reduction of diesel particulate matter being released;
- Introduction of an underground gas testing station. This will enable more accurate monitoring for diesel emissions, and assist in specific component maintenance to reduce diesel emissions;
- Assistance from the original equipment manufacturer in the maintenance of the diesel fleet as product specialists, to minimize diesel emissions due to wear and tear of diesel vehicles on site;
- Optimisation of the diesel emissions maintenance system, through generated alerts, when diesel emissions testing is not within site specification. This will trigger an inspection of affected diesel systems to determine the cause and in turn minimise diesel emission generation;

- Investigations into establishing a low emission diesel fleet. This includes introducing proven machinery with the latest technologies in certified diesel engine systems with minimal diesel emissions. By 2030 there is to be a plan in place to implement battery powered man transports and load haul dump machinery at site with zero diesel emissions from the underground fleet.

Scope 2

258. Scope 2 emissions are those emissions associated with the production of electricity used by the proposed action. Electricity will be generated for onsite activities including underground mining equipment, conveyor belt motors, overhead cranes in the workshop, compressors, ancillary equipment, and administration facilities. The Management Plan states that the forecast for the proposed action is approximately 103,500t CO₂-e of during the operation phase.

259. WCL's Sustainability and Emission Reduction Strategy notes that the proponent has proposed to reduce scope 2 emissions by 10,839 t CO₂/year through efficient and sustainable electricity use (Table 1), mostly due to:

- increased use of solar power;
- replacement of incandescent lights with LEDs;
- removal of several ventilation fans;
- solar panels and battery storage installed at No 4 ventilation shaft;
- solar panels and solar water heating to be implemented at bathhouse.

Table 1 showing energy savings and CO₂ reductions for existing and proposed projects as claimed by the proponent

Description	Per Annum		
	Energy Saving kWH	CO ₂ Reduction (T)	SO ₂ (kg)
Change from 2MTpa using LW to 1MTpa using Continuous Miners	5,000,000	5376	714.3
Remove #5 Shaft Ventilation Fans	4,117,200	4427	588.2
Install Solar Panels on Workshop	505,141	543	72.2
Replace Surface Lighting to LED	413,187	444	59.0
Install Solar Panels on Main Bathhouse	38,857	42	5.6
Install Solar Panels at #4 Shaft	6,023	6	0.9
TOTAL	10,080,408	10,839	1,440

Scope 3

260. Scope 3 emissions associated with the proposed action will be generated by third parties who transport and consume coal products. Approximately 1,925,000 t CO₂-e per annum of scope 3 emissions is expected.

261. The Management Plan states that the distribution and transport of the coal product will be undertaken by companies who have committed to using fuel efficient vehicles and will be trialling electric vehicles.
262. The proponent advised that the majority of coal will be sent directly to India to the primary customer, JSPL. India is a signatory to the Paris Agreement and has committed to various measures as discussed at [230]-[2323]. The proponent advised that the annual average scope 3 emissions from the combustion of product coal from the proposed action constitutes between 0.03% and 0.031% of India's NDC 2030 target.
263. JSPL have implemented a range of GHG emissions reduction strategies.³
264. JSPL advised that they have reduced their emissions under India's industry efficiency program (the Perform Achieve and Trade (**PAT**) scheme). The PAT scheme is a measure under the National Action Plan on Climate Change (as discussed a [231]). Under this scheme, designated consumers must achieve an energy savings target and any savings beyond the target can be traded within the three year PAT cycle. Verification of energy savings is done by an accredited energy auditor at the end of the cycle. JSPL has advised that at its Raigarh steel plant (where coal from the proposed action is intended to be consumed) it has achieved emissions reductions of 578,857 tonnes of CO₂ under cycle I and 804,982 tonnes of CO₂ in cycle II of the PAT. At JSPL's Angul steel plant (another location where coal will be consumed) emissions reductions of 336,181 tonnes of CO₂ have been made in PAT cycle IV. The Angul plant is also subject to a state renewable energy policy requiring that 50MW of its energy consumption be met by its own cogeneration plants. The proponent advised that this has resulted in emissions reductions of 199,584 tonnes of CO₂ annually.
265. The proponent advised that the only confirmed customer of the coal is JSPL. As outlined in the Management Plan, other potential users of the product coal may include China and domestically within Australia, depending on future commercial agreements. As discussed at [209], China and India are the two largest steel producers. Both China and Australia are parties to the Paris Agreement and have communicated NDCs.

WCL commitments

266. WCL provided further information to the department about its intended GHG commitments on 13 August 2021.
267. In addition to the GHG reduction measures identified specific to the GHG emissions above, WCL committed to abating and or sequestering its scope 1 and 2 emissions by 4% per annum cumulative commencing in 2021 (a reduction of 20% over the 5 year life of the proposed action), with the intention of being carbon neutral by the year 2050 in accordance with the Paris Agreement. The proponent explained that the commitment to net zero by 2050 involves a trajectory of abatement and sequestration of CO₂-e to 4% cumulative per annum between 2022 and 2050. The proponent intends to hire a greenhouse and sustainability expert to develop a Sustainability and Net Zero by 2050 plan within six months of any EPBC Act approval. The proponent has stated that it will achieve these emissions reductions by purchasing and installing solar energy, improved energy efficiency of equipment and lighting needed to operate its mine, converting to electric trucks, capturing more of the methane from the underground, planting 1000 trees,

³ See JSPL, 'Business Sustainability Report FY 2018-19' and 'Business Sustainability Report FY 2019-2020'.

purchasing Australian Carbon Credit Units and other nationally and internationally accredited carbon markets.

268. The proponent also advised that it is evaluating a number of options for reducing emissions from the proposed action, including continuing to progress installation of solar power networks and the use of electric trucks for coal transportation. DISER advised that if implemented, these options have the potential to reduce the proposed action's scope 2 emissions, as well as minor sources of scope 1 emissions, which occur within Australia.

Relevance of proponent's voluntary commitments

269. The department provided the above information regarding measures that the proponent has committed to undertake to achieve emissions reductions, in addition to those measures that will be required by the NSW conditions.

270. However, the department advised that for the purposes its recommendations, it had not assumed that voluntary commitments will necessarily be undertaken. I agreed that the proponent's voluntary commitments would be beneficial to reducing GHG emissions if they are carried out, but, in deciding whether or not to approve the proposed action, I have taken into account that only those measures required by the NSW conditions are required to be undertaken in accordance with the NSW development consent.

State assessment

271. As discussed above at [10]-[16], the Russell Vale Underground Expansion Project was assessed under Part 4 of the EP&A Act. The NSW Department of Planning, Industry and Environment (DPIE) provided an assessment report (**DPIE assessment report**) to the IPC on 5 September 2020.

272. The DPIE assessment report noted that coal produced from the proposal would most likely be used for steelmaking in India, which is a signatory of the Paris Agreement.

273. In accordance with the mining SEPP, DPIE considered that the coal resource associated with the proposal is significant based on the high quality of the coal and the overall socio-economic benefits of the proposed action. DPIE recommended that the proponent be required to prepare and implement an updated Air Quality and Greenhouse Gas Management Plan to detail measures to minimise GHG emissions during both the construction and operational phases of the proposed action.

274. The IPC agreed with the DPIE assessment and also noted:

- under the Paris Agreement, the Australian Government committed to a nationally determined contribution to reduce GHG emissions by 26% to 28% below 2005 levels by 2030. The IPC noted that scope 3 emissions occurring overseas become the consumer country's scope 1 and 2 emissions and would be accounted for under the Paris Agreement in their respective national inventories;
- the proposed action is not inconsistent with the CCPF, the net zero plan or Australia's obligations in respect to the nationally determined contributions;
- the proposed action includes appropriate measures for minimising and managing scope 1 and scope 2 emissions to the greatest extent practicable.

275. The IPC was of the view that, in the absence of a viable alternative to the use of metallurgical coal in steel making, on balance, the impacts associated with the emissions from the combustion of the proposed action's metallurgical coal are justified.

276. The IPC imposed conditions for air quality and GHG regulation (B8, B9, B10 and B11), including the approval holder must:

- not exceed GHG emission criteria (1,148,997 t CO₂-e of scope 1 emission; 103,500 t CO₂-e of scope 2 emissions);
- take all reasonable steps to improve energy efficiency and reduce scope 1 and scope 2 GHG emissions;
- ensure that major mobile diesel mining equipment used in undertaking the development includes reasonable and feasible diesel emissions reduction technology; and
- prepare and implement an Air Quality and Greenhouse Gas Management Plan.

Risks to human safety of a warming climate

277. The department sought internal advice from Climate Adaptation and Resilience Division regarding the current state of climate change and, in particular, the outcomes from the most recent IPCC Report 'Climate Change 2021: The Physical Science Basis' (**IPCC Report**). The Climate Adaptation and Resilience Division advised that the Government receives its primary advice on climate science from the Bureau of Meteorology (**BoM**) and the CSIRO. This advice aligns with information provided by the Intergovernmental Panel on Climate Change and other national and international organisations, such as the Australian Academy of Science, the World Meteorological Organization, the National Academy of Sciences and the National Aeronautics and Space Administration.

278. I noted that the IPCC Report provides an update on the latest climate science, including the rates, causes and likely future trajectories of global warming and other changes to the climate system. The Climate Adaptation and Resilience Division advised that the key findings in IPCC Report are consistent with the findings of the *State of the Climate 2020* report, produced by BoM and the CSIRO.

279. The department advised that increases to global GHG emissions poses a risk to human safety by increasing total global average surface temperatures with the consequences described in the IPCC Report.

Contribution of the proposed action to climate change

280. Notwithstanding my decision to appeal the Sharma decision, I took into account that the Court in *Sharma* found that, even though the emissions of the Extension Project (100MT) were 'tiny' on a global scale, there was a real risk that even an infinitesimal increase in global average surface temperature may trigger a tipping point or a 4°C Future World: *Sharma No 1* at [253].

281. However, as noted above, I have accepted the department's recommendation on the available evidence, that a decision to approve the proposed action would be unlikely to lead to an increase in global average surface temperatures. This is because the proposed action is not likely to cause more coal to be consumed globally (and therefore more GHG emissions) than if the proposed action was not approved.

282. Notwithstanding that the proposed action is not likely to cause more coal to be consumed globally, I agreed with the department's conclusion that if, contrary to the DISER Advice, the proposed action caused 'additional' coal to be consumed, the proposed action may risk a very small increase in global GHG emissions (see below), which in turn would lead to a commensurately small risk of increased global average surface temperatures and therefore a very small increased risk to human safety.

283. However, I found that this risk was particularly low given the total emissions from the proposed action are extremely small and significantly less than those associated with the Extension Project. The total GHG emissions of the proposed action would be approximately 11.1MT of CO₂ equivalent.

Reasonable measures to mitigate climate change

284. As outlined above at [224]-[229], climate change is a global problem that the international community has responded to through the UNFCCC and now the Paris Agreement. Parties to the Paris Agreement have committed to prepare, communicate and maintain their NDCs that they aim to achieve, with the goal of limiting the increase in global average temperature to well below 2°C above pre-industrial levels and pursue efforts to limit the temperature increase to 1.5°C above pre-industrial levels.

285. As outlined above, the proponent has advised that the only confirmed customer of the coal is JSPL and other potential users of the product coal may include China and domestically within Australia, depending on future commercial agreements. I considered that these are the likely consumers of the product coal. I noted that India, China and Australia are parties to the Paris Agreement and have communicated NDCs.

286. I noted the advice of DISER which stated:

CO₂ emissions associated with the Project that occur within Australia's jurisdiction over the period 2021-30 would be covered by the Australian Government's Paris Agreement Nationally Determined Contribution (NDC) for that period (2030 Paris target)

287. I agreed with DISER's advice that the approval of the proposed action would not affect Australia's ability to achieve the commitments in its NDC. I found that the approval of the proposed action is consistent with Australia's commitments under the Paris Agreement.

288. I also took into account that scope 3 emissions occurring overseas will become the consumer country's scope 1 and 2 emissions and be accounted for under the Paris Agreement in their respective national inventories. The Paris Agreement does not require parties to take particular measures to achieve their NDCs; rather, parties may determine which domestic mitigation measures to pursue, with the aim of achieving the objective of their NDC. India has made a number of commitments to reduce GHG emissions, as discussed at [230]-[2323]. Countries where the coal will be consumed, including India, have a discretion to determine what climate change mitigation measures they will pursue in accordance with their national policies and pursuant to their NDCs.

289. While, I also took into account the Steffen Report in considering the impact of the proposed action on climate change, I disagreed with Professor Steffen's conclusions and accepted the Department's advice that a decision to refuse the proposed action is likely to have no impact on total GHG emissions.

290. Professor Steffen used a carbon budget approach to determine the limited cumulative amount of additional CO₂ emissions that can be emitted consistent with limiting global temperature rise to 2°C, consistent with the Paris Agreement.

291. I disagreed with Professor Steffen's conclusion that, because the majority of the world's existing fossil fuel reserves cannot be burned in the 'carbon budget', this means that no new coal mines can be approved consistent with limiting warming to 2°C.

292. The department noted the following points, which I took into account:

- First, consistent with the Paris Agreement, national governments have a discretion to determine what measures will be employed to reduce GHG emissions. There is no government policy requiring approval of coal mines to be refused in order to meet Australia's commitments under the Paris Agreement, or to prevent coal being available to other countries to reduce other countries' emissions.
- Second, the scope 3 emissions from the burning of the coal are taken into account in the country where they are emitted, consistent with the Paris Agreement. The majority of the proposed action's emissions are scope 3 emissions, and the proposed consumers of the coal will be parties to the Paris Agreement.
- Third, evidence as discussed above indicates that there is an ongoing demand for metallurgical coal, particularly for use in steelmaking. A decision to refuse the proposed action is likely to have no reduction of total GHG emissions.
- Fourth, there are myriad sources of GHG emissions including from the burning of coal, but also many other sources. The department disagrees that the use of coal in particular cannot continue as a source of such emissions. The fact that *most* fossil fuels must remain unburned accepts that some fossil fuels can be exploited (see *Gloucester Resources v Minister for Planning* [2019] NSWLEC 9 at [551]) and does not take into account other measures that may be taken to reduce or offset emissions.

293. While recent projections indicate that parties' current NDCs under the Paris Agreement are insufficient to limit global average temperatures to below 2°C, I note that there are mechanisms under the UNFCCC and Paris Agreement (Article 4 to increase the commitments made for future NDCs) to achieve the Paris goal of well below 2 degrees.

Reasonable measures to mitigate human safety impacts posed by climate change

294. I considered the conditions imposed by the IPC directed at the reduction and mitigation of GHG emissions from the proposed action. Those measures are outlined above in [271]-[276].

295. I considered all completed assessments and NSW development consent conditions relating to GHG emissions. I noted that the IPC concluded that the proposed action included appropriate measures for minimising and managing the scope 1 and scope 2 emissions of the proposed action 'to the greatest extent possible'.

296. I found that these conditions address the proposed action's GHG emissions and mitigate the risk to human safety caused by the proposed action. I also took into account the social and economic benefits of the proposed action, as discussed earlier in my reasons and summarised again below.

Social and economic considerations

297. I have outlined my findings on social and economic considerations earlier in my reasons at [167]-[189]. In summary, I found that the proposed action is estimated to result in an economic benefit to the NSW community. I considered that the refusal of the proposed action would prevent the opportunity for positive economic and social impacts.

298. I found that the proposed action would generate positive social and economic benefits from the steel production generated by the proposed action. Coking coal is considered an essential input to 90% of current primary production of steel and alternatives are not currently available at the scale needed to meet global demand for steel. I noted that steel is an essential material in the construction of safe buildings, infrastructure and renewable energy and is of particular importance to developing countries. I found that the impacts associated with the combustion of the proposed action's coking coal are acceptable and justified in circumstances where there are no current viable alternatives to those emissions for the production of steel.

Conclusion on human safety risks

299. For the reasons discussed above, I found, after giving elevated weight to human safety as required by the *Sharma* decision, approval of the proposed action is not likely to cause harm to human safety and decided that the proposed action should be approved.

300. I decided that even if, contrary to the DISER advice, the coal from the proposed action would not be substituted by other coal if the proposed action is not approved, it is appropriate to approve the proposed action, taking into account and balancing the other relevant considerations discussed throughout these reasons.

301. I further found that approval is appropriate having regard to the social and economic benefits of the proposed action, the global need for steel and the absence of any currently viable alternatives at scale to the use of metallurgical coal in steelmaking. I reached this conclusion after taking into account the matters referred to in this attachment and, in particular, that any contribution of the proposed action to global GHG emissions will be extremely small.

Additional considerations

302. In considering the matters relevant to the matters protected by the applicable controlling provision, and economic and social matters, I took 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 PER and recommendation report (section 136(2)(c));
- any other information I have on the relevant impacts of the proposed action (section 136(2)(e));
- any relevant comments given to me by another Minister in accordance with an invitation under section 131, 131AA or 131A ((section 136(2)(f) and section 131AA(6));
- any relevant advice obtained from the IESC in accordance with section 131AB (section 136(2)(fa)); and

- any information given to me in accordance with a notice under section 132A (section 136(2)(g)).

303. I have considered these matters, where relevant, below.

Principles of ecologically sustainable development (section 136(2)(a)) including the precautionary principle (section 391)

304. The principles of ESD, as defined in Part 1, section 3A of the EPBC Act, are:

- decision-making processes should effectively integrate both long-term and short-term economic, environmental, social, and equitable considerations
- 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 (the precautionary principle)
- 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
- the conservation of biological diversity and ecological integrity should be a fundamental consideration in decision-making
- improved valuation, pricing and incentive mechanisms should be promoted.

305. In making this decision, took into account the principles of ESD, including the precautionary principle. In particular:

- a. I have considered the recommendation report and the assessment documentation, which provided information on the long-term and short-term economic, environmental, social, and equitable considerations relevant to the decision.
- b. I agreed with the department's conclusion that any lack of certainty related to the potential environmental impacts of the proposed action is addressed by conditions that restrict environmental impacts, impose strict monitoring and adopt environmental standards which, if not achieved, require the application of response mechanisms in a timely manner to avoid adverse impacts.
- c. I considered that the conditions I have decided to attach to the approval will ensure protection of water resources and EPBC listed species and communities. Those conditions allow for the proposed action to be delivered and operated in a sustainable way to protect the environment for future generations and preserve EPBC listed species and communities in perpetuity.
- d. I have considered the importance of conserving biological diversity and ecological integrity in relation to all of the controlling provisions for this project, and considered that the advice and recommendations provided to me in the department's decision brief reflected that consideration.

The Public Environment Report and Recommendation Report (section 136(2)(c)) and relevant advice obtained from the IESC in accordance with section 131AB (section 136(2)(fa))

306. As noted above, in making this decision I had regard to the PER, the Recommendation Report and the advice obtained from the IESC.

Any relevant comments given to the Minister by another Minister in accordance with an invitation (s 136(2)(f))

307. As noted above, substantive comments on the proposed action were received on behalf of the Minister for Resources, Water and Northern Australia, and the Minister for Indigenous Australians. To the extent these comments were relevant to matters under s 136(1), I took these comments into account, and they are both addressed above.

Comments from the proponent (section 131AA(1) and section 131AA(6))

308. In making my decision I took into account WCL's comments on the proposed decision, as addressed above in the discussion of the conditions.

Proponent's history in relation to environmental matters (section 136(4)(a))

309. In deciding whether to approve a proposed action, and what conditions to attach to any approval, I may, under section 136(4) of the EPBC Act, consider whether the person proposing to take the action is a suitable person to be granted an approval.

310. I considered whether WCL is a suitable person to be granted an approval, noting that a recurring theme in the public submissions on the draft PER was the proponent's compliance history. The most frequently raised compliance matters related to the proponent's environmental history (25 of the 28 submissions) and financial position (22 of the 28 submissions). Many of the submissions stated that the proponent does not have a satisfactory record of responsible environmental management and compliance with environmental laws, and that the proponent's liabilities are such that its financial situation is unlikely to improve, and consequently the proponent would be unable to or unwilling to address its environmental obligations.

Environmental History from the proponent

311. The department wrote to the proponent on 26 March 2021 requesting information from the last ten years on the following:

- the environmental history of WCL and its executive officers;
- the environmental history of WCL's parent body or parent bodies; that is; any body or bodies of which WCL is a subsidiary; and
- the environmental history of the executive officers of WCL's parent body or parent bodies.

312. The proponent responded on 13 April 2021 detailing 47 contraventions, and the executive officers at the time of those contraventions. Of those 47 contraventions, only one remains outstanding; the remedial action for which is scheduled for completion in the second half of 2021. A summary of the contraventions is in Table 1 below.

Table 1 – Summary of WCL Environmental History 7 April 2011 to 7 April 2021

Contravention Type	Number	Key matters
Administrative	10	• Direction to engage a suitably qualified independent person to prepare a rehabilitation cost estimate • Provide information on financial matters (bank loans, working capital facilities, securities) • Failure to pay rental fees and administrative levies • Failure to undertake at least three community consultation meetings a year (\$15,000 penalty) • Failure to make existing monitoring data publicly available (\$1000 penalty) • Failure to pay revised assessed security deposit by due date (\$750 penalty) • Non-compliant pollution monitoring data being published

Contravention Type	Number	Key matters
Workplace Health and Safety	3	Direction to complete actions from audits to address matters of non-compliance or where further action is required
Mine-related infrastructure	8	- Failure to comply with conditions of the development consent for construction of Bellambi Gully diversion works (\$3,000 penalty) - Direction to complete controls and implementation program from the independent risk assessments for catchment infrastructure for the Russell Vale Colliery and Wongawilli Colliery - Direction to replace underground pipe with suitable culvert required by development consent (\$3,000 penalty)
Water impacts	10	- Excess water taken during dewatering operations - Turbid water discharge (two penalty notices \$15,000 each) - Direction to implement various actions from audit - Failure to correctly activate pollution incident response management plan - Precipitate and discharge detected in tributary (proponent self-reported) - Loss of water from Highway dam to Bellambi Gully
Environmental	16	- Direction to complete erosion and sediment controls and weed removal - Ordered to remove coal from emplacement area (\$3000 penalty) - Direction to secure, contain and clean up oil spill at vent shafts 1 and 3-the proponent advised the oil spill was the result of theft by third parties where the intent of the perpetrator was to remove copper from the transformer and to do so the perpetrator drained the transformer of oil - Caution due to failure to comply with self-imposed speed limit of 50km/h on Bellambi Lane - Two penalty notices (\$15,000 each) for discharge of coal fines (tailings) into Bellambi Gully - Direction to remove 174,000 tonnes of stored coal in breach of project approval - Two penalty notices issued in relation to failure to wash trucks before leaving the facility (two penalty notices \$1500)

313. The proponent noted that no action has resulted in a conviction being recorded against the company or an executive officer.

Environmental History from NSW Regulators

314. On 26 March 2021, the department requested advice from DPIE on the environmental history of the proponent and its parent bodies for the past 10 years. A response was received on 27 April 2020, and provided detailed information from the following NSW government agencies:

- DPIE
- NSW Resource Regulator
- NSW Environment Protection Agency
- Natural Resource Access Regulator

315. The compliance history from DPIE aligned with that provided by the proponent. On 3 May 2021, the department sought additional information from the proponent in relation to formal enforcement actions for environmental audits in 2013. On 5 May 2021, the proponent advised that these matters had been addressed.

316. The NSW Resources Regulator's compliance history for the proponent was predominately in relation to late payments of royalties, rent and levies, which I considered were not directly related to the proponent's environmental history for the purposes of the EPBC Act. On 28 April 2021, the department sought further information from the NSW Resources Regulator. The additional information received on 5 May 2021 demonstrated the breaches were administrative in nature, such as not submitting a revised Mine Operations Plan within the timeframe specified in the regulator's guidelines.

317. The compliance history provided by the Environment Protection Agency and the Natural Resources Access Regulator was consistent with that provided by the proponent.

Department's Environmental History Records

318. On 21 April 2021 and 4 May 2021, the Environment Compliance Branch advised the following:

- A search of the department's Compliance and Enforcement Management System database and records held by the department for the proponent found that the proponent was non-compliant with a reporting condition. The proponent failed to publish its Extraction Plan within five days of it being re-approved. The Extraction Plan was re-approved on 25 March 2015 but had not been published by 28 April 2015. The non-compliance was confirmed as rectified as at 3 June 2015.
- In 2014, the proponent was investigated for a potential impact on matters of national environmental significance. It was concluded that no offence under the national environmental law was identified, and no further compliance action would be taken.

319. Having regard to the nature and scale of the incidents and contraventions outlined above, the department advised that these did not result in significant environmental harm. Most of the penalties imposed were at the low end (i.e. between \$750 and \$15,000). The department noted that WCL, or its parent body, accepted and acknowledged these infringements and penalties. The department considered that this demonstrates WCL's commitment to taking responsibility for incidents that result in environmental harm.

320. On that basis of the analysis in the recommendation report discussed above, I found that the proponent is a suitable person to be granted an approval.

Considerations in deciding on conditions – section 134

321. In accordance with section 134(1), I may attach a condition to the approval of the action if I am satisfied that the condition is necessary or convenient for:

- protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or
- repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage has been, will be or is likely to be caused by the action).

322. As discussed earlier in my reasons, I found that each of the conditions attached to the approval is necessary or convenient to protect, repair and/or mitigate impacts on a matter protected by provision of Part 3 for which the approval has effect.

Any relevant conditions that have been imposed, or the Minister considers are likely to be imposed, under a law of a State or self-governing Territory or another law of the Commonwealth on the taking of the action (s 134(4)(a))

323. In accordance with section 134(4) of the EPBC Act, in deciding whether to attach conditions to the approval, I took into account the conditions of the NSW development

consent to the extent they were relevant to matters of national environmental significance. I was satisfied that the conditions of approval I have decided to attach are consistent with the requirements of the NSW development consent, and have been developed to avoid duplication with the NSW development consent.

324. I also had regard to the EPBC Act Condition-setting Policy, which outlines the Australian Government's approach to considering state and territory approval conditions when approving a project under the EPBC Act.

Information provided by the person proposing to take the action or by the designated proponent of the action (s 134(4)(b))

325. In deciding whether to attach conditions to the approval I took into account the referral and assessment documentation provided by the proponent. As discussed above at [308], I took into account the proponent's comments on the conditions in my proposed decision.

The desirability of ensuring as far as practicable that the condition is a cost-effective means for the Commonwealth and a person taking the action to achieve the object of the condition

326. In deciding to attach conditions to the approval, I accepted the department's advice in the recommendation report that the conditions will be cost effective and will ensure that matters of national environmental significance are protected over time.

Requirements for decisions about listed threatened species and communities (section 139)

327. Under section 139(1) of the EPBC Act, 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, I must not act inconsistently with:

- Australia's obligations under:
 - the Convention on Biological Diversity (Biodiversity Convention); or
 - the Convention on the Conservation of Nature in the South Pacific (Apia Convention); or
 - the Convention on International Trade in Endangered Species of Wild Fauna and Flora (CITES); or
- a recovery plan or threat abatement plan.

328. Section 139(2) states, if:

- a. the Minister is considering whether to approve, for the purposes of a section 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 approve the taking of the action, have regard to any approved conservation advice for the species or community.

The Biodiversity Convention

329. 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.

330. The Biodiversity Convention requires Contracting Parties, as far as possible and as appropriate, to introduce procedures requiring environmental impact assessments of projects that are likely to have significant adverse effects on biological diversity to avoid and minimise such impacts, and requires Parties to introduce appropriate arrangements to ensure that the environmental consequences of their programmes and policies that are likely to have significant adverse impacts on biological diversity are duly taken into account. The proposed action was subject to an environmental impact assessment process under the NSW EP&A Act and assessment under the EPBC Act.

331. The department considered that the proposed action will not have unacceptable impacts on biodiversity, including Commonwealth-listed threatened species and communities, if it is taken in accordance with the recommended conditions. The department considered that its recommendation to approve the proposed action subject to conditions was not inconsistent with the Biodiversity Convention, noting that the Biodiversity Convention promotes environmental impact assessment to avoid and minimise adverse impacts on biological diversity. Further, the approval requires information related to the proposed action to be publicly available to ensure equitable sharing of information and improved knowledge of biodiversity.

332. On the basis of the above, I was satisfied that approving the proposed action, subject to conditions that avoid, mitigate and offset impacts to biodiversity, is not inconsistent with Australia's obligations under the Biodiversity Convention.

CITES

333. The aim of CITES is to ensure that international trade in specimens of wild animals and plants does not threaten their survival. As the proposed action does not involve international trade in specimens of wild animals and plants, I was satisfied that approving the proposed action, subject to conditions, is not inconsistent with Australia's obligations under CITES.

APIA Convention

334. 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.

335. The APIA Convention was suspended with effect from 13 September 2006.

336. While this Convention has been suspended, the department's advice included consideration of whether the proposed action would be consistent with the Apia Convention.

337. The proposed action has undergone an environmental assessment which concluded that the proposed action will not have an unacceptable impact on biodiversity, geological formations and objects of aesthetic interest or historic, cultural or scientific value, subject to the proposed conditions.

338. The proposed conditions of approval place restrictions on the extent of impacts the action can have on biodiversity and water resources, and how they are managed in the long-term. The proposed conditions also require ongoing monitoring of potential impacts and obligations for the person taking the action to implement mitigation and corrective actions, and to offset significant residual impacts.

339. As Australia currently has no international obligations under the APIA Convention, it cannot act inconsistently with them. Nevertheless, I was satisfied that approving the proposed action, subject to conditions would not be inconsistent with the Convention.

Recovery Plans and Threat Abatement Plans

340. When deciding whether to approve the taking of an action for the purposes of sections 18 and 18A, and what conditions to attach to any approval, I must not act inconsistently with a recovery plan or a threat abatement plan. The relevant plans which I have considered are set out above in this statement, as they relate to specific species or communities. I was satisfied that the approval of the action would not be inconsistent with any of the recovery plans or threat abatements plans.

Conservation advices

341. When deciding whether to approve the taking of an action for the purposes of sections 18 and 18A, and what conditions to attach to any approval, I must have regard to any approved conservation advice for a listed threatened species or community that is likely to be significantly impacted by the proposed action.

342. The relevant conservation advices which I have considered are set out above in this statement, as they relate to specific species or communities.

Bioregional Plans section (176(5))

343. In accordance with section 176(5), I was 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.

Duration of approval

344. I decided to approve the proposed action until 31 December 2067.

345. The PER states the proposed action will be undertaken within 5 years. However, I accepted the department's advice that water discharge from the adits may commence many years after the mining activity has ceased as groundwater levels recover. There is some uncertainty about this timing, but the DPIE assessment report noted that in around 2057 a maximum of 110 ML/year of groundwater would discharge out of the adits.

346. In determining the duration of the approval, I took into account the concerns of the IESC regarding the quality of the discharge water into Bellambi Creek, and the recommendation that monitoring continue for a long enough period after mining ceases.

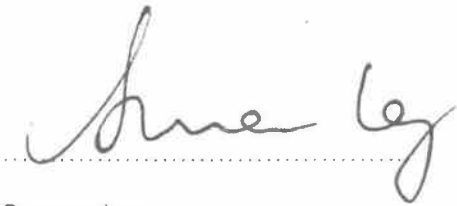
347. I accepted the department's recommendation that the approval remain valid for a period of 46 years to allow sufficient time for the ongoing monitoring of the adit water and to ensure that the implementation of measures to protect matters of national environmental significance are undertaken.

Conclusion

348. In light of the findings in paragraphs [42]-[347], and not having considered any matter which I am not required or permitted to consider, I decided to approve, subject to conditions, the taking of the proposed action for the purposes of sections 18 and 18A (listed threatened species and communities) and sections 24D and 24E (a water resource, in relation to coal seam gas development and large coal mining development).

349. My approval will remain valid until 31 December 2067. This time period accounts for the need for ongoing monitoring after mining ceases and to ensure that implementation of measures to protect MNES are undertaken.

Signed

A handwritten signature in black ink, appearing to read 'Sussan Ley', written over a dotted line.

Sussan Ley

Minister for the Environment

Date: 2/9/21

ANNEXURE A

Section 130 of the EPBC Act relevantly provides:

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.
- (1A) The Minister must make the decision within the relevant period specified in subsection (1B) that relates to the controlled action, or such longer period as the Minister specifies in writing.

Notice of extension of time

- (4) If the Minister specifies a longer period for the purposes of subsection (1A), he or she must:
 - (a) give a copy of the specification to the person proposing to take the action; and
 - (b) publish the specification in accordance with the regulations.

Section 131 of the EPBC Act provides:

- (1) Before the Minister (the **Environment Minister**) decides whether or not to approve, for the purposes of a controlling provision, the taking of an action, and what conditions (if any) to attach to an approval, he or she must:
 - (a) inform any other Minister whom the Environment Minister believes has administrative responsibilities relating to the action of the decision the Environment Minister proposes to make; and
 - (b) invite the other Minister to give the Environment Minister comments on the proposed decision within 10 business days.
- (2) A Minister invited to comment may make comments that:
 - (a) relate to economic and social matters relating to the action; and
 - (b) may be considered by the Environment Minister consistently with the principles of ecologically sustainable development.

This does not limit the comments such a Minister may give.

Section 131AA of the EPBC Act relevantly provides:

- (1) Before the Minister decides whether or not to approve, for the purposes of a controlling provision, the taking of an action, and what conditions (if any) to attach to an approval, he or she must:
 - (a) inform the person proposing to take the action, and the designated proponent of the action (if the designated proponent is not the person proposing to take the action), of:
 - (i) the decision the Minister proposes to make; and

- (ii) if the Minister proposes to approve the taking of the action—any conditions the Minister proposes to attach to the approval; and
 - (b) invite each person informed under paragraph (a) to give the Minister, within 10 business days (measured in Canberra), comments in writing on the proposed decision and any conditions.
- (2) If the Minister proposes not to approve, for the purposes of a controlling provision, the taking of the action, the Minister must provide to each person informed under paragraph (1)(a), with the invitation given under paragraph (1)(b):
- (a) a copy of whichever of the following documents applies to the action:
 - (i) an assessment report;
 - (ii) a finalised recommendation report given to the Minister under subsection 93(5);
 - (iii) a recommendation report given to the Minister under section 95C, 100 or 105; and
 - (b) any information relating to economic and social matters that the Minister has considered; and
 - (c) any information relating to the history of a person in relation to environmental matters that the Minister has considered under subsection 136(4); and
 - (d) a copy of any document, or part of a document, containing information of a kind referred to in paragraph 136(2)(e) that the Minister has considered.
- (3) The Minister is not required to provide under subsection (2):
- (a) information that is in the public domain; or
 - (b) a copy of so much of a document as is in the public domain; or
 - (c) in the case of information referred to in paragraph (2)(b) or (c)—any conclusions or recommendations relating to that information included in documents or other material prepared by the Secretary for the Minister.
- (6) In deciding whether or not to approve, for the purposes of a controlling provision, the taking of the action, the Minister must take into account any relevant comments given to the Minister in response to an invitation given under paragraph (1)(b).

Section 131A of the EPBC Act provides:

Before the Minister decides whether or not to approve, for the purposes of a controlling provision, the taking of an action, and what conditions (if any) to attach to an approval, he or she may publish on the Internet:

- (a) the proposed decision and, if the proposed decision is to approve the taking of the action, any conditions that the Minister proposes to attach to the approval; and

- (b) an invitation for anyone to give the Minister, within 10 business days (measured in Canberra), comments in writing on the proposed decision and any conditions.

Section 133 of the EPBC Act relevantly provides:

Approval

- (1) After receiving the assessment documentation relating to a controlled action, or the report of a commission that has conducted an inquiry relating to a controlled action, the Minister may approve for the purposes of a controlling provision the taking of the action by a person.
- (1A) If the referral of the proposal to take the action included alternative proposals relating to any of the matters referred to in subsection 72(3), the Minister may approve, for the purposes of subsection (1), one or more of the alternative proposals in relation to the taking of the action.

Content of approval

- (2) An approval must:
 - (a) be in writing; and
 - (b) specify the action (including any alternative proposals approved under subsection (1A)) that may be taken; and
 - (c) name the person to whom the approval is granted; and
 - (d) specify each provision of Part 3 for which the approval has effect; and
 - (e) specify the period for which the approval has effect; and
 - (f) set out the conditions attached to the approval.

Persons who may take action covered by approval

- (2A) An approval granted under this section is an approval of the taking of the action specified in the approval by any of the following persons:
 - (a) the holder of the approval;
 - (b) a person who is authorised, permitted or requested by the holder of the approval, or by another person with the consent or agreement of the holder of the approval, to take the action.

Notice of approval

- (3) The Minister must:
 - (a) give a copy of the approval to the person named in the approval under paragraph 133(2)(c); and
 - (b) provide a copy of the approval to a person who asks for it (either free or for a reasonable charge determined by the Minister).

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.

Section 134 of the EPBC Act provides:

Condition to inform persons taking action of conditions attached to approval

- (1A) An approval of the taking of an action by a person (the **first person**) is subject to the condition that, if the first person authorises, permits or requests another person to undertake any part of the action, the first person must take all reasonable steps to ensure:
- (a) that the other person is informed of any condition attached to the approval that restricts or regulates the way in which that part of the action may be taken; and
 - (b) that the other person complies with any such condition.

For the purposes of this Chapter, the condition imposed by this subsection is attached to the approval.

Generally

- (1) The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:
- (a) protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or
 - (b) repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage has been, will be or is likely to be caused by the action).

Conditions to protect matters from the approved action

- (2) The Minister may attach a condition to the approval of the action if he or she is satisfied that the condition is necessary or convenient for:
- (a) protecting from the action any matter protected by a provision of Part 3 for which the approval has effect; or
 - (b) repairing or mitigating damage that may or will be, or has been, caused by the action to any matter protected by a provision of Part 3 for which the approval has effect.

This subsection does not limit subsection (1).

Examples of kinds of conditions that may be attached

- (3) The conditions that may be attached to an approval include:
- (aa) conditions requiring specified activities to be undertaken for:
 - (i) protecting a matter protected by a provision of Part 3 for which the approval has effect (whether or not the protection is protection from the action); or

- (ii) repairing or mitigating damage to a matter protected by a provision of Part 3 for which the approval has effect (whether or not the damage may or will be, or has been, caused by the action); and
- (ab) conditions requiring a specified financial contribution to be made to a person for the purpose of supporting activities of a kind mentioned in paragraph (aa); and
- (a) conditions relating to any security to be given by the holder of the approval by bond, guarantee or cash deposit:
 - (i) to comply with this Act and the regulations; and
 - (ii) not to contravene a condition attached to the approval; and
 - (iii) to meet any liability of a person whose taking of the action is approved to the Commonwealth for measures taken by the Commonwealth under section 499 (which lets the Commonwealth repair and mitigate damage caused by a contravention of this Act) in relation to the action; and
- (b) conditions requiring the holder of the approval to insure against any specified liability of the holder to the Commonwealth for measures taken by the Commonwealth under section 499 in relation to the approved action; and
- (c) conditions requiring a person taking the action to comply with conditions specified in an instrument (including any kind of authorisation) made or granted under a law of a State or self-governing Territory or another law of the Commonwealth; and
- (d) conditions requiring an environmental audit of the action to be carried out periodically by a person who can be regarded as being independent from any person whose taking of the action is approved; and
- (e) conditions requiring the preparation, submission for approval by the Minister, and implementation of a plan for managing the impacts of the approved action on a matter protected by a provision of Part 3 for which the approval has effect such as a plan for conserving habitat of a species or ecological community; and
- (f) conditions requiring specified environmental monitoring or testing to be carried out; and
- (g) conditions requiring compliance with a specified industry standard or code of practice; and
- (h) conditions relating to any alternative proposals in relation to the taking of the action covered by the approval (as permitted by subsection 133(1A)).

This subsection does not limit the kinds of conditions that may be attached to an approval.

Certain conditions require consent of holder of approval

- (3A) The following kinds of condition cannot be attached to the approval of an action unless the holder of the approval has consented to the attachment of the condition:

(a) a condition referred to in paragraph (3)(aa), if the activities specified in the condition are not reasonably related to the action;

(b) a condition referred to in paragraph (3)(ab).

(3B) If the holder of the approval has given consent, for the purposes of subsection (3A), to the attachment of a condition:

(a) the holder cannot withdraw that consent after the condition has been attached to the approval; and

(b) any person to whom the approval is later transferred under section 145B is taken to have consented to the attachment of the condition, and cannot withdraw that consent.

Conditions attached under paragraph (3)(c)

(3C) A condition attached to an approval under paragraph (3)(c) may require a person taking the action to comply with conditions specified in an instrument of a kind referred to in that paragraph:

(a) as in force at a particular time; or

(b) as is in force or existing from time to time;

even if the instrument does not yet exist at the time the approval takes effect.

Considerations in deciding on condition

(4) In deciding whether to attach a condition to an approval, the Minister must consider:

(a) any relevant conditions that have been imposed, or the Minister considers are likely to be imposed, under a law of a State or self-governing Territory or another law of the Commonwealth on the taking of the action; and

(aa) information provided by the person proposing to take the action or by the designated proponent of the action; and

(b) the desirability of ensuring as far as practicable that the condition is a cost-effective means for the Commonwealth and a person taking the action to achieve the object of the condition.

Effect of conditions requiring compliance with conditions specified in another instrument

(4A) If:

(a) a condition (the **principal condition**) attached to an approval under paragraph (3)(c) requires a person taking the action to comply with conditions (the **other conditions**) specified in an instrument of a kind referred to in that paragraph; and

(b) the other conditions are in excess of the power conferred by subsection (1);

the principal condition is taken to require the person to comply with the other conditions only to the extent that they are not in excess of that power.

Validity of decision

- (5) A failure to consider information as required by paragraph (4)(aa) does not invalidate a decision about attaching a condition to the approval.

Section 136 of the EPBC Act provides:

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
 - (ba) if Division 3A of Part 8 (assessment on referral information) applies to the action—the finalised recommendation report relating to the action given to the Minister under subsection 93(5); and
 - (bc) if Division 4 of Part 8 (assessment on preliminary documentation) applies to the action:
 - (i) the documents given to the Minister under subsection 95B(1), or the statement given to the Minister under subsection 95B(3), as the case requires, relating to the action; and
 - (ii) the recommendation report relating to the action given to the Minister under section 95C; 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
 - (ca) if Division 6 (environmental impact statements) of Part 8 applies to the action:
 - (i) the finalised environmental impact statement relating to the action given to the Minister under section 104; and
 - (ii) the recommendation report relating to the action given to the Minister under section 105; and
 - (d) if an inquiry was conducted under Division 7 of Part 8 in relation to the action—the report of the commissioners; 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
- (g) if a notice relating to the action was given to the Minister under subsection 132A(3)—the information in the notice.

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.

Section 139 of the EPBC Act provides in part:

- (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.