



New South Wales Government  
Independent Planning Commission

# Russell Vale Underground Expansion Project

## Statement of Reasons for Decision

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Russell Vale UEP Final Report ©  
State of New South Wales through the Independent Planning Commission 2020

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## DEFINED TERMS

ABBREVIATION	DEFINITION
<b>Applicant</b>	Wollongong Coal Limited
<b>Application</b>	Russell Vale Revised Underground Expansion Project (also known as Revised UEP)
<b>Commission</b>	Independent Planning Commission of NSW
<b>DCP</b>	Development Control Plan
<b>Department</b>	NSW Department of Planning, Industry and Environment
<b>Department's AR</b>	Department's Addendum Report dated November 2015
<b>Department's FAR</b>	Department's Final Assessment Report dated September 2020
<b>Department's PAR</b>	Department's Preliminary Assessment Report dated December 2014
<b>DRG</b>	Director-General's Requirements, dated 18 August 2009
<b>EA</b>	Environmental Assessment
<b>EIS</b>	Environmental Impact Statement
<b>EP&amp;A Act</b>	<i>Environmental Planning and Assessment Act 1979</i>
<b>EPI</b>	Environmental Planning Instrument
<b>ESD</b>	Ecologically Sustainable Development
<b>Existing Approval</b>	Development Consent MP 10_0046 granted by the then Planning Assessment Commission on 13 October 2011 and known as Preliminary Works Project (PWP)
<b>ha</b>	Hectare
<b>IAPUM</b>	Independent Advisory Panel for Underground Mining
<b>IESC</b>	Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development
<b>LEP</b>	Local Environmental Plan
<b>LGA</b>	Local Government Area
<b>Material</b>	The material set out in paragraph 94
<b>Minister</b>	Minister for Planning and Public Spaces
<b>Minister's Request</b>	Request by the Minister for Planning and Public Spaces on 27 July 2020, as set out in paragraph 7
<b>NEPM</b>	National Environment Protection Measures
<b>Original UEP Application</b>	Russell Vale Underground Expansion Project Application submitted in August 2009 with the supporting EIS publicly exhibited in February to April 2013
<b>PAC</b>	Planning Assessment Commission, former determination authority
<b>Preferred UEP Application</b>	Russell Vale Underground Expansion Project Application submitted in September 2013 with supporting Preferred Project Report (PPR)
<b>Project</b>	Russell Vale Revised Underground Expansion Project at Russell Vale, NSW
<b>Regulations</b>	<i>Environmental Planning and Assessment Regulations 2000</i>
<b>Relevant Considerations</b>	Relevant matters for consideration, as provided in s 4.15(1) of the EP&A Act
<b>RMR</b>	Residual Matters Report, lodged by WCL in June 2014
<b>Revised UEP</b>	Russell Vale Underground Expansion Project Application submitted in

<b>Application</b>	July 2019 with supporting Revised Preferred Project Report (RPPR)
<b>RPPR</b>	Revised Preferred Project Report, lodged by WCL in July 2019
<b>RR</b>	Resources Regulator
<b>RtS</b>	Response to Submissions
<b>SEPP</b>	State Environmental Planning Policy
<b>Site</b>	Russell Vale Colliery, as defined in Section 2.1
<b>SRD SEPP</b>	<i>State Environmental Planning Policy (State and Regional Development) 2011</i>
<b>SSD</b>	State Significant Development
<b>STOP Reg</b>	<i>Environmental Planning and Assessment (Savings, Transitional and Other Provisions) Regulation 2017</i>
<b>WCC</b>	Wollongong City Council
<b>WCL</b>	Wollongong Coal Limited
<b>WSC</b>	Wollondilly Shire Council

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## EXECUTIVE SUMMARY

This Statement of Reasons has been prepared by the Independent Planning Commission (**Commission**) in its determination of the Russell Vale Underground Expansion Project (**Project**). In making its determination the Commission has relied on material including the whole-of-government assessment conducted on its behalf by the Department of Planning, Industry and Environment (**Department**). The Commission is satisfied that this assessment was undertaken in line with relevant legislation and guidelines, was informed by appropriate expertise and addressed the mandatory relevant considerations under s 4.15 of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) in a manner sufficient to inform the Commission's determination.

The original Russell Vale Underground Expansion Project Application was submitted to the Department in August 2009 by the former owner of the mine, Gujarat NRE Coking Coal Ltd (**Original UEP Application**). The Original UEP Application proposed 18 longwall panels across the Wonga East and Wonga West areas and represented a significant expansion of mining in the Wongawilli Seam. 31 million tonnes (Mt) of coal was proposed to be extracted over a projected period of 18-years.

In September 2013, Wollongong Coal Limited, the 'Applicant' and new owner of the mine submitted a Preferred Project Report (**PPR**) making significant changes (**Preferred UEP Application**) to the Original UEP Application in response to issues raised in agency, public submissions and independent expert reviews undertaken on behalf of the Department. The Preferred UEP Application removed all proposed longwall mining in the Wonga West area and one panel from the Wonga East area, reducing the total proposed extraction of coal to 4.7 Mt, and reducing the proposed project life from 18 years to five years.

On 9 December 2014, the then Minister for Planning requested that the former Planning Assessment Commission (**PAC**) carry out a review and conduct a public hearing on the Preferred UEP Application. The PAC conducted the public hearing on Tuesday 3 February 2015 (**First Public Hearing**) and the PAC's first Review Report was provided to the Department on 2 April 2015 (**First Review Report**). The First PAC Review Report concluded that the PAC did not have sufficient information or confidence to determine the merits of the proposal sufficient for a determination of approval. The PAC also made recommendations regarding additional work and assessments required to be carried out prior to the determination being made.

Following further assessments by the Applicant, on 23 October 2015, the then Minister for Planning requested that the PAC carry out a second review of the Preferred UEP Application and conduct a public hearing. The PAC conducted the second public hearing on Tuesday 8 December 2015 (**Second Public Hearing**) and the PAC's second Review Report was provided to the Department on 31 March 2016 (Second Review Report). The PAC's Second Review Report concluded that the social and economic benefits of the project as currently proposed in the Preferred UEP Application are likely outweighed by the magnitude of impacts to the environment.

In July 2019, the Applicant submitted a Revised Preferred Project Report (**RPPR**), which included further amendments to address the issues raised in the PAC's Second Review Report (**Revised UEP Application**).

On 27 July 2020, the Minister for Planning and Public Spaces (**Minister**) requested that the Commission conduct a further Public Hearing into the Project and determine the Application (**Minister's Request**). The Minister's Request was received by the Commission on 5 August 2020. On 4 September 2020 the Department referred state significant development applicant (SSD MP09\_0013) (the **Application**) to the Commission for determination. The Project before the Commission includes a revised mine plan involving the extraction of coal resources via bord and pillar mining technique, excluding the use of long wall mining techniques. The Project involves the extraction of approximately 3.7 Mt of run-of-mine (**ROM**) coal over a five-year period. The Commission understands that the proposed section of the Wongawilli Seam which would be mined as part of the Project comprises approximately 57% coking coal and 27% thermal coal with rejects accounting for the remaining 16%.

The Commission Panel determining the Application is comprised of Professor Alice Clark (Chair), Professor Chris Fell AM and Dr Peter Williams. The Commission conducted an electronic public hearing over two days on 19 October 2020 and 20 October 2020 (the **Public Hearing**). The Commission heard from 85 registered speakers in total via video conference and telephone. The Commission received a total of 805 written public submissions including 189 submissions in support, 607 objections and 9 neutral comments on the Application.

The Commission has considered a number of issues, including: water resources, subsidence, greenhouse gas (**GHG**) emissions, noise, air quality, visual amenity, socio-economics, traffic and transport, heritage, mine waste, bush fire risk and biodiversity.

The Commission finds that the Project would result in some amenity impacts and additional environmental disturbance associated with recommencement of mining operations at the site in accordance with the proposed mine plan. For the reasons set out in this Statement of Reasons, the Commission is of the view that the additional environmental and amenity impacts can be appropriately managed and mitigated in accordance with the applicable guidelines and policies.

The Commission finds that the Project would generate social and economic benefits for the local area, Illawarra region and to NSW. This includes: a direct capital investment of \$35.3 million, a net economic benefit of \$174 million and employment of 205 people during operation and 22 during construction.

The Commission finds that on balance, and when weighed against the objects of the EP&A Act, ecologically sustainable development (**ESD**) principles, the relevant policy framework, and socio-economic benefits, the impacts associated with the Project are acceptable and the Project is in the public interest.

For the reasons set out in this Statement of Reasons, the Commission has granted development consent to the Application. In reaching its decision, the Commission carefully considered the Application, the Department's Preliminary Assessment Report, the Department's Addendum Report, the PAC's First and Second Review Report's, the Department's Final Assessment Report, the independent expert reports, advice from relevant government agencies, submissions from Councils and concerns raised by interested individuals, groups and organisations at the Public Hearing and in written submissions in accordance with the requirements of the EP&A Act.

The Commission has imposed the Department's recommended conditions and additional conditions to ensure that the Project complies with the relevant criteria and standards, that impacts are consistent with the predictions in the RPPR (including supplementary material) and that residual impacts are minimised, mitigated and – where relevant – compensated for.

# 1 INTRODUCTION

## 1.1 The Minister's First Request

1. On 9 December 2014, the then Minister for Planning requested under section 23D of the EP&A Act (as then applied) that the former PAC:
  - a) carry out a review of the Preferred UEP Application;
  - b) conduct a Public Hearing on the Preferred UEP Application; and
  - c) complete the review by 20 March 2015.
2. The PAC conducted the First Public Hearing on Tuesday 3 February 2015 at the WIN Entertainment Centre, Wollongong.
3. The PAC's First Review Report was provided to the Department on 2 April 2015.

## 1.2 The Minister's Second Request

4. On 23 October 2015, the then Minister for Planning requested under section 23D of the EP&A Act (as then applied) that the PAC:
  - a) carry out a review of the Preferred UEP Application;
  - b) conduct a Public Hearing on the Preferred UEP Application; and
  - c) provide a final report to the Department.
5. The PAC conducted the Second Public Hearing on Tuesday 8 December 2015 at the WIN Entertainment Centre, Wollongong.
6. The PAC's Second Review Report was provided to the Department on 31 March 2016.

## 1.3 The Minister's Third Request

7. On 27 July 2020, the Minister for Planning and Public Spaces requested under section 2.9 of the EP&A Act that the Commission conduct a further Public Hearing into the Project and determine the Application within 12 weeks of receipt of the Department's referral of the Application to the Commission. The Minister's Request was received by the Commission on 5 August 2020.

## 1.4 The Department's Referral

8. On 14 September 2020, the Department referred a state significant development application (SSD MP09\_0013) to the Commission for determination. The Application seeks approval under section 4.38 of the EP&A Act for the Russell Vale Revised Underground Expansion Project, located in Wollongong and Wollondilly Local Government Areas (**LGAs**).

## 1.5 The Commission Panel

9. The Commission is the consent authority in respect of the Application under section 4.5(a) of the EP&A Act and clause 8A of the *State Environmental Planning Policy (State and Regional Development) 2011 (SRD SEPP)*. This is because:
  - the Project constitutes State significant development (**SSD**) under section 4.36 of the EP&A Act; and
  - the Department received more than 50 submissions from the public objecting to the Application under the mandatory requirement for community participation in Schedule 1 to the EP&A Act.
10. Professor Mary O'Kane AC, Chair of the Commission, nominated Professor Alice Clark (Chair), Professor Chris Fell AM and Dr Peter Williams to constitute the Commission Panel determining the Application.

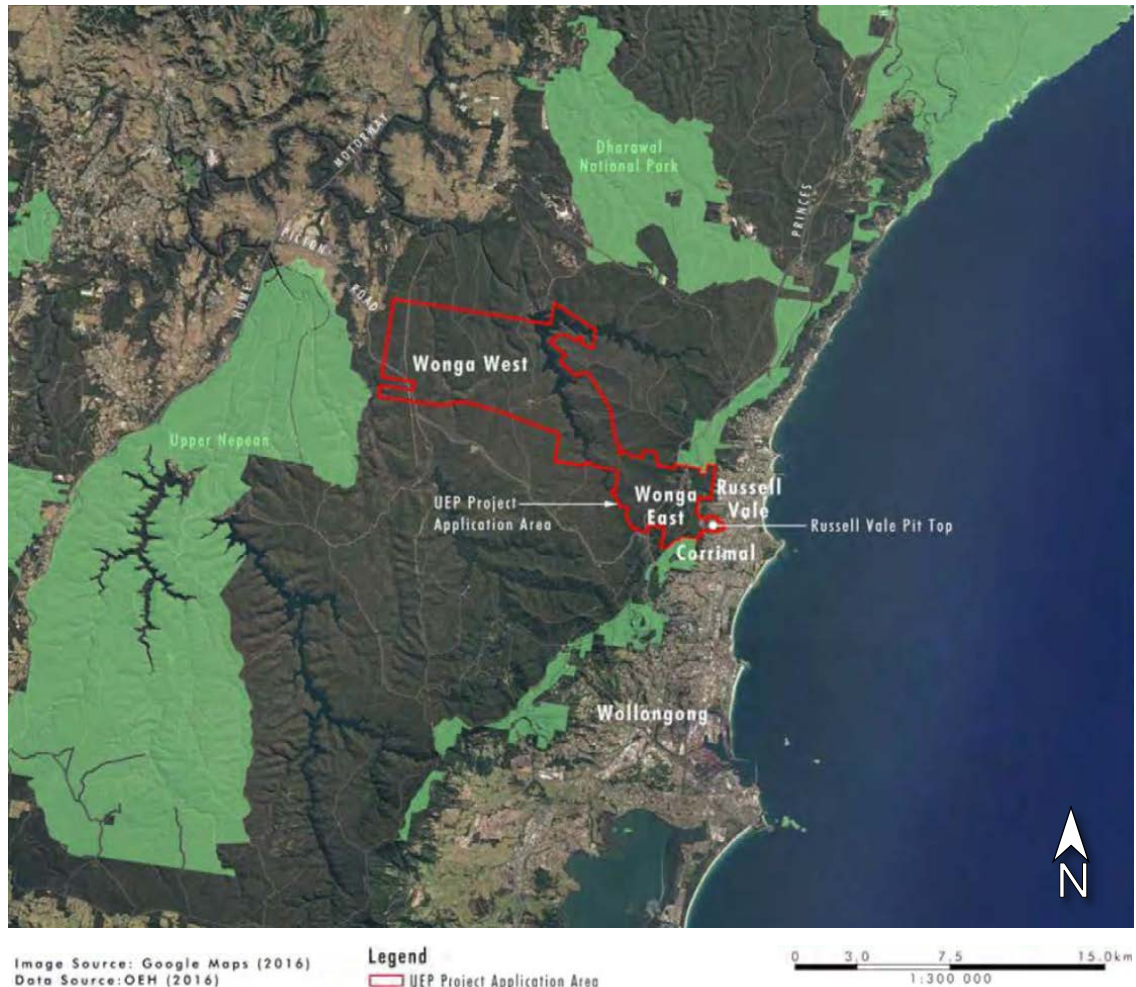


## 2 THE APPLICATION

### 2.1 Site and Locality

11. The Department's Final Assessment Report (**Department's FAR**), dated September 2020, describes the Site at Section 1.2 as covering over 6,500 hectares of underground mining lease area, which lies under the Woronora Plateau west of the Illawarra Escarpment. The Site's surface facilities comprise approximately 100 hectares and are located on the foot slopes of the Illawarra Escarpment at Russell Vale, west of the Princes Highway. The location of the Site is illustrated in Figure 1 below.

Figure 1 – Locality Map (Source: Department's FAR)



### 2.2 Previous Operations

12. Extensive underground mining has been undertaken at the Site since 1887. Paragraph 9 of the Department's FAR notes that the uppermost Bulli Seam was mined in the early to mid-1900s using pillar extraction techniques, and the underlying Balgownie Seam was mined using longwall mining techniques (1970–1982 and 2001–2003). More recently, longwall mining was undertaken in the lower Wongawilli Seam (2012–2014).

## 2.3 Background of the Russell Vale Underground Expansion Project

### 2.3.1 Original UEP Application

13. The Original UEP Application was submitted to the Department in August 2009 by the former owner of the mine, Gujarat NRE Coking Coal Ltd. The Application was for 18 longwall panels across the Wonga East and Wonga West areas and represented a significant expansion of mining in the Wongawilli Seam. The panels were estimated to extract 31 million tonnes (Mt) of coal over a projected period of 18 years.
14. Appendix A of the Department's FAR noted "*the Department considered the original environmental assessment for this application inadequate for public exhibition*". The EA was revised by the Applicant and publicly exhibited between February and April 2013.

### 2.3.2 Preferred UEP Application

15. In September 2013, the Applicant and new owner of the mine, Wollongong Coal Limited (**WCL**), submitted the PPR in conjunction with a Response to Submissions (**RtS**) which made significant changes to the Original UEP Application to respond to issues raised in agency submissions, public submissions and independent expert reviews undertaken on behalf of the Department. The Preferred UEP Application removed all proposed longwall mining in the Wonga West area and one panel from the Wonga East area, reducing the total proposed coal extraction to 4.7 Mt, and reducing the proposed project life from 18 years to 5 years.
16. The Preferred UEP Application was referred to the PAC in December 2014 to carry out a review and conduct a public hearing. The PAC's First Review Report was submitted to the then Minister for Planning in April 2015. Appendix A of the Department's FAR provides that the PAC concluded "*the Commission does not have sufficient information or confidence to determine the merits of the proposal sufficient for a determination for approval*".
17. Following further assessments by the Applicant, the Application was referred to the PAC in October 2015 to carry out a second review and conduct a public hearing. The PAC's Second Review Report was submitted to the then Minister for Planning in March 2016. The PAC concluded that "*the social and economic benefits of the project as currently proposed are likely outweighed by the magnitude of impacts to the environment*" as stated in the Second Review Report. The PAC's conclusions are also set out in Appendix A of the Department's FAR.

### 2.3.3 Revised UEP Application / The Project

18. In July 2019 the Applicant submitted the RPPR, which included further amendments to address the issues raised in the PAC's Second Review Report. The Revised UEP Application is the subject of the Commission's present consideration.
19. The Revised UEP Application for the purposes of this Statement of Reasons is defined as the 'Project'. The key elements of the Project are outlined in Table 3 in Appendix A of this Statement of Reasons.
20. The Project includes a revised mine plan which excludes the use of longwall mining techniques. The Commission notes that mining is proposed by means of a bord and pillar mining technique only. The Applicant has detailed the proposed revised surface operations, including design improvements and mitigation measures to reduce concerns raised by the PAC in its Review Reports.

## 3 COMMUNITY PARTICIPATION & PUBLIC SUBMISSIONS

### 3.1 Community Group Attendance at the Site Inspection

21. On Friday 16 October 2020, the Commission conducted an inspection of the Project Site. The Commission also invited representatives from community groups to attend and observe at the site inspection. The following groups were represented at the site inspection:
  - Illawarra Residents for Responsible Mining (**IRRM**);
  - Lock the Gate Alliance; and
  - Wollongong City Council (surface facilities only).

### 3.2 Public Hearing

22. The Commission conducted a Public Hearing over two days on Monday 19 October 2020 and Tuesday 20 October 2020. The Public Hearing was held electronically with registered speakers presenting to the panel via telephone or video conference. The Public Hearing was streamed live on the Commission's website.
23. The Commission heard from the Department, the Applicant, various Community Group representatives and individual community members. In total, 85 speakers presented to the Commission during the Public Hearing.
24. Presentations made at the Public Hearing have been considered by the Commission as submissions and are referenced below in Section 3.3.

### 3.3 Public Submissions

25. The Commission notes the Application was exhibited publicly by the Department from 1 August 2019 until 29 August 2019, with relevant State government authorities, WCC and WSC also being notified. Table 5 of the Department's FAR provides that the Department received 202 public submissions and advice from 11 government authorities during the exhibition period. The Commission has considered the submissions made to the Department during the public exhibition period.
26. As part of the Commission's consideration of the Project, all persons were offered the opportunity to make written submissions to the Commission until 5.00pm on Monday 2 November 2020. It is noted that the Commission extended the deadline for public comment on the Project by six days to allow time for the public to review the transcript of the Public Hearing.
27. The Commission received a total of 805 written submissions on the Application. A breakdown of the submissions received by the Commission is provided below:
  - 189 submissions in support of the Application;
  - 607 objections to the Application; and
  - nine (neutral) comments on the Application.
28. The Commission heard concerns from speakers at the Public Hearing and received written comments regarding a number of issues which have been summarised below. Common concerns raised related to water resources (including water usage, wastewater, ground water, surface water and impacts on the water catchment), subsidence, dust, air quality, greenhouse gas emissions and climate change, bushfire, traffic and transport, amenity (including noise and visual impacts), social impacts, biodiversity, public access to the escarpment, and rehabilitation.
29. The Commission also received written submissions made in support of the Project. The submissions emphasised the economic benefits of the Project, specifically the employment opportunities provided for residents of the local area.

### Water Associated Issues

30. The Commission heard from speakers at the Public Hearing and received written comments regarding the Project's potential impacts on water resources, including impacts on the Cataract Reservoir and its capacity to supply Sydney with drinking water.
31. The following is a snapshot of these concerns expressed in the written submissions received by the Commission stated:

*It is unacceptable for the NSW government to allow such risky mining in the water catchment for 5 million people of Greater Sydney.*

*Without the availability of clean, safe and abundant drinking water resources the good future of our people cannot be sustained. No alleged financial benefit to business or government justifies placing our drinking water supply at risk.*

*They should not be allowed to mine the water catchment of the largest city on the driest inhabited continent on earth.*
32. Written submissions also raised concerns regarding waste water and potential contamination of local waterways caused by waste water discharge. Speakers at the Public Hearing also raised concern regarding the discharge of untreated mine water into Bellambi Creek. One speaker stated that wastewater discharge licences should be specified together with a water management regime implemented prior to the extraction of any coal.
33. Concerns regarding potential groundwater impacts were raised by speakers at the Public Hearing and in written submissions.
34. A speaker at the Public Hearing stated:

*The mining expansion will drain both surface and groundwater from the Cataract Reservoir Catchment; this de-watering exacerbated by a drought and climate change will impact the biodiversity and increase bushfire risk.*
35. Written submissions received by the Commission raised concern about the potential risks and unknown impacts of 'triple seam mining' and subsidence on ground water.
36. The Commission also heard from speakers at the Public Hearing and received written comments regarding the Project's potential impacts on surface water. Key concerns related to impacts on surface features such as swamps and watercourses, and potential increased bushfire risk. A written submission from a representative of the Illawarra Escarpment Alliance (EscA) community group stated:

*EscA is concerned that the project [will] contribute to the drying out of the vegetation of the Cataract Reservoir catchment area. This will increase the bushfire risk, both in the Cataract Reservoir catchment area itself, but also to the wooded eastern slopes of the escarpment behind Wollongong.*
37. Written submission's also raised concern about impacts of flooding and pollution on local waterways:

*Mine wastewater flows in to (sic) Bellambi Gully Creek and thence to Bellambi Lagoon Reserve... If the Project goes ahead, the lagoon is likely to become extremely polluted...*

*...poor water quality is likely to be exacerbated by the fact that the company proposes to re-inject the coal waste back into mining voids. When flooded and overflowing, this will add to the already high burden of salinity, turbidity and toxic metals into downstream receiving watercourses, if it isn't captured and treated for re-use.*

### Air Quality

38. The Commission heard concerns from members of the public at the Public Hearing and received written submissions regarding air quality impacts caused by coal dust from the Project.
39. At the Public Hearing, local residents stated:



*The coal trucks will cause coal dust or particulate pollution along the trucking route, as well as particulate pollution from the three coal stockpiles back at the colliery, exacerbated by the windy conditions in the northern suburbs.*

*... when we moved into the place, we had a deck on the back and the kids' feet were black after going out onto that deck.*

40. The Commission also received written submissions about the air quality impacts of the Project, which stated:

*There is no doubt there will be a significant increase in dust from the mine expansion. Resident's testify to the layers of fine black dust already found in our roofs and on our decks.*

*The coal dust that accumulates in our house, and in our lungs, is terrible. We have strong winds that carry it across the short distance to our house.*

#### **Greenhouse Gas (GHG) Emissions and Climate Change**

41. The Commission heard concerns from members of the public and local community groups at the Public Hearing and received written submissions regarding GHG emissions and the contribution of the Project to climate change.

42. At the Public Hearing, a local resident stated:

*...the scientific consensus is that we must urgently take action to reduce the amount of carbon, methane and other greenhouse gases in our atmosphere or face catastrophic climate change, threatening the future of my family and everyone else's.*

43. The Commission also received written submissions about the climate change impacts of the Project. Submissions stated:

*At a time when we should be looking urgently to safeguard our future through the reduction of greenhouse gas emissions, pursuing the Russell Vale mine is irresponsible and nonsensical in the extreme.*

*It's unthinkable in today's economic environment that a project which adds to Australia's overall carbon emissions could be given permission to do even more damage by putting this environment at risk.*

44. Written submissions received by the Commission commented on the need for Australia to transition away from use of metallurgical coal for steel making and embrace new technologies such as 'green steel'.

#### **Bushfire Risk**

45. The Commission heard concerns from speakers at the Public Hearing regarding the potential increased bushfire risk resulting from the Project. Of key concern was increased bushfire risks due to drying of surface water features, such as swamps and streams.

46. The Commission also received written submissions about the potential bush fire impacts of the Project. Submissions stated:

*The mine expansion would drain both surface and ground water from the Cataract Reservoir catchment... With further drying out come (sic) even greater risks of rampant bushfires.*

*It could reduce water flowing into our waterways and increase the likelihood of bushfire on the escarpment.*

*After the 2019/20 bushfires, protecting and preserving the remaining wildlife should be the top priority of the government.*

#### **Traffic and Transport**

47. The Commission heard concerns from speakers at the Public Hearing and received written submissions regarding the Application's impact on the existing road network, road safety and amenity, including noise and dust caused by truck movements.

48. At the Public Hearing, local residents stated:

*As part of the proposal, coal would be trucked from Russell Vale along Bellambi Lane and then the northern distributor to Port Kembla Coal Terminal. There would be up to 32 truck movements per hour. The coal trucks will cause coal dust or particulate pollution along the trucking route...*

*...the trucks are noisy, they are disrupting a peaceful community, but they also carry air pollution concerns as well.*

#### *Amenity*

49. The Commission heard concerns from speakers at the Public Hearing regarding the potential noise impacts resulting from the Project, including construction noise, operational noise and traffic noise.

50. Written submissions stated:

*Noise pollution will be caused from additional trucks and machinery in the area. With expanding the mine it is anticipated there will be additional trucks leaving the colliery...*

*This colliery is situated nearby dense residential areas. Residents have already long suffered from negative impacts of mining, including noise and particulate pollution. This is not a suitable area for a mine.*

*Mining shouldn't operate so close to populated areas. If mine does proceed there should be a southern noise wall.*

51. The Commission heard concerns from speakers at the Public Hearing and received written submissions regarding the Project's visual impact on nearby residential areas.
52. The Commission also received written submissions about potential vibration impacts of the Project on nearby residents.

#### *Socio-Economics*

53. The Commission received written submissions from the community in support of the Application because of the proposed economic benefits, including the provision of local employment. Written submissions considered that the economic benefits of the Application could be balanced with managing environmental impacts through the implementation of appropriate mitigation measures.

54. The Commission also received written submissions raising concern about the uncertain economic benefits of the Project on the local community:

*Promised socio-economic benefits are unlikely to materialise.*

*They were forced to cease mining at Wongawilli in 2019 – with huge job losses – when the Resources Regulator found it was not safe for workers.*

55. The Commission received written submissions in support due to the provision of jobs and positive impact on local business:

*The approval of this project will create more much needed jobs in the area and some of the local businesses will also benefit from the success of the mining operation.*

56. Written submissions in support raised the positive economic contribution the Project may have on the region including the indirect economic benefits:

*This will be a great boost for the jobs prospect in the Illawarra, it will help struggling businesses and families in this current recession. For every permanent position this creates it also indirectly create 6 positions outside the industry...*

*The proposed Russell Vale Colliery Expansion Project has my full support as it will provide for significant direct and indirect jobs to the Illawarra Area.*

57. The Commission heard concerns from speakers at the Public Hearing and received submissions regarding the potential social impacts of the Project, including limitations on public access to the Illawarra Escarpment and the impact this is having on the use of the land for recreational purposes. At the Public Hearing, a local resident stated:

*We run the many fire trails and tracks on the Illawarra Escarpment, and we've been running for a very long time... But only two kilometres onto this trail, we run into a problem, literally. A virtual wall, so to say, has been imposed by coal. A gate and a newly-erected sign indicate no access and threat of prosecution for those who do.*

58. Written submissions from community members stated:

*Our Escarpment should be enjoyed and cared for by the Community. It should not be dug up/locked up for a single entity to ruin (destroying the environment and polluting our water supply). There is value and opportunity for investment in this space.*

*The location could be a vital community asset. It already provides social and health amenity for mountain bikers, trail runners, bushwalkers and naturists. It brings others to the area too which supports the local economy. This value will be compromised by the proposed expansion.*

### *Mining Method and Subsidence*

59. The Commission received written submissions raising concerns relating to the potential risks and impacts associated with subsidence:

*While acknowledging that the bord and pillar method proposed would be less damaging than longwall mining, the complicating factor of mining beneath two previously mined coal seams, must lead to a greater degree of uncertainty as to the extent and degree of subsidence. The Company has admitted the possibility that pillar collapse in the overlying Bulli Seam could lead to additional substantial subsidence, from mining of the Wongawilli Seam.*

60. Lock the Gate in its submission to the Commission dated 27 October 2020 raised concern regarding the subsidence risks to the catchment. Lock the Gate also noted that further advice should be obtained from the Independent Advisory Panel for Underground Mining (**IAPUM**).

61. The Commission also received written submissions in support of the proposal noting that the mining method has been revised by the Applicant in order to minimise environmental impacts:

*With the minimal surface impacts from the proposed mining method and the local employment generated I support the proposed Russel vale (sic) expansion project.*

*I understand that the company is now using board (sic) and pillar which is much (sic) environmentally friendly way to mine. I strongly believe that they should be allowed to start mining operations and be a role model for other mines in the country. This will help in boosting sluggish economy and employment after disasters and pandemic.*

*...the proposed method of mining eliminates any subsidence issues. The area has already been mined for over 100 years and with the proposed method of mining eliminates any environmental risks. It will be [a] huge boost for the local community.*

### *Rehabilitation and Mine Closure*

62. The Commission heard from speakers at the Public Hearing and received submissions from the public who raised concern about the Applicant's capacity to comply with its rehabilitation responsibilities on the closure of the mine. Concerns were raised about the Applicant's record for rehabilitation and submissions questioned the Applicant's financial capacity to complete rehabilitation works.

63. A submission stated:

*Wollongong Coal is financially constrained and in no position to ensure its responsibility for remediation of the environment going forwards.*

64. Concerns were also raised about the proposed rehabilitation strategies for the project.

### 3.3.1 Public Submissions on Additional Material

65. In accordance with the Commission's 'Additional Material' policy, the Panel considered that it would be assisted by additional advice on certain matters and requested the following information:
  - the Independent Advisory Panel for Underground Mining Advice (**IAPUM Advice**), provided to the Commission on 22 November 2020;
  - the Department's 'Response to Clarification Request', provided to the Commission on 16 November 2020; and
  - the Resources Regulator's 'Response to Clarification Request' provided to the Commission on 9 November 2020;
66. The Commission wrote to the Independent Expert Panel for Mining in the Catchment (**IEPMC**) on 5 November 2020 seeking expert advice. The Commission notes that the response received was from the IAPUM. The Commission understands that this is the appropriate panel to provide advice to the Commission and that the IAPUM is consistent with the IEPMC.
67. The Commission re-opened public comments on this additional material (with submissions permitted via email) between Monday 23 November 2020 and 5pm on Monday 30 November 2020.
68. The Commission received a total of five written submissions on the Additional Material, including comments from the Applicant on the IAPUM Advice.
69. Key issues raised through public submissions on the Additional Material included inadequacy of rehabilitation cost estimates, Wongawilli Seam roof stability, inaccuracy of subsidence predictions, limited economic benefit, need for further review of economic material, clarification on coal type, impacts on Aboriginal cultural heritage and upland swamps.

## 4 THE COMMISSION'S CONSIDERATION

### 4.1 The Commission's First Review Report

70. On 2 April 2015, the PAC published its First Review Report to the Department. The Report identified key issues relating to environmental and community impacts.
71. Page 52 of the PAC's First Review Report states:

*At this stage the Commission does not have sufficient information or confidence to determine the merits of the proposal sufficient for a determination of approval.*
72. Further, the PAC made 15 recommendations regarding additional work and assessments required to be carried out prior to the determination being made. These recommendations are set out on pages 52-54 of the PAC's First Review Report and are in relation to water/subsidence, upland swamps, socio-economics, noise, air, flooding and traffic.
73. The PAC's First Review Report recommended that a risk assessment panel be established and that an integrated risk assessment be undertaken, particularly focusing on links between subsidence and water (both groundwater and surface water) impacts from mining. The PAC also recommended that further monitoring and baseline data collection for the upland swamps be undertaken; and collection of additional baseline data and monitoring of the impacts to the swamps, through mining induced changes to the groundwater supporting the swamps. They also recommended that a more definitive policy be developed regarding triggers for offsets and mitigation measures be made available for consideration by the risk assessment panel.



## 4.2 The Commission's Second Review Report

74. On 31 March 2016, the PAC published its Second Review Report to the Department. The Report identified key issues relating to environmental and community impacts. The PAC's concerns included: "*risk of water loss, risk to upland swamps, noise impacts on nearby residents and along Bellambi Lane, potential hydrological impacts and loss of ecosystem functions*". The PAC concluded that from the information presented to it, these issues have not been satisfactorily resolved.
75. The PAC's Second Review Report stated that the potential for and degree of loss of surface water flow due to subsidence and cracking remains uncertain. The PAC noted that long term operation and management costs of mitigation measures after mine closure have not been considered. The PAC also concluded that the magnitude of water loss is uncertain and considered this a high-risk situation.
76. In relation to economics, the PAC acknowledged that the Preferred UEP Application may generate short term benefits including up to 300 jobs for five years, about \$23 million in royalties to the NSW Government, \$85 million capital investment and other direct and indirect flow on effects. However, the PAC noted that there were some external costs which had not been included in the economic assessment.
77. Page 45 of the PAC's Second Review Report states:
- On the basis of all the information provided, the Commission is of the view that the social and economic benefits of the project as currently proposed are likely outweighed by the magnitude of impacts to the environment...*
78. The PAC recommended that any further consideration of the proposal should have regard to the issues raised in the Second Review Report.

## 4.3 The Department's Assessment

79. Section 1.5 and Table 2 of the Department's FAR provide a chronology of the assessment history.
80. Under section 4.6 of the EP&A Act, certain functions of the Commission are to be exercised by the Planning Secretary on behalf of the Commission, including "*undertaking assessments of the proposed development and providing them to the Commission (but without limiting the assessments that the Commission may undertake)*". The Planning Secretary's assessment of the Project is set out in the Department's FAR, and paragraphs 4.3.1 to 4.3.3 below.
81. Accordingly, the Commission considers that it is permitted to take into account the Department's FAR, but that it should be weighed in the same manner as the other Material referred to below in section 4.5 of this Statement of Reasons. To the extent that any policy outside of the EP&A Act purports to require the Commission to give the Department's FAR greater weight than the other Material, the Commission has not applied that policy.

### 4.3.1 Department's Preliminary Assessment Report

82. The Department's PAR, dated 11 December 2014, assessed the Applicant's Preferred UEP Application. The Department concluded:
- On balance, the Department believes that the project's benefits outweigh its residual impacts, that it is in the public interest and should be approved, subject to stringent conditions.*

### 4.3.2 Department's Addendum Report

83. As described in paragraph 16, the PAC completed its review of the Preferred UEP Application in April 2015 and concluded that it did not have sufficient information or confidence to make a determination. The Department's Addendum Report (**Department's AR**), dated November 2015, was produced subsequent to receipt of additional studies commissioned by the Applicant to clarify the residual matters.

84. The Department's AR concludes:

*The Department has carefully weighed the impacts of the project against its social and economic benefits. On balance, the Department is satisfied that the project's benefits substantially outweigh its residual costs, that it is in the public interest and should be approved, subject to strict conditions of consent.*

#### 4.3.3 Department's Final Assessment Report

85. The Department's FAR, dated 14 September 2020, was prepared to assess the merits of the Revised UEP Application. The Department considered changes to the Application, with regard to the Commission's Second Review Report, relevant statutory obligations, supplementary information provided by the Applicant, public submissions received and submissions by government agencies and community groups address the key issues.

86. Paragraph 266 of the Department's FAR states:

*Overall, the Department considers that the benefits of the Revised UEP outweigh its residual costs, that the project is in the public interest and is approvable, subject to strict conditions of consent.*

#### 4.4 The Commission's Meetings

87. As part of its determination, the Commission met with various organisations and persons and undertook site inspections as set out in Table 1. Transcripts and notes of these meetings were made available on the Commission's website.

Table 1 – Commission's Meetings

Meeting	Date	Transcript/Notes Available on
Applicant	13 October 2020	21 October 2020
Resources Regulator	13 October 2020	19 October 2020
WCC	13 October 2020	19 October 2020
WSC	13 October 2020	19 October 2020
Department	14 October 2020	19 October 2020
Site Inspection	16 October 2020	30 October 2020
Public Hearing	19 October 2020 & 20 October 2020	28 October 2020
Locality Tour	20 October 2020	30 October 2020

##### 4.4.1 Council Comments

###### *Wollongong City Council*

88. The Commission met with WCC on 13 October 2020 to hear Council's views on the Project. In the meeting with the Commission, WCC stated that Council was generally satisfied with the reporting conditions proposed in the Department's FAR, the information provided as part of the Application and that it addressed the key concerns raised by WCC.
89. WCC subsequently provided a written submission on the Project dated 27 October 2020 objecting to the Project on the basis of community concerns in relation to increased heavy vehicle traffic, dust, noise, threats to the drinking water catchment, Aboriginal heritage sites and GHG emissions.
90. WCC in its submission also stated that if the Project is approved, the conditions of consent should require the completion of infrastructure at Russell Vale Colliery to protect residents from particulate and noise pollution before coal is extracted.

91. WCC also requested that the Applicant fulfill the outstanding consent conditions of the 1989 and 1990 development approvals, including the payment of a security bond to WCC, the remediation of the Russell Vale Emplacement Area to an agreed final landform and the dedication of a parcel of golf course land to WCC.
92. The Commission has given consideration to WCC's objection in section 4.9 below. The Commission addresses the Applicant's Compliance History in section 4.6.6 below.

#### *Wollondilly Shire Council*

93. The Commission met with WSC on 13 October 2020 to hear Council's views on the Project. WSC stated that they recognise the contribution of mining to the economy and local employment provided its impacts are adequately managed, in particular the Project's impacts on the Sydney drinking water catchment. Council also noted that its key concerns related to the management of water resources, groundwater and surface water.

#### **4.5 Material Considered by the Commission**

94. In making its determination in relation to the Project, the Commission has carefully considered the following material (the **Material**) along with the other documents referred to in this Statement of Reasons:
  - the Director-General's Requirements (**DRG**), dated 18 August 2009;
  - the Applicant's Environmental Assessment (**EA**), dated 8 February 2013;
  - all public submissions on the EA made to the Department during public exhibition;
  - all Government Agency comments on the EA;
  - the Applicant's PRP, dated 24 September 2013, including the Applicant's RtS;
  - all public submissions on the Applicant's PPR and RtS;
  - all Government Agency comments on the Applicant's PPR and RtS;
  - the Applicant's Residual Matters Report (**RMR**), dated 20 June 2014;
  - all Government Agency comments on the Applicant's RMR;
  - the groundwater, surface water and subsidence peer reviews prepared for the Department;
  - the Department's PAR, dated 11 December 2014, including material considered in that report;
  - the Commission's First Review Report, dated 2 April 2015;
  - the Department's AR, dated 10 November 2015;
  - the Commission's Second Review Report, dated 31 March 2016;
  - the Applicant's RPPR, dated July 2019;
  - the Department's FAR, dated 14 September 2020;
  - the Department's draft Development Consent, dated 14 September 2020;
  - the Resources Regulator's Confirmation of Position letter, dated 16 October 2020;
  - all speaker comments made to the Commission at the Public Hearing held on 19 October 2020 and 20 October 2020;
  - the Applicant's response to questions on notice, dated 27 October 2020;
  - the Applicant's response to the Public Hearing, dated 2 November 2020;
  - all written comments received by the Commission up until 5pm, 2 November 2020;
  - the Resources Regulator's response to the Commission (**RR Response**), dated 9 November 2020;
  - the Department's response to the Commission (**Department's Response**), dated 16 October 2020;
  - the IAPUM response to the Commission (**IAPUM Advice**), dated 22 November 2020;
  - the Applicant Response to IAPUM Advice, dated 30 November 2020; and
  - all written comments on the RR Response, Department's Response and IAPUM Advice (**Additional Material**) up until 5pm, Monday 30 November 2020.

## 4.6 Statutory Context

### 4.6.1 Permissibility

95. Section 3.2.1 of the Applicant's RPPR states that the Wollongong Local Environment Plan 2009 (**LEP**) and Wollondilly LEP 2011 both apply to the Project. According to the Applicant's RPPR the Project is located on land zoned SP2, E2 and RU1. The Commission notes that part of the Site is also located on land zoned E3.
96. The Commission notes that under the Wollongong LEP 2009 and Wollondilly LEP 2011, mining is prohibited on land zoned SP2, E2, E3 and RU1. However, clause 7(1) of *State Environmental Planning Policy (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)* provides that 'underground mining carried out on any land' is permissible with development consent.
97. The Commission therefore agrees with the Department in Table C1 of the Department's FAR and finds that the Project is permissible on the subject land.

### 4.6.2 Surrender of Consent under section 4.63 of the EP&A Act

98. Paragraph 53 of the Department's FAR states:

*If the Revised UEP is approved, WCL would surrender the Russell Vale Preliminary Works Project development consent and all mining operations on the site would be regulated under a single consolidated contemporary development consent.*
99. The Commission agrees that this outcome is beneficial and has therefore imposed Condition A16 and A17 which state that upon commencement of the Project, the Applicant must surrender the existing development consent for the Russell Vale Preliminary Works Project (MP10\_0046). The Commission notes that upon commencing development under the Project consent, and before the surrender of the existing development consent required under condition A16, the conditions within the Project consent prevail to the extent of any inconsistency with the conditions of MP10\_0046.

### 4.6.3 Integrated and other NSW Approvals

100. As per section 4.4 of the Department's FAR, the Commission notes the Department has consulted with the relevant government authorities that are responsible for providing integrated and other approvals. The Commission acknowledges that the Applicant may also require other approvals which are not integrated into the SSD process, including those listed in paragraph 57 of the Department's FAR.

### 4.6.4 IESC Advice

101. The Independent Expert Scientific Committee on Coal Seam Gas and Large Coal Mining Development (**IESC**) provided advice on the Project in response to requests from the Department and PAC. The Department's consideration of the IESC advice is set out in section 5.5 and Table 2 of the Department's FAR.
102. The Commission agrees with the Department's assessment and is of the view that the IESC recommendations have been addressed by the Applicant.

### 4.6.5 Commonwealth Approvals

103. The Commission notes that on 5 August 2020, the Applicant referred the Project to the Commonwealth Minister for the Environment under the *Environment Protection and Biodiversity Conservation Act 1999 (EPBC Act)* as stated by the Department in paragraph 66 of the Department's FAR. The Commission also notes that on 2 September 2020, the Commonwealth declared the Revised UEP to be a 'controlled action' due to its potential impacts on Matters of National Significance (**MNES**).
104. Paragraph 67 of the Department's FAR states:

*Given the late stage in the NSW assessment process that the Revised UEP was referred to the Commonwealth and deemed a 'controlled action', the project cannot be assessed under the Bilateral Agreement under section 45 of the EPBC Act between the Commonwealth and State (NSW). The Revised UEP will be assessed and determined separately by the Department of Agriculture, Water and the Environment (DAWE) and the Commonwealth Minister for the Environment using a "Public Environment Report" assessment approach.*

105. The Commission agrees with the Department's assessment and acknowledges that the Project will not be assessed under the Bilateral Agreement and will need to be assessed and determined separately by the Commonwealth Minister for the Environment and DAWE.

#### 4.6.6 Compliance History

106. Paragraph 258 of the Department's FAR states:

*The Department notes that from 21 December 2019, WCL has been in non-compliance with the terms of the Order issued on 16 December 2016 (and modified on 15 June 2018 and 15 July 2019) for failing to implement the Bellambi Gully diversion works required by its existing PWP consent. The Department takes non-compliance issues seriously and confirms that on the 23 July 2020 the Department's Compliance Branch issued a Penalty Notice to WCL for breaching the Order. Further, a new Order was issued to conduct detailed designs and construct the works within 12 months.*

107. The Commission received public submissions regarding the Applicant's regulatory compliance history and suggesting that the Applicant was not a fit and proper person in respect of the Project. The Commission notes that there is no fit and proper person test in respect of development consents and that matters such as the identity of an applicant or past planning law breaches have been found to be irrelevant considerations for consent authorities such as the Commission. The planning law is concerned with land use, not the user. The Commission also acknowledges that the EP&A Act contains open standing provisions regarding the enforcement of that Act such that any person may take proceedings seeking to remedy or restrain a breach.

#### 4.7 Mandatory Considerations

108. In determining this application, the Commission is required by section 4.15(1) of the EP&A Act to take into consideration such of the following matters as are of relevance to the development that is the subject of the Application (**mandatory considerations**):

- the provisions of:
  - any environmental planning instrument (**EPI**);
  - any proposed instrument that is or has been the subject of public consultation under the EP&A Act and that has been notified to the Commission (unless the Planning Secretary has notified the Commission that the making of the proposed instrument has been deferred indefinitely or has not been approved);
  - any development control plan (**DCP**);
  - any planning agreement that has been entered into under s 7.4 of the EP&A Act, and any draft planning agreement that a developer has offered to enter into under s 7.4;
  - the *Environmental Planning and Assessment Regulations 2000* (**Regulations**) to the extent that they prescribe matters for the purposes of s 4.15(1) of the EP&A Act;
- that apply to the land to which the Application relates;
- the likely impacts of the development, including environmental impacts on both the natural and built environments, and social and economic impacts in the locality;
- the suitability of the site for the development;
- submissions made in accordance with the EP&A Act and Regulations; and
- the public interest.



In accordance with s 4.15(1), the Commission has considered the mandatory considerations. They are addressed in the following sections.

109. The mandatory considerations are not an exhaustive statement of the matters the Commission is permitted to consider in determining the Project. To the extent that any of the Material does not fall within the mandatory considerations, the Commission has considered that Material where it is permitted to do so, having regard to the subject matter, scope and purpose of the EP&A Act.

#### 4.7.1 Relevant Environmental Planning Instruments

110. Per paragraph 59 of the Department's FAR, relevant EPIs include:
- *State Environmental Planning Policy (Sydney Drinking Water Catchment) 2011 (Sydney Drinking Water Catchment SEPP)*;
  - Mining SEPP;
  - SRD SEPP;
  - *State Environmental Planning Policy (Infrastructure) 2007 (Infrastructure SEPP)*;
  - *State Environmental Planning Policy No 33 – Hazardous and Offensive Development (SEPP 33)*;
  - *State Environmental Planning Policy No 44 (Koala Habitat Protection) (SEPP 44)*;
  - *State Environmental Planning Policy No 55 – Remediation of Land (SEPP 55)*;
  - *Wollongong LEP 2009*; and
  - *Wollondilly LEP 2011*.
111. The Commission agrees with the Department's assessment of EPIs set out in Appendix D of the Department's FAR. The Commission therefore adopts the Department's assessment but has also further addressed some of the EPIs, in particular the Sydney Drinking Water Catchment SEPP and cl 14 of the Mining SEPP, in the reasons below.

#### 4.7.2 Relevant Development Control Plans

112. The Commission notes that because of clause 11 of the SRD SEPP, development control plans (DCP) do not apply to SSD. The Commission is therefore of the view that DCPs do not apply to the Project.

#### 4.7.3 The Likely Impacts of the Development

113. The likely impacts of the Project have been considered in section 4.9 of this report.

#### 4.7.4 The Suitability of the Site for Development

114. The Commission has considered the suitability of the Site. The Commission finds that the Site is suitable for the following reasons:
- the Site has a previous history of mining operations and there is existing mining infrastructure and existing disturbance within the Site;
  - adverse impacts on surrounding dwellings have been minimised and would be further managed and mitigated by the imposed conditions of consent;
  - impacted swamps would be offset in accordance with the Biodiversity Offsets Scheme of the Biodiversity Conservation Act 2016 (BC Act);
  - impacts on water resources would be minimised and mitigated;
  - the proposed extraction of coal resources at the Site is the orderly and economic use and development of land; and
  - the development of the Site for the purpose of coal mining will allow the social and economic benefits to be realised.

#### 4.7.5 Submissions

115. Section 3 of this report sets out the matters raised in the submissions made to, and considered by, the Commission. Consideration has been given to these submissions in the Commission's assessment of the Project as set out in the Key Issues section of this report (see section 4.9). For the reasons set out in this Statement of Reasons, the Commission considers that the matters raised in submissions do not preclude the grant of development consent and that the matters can be satisfactorily addressed by the conditions of consent imposed by the Commission.

#### 4.7.6 The Public Interest

116. The Commission has considered the public interest in section 4.9.8 of this report.

#### 4.8 Additional Considerations

117. In determining this application, the Commission has also considered:

- *NSW Noise Policy for Industry (NPfI)*;
- *Interim Construction Noise Guideline (ICNG)*;
- *NSW Road Noise Policy (RNP)*;
- *NSW Aquifer Interference Policy (AIP)*;
- *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (EPA, 2016) (**Approved Methods**);
- *NSW Climate Change Policy Framework (CCPF)*;
- *NSW Risk Assessment Guideline for Groundwater Dependent Ecosystems* (NOW, 2012) (**GDE Guideline**);
- *Guidelines for the economic assessment of mining and coal seam gas proposals* (NSW Government, 2015);
- *Social Impact Assessment Guideline for State Significant Mining, Petroleum Production and Extractive Industry Development (SIA Guideline)*; and
- *NSW Net Zero Plan Stage 1: 2020–2030 (Net Zero Plan)*.

#### 4.9 Key Issues

##### 4.9.1 Subsidence

118. The Commission acknowledges that the Project now proposes mining via bord and pillar mining technique only, with workings designed to be long term stable with minimal subsidence impacts. The Commission understands that bord and pillar is a mining method comprising of a series of self-supporting roadways (or bords) within the coal seam leaving a grid of pillars of unmined coal which are designed to be stable in the long term. The Commission is of the view that that the bord and pillar mining method is more stable than longwall mining and agrees with the Department in paragraph 43 of the FAR that this mining method is unlikely to cause significant surface subsidence or significant interaction with the overlying coal seams.

119. The Commission has given consideration below to whether the proposed bord and pillar mining without subsequent extraction of the pillars could contribute to further subsidence caused by mined coal seams above the Wongawilli Seam targeted by the Project. The Commission has also given specific consideration to the potential impacts of subsidence on built features, geological structures, Cataract Reservoir and upland swamps.

120. The Commission notes a difference in terminology between the Applicant's submissions and the Department's FAR. The Applicant describes the proposed bord and pillar mining method without subsequent extraction of the pillars as 'first workings'. The Resources Regulator and the Department classifies it as 'second workings' insofar as an Extraction Plan must be developed prior to mining. The Commission has adopted the Department's and Resources Regulator's terminology.

121. The Commission acknowledges that some written submissions were supportive of the Applicant’s proposal to revise the mining method to bord and pillar in order to minimise subsidence impacts as referenced in paragraph 61. The Commission also notes that there was still concern from the public regarding the potential risks and impacts associated with subsidence (see paragraph 59).

### **Subsidence Assessments**

122. Table 2 below sets out the assessments and advice on subsidence considered as part of the Commission’s assessment of the Project.

*Table 2 – Summary of subsidence assessments and advice for the Project*

<b>Document</b>	<b>Prepared by</b>	<b>Date</b>
Subsidence Assessment	SCT Operations Pty Ltd ( <b>SCT</b> )	July 2019
Subsidence Assessment Independent Peer Review	B K Hebblewhite Consulting	October 2019
IESC November Advice	IESC	November 2019
Quantitative Assessment of the Risk of Pillar Failure ( <b>Quantitative Assessment</b> )	SCT	January 2020
IESC March Advice	IESC	March 2020
Quantitative Assessment Peer Review	B K Hebblewhite Consulting	7 April 2020
Revised Quantitative Assessment	SCT	12 June 2020
Supplementary Peer Review	B K Hebblewhite Consulting	15 June 2020
IAPUM Advice	IAPUM for the Commission	23 November 2020
Response to IAPUM Advice	SCT	29 November 2020
Response to IAPUM Advice Peer Review	B K Hebblewhite Consulting	29 November 2020

### **Subsidence Effects**

#### **Wongawilli Seam**

123. In relation to predicted subsidence effects on the Wongawilli Seam, paragraph 101 of the Department’s FAR states:

*Using the UNSW pillar design approach, SCT confirmed that the 30 m wide pillars in the Wongawilli Seam at 380 m depth have a less than 1 in 100,000 (0.001%) probability of failure. On the scale used by the NERAG, this equates to less than an “extremely rare” likelihood level. Professor Hebblewhite considered such a probability of failure to be at least consistent with the IESC use of the terminology of “extremely rare” or “negligible risk”.*

124. Paragraph 102 of the Department’s FAR states that SCT identified a small area at the eastern margin of the proposed mining area where the 25 m wide pillars at 320 m depth would have a less than 1 in 1,000 (0.1%) probability of failure. According to the Department, the potential for failure of these pillars is assessed as “rare” on the NERAG scale. The Commission agrees with this finding.

#### **Risk of Pillar Failure in the Overlying Balgownie and Bulli Seams**

125. In relation to the risk of pillar failure in the overlying Balgownie and Bulli Seams, paragraph 103 of the Department’s FAR states:



*SCT indicated that for the overlying pillars to present a risk, the remnant pillars in these seams need to be still standing and be marginally stable so as to fail under the slightly modified stress generated by proposed mining in the Wongawilli Seam. If remnant pillars have already collapsed in these seams, the surface has already subsided and there is considered to be no potential for further pillar instability, further subsidence or further impact to surface features, irrespective of any proposed bord and pillar workings in the Wongawilli Seam.*

126. In relation to the Balgownie Seam, paragraph 104 of the Department's FAR states:

*Historical records of mining in the Balgownie Seam indicate the seam was fully collapsed at the completion of mining and there are no areas of uncertain pillar stability in the areas of this seam above proposed mining areas. It is therefore considered that there is no potential for further subsidence to occur from the Balgownie Seam.*

127. The Commission agrees with the Department's assessment above that there are no areas of uncertain pillar stability in the areas of the Balgownie Seam above the proposed mining areas. The Commission accepts that there is therefore no potential for further subsidence to occur from the Balgownie Seam.

128. In relation to the Bulli Seam, paragraph 104 of the Department's FAR states:

*SCT indicates that this is also the case for at least seven of the fourteen panels associated with the Bulli Seam, where available evidence indicates the goaf areas of these panels have already fully subsided. The status of the pillars in the other seven panels is not known definitively, however SCT considers that these panels are also "almost certainly already subsided" given the same or similar mining systems were used in all the Bulli Seam goaf areas above the proposed mining areas.*

129. Paragraph 106 of the Department's FAR stated that SCT's analysis implied that areas indicated on the mine plans and record tracings as goaf have already collapsed with no potential for future instability with or without the proposed mining in the Wongawilli Seam.

130. According to paragraph 107 of the Department's FAR, SCT's Quantitative Assessment indicated:

*...the estimated probability of the proposed mining in the Wongawilli Seam to cause instability of these pillars would be less than 1 in 100 (1%). SCT predicted that the maximum subsidence resulting from instability of any remnant pillars in the Bulli Seam would be 850 mm.*

131. The Department accepted SCT's advice that it is highly unlikely that large areas of remnant pillars exist in the seven Bulli Seam panels as stated in paragraph 109 of the Department's FAR. The Department also accepted that if the remnant pillars do exist, there is a very low probability that the proposed mining in the Wongawilli Seam would result in collapse of these pillars.

132. The IAPUM Advice stated that SCT's Quantitative Assessment addresses the extent of the impacts adequately. The IAPUM Advice states:

*The Panel concurs with SCT that it is very unlikely that there are pockets of pillars still standing in the 14 goaf areas identified in the SCT quantitative risk assessment report.*

*Notwithstanding this, the Panel concurs with the peer reviewer that endeavours should be made to confirm that there are no standing pillars in the goaves. This is for reasons relating to managing operational risks as well as for managing subsidence impacts.*

133. The Commission notes that the Resources Regulator in its meeting with the Commission on 13 October 2020 raised concerns relating to mine stability due to the possible existence of un-collapsed marginally stable pillars. The Resources Regulator in its Confirmation of Position letter to the Commission, dated 16 October 2020 stated:

*...the Resource Regulator's position remains that the identified risks can be suitably and appropriately managed post approval provided that appropriate inquiries and investigations are undertaken by the proponent to further identify and define the existence and distribution of the marginally stable pillars in the overlying Bulli Seam.*

134. The IAPUM Advice stated that the IAPUM agrees with the Resources Regulator's position expressed on 16 October 2020 and referenced above in paragraph 133.
135. The Department, in paragraph 109 of the FAR concluded:
- The Department accepts SCT's advice that it is highly unlikely that large areas of remnant pillars exist in the seven Bulli Seam panels. Further, the Department accepts that if the remnant pillars do exist, there is a very low probability that the proposed mining in the Wongawilli Seam would result in collapse of these pillars. However, ... SCT has taken a highly conservative approach to assess the potential subsidence impacts if this situation was to occur. As suggested by SCT, the Department has recommended a condition requiring the status of pillars be determined during roadway development. The Department notes that the recommended subsidence monitoring and management measures have been development based on worst-case scenarios.*
136. In relation to potential conditions of consent, the IAPUM Advice stated:
- A maximum incremental vertical subsidence of 100 mm (corresponding to an incremental strain of ~0.5 mm/m) would be consistent with not exceeding the predictions presented in SCT (2020b) but leaves little opportunity for unplanned deviations, which are a feature of geotechnical engineering. On the other hand, the Panel's upper limit of 300 mm (~1.5 mm/m) may be generous.*
- Based on historical performance and geotechnical considerations, the Panel considers it very unlikely that such small changes could result in an impact of catastrophic proportions.*
137. The Commission notes that the Applicant's Response to the IAPUM Advice dated 30 November 2020 includes supplementary views from SCT and B K Hebblewhite Consulting as set out in Table 2. The Commission notes that B K Hebblewhite endorses the recommendation of the IAPUM regarding the increase in the threshold level of acceptable incremental vertical subsidence to 300mm. SCT Operations also stated that adopting a threshold of 300mm of vertical subsidence for significant swamp impacts is accepted as more credible than 100mm.
138. The Commission agrees with the SCT Quantitative Assessment, Department's assessment and the IAPUM Advice above, that it is highly unlikely that there are pockets of pillars still standing in the fourteen panels associated with the Bulli Seam. The Commission is of the view that if the remnant pillars do exist, there is a very low probability that the proposed mining in the Wongawilli Seam would result in collapse of these pillars as stated by the Department in paragraph 134 above.
139. The Commission acknowledges that concerns were raised by the public in relation to the risks and impacts associated with the potential collapse of pillars in the overlying Bulli Seam. The Commission agrees with the Department, SCT Quantitative Assessment and the IAPUM Advice that endeavours should be made to confirm that there are no standing pillars in the goaves. This is for reasons relating to managing operational risks as well as for managing potential subsidence impacts. If remnant pillars do exist, the Commission agrees with the Department's assessment that there is a very low probability that the proposed mining in the Wongawilli Seam would result in collapse of these pillars.
140. The Commission has therefore imposed Condition C10 which requires the Applicant to prepare an Extraction Plan in consultation with the RR, DPIE Water and WaterNSW. Condition C10 has a specific requirement for the Applicant to prepare a Subsidence Monitoring Program in consultation with the RR. As part of the Subsidence Monitoring Program the Applicant will be required to confirm the status of the Bulli Seam goaf areas referenced above. The Commission understands that pending the status of the Bulli Seam goaf areas the Applicant would be required to re-evaluate any mine plans accordingly to ensure that subsidence is appropriately managed. The Commission also notes that an objective of the Subsidence Monitoring Program is for the Applicant to ensure that any subsidence complies with the approved limits imposed by the Commission as set out below.

141. The Commission accepts the IAPUM Advice referenced in paragraph 136 above and has imposed a maximum incremental vertical subsidence limit of 300mm. The Commission acknowledges the concerns raised by the public in relation to subsidence impacts and is of the view that this requirement will assist in ensuring a stable bord and pillar layout is established in the Wongawilli Seam and that subsidence impacts are minimised. The Commission has therefore included a vertical subsidence limit as a performance measure in Condition C7 of the consent.

### *Geological Structures*

142. In relation to the Corrimal Fault and Dyke D8, paragraphs 113, 114 and 115 of the Department's FAR state:

*The updated Subsidence Assessment indicates that the proposed bord and pillar panels avoid interaction with these geological structures where possible and the limited interaction is not expected to extend beyond the immediate vicinity of individual roadways*

*Professor Hebblewhite, agrees that "the proposed mine workings in the Wongawilli Seam are not likely to unclamp or in any way mobilise any of these structures" and that "where any of the pillar panels intersect any geological structures there may be localised poor ground conditions but this is not expected to have any regional ramifications".*

*IESC concluded that it "is confident that these two geological features are unlikely to contribute to increased cumulative water losses".*

143. Paragraph 116 of the Department's FAR states that the Department accepts that the extent of existing information on geological structures in the vicinity of the proposed mining provides a high level of confidence in predictions, and accepts the conclusions of SCT, Professor Hebblewhite and the IESC. The Commission agrees with the Department's assessment and accepts the conclusions of SCT, Professor Hebblewhite and the IESC.

### *Subsidence Impacts*

#### *Built Features*

144. According to paragraph 118 of the Department's FAR, the following built features are located within the vicinity of the Project:

- Mount Ousley Road;
- Picton Road Interchange;
- Telecommunications infrastructure on Brokers Nose;
- 330kV and 132kV powerlines; and
- Two 33kV powerlines.

145. Paragraph 119 of the Department's FAR states that the probability of additional subsidence and impacts on the 330kV and 132kV powerline pylons from the Project is low. The Department accepts that potential impacts to these transmission pylons and other built features can be monitored and managed via updated Built Features Management Plans.

146. The Commission agrees with the Department's assessment and has imposed Condition C10(g)(ii) which requires the Applicant to prepare a Built Features Management Plan in consultation with the Resources Regulator to manage the potential subsidence impacts of the proposed underground workings on built features.

#### *Cataract Reservoir*

147. Paragraph 122 of the Department's FAR states that the Project involves mining inside the Dam Safety NSW (**DS NSW**) Notification Area for the Cataract Reservoir and that under the provisions of Part 8 section 48(4) of the *Dam Safety Act 2015*, a consent authority must, before granting consent for carrying out any mining operations, refer the application to DS NSW and take into consideration any matters that are raised by DS NSW.

148. The Commission acknowledges that the public raised concern regarding the potential impacts of the Project on the Cataract Reservoir. The Commission also notes that the Project was referred to DS NSW for review and that DS NSW confirmed that it has no concerns with the development of bord and pillar workings within the Notification Area for Cataract Reservoir (see paragraph 123 of the Department's FAR).
149. Paragraph 122 of the Department's FAR states that the Applicant should be required to implement a comprehensive monitoring program and has also recommended that the existing performance measures for the Cataract Reservoir, requiring negligible leakage from the reservoir and negligible reduction in the water quality of the reservoir, are retained.
150. The Commission accepts the advice from DS NSW and agrees with the Department's assessment above. The Commission has therefore imposed Condition C1 which requires the Applicant to comply with specific performance measures to ensure negligible impacts on the water quality of Cataract Reservoir.

### *Upland Swamps*

151. The Commission notes that Biosis prepared an Ecological Impact Assessment on behalf of the Applicant, dated July 2019. Paragraph 129 of the Department's FAR states that based on SCT's predictions, the proposed mine plan would not result in any perceptible surface subsidence and that Biosis concluded that impacts to upland swamps are predicted to be negligible. The Department's FAR also stated that Biosis considered the proposed mining would result in negligible risk of impact to the three threatened species known to occupy coastal upland swamps, including the prickly bush-pea, giant burrowing frog and the giant dragonfly.
152. The Commission also notes that the Biodiversity Conservation Division of the Department (**BCD**) accepted the Applicant's conclusion referenced above and in its advice on the Project, BCD agreed that the proposed bord and pillar coal extraction method significantly reduces the risk of subsidence on sensitive environmental features, including swamps, as stated in paragraph 129 of the Department's FAR.
153. Paragraph 131 of the Department's FAR states:
 

*the IESC advised that if the likelihood of pillar failure is "extremely rare" and does not result in the catastrophic loss of a single swamp, then the IESC would not regard this proposal as being of material concern. The quantitative risk assessment calculated the probability of pillar failure in the Wongawilli Seam using the UNSW pillar design approach as being less than 1 in 100,000 (0.001%), which equates to "extremely rare" on the NERAG scale. This probability of failure is considered to be consistent with the IESC use of the terminology of "extremely rare", posing "negligible risk".*
154. The Commission notes that the IAPUM Advice states:
 

*The IESC has not defined what constitutes 'catastrophic loss of a single swamp'. Based on experience in the Sydney Basin Biogeographic Region, the Panel associates catastrophic loss with a reduction in the capacity for a swamp to retain its water table and soil moisture that is so severe as to cause the swamp flora species to be replaced by species representative of dry heath or woodland.*

The Commission agrees with the IAPUM Advice above and adopts this definition when referring to a 'catastrophic' loss of a swamp.
155. The IAPUM Advice notes that four swamps that have been subjected to estimated tensile strains of around 10.5 mm/m. The Commission understands that these swamps are CCUS1, CCUS6, CCUS20 and CCUS21.
156. The Applicant's Response to the IAPUM Advice states that the flexible nature of bord and pillar mining systems means risks associated with the low level of predicted subsidence can be effectively managed to avoid significant risks, including in areas below the four swamps identified by the IAPUM.

157. According to paragraph 134 of the Department's FAR, the Department accepts that the Applicant has employed all feasible and reasonable measures to avoid swamp impacts by adopting the bord and pillar mining method and considers that this substantially reduces the risk of impact to swamps as a result of the proposal. Based on the subsidence predictions and outcome of the quantitative risk assessment, the Department considers that impacts to swamps as a result of the proposed mining would be negligible. The Commission agrees with the Department and adopts the Department's assessment.
158. In line with the NSW Government *Swamp Offset Policy 2016*, the Department has recommended a subsidence performance measure preventing greater than negligible environmental consequences to upland swamps in the vicinity of the proposed mining as stated in paragraph 139 of the Department's FAR. The Commission notes that the ongoing subsidence monitoring program is supported by BCD as stated in paragraph 140 of the Department's FAR.
159. The Commission notes that the IESC indicated that ongoing monitoring of surface and shallow subsurface processes near potentially affected swamps and reference sites should continue after mining ceases. The Commission agrees with the IESC that this should be undertaken for a period of 12 months after mining to confirm that no delayed significant impacts are occurring, or if they do, until recovery is complete.
160. The Department has recommended that an updated Upland Swamp Management Plan (**USMP**) be prepared as part of the Extraction Plan. The Commission agrees with the Department and has imposed Condition C10(g)(v) which requires the preparation of a Swamp Monitoring Program in consultation with BCD, DPI Water and WaterNSW.
161. Paragraph 145 of the Department's FAR states that:
- While considered unlikely, in accordance with the Swamp Offset Policy, where swamp monitoring demonstrates that the actual impact is more than negligible and where the shallow groundwater does not return to its natural regime within 12 months, the Department has also recommended a condition requiring WCL to identify and retire a swamp offset equivalent to the actual impact within six months.*
162. The Commission agrees with the Department's assessment above and as a precautionary measure has imposed Condition C4 which requires the Applicant to provide a suitable offset to compensate for the subsidence impact or environmental consequence to the satisfaction of the Secretary. The Commission also imposes Conditions C5 and C6 which require the Applicant to provide a suitable offset for any biodiversity and swamps in accordance with the Biodiversity Offsets Scheme of the *Biodiversity Conservation Act 2016*.

## 4.9.2 Water Resources

### **Groundwater**

#### *Groundwater Assessment & Uncertainty Analysis*

163. The Commission notes that the Applicant provided a Groundwater Assessment jointly prepared by GeoTerra Pty Ltd and Groundwater Exploration Services Pty Ltd dated July 2019 (**Groundwater Assessment**) to predict the potential groundwater and base flow impacts for the Project. The Commission also notes that the Applicant provided a Revised Groundwater Assessment, dated 5 February 2020 (**Revised Groundwater Assessment**) to provide clarity around the model and additional context regarding the history of mining at Russell Vale and the various studies undertaken as part of the Project as stated by the Department in paragraph 158 of the FAR.
164. Paragraph 159 and 160 of the Department's FAR states that in accordance with recommendations made by DPIE-Water and the Independent Expert Panel for Mining in the Catchment (**IEPMC**), the Applicant commissioned an independent peer review of the Revised Groundwater Assessment and that this was prepared by Dr Noel Merrick and dated 3 February 2020 (**Groundwater Peer Review**). According to the Department's FAR, Dr Merrick concluded:



*...the Russell Vale Groundwater Model has been developed competently and is “fit for purpose” for addressing the potential environmental impacts from the proposed underground mining operations and for estimating indicative dewatering rates.*

165. According to paragraph 161 of the Department’s FAR, the Applicant commissioned an uncertainty analysis for the Revised Groundwater Assessment, dated 30 January 2020 (**Uncertainty Analysis**) prepared by HydroAlgorithmics Pty Ltd. Paragraph 163 of the Department’s FAR states that an independent peer review of the Uncertainty Analysis was conducted by Dr Frans Kalf of Kalf and Associates dated 22 January 2020 (**Uncertainty Analysis Peer Review**) which indicated that the analysis is considered to be suitable and valid.
166. The Commission agrees with the Department in paragraph 167 of the Department’s FAR and acknowledges that the Uncertainty Analysis has been undertaken in accordance with the IESC guidelines and to the satisfaction of the peer reviewer, Dr Kalf. The Commission agrees with the Department that the outcomes of the Uncertainty Analysis provide greater confidence in the predictions made in the Revised Groundwater Assessment.

### *Groundwater Predictions*

167. In relation to depressurisation, paragraph 168 of the Department’s FAR states that the Revised Groundwater Assessment indicated that the influence of the proposed bord and pillar mining would result in depressurisation of two separate regimes: within the Wongawilli Seam; and overburden above the Wongawilli Seam. Paragraph 170 of the Department’s FAR states that the Revised Groundwater Assessment indicated that the overlying Balgownie and Bulli seams have previously been mined and therefore significant depressurisation has already occurred.
168. In relation to baseflow losses, paragraph 171 of the Department’s FAR states that induced groundwater drawdown impacts are predicted to be limited to minor reductions in baseflow in Cataract Creek, Cataract River and Bellambi Creek. Paragraph 172 of the Department’s FAR notes that the average daily stream flow from Cataract Creek to Cataract Reservoir is 13 ML/d of which 4.1 ML/day (i.e. approximately 1,500 ML/year) is baseflow. The Department states that the cumulative baseflow reductions predicted for the Project are less than 0.7% of average existing annual baseflow. The Commission agrees with the Department’s assessment and is of the view that these baseflow reductions are therefore considered minor and unlikely to be observable for all practical purposes as stated in paragraph 173 of the Department’s FAR.
169. The Commission acknowledges that there were concerns raised at the Public Hearing and in written comments in relation to the potential impacts on Cataract Reservoir and its capacity to supply Sydney with drinking water (see paragraphs 30 and 31). In relation to the transfer of stored water within Cataract Reservoir to the underlying groundwater system, the Applicant’s Groundwater Assessment states “*Cumulative impacts on baseflow in Cataract Creek associated with all previous and currently proposed mining at Russell Vale are predicted to peak at 0.024ML/day (8.76 ML/year) and are therefore unlikely to be observable*”. The Commission accepts that cumulative impacts on baseflow in Cataract Creek are predicted to peak at 0.024ML/day.
170. The Commission notes that according to the Revised Groundwater Assessment, the maximum total annual groundwater inflow to the workings, including all previous mining impacts from the Russell Vale lease workings, is 288 ML/year, with the contribution from the proposed bord and pillar workings being up to 36.5 ML/year as stated in paragraph 176 of the Department’s FAR. The Commission acknowledges that these predictions are within the uncertainty range modelled as part of the Applicant’s Uncertainty Analysis.

171. The Commission acknowledges that there were concerns raised at the Public Hearing in relation to the discharge of excess water from the Site into Bellambi Gully (see paragraph 37). The Commission is of the view that surface water discharges from the Site should comply with discharge limits (both volume and quality) set for the development in any EPL. The Commission has therefore imposed Condition B15. The Commission has also set specific water management performance measures in Condition B16 to ensure that baseline channel stability is maintained (or improved) and that site-specific in-stream water quality objectives are developed in accordance with the ANZECC & ARMCANZ (2000) water quality guidelines.

172. In relation to groundwater recovery and future adit discharge, paragraph 187 of the Department's AR states:

*The Department accepts that the Revised UEP would not significantly change either the rate of flow from the adit or the quality of this water, when compared to the existing approved operations. The Department considers that treatment of this adit outflow water for different uses, including potable uses, is reasonable and feasible and believes the preparation and ongoing review of an Adit Water Discharge Management Plan would guide appropriate site specific and regional treatment options and funding arrangements.*

173. The Commission agrees with the Department's assessment above and finds that the Project would not significantly change either the rate of flow from the adit or the quality of this water, when compared to the operations under the Existing Approval. The Commission has imposed Condition B19 which requires the Applicant to prepare an Adit Water Discharge Management Plan, within 12 months of project approval, in consultation with WaterNSW and the EPA and to the satisfaction of the Secretary. Condition B20 imposed by the Commission requires the Applicant to implement the Adit Water Discharge Management Plan as approved by the Secretary. In response to concerns raised by the IESC and at the public hearing, the Commission has ensured that the Adit Water Discharge Management Plan covers mining and post-mining water quality impact prediction, avoidance, mitigation and monitoring measures.

174. In relation to cumulative groundwater impacts, the Commission acknowledges that the Applicant's Groundwater Assessment concluded that there is no cumulative depressurisation resulting from the Project and other adjoining mines. This is also set out in paragraph 190 of the Department's FAR. The Commission accepts the Applicant's conclusion above and agrees with the Department assessment.

175. In relation to impacts on water resources from pillar failure, the Commission agrees with the Department and is of the view that the risk of additional subsidence impacting water resources is low and, if realised, the magnitude of incremental impacts are small enough to be considered negligible, as stated in paragraph 194 of the Department's FAR.

176. In relation to the NSW AIP, the Commission notes that the Applicant undertook an assessment in accordance with the AIP and concluded that the criteria for minimal impact would not be exceeded and that the Project would meet the Level 1 impact thresholds of the AIP, as stated in paragraph 195 of the Department's FAR.

177. The Commission agrees with the Department's conclusion in paragraphs 211, 212 and 216 of the Department's FAR:

*The Department is satisfied that the current and proposed surface and groundwater monitoring programs are adequate to monitor and assess any impacts to water resources associated with the proposed project.*

*...the Department considers that the proposed bord and pillar mining method significantly reduces potential impacts on groundwater resources and stream baseflow, when compared to the previously proposed longwall mining method.*

*The Department considers that the current and proposed surface and groundwater monitoring programs are adequate to monitor and assess any impacts to water resources associated with the proposed project, and has recommended a condition requiring a comprehensive Water Management Plan.*

178. The Commission has therefore imposed Condition B17, which requires the Applicant to prepare a comprehensive Water Management Plan (**WMP**) for the Project, in consultation with BCD, WaterNSW, DPIE-Water and WCC, by suitably qualified and experienced experts. As part of the WMP, the Applicant would be required to prepare a Surface Water Management Plan and Groundwater Management Plan.

### **Water Licensing**

179. In relation to groundwater, paragraph 196 of the Department's FAR states that under the *Water Management Act 2000 (WM Act)*, the Applicant is required to hold a water access licence (**WAL**) for groundwater take within *the Sydney Basin Nepean Groundwater Source* in accordance with the *Water Sharing Plan for the Greater Metropolitan Region Groundwater Sources 2011 (Groundwater WSP)*.
180. Paragraph 197 of the Department's FAR states that the Applicant has confirmed that it currently holds a WAL for 515 ML/year and that the company has been advised that it has been successful in the bid for allocation for an additional 100 units (equating to 100 ML). The Commission agrees with the Department in its assessment which states that based on the predicted maximum groundwater inflow into the Russell Vale workings of 288 ML/year, for the period during and after the proposed mining, the Applicant currently holds a sufficient quantity of units in the Groundwater WSP.
181. In relation to surface water licencing, paragraph 199 of the Department's FAR states that the Applicant does not currently hold any licences for surface water use for the region and that they may require a WAL for up to 10.04 ML/year. Paragraph 202 of the Department's FAR states:

*...both the Department and WaterNSW consider that the induced surface water losses associated with the project are very minor and can be considered negligible in the context of the catchment and the applicable water source. The 10 ML/year is based on a maximum induced surface water take, is within the margin of error within the modelling and would not be able to be practically measured against background fluctuations.*

182. Paragraph 215 of the Department's FAR states:

*The Department accepts that there are a range of regulatory options to allow WCL to acquire sufficient surface water entitlements for the modelled minor baseflow and leakage volumes. Further, the Department accepts that predicted increases in groundwater inflow to the workings is minimal and that WCL currently holds sufficient WALs to account for this groundwater take.*

183. The Commission agrees with the Department's assessment above and has imposed Condition B12 which requires the Applicant to obtain all necessary water licences for the Project, including during rehabilitation and following mine closure. As referenced in paragraph 178 above, the Commission has also imposed Condition B16 which requires the Applicant to prepare a WMP, with a specific requirement to prepare a Site Water Balance for the Project.

### **Surface Water and Flooding**

184. The Commission acknowledges that there were concerns raised by the public regarding surface water and potential stormwater flooding and impacts on local water ways.
185. Paragraph 248 of the Department's FAR states that the Applicant completed updated site surveys and flood modelling to provide new, more practical stormwater management and flood mitigation designs. The Applicant's updated *Bellambi Gully Flood Assessment* (prepared by Cardno) was submitted to the Department on 5 June 2020.



186. According to paragraph 253 of the Department's FAR, the Applicant's flood modelling confirms that the flood depths and flood velocities would be significantly improved when compared with previous designs in all flood events with the exception of the probable maximum flood (**PMF**) events, where velocities would remain more or less the same. The Department stated that the most significant improvements are modelled to be during a 100-year Annual Recurrence Interval (**ARI**) when peak flow velocities would be reduced by 57 to 89% at key downstream locations, including Princes Highway culvert and overflow and the Bellambi Lane overflow.
187. The Commission agrees with the Department's assessment in paragraph 256 of the Department's FAR that the proposed revised stormwater management strategy would provide a better outcome in regard to controlling flood waters and improving on-site water quality, when compared to the previous designs.
188. The Commission has therefore imposed Condition B16 which requires the Applicant to "*Design, install and maintain flood levees to protect mining areas from a 100-year ARI flood event and to ensure no increased flooding impacts on roads or privately-owned land*". As stated in paragraph 178 above, the Commission has imposed Condition B17 which requires the Applicant to prepare a WMP. Under this condition, the Applicant would be required to give specific consideration to flooding protection works and managing flood risks.

### 4.9.3 Amenity

#### *Air Quality*

189. The Commission notes that there are potential environmental impacts caused by dust from wind erosion of coal and waste stockpiles, dust generated by traffic on unsealed roads and dust generated during the handling and transport of coal associated with the Project. The Commission acknowledges that there were a number of concerns from the public regarding air quality impacts caused by coal dust from the Project (see paragraphs 39 - 41).
190. Table 12 of the Department's FAR states that an Air Quality Assessment (prepared by ERM Australia Pacific), dated 12 July 2019 provided a modelling assessment for both the in-phase and full operating scenarios of the Project in accordance with EPA's *Approved Methods for the Modelling and Assessment of Air Pollutants in New South Wales* (2016).
191. The Department's FAR states that the EPA requested additional data be provided and further assessment of the worst-case operating scenario. The Commission notes that the Applicant provided this information in a technical response (Appendix 8 of the RtS – Part A) which satisfied the EPA that the Project could meet the relevant air quality guidelines.
192. The Commission agrees with the Department's assessment in Table 12 of the Department's FAR that the risks of adverse air quality impacts are low and can be adequately managed through the implementation of best practice mitigation, monitoring and management measures. The Commission agrees with the Department's recommended conditions requiring the Applicant to:
  - comply with contemporary air quality criteria;
  - implement all reasonable and feasible 'source-based' measures to minimise dust emissions on site;
  - continue to implement a real-time dust monitoring program and an active air quality management system to identify and manage potential exceedances; and
  - develop a comprehensive Air Quality and Greenhouse Gas Management Plan (**AQGGMP**).

193. The Commission is of the view that the potential air quality impacts have been adequately assessed and has imposed specific conditions to mitigate and manage the air quality impacts of the Project. The Commission therefore imposes Conditions B7 and B8 which set air quality criteria and operating conditions for the Project. The Commission notes that in the Applicant's Air Quality Assessment dated November 2012 it was observed that coal dust makes up a minor component of atmospheric dust levels. Under Condition B7, the Applicant will be required to ensure that the 24-hour and yearly averages of PM<sub>10</sub> and PM<sub>2.5</sub> levels meet standards in Condition B7, Table 2 that are equivalent to the current National Environment Protection Measures (NEPM). The Commission notes that the coal dust component of the Project's emissions is included within the limit set out in Condition B7. The Commission also imposes Condition B9 which requires the Applicant to prepare a detailed AQGGMP to the satisfaction of the Secretary. Condition B10 imposed by the Commission requires the Applicant to implement the AQGGMP.

### Noise

194. The Commission acknowledges that there were concerns raised at the Public Hearing and in written submission regarding the potential noise impacts resulting from the Project, including construction noise, operational noise and traffic noise (see paragraph 50 - 52).
195. The Commission notes that Section 7.3 of the Department's FAR describes the acoustic environment surrounding the surface facilities site and summarises the changes proposed by the Applicant to mitigate noise impacts. Paragraph 225 of the Department's FAR notes the Commission's previous comments relating to noise impacts:
- In its Second Review Report, the Commission considered that additional mitigation measures are required to reduce noise impacts from both the surface facilities site to private residences and truck traffic noise impact to residents along Bellambi Lane. In particular, the Commission raised concerns about noise impacts arising from truck queuing along the site access road.*
196. Paragraph 220 of the Department's FAR states that the Applicant's Noise Impact Assessment (prepared by Wilkinson Murray Pty Ltd) dated July 2019 was amended in response to the comments provided by the EPA and issues raised in the Second Review.
197. The Commission notes that the Noise Impact Assessment was amended to provide defined background noise levels (obtained using one full year of noise monitoring data collected from two monitors in 2016 and additional data obtained over a 12-day period in 2014) and present additional noise mitigation measures to reduce the acoustic impact of surface operations on the surrounding community.
198. In relation to construction noise, paragraph 234 of the Department's FAR states that the construction works are predicted to exceed the ICNG 'noise affected' management level at 10 representative receivers located immediately to the north (R1 to R6) and south (R7 to R10) of the surface facilities site, as well as at a local school.
199. Paragraph 235 of the Department's FAR states:
- Exceedances range from 1 to 16 dBA above the 'noise affected' management criteria. This would occur for a short duration during the construction of the closest bunds. However, results indicate that construction noise levels would comply with the ICNG 'highly noise affected' management level at all receivers.*
200. The Commission agrees with the Department's assessment that these construction works are necessary to minimise noise impacts for the remainder of the Project and would be undertaken over a very short duration (three months) during standard construction hours. The Commission has therefore imposed Condition D5 which requires the Applicant to prepare a Construction Management Plan which will require the Applicant to detail the measures to be implemented to minimise construction related noise.

201. In relation to traffic noise, the Commission notes coal from the surface facilities site has historically been delivered to the Port Kembla Coal Terminal using trucks via Bellambi Lane and then onto Memorial Lane and this would continue for the Project. However, the Applicant has committed to limiting the movement of laden outbound trucks to an average of 16 per hour between the hours of 7am to 6pm Monday to Friday and 8am to 6pm on Saturday as stated in paragraph 237 of the Department's FAR. The Commission notes that the Applicant has also committed to continue to enforce a voluntary speed limit along Bellambi Lane of 50 km/hr (sign posted speed limit is 60 km/hour).
202. According to the Noise Impact Assessment the Project would result in noise level increases above background levels of 2 dB during the day and 0.5 dB at night. The Noise Impact Assessment indicated that these increases meet the 2 dB increase identified in the *NSW Road Noise Policy (RNP)* as acceptable and considered to be barely perceptible to the average person.
203. Paragraph 226 of the Department's FAR sets out the noise mitigation measures identified by the Noise Impact Assessment and proposed to be adopted:
- existing bunds – extensions to five existing bunds and raising the height of three existing bunds;
  - container walls and noise barrier – construction of two container walls and 5 metre barrier;
  - new infrastructure layout – repositioning of secondary sizer;
  - acoustic treatments – installation of acoustic treatment to equipment and mobile fleet;
  - operational time restrictions – truck movements and the use of major plant and equipment typically restricted to daytime period only; and
  - speed limits – speed limits of 40 km/hr on site and 50 km/hr along Bellambi Lane.
204. The Commission agrees with the Department in paragraph 228 of the Department's FAR and considers the proposed measures represent feasible and reasonable mitigation and management measures to minimise noise impacts of the Project.
205. The Commission has therefore imposed Conditions B1 and B2 which require the Applicant to comply with operational noise criteria and set specific noise operating conditions. The Commission has imposed Condition B4 which states that the Applicant must prepare a Noise Management Plan for the Project, in consultation with the EPA and WCC to the satisfaction of the Secretary. As part of the Noise Management Plan the Applicant must ensure that best practice management is being employed and must minimise road traffic noise generated by employee commuter vehicles on public roads, particularly on Bellambi Road. The Commission has also imposed Condition B4(f) which requires the Applicant to limit the queuing of trucks outside the bund walls to minimise noise impacts on the local area.
206. The Commission has imposed Condition B3 which requires the Applicant to implement noise mitigation bunds, walls and barriers prior to the commencement of mining operations. The Commission is of the view that the implementation of noise mitigation prior to mining operations will ensure that noise impacts on the local area, in particular truck movements, are minimised.

### **Visual Impacts**

207. Table 12 of the Department's FAR notes that residential properties border the north, east and southern boundaries of the surface facilities site.
208. The Commission notes the Department's summary of the visual impact analysis undertaken for the Project at Table 12 of the Department's FAR. A Visual Amenity Assessment was prepared by Umwelt and was updated in the RtS to consider the visual impacts associated with the redesigned surface facilities site, including the rearrangement of the noise bunds and use of container noise walls. The Department's FAR states:

*The visual analysis indicated that the top of the proposed container noise wall would be visible to residents to the north and north-east of the site, however views would be filtered or obscured by existing established vegetation and topographic features. Umwelt proposed visual mitigation measures to reduce visual impacts of the noise walls, including planting of vegetation screening and painting the container wall in non-reflective natural grey/green tones to minimise contrast against the surrounding environment.*

209. The Commission notes the Applicant has committed to implement measures to minimise the visual impact of the site, including the following measures set out in Table 12 of the Department's FAR:
- regular maintenance of existing vegetation screening surrounding the site;
  - progressive revegetation of earthen noise bunds;
  - painting all visual infrastructure in non-reflective natural grey/green tones; and
  - installation and operation of all outdoor lighting in accordance with the Australian Standard AS4282. (INT) 1995 – Control of the Obtrusive Effects of Outdoor Lighting.
210. The Commission agrees with the Department's conclusion in Table 12 of the Department's FAR that there are existing views of the surface facilities site and the changes to the views would not present significant additional adverse visual impacts, particularly with implementation of the proposed visual mitigation measures. The Commission is of the view that the visual impacts of the Project are acceptable and that visual mitigation measures could be effectively implemented subject to the preparation of a Visual Impact Management Plan.
211. The Commission has therefore imposed Condition B32 which requires the Applicant to take all reasonable steps to minimise the visual and off-site lighting impacts of the development. The Commission has also imposed Condition B33 which requires the Applicant to prepare a Visual Impact Management Plan for the development in consultation with WCC and the CCC, to the satisfaction of the Planning Secretary. Under this condition, the Applicant must include a landscape strategy and a program to monitor and report on the implementation and effectiveness of the mitigation measures.

#### **4.9.4 GHG Emissions**

212. 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.
213. Clause 14(1) of the Mining SEPP requires the Commission to consider whether or not the consent should be issued subject to conditions aimed at ensuring that the development is undertaken in an environmentally responsible manner, including conditions to ensure that greenhouse gases emissions are minimised to the greatest extent practicable. Clause 14(2) requires the Commission to consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and to do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions. Other provisions of the Mining SEPP are considered in Section 7.2, 7.3 and Appendix I of the Department's FAR. As stated in paragraph 111 above, the Commission agrees with the Department and has adopted its assessment of the Mining SEPP. The Commission has given further consideration to GHG emissions below.
214. The Commission acknowledges that there was concern raised at the Public Hearing and in written submissions regarding the Project's GHG emissions and its contribution to climate change (see paragraph 42).

215. The Commission notes that the Project would generate approximately 1,523,000 t CO<sub>2</sub>-e of Scope 1 and 2 emissions primarily from the combustion of diesel, release of fugitive emissions and the use of electricity over the five-year mine life and is also forecast to be associated with approximately 9,624,000 t CO<sub>2</sub>-e of Scope 3 emissions as stated in Table 12 of the Department's FAR.
216. The Commission acknowledges that 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 a changing climate and current and emerging international and national policy settings and actions to address climate change" with the aim to achieve net-zero emissions by 2050 and to ensure NSW is more resilient to a changing climate. The Commission notes that the CCPF does not set prescriptive emission reduction targets and sets policy directions for government action. The Commission also notes that the NSW Government released the Net Zero Plan Stage 1: 2020–2030 (**Net Zero Plan**) in March 2020. The Commission notes that the Net Zero Plan builds on the CCPF and sets out a number of initiatives to deliver a 35% cut in emissions by 2030, compared to 2005 levels.
217. The Commission notes that, under the Paris Agreement, the Australian Government committed to a nationally determined contribution (NDC) to reduce national GHG emissions by between 26 and 28 percent from 2005 levels by 2030. The Commission also notes that Australia does not require monitoring or reporting of Scope 3 emissions under the *NGERS* and they are not counted in Australia's national inventory of GHG emissions under the Paris Agreement. The Commission is of the view that the Project's Scope 3 emissions would not contribute to Australia's NDC, as product coal would be exported overseas. The Commission notes that these Scope 3 emissions become the consumer countries' Scope 1 and 2 emissions and would be accounted for under the Paris Agreement in their respective national inventories.
218. The Commission has considered the matters in cl 14(1)(c) and 14(2) of the Mining SEPP and finds that the Project includes appropriate measures for minimising and managing Scope 1 and Scope 2 GHG emissions to the greatest extent practicable for the reasons set out above and below. The Commission is of the view that the Project is not inconsistent with the CCPF the Net Zero Plan or Australia's obligations in respect of the NDC.
219. The Commission has imposed Condition B8 'Air Quality Operating Conditions' requiring the Applicant to take all reasonable steps to "*(a)(iii) improve energy efficiency and reduce Scope 1 and Scope 2 greenhouse gas emissions of the development*". The Commission has also imposed Conditions B9 and B10 which require the preparation and implementation of an AQGGMP. Condition B9(d)(ii) imposed by the Commission requires the Applicant to ensure the Project does not exceed the predicted Scope 1 and 2 GHG emissions. The Commission has imposed Condition B11(d)(iii) which requires the Applicant to ensure best practice management is employed to minimise the air quality impacts, minimise Scope 1 and 2 GHG emissions and improve the Project's energy efficiency. The Commission notes that the coal will likely be exported to a Paris Agreement signatory country and therefore has not imposed any conditions relating to Scope 3 emissions as these emissions will be accounted for as Scope 1 and 2 emissions in that country.



220. The Commission notes that the proposed section of the Wongawilli Seam which would be mined as part of the Project comprises approximately 57% coking coal and 27% thermal coal with rejects accounting for the remaining 16% as stated by the Department in its response to the Commission's clarification request dated 16 November 2020. The Department's FAR also noted that the coal produced by the Project would most likely be used for steel-making in India which is a signatory of the Paris Agreement. The Commission acknowledges the submissions made by the public, who were of the view that Australia needed to transition away from use of metallurgical coal for steel making and embrace new technologies such as 'green steel' (see paragraph 44). However, the Commission notes that at this point in time, metallurgical coal is an essential input for the current production of steel. The Commission is 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 Project's metallurgical coal are justified.
221. For the reasons set out above, the Commission is of the view that the GHG emissions for the Project have been adequately considered. The Commission finds that on balance, and when weighed against the relevant climate change policy framework, objects of the EP&A Act, ESD principles (section 4.9.10) and socio-economic benefits (section 4.9.6), the impacts associated with the GHG emissions of the Project are acceptable and in the public interest. The Commission therefore imposes the Conditions B8, B9, and B10.

#### 4.9.5 Remediation and Closure

222. The Department's assessment of remediation and closure is set out in Table 12 of the Department's FAR. The Department's FAR states:

*Rehabilitation objectives proposed by WCL included ensuring:*

- *the site areas remain in a safe, stable, non-polluting and sustainable state;*
- *preservation of heritage items;*
- *socio-economic benefits of the rehabilitated sites are maximised; and*
- *the long-term maintenance of the sites (sic) is no greater than the surrounding landforms and land uses.*

223. The Commission acknowledges that the Resources Regulator is satisfied with the rehabilitation and mine closure commitments proposed as stated in Table 12 of the Department's FAR.
224. The Department's FAR states that in accordance with a further request from the Resources Regulator, WCL confirmed that it has recently provided an increased rehabilitation liabilities security deposit totalling \$12,354,000 to the Department of Regional NSW - Mining, Exploration and Geoscience (**MEG**).
225. The Resources Regulator in its response to the Commission dated 9 November 2020, provided the following clarification:

*...rehabilitation costs would be covered if mining operations were to end prior to 5 years from the date of commencement.*

*The current assessed deposit held by the Department is \$12,354,000.*

*Should the development consent be granted, a subsequent Rehabilitation Cost Estimate would be required to be submitted by the titleholder for assessment and determination by the Regulator before commencement of activities. At this time the cost of any additional rehabilitation as a result of the expansion project will be determined.*

226. Table 12 of the Department's FAR states:

*The Department has recommended that these commitments be further refined and included into a Rehabilitation Management Plan, which is to be prepared in consultation with the Department, DPIE Water, BCD, WaterNSW and WCC, in accordance with conditions imposed on the Mining Lease in accordance with the Mining Act 1992, prior to the commencement of mining operations.*

227. The Commission agrees with the Department's assessment and accepts the Resources Regulator advice referenced above. The Commission has therefore imposed Conditions B44 and B45 which set out rehabilitation objectives for the Project and also require the Applicant to prepare a Rehabilitation Management Plan (**RMP**) in consultation with the Department, DPIE Water, BCD, WaterNSW, RR and WCC.

#### 4.9.6 Socio-Economics

228. The Commission notes that the Applicant provided an Economic Impact Assessment (**EIA**) dated July 2019 which incorporated a Cost Benefit Analysis (**CBA**) and a Local Effects Analysis (**LEA**) to estimate the net benefits of the Project to the State and the local benefits to the Wollongong region as stated in Table 12 of the Department's FAR. The Department also noted that the EIA was undertaken in accordance with the *Guidelines for the economic assessment of mining and coal seam gas proposals (NSW Government, 2015)* (**Economic Guideline**) and the associated Technical Notes.

229. The Commission acknowledges that the Project will have the following direct benefits as stated in Table 12 of the Department's FAR:

- *employment of 205 people during operation and 22 during construction;*
- *\$35.3 million in capital investment;*
- *a net economic benefit of [up to] \$174 million (net present value) for the NSW community and \$17 million to the Wollongong local area through employment and expenditure; and*
- *royalty revenue to the State.*

230. The Commission notes that a sensitivity analysis of the CBA was undertaken in order to test the sensitivity of the estimate of net economic benefit. The sensitivity analysis estimated the range of net benefit as \$117.3 to \$220.1 million in NPV terms as stated in Table 12 of the Department's FAR.

231. The Commission acknowledges that the LEA identified that the Project would have the following economic contribution to the local community in the Wollongong region as stated in Table 12 of the Department's FAR:

*The project would directly employ over 200 workers and purchase goods and services from suppliers located in the region. The LEA indicated a total estimated net benefit of \$14.3 million in NPV terms to local suppliers and employees in the Wollongong local area. This is driven largely by:*

- *benefits to local workers of \$8.7 million based assuming that 20% of the mine's direct employees are located in the local area; and*
- *benefits to local suppliers of \$5.5 million assuming that 20% of the inputs to production are supplied from the region.*

232. The Department, in its Response to the Commission dated 16 November 2020, stated that the Applicant appropriately provides a financial analysis of the Project in isolation. The Department noted that even if company tax revenue from the Project attributable to NSW is set as zero, the Project would still return a significant positive net benefit of \$135.8 million, largely due to royalties and employee/supplier benefits. The Department confirmed that the economic benefit of the Project ascribed to the State and region remains valid.

233. In relation to local hires, the Department's FAR states:

*The LEA conservatively assumes that only 20% of the additional workforce would be sourced from the local government area. The Department considers that, in reality, the number of directly employed local workers would be substantially higher. As stated in the PAR, when the colliery was previously operating at full production, 62% of the Russell Vale employees resided locally in the Wollongong LGA and 90% resided in the Illawarra region.*

234. The Commission acknowledges that the Project may also result in approximately 800 additional indirect jobs in both mine and non-mine related services as stated in Table 12 of the Department's FAR.

235. The Commission also acknowledges that the Applicant has committed to pay WCC a road maintenance contribution of \$338,000 for pavement upgrade and maintenance of Bellambi Road resulting from transport of product associated with the Project and has imposed conditions accordingly (see paragraph 250 below).
236. The Commission notes that the Department undertook an assessment of social impacts in Table 12 of the Department's FAR. According to the Department's FAR, the Applicant prepared a Social Impact and Opportunities Assessment (**SIOA**) dated July 2019, generally in-line with the *Social Impact Assessment: Guidelines for State Significant Mining Petroleum Production and Extractive Industry Development* (DPIE, 2017) (**SIA Guideline**).
237. Table 12 of the Department's FAR states:
- Key issues raised in consultation on the SIOA included reduced amenity from dust and noise impacts; road safety from heavy vehicles; impacts on the water catchment and water quality; limited perceived economic benefits; inadequate mine management and financial viability of WCL; potential decreases in property values and GHG emission impacts. The broader community also identified positive social perceptions related to local employment and increased opportunities for community investment.*
238. The Commission notes that a key perceived social issue identified in the SOIA was that the Revised UEP could potentially de-value properties surrounding the pit top site as stated by the Department in Table 12 of the Department's FAR. The Department states that:
- ...the Russell Vale surface facilities site predates the development of the existing residential areas that surround it. Given the long history of mining in the area and the acceptable predicted amenity impacts associated with the Revised UEP, the Department accepts that adverse effects on property values are unlikely.*
239. The Commission acknowledges that the Russell Vale Mine has been operating in 'care and maintenance' since mining operations ceased in 31 December 2015 and that potential impacts experienced by local residents would be increased should mining operation recommence at the Site. The Commission also notes that Project surface facilities Site predates the development of the existing residential areas that surround it as stated by the Department above. The Commission has given consideration to amenity impacts, water resources, traffic and transport and GHG emissions in the relevant sections of this Statement of Reasons.
240. The Commission agrees with the Department's assessment in Table 12 of the Department's FAR that the Project would not substantially change the extent of impacts on social amenity that were experienced during operations prior to 2015, and may result in reduced impacts. The Commission also notes that the Project would result in social and economic benefits, particularly for local and regional employment and benefits to local suppliers as stated by the Department.
241. The Commission acknowledges the concerns raised by the community in relation to the restricted public access to the escarpment for recreational purposes (see paragraphs 54 and 58). The Commission notes that the areas within the Project Site referenced by the community are located within the Metropolitan Special Area within the Cataract River catchment as stated in paragraph 40 of the Department's FAR. The Commission understands that Special Areas are managed by WaterNSW and that public access and activities are restricted. The Commission acknowledges that these restrictions are in place in order to protect water quality in these areas.
242. For the reasons set out above, the Commission finds that that the Project would generate a considerable number of direct and indirect jobs, and that a significant percentage of the workers would likely reside in the local and regional area. The Commission acknowledges that a large portion of workers' salaries would be reinvested and circulated within the region and that this would also have a positive economic contribution.



243. Overall, the Commission finds that the Project would generate social and economic benefits for the local area, Illawarra region and to NSW. This includes: a direct capital investment of \$35.3 million, a net economic benefit of up to \$174 million and employment of 205 people during operation and 22 during construction.
244. To ensure that any social impacts are monitored and appropriately managed through the life of the Project, the Commission has imposed Condition B46 which requires the Applicant to prepare a Social Impact Management Plan (**SIMP**). The Applicant would be required to identify both positive and negative social impacts resulting from the development and following mine closure and to include a program to monitor, review and report on the effectiveness of these measures, including updating the plan 1 year prior to mine closure. Condition B46 requires the SIMP to be prepared in consultation with WCC, CCC and the local affected community and other interested stakeholders (to the greatest extent practicable). Condition B47 imposed by the Commission requires the Applicant to implement the SIMP as approved by the Planning Secretary.

#### 4.9.7 Traffic and Transport

245. The Commission notes the Department's summary of traffic and transport analysis undertaken for the Project at Table 12 of the Department's FAR. A Traffic and Transport Impact Assessment (**TTIA**) was prepared as part of the Revised UEP Application (prepared by Transport and Urban Planning Pty Ltd) in accordance with the requirement of *Roads and Traffic Authority's Guide to Traffic Generating Development* (2002).
246. Table 12 of the Department's FAR states that the Applicant is not seeking to change the existing transport arrangements from the surface facilities site and therefore trucks transporting coal are proposed to continue to travel along Bellambi Lane and Memorial Drive.
247. Table 12 of the Department's FAR states the Applicant has made the following commitments to reduce traffic impacts caused by truck movements:
- limiting the movement of laden outbound trucks to an average of 16 per hour between the hours of 7am to 6pm Monday to Friday and 8am to 6pm on Saturday (with an additional one truck per hour for transport of fuel supplies, deliveries and maintenance). No coal would be transported on Sundays or Public Holidays.
  - limiting vehicle speed along Bellambi Lane to 50 km/hr, which is 10km/hr less than the sign posted speed limit.
  - provision of a designated on-site truck parking area to avoid queuing of trucks onto the adjoining public road (with all trucks waiting in this area required to switch off their engines).
248. The Commission notes the Department's comment in Table 12 of the Department's FAR that traffic volumes generated by the Project would generally be the same level as previously generated by previous operations and agrees that the Project is "*unlikely to result in an adverse impact on road safety, the road network or road users*", subject to appropriate management measures.
249. The Commission agrees with the Department's assessment above and has imposed Condition B30 which requires the Applicant to prepare a Traffic Management Plan for the Project in consultation with TfNSW and WCC to the satisfaction of the Planning Secretary. Condition B30 imposed by the Commission requires the Applicant to implement the TMP as approved by the Planning Secretary. To further mitigate impacts on the surrounding community and road network, the Commission has also included a requirement in Condition B30(e) requiring the Applicant to include details of measures in the TMP coordinating truck movements for the Project avoiding school hours where practicable.

250. The Commission also acknowledges that the Applicant has committed to pay WCC a road maintenance contribution of \$338,000 for pavement upgrade and maintenance of Bellambi Road resulting from transport of product associated with the Project. In accordance with a request from WCC, the Department has formalised this commitment via a recommended condition requiring WCL to pay the contribution costs to WCC in instalments on an annual basis over the 5-year life of the Project, with payments indexed in accordance with the CPI. The Commission has therefore imposed Condition B28 which requires the payment of the Bellambi Lane maintenance contribution referenced above to WCC.

#### 4.9.8 Aboriginal Cultural Heritage

251. The Commission acknowledges that no additional disturbance is proposed at the surface facilities site beyond that currently disturbed and/or approved and that the Project is therefore considered unlikely to result in any impacts to Aboriginal Heritage as stated in Table 12 of the Department's FAR.
252. Table 12 of the Department's FAR states:
- To monitor and manage any impacts to Aboriginal heritage sites as a result of the Revised UEP, WCL proposes to update its existing Aboriginal Cultural Heritage Management Plan (ACHMP) in consultation with the Registered Aboriginal Parties, BCD and the Department. In accordance with BCD's recommendations, WCL has confirmed that the ACHMP would include updated baseline archaeological recording for Aboriginal heritage sites (including rock art, rock shelter and grinding groove sites) and updated Aboriginal community consultation records and outcomes.*
253. The Commission agrees with the Department that the revised mining method substantially reduces the risk of subsidence-related impacts to Aboriginal heritage sites when compared to the previous longwall mining proposal as stated in Table 12 of the Department's FAR.
254. The Commission has therefore imposed Condition B23 which requires the Applicant to ensure that the Project does not cause any direct or indirect impact on any identified heritage items. The Commission has also imposed Condition B24 and B25 which requires the Applicant to prepare and implement an ACHMP for the Project in consultation with BCD and Registered Aboriginal Parties.

#### 4.9.9 Other Issues

##### **Mine Waste**

255. Table 12 of the Department's FAR states that the Applicant estimated that the Project will generate approximately 200,000 tpa of coarse reject material. The Commission notes that the Applicant proposes to either sell the reject material for fill, use it on-site for rehabilitation and/or emplacing it underground within the former mine workings.
256. In response to a request from the EPA and WaterNSW, the Applicant confirmed that reject material that cannot be beneficially reused as fill material would be initially emplaced within roadways for the former Wongawilli longwalls and then within the roadways generated by the first workings associated with the Project as stated in Table 12 of the Department's FAR.
257. In relation to the Sydney Drinking Water Catchment SEPP and NorBE requirements, paragraph 61 of the Department's FAR states: "*the Department and WaterNSW are satisfied that the development would have a neutral impact on water quality within the catchment and that the development would not contravene the aims of this SEPP*". The Commission agrees with this assessment.
258. The Commission also notes that both the EPA and WaterNSW did not object to the proposed approach, but recommended conditions requiring ongoing monitoring and prioritisation of beneficial use of reject materials as stated in Table 12 of the Department's FAR.
259. Table 12 of the Department's FAR states:

*The Department accepts WCLs approach to ongoing monitoring and agrees that if the material meets the EPA's regulations, it should be prioritised for beneficial reuse. The Department has recommended specific waste management conditions to give this effect, as well as ensuring that reject material is only emplaced underground if it meets requirements of NorBE in regard to water quality.*

260. The Commission agrees with the Department and accepts the advice from EPA and WaterNSW above and is therefore satisfied that the Project would have a neutral impact on water quality within the catchment and would not contravene the aims of the Sydney Drinking Water Catchment SEPP. The Commission therefore imposes Condition B35 which requires the Applicant to take all reasonable steps to minimise the waste generated by the Project. Condition B37 also requires the Applicant to ensure that coal reject material is tested every 6 months to confirm its suitability for beneficial reuse and/or underground emplacement.
261. The Commission has also imposed Condition B37 which requires the Applicant to prepare a Waste Management Plan for the Project to the satisfaction of the Planning Secretary. This condition will require the Applicant to describe the measures to ensure the management of waste in accordance with Condition B35 referenced above in paragraph 260.

### **Non-Aboriginal Heritage**

262. The Commission notes that the following items of heritage significance are located within the Project Site as stated in Table 12 of the Department's FAR:
- *Cataract Dam (Reservoir) listed on the State Heritage Register and the Wollondilly Local Environmental Plan (LEP) 2011;*
  - *Illawarra Escarpment listed on the Registers of the National Estate and NSW National Trust; and*
  - *Russell Vale Colliery (previously the South Bulli Colliery) listed in the Wollongong LEP 2009 and specific items in the Illawarra Regional Environmental Plan No. 1.*
263. The Commission notes that the Heritage Council recommended that no extraction should occur beneath or within 1 km of the reservoir curtilage. Table 12 of the Department FAR stated that the Applicant confirmed that no mining is proposed beneath the fully supply level of the reservoir, except the Wonga Mains development which are already approved under the Existing Approval. The Applicant noted the conclusions of the subsidence assessment, which indicated that the proposed bord and pillar mining would not have any perceptible impact on the Cataract Reservoir.
264. The Commission agrees that any impacts to historic heritage sites as a result of the Project would be minor and manageable via the recommended Extraction Plan and Historic Heritage Management Plan (**HHMP**) processes as stated by the Department in Table 12 of the FAR.
265. The Commission has therefore imposed Conditions B26 and B27 which require the Applicant to prepare and implement a HHMP for the Project in consultation with the Heritage Branch, WCC and WSC, and in accordance with the relevant Heritage Branch guidelines.

### **Biodiversity**

266. The Commission notes that the Applicant prepared an Ecological Impact Assessment for the Project dated 11 July 2019. Table 12 of the Department's FAR states that in addition to upland swamps, the Applicant identified that the sensitive habitats in the study area include rocky outcrops and the aquatic environments of Cataract River, Cataract Creek and Bellambi Creek and their tributaries.
267. Table 12 of the Department's FAR states that the Project does not require the direct removal of native vegetation or fauna habitat. The Department accepts that it is unlikely that there would be any significant impacts to biodiversity as a result of the Project.
268. The Commission agrees with the Department's assessment and has therefore imposed Condition B21 and B22 which require the Applicant to prepare and implement a Biodiversity Management Plan in consultation with BCD.

269. The Commission has considered potential biodiversity impacts as a result of subsidence in section 4.9.1 above. Condition C1 imposed by the Commission also includes specific performance measures for biodiversity relating to subsidence which the Applicant must comply with.

#### **Bushfire Risk**

270. According to Table 6 of the Department's FAR, the NSW Rural Fire Service (**RFS**) noted that the Project has the potential to increase the level of bushfire risk within the landscape and that the Project may be impacted during a bush fire event. The RFS indicated that a Fire Management Plan should be prepared.
271. The Commission accepts the advice referenced above and has imposed Condition B40 which requires the Applicant to prepare a Bushfire Management Plan for the Project in consultation with RFS. Condition B41 imposed by the Commission requires the Applicant to implement the Bushfire Management Plan in consultation with the RFS.

#### **Weed Management**

272. At the Site Inspection the Commission observed a large amount of weeds throughout the surface facility operations area. The Commission has imposed Condition B21 which requires the Applicant to implement a Biodiversity Management Plan. Condition B21(f)(iii) requires the BMP to include measures to "control weeds, including measures to avoid and mitigate the spread of noxious weeds". The Commission imposes these conditions to ensure that appropriate weed management measures are implemented by the Applicant for the Project.

### **4.9.10 Objects of the EP&A Act and Public Interest**

#### **Objects**

273. The Commission has assessed the Project against the relevant Objects of the EP&A Act below.
- (a) ***to promote the social and economic welfare of the community and a better environment by the proper management, development and conservation of the State's natural and other resources.***
- (c) ***to promote the orderly and economic use and development of land.***
274. The Commission is of the view that the extraction of coal as part of the Project is an orderly and economic use of the land. The Commission agrees with the Department's assessment in Table C1 of the Department's FAR and finds that the Project will provide ongoing socio-economic benefits to the people of NSW and employment opportunities for the members of the local community.
- (b) ***to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment.***
275. The Commission agrees with the Department's assessment in Table C1 of the Department's FAR and is of the view that the Project can be carried out in a manner that is consistent with the principles of ESD as set out in paragraph 285 below.
- (e) ***to protect the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats.***
- (f) ***to promote the sustainable management of built and cultural heritage (including Aboriginal cultural heritage).***
276. The Commission agrees with the Department's assessment and is of the view that the Project would:
- result in improvements to the surface facilities operations to minimise noise and air impacts on the community;

- result in negligible environmental consequences to native plants and animals, ecological communities or their habitats, including upland swamps; and
- not directly impact Aboriginal cultural heritage or historic heritage.

- (i) ***to promote the sharing of the responsibility for environmental planning and assessment between the different levels of government in the State;***
- (j) ***to provide increased opportunity for community participation in environmental planning and assessment.***

277. The Commission notes that the Department has consulted with WSS, WSC and other relevant NSW Government authorities and has given consideration to the issues raised by these agencies in the Department's assessment. The Commission notes that the Department publicly exhibited the Application and the Commission has held a Public Hearing to hear the public's views on the Project.

278. For the reasons set out above, the Commission is of the view that the Project is in accordance with the Objects of the EP&A Act.

### ***Ecologically Sustainable Development***

279. The EP&A Act adopts the definition of ESD found in the *Protection of the Environment Administration Act 1991*, as follows:

*ecologically sustainable development requires the effective integration of social, economic and environmental considerations in decision-making processes. Ecologically sustainable development can be achieved through the implementation of the following principles and programs:*

*(a) the precautionary principle...*

*(b) inter-generational equity...*

*(c) conservation of biological diversity and ecological integrity... and*

*(d) improved valuation, pricing and incentive mechanisms.*

280. The Commission has given consideration to the principles of ESD in its assessment as set out below.

#### ***(a) the precautionary principle***

281. The Commission finds that the precautionary principle has been appropriately applied through the application of mitigation and management measures set out in the Application, the Department's FAR and the recommended conditions of consent. The Commission has proposed additional measures as set out in this Statement of Reasons to further mitigate Project impacts.

#### ***(b) inter-generational equity***

282. The Commission is of the view that on balance, the social and economic benefits from the Project and steel production generated from the Project would benefit both current and future generations. As set out in paragraph 221 above, the Commission is of the view that the GHG emissions from the Project have been adequately considered. The Commission also finds the Project includes appropriate measures for minimising and managing Scope 1 and Scope 2 GHG emissions to the greatest extent practicable. The Commission notes that Scope 3 emissions become the consumer countries' Scope 1 and 2 emissions and would be accounted for under the Paris Agreement in their respective national inventories.

283. For the reasons set out above, the Commission is of the view that intergenerational equity has been appropriately considered and addressed.

#### ***(c) conservation of biological diversity and ecological integrity***



284. The Commission acknowledges that the Project does not require the direct removal of native vegetation or fauna habitat and that it is unlikely that there would be any significant impacts to biodiversity as a result of the Project. The Commission finds that any potential impacts would be reasonably mitigated and/or offset to enable the long-term biodiversity outcomes to be achieved for the region. The Commission finds that the conservation of biological diversity and ecological integrity has been applied through avoiding and minimising biodiversity impacts.

***(d) improved valuation, pricing and incentive mechanisms***

285. The Commission is of the view that careful consideration has been given to the costs and economic benefits of the Project which support the conclusion that the Project would deliver a net benefit to the local region and the State of NSW.

286. In summary, the Commission finds that the Project is consistent with ESD, because the Project, if approved, would achieve an appropriate balance between relevant environmental, economic and social considerations.

***Public Interest***

287. A summary of the Commission's community participation and public submission process is set out in section 3 of this Statement of Reasons. Through the Public Hearing and submissions process, the Commission received a large volume of submissions on the Project which are summarised in section 3.3. Consideration has been given to these submissions in the Commission assessment of the Project as set out in the Key Issues section of this report (see section 4.9).

288. The Commission finds that on balance, and when weighed against the relevant climate change policy framework, objects of the EP&A Act, ESD principles and socio-economic benefits, the impacts associated with the Project are acceptable and in the public interest. The Commission finds that the matters raised in the submissions made to it can be satisfactorily addressed by the conditions of consent imposed by the Commission.

289. For the reasons set out above, the Commission is of the view that the Project is in accordance with the EP&A Act and is in the public interest.

## 5 CONCLUSION: THE COMMISSION'S FINDINGS AND DETERMINATION

290. The views of the community were expressed through public submissions and comments received (as part of exhibition and as part of the Commission's determination process), as well as in oral presentations to the Commission at the Public Hearing. The Commission carefully considered all of these views as part of making its decision.
291. The Commission has carefully considered the Material before it as set out in section 4.5 of this report. Based on its consideration of the Material, the Commission finds that the Project should be approved subject to conditions of consent for the following reasons:
- the bord and pillar mining method is unlikely to cause significant surface subsidence or significant interaction with the overlying coal seams;
  - it is highly unlikely that there are pockets of pillars still standing in the 14 panels associated with the Bulli Seam and if remnant pillars do exist, there is a very low probability that the proposed mining in the Wongawilli Seam would result in collapse of these pillars;
  - an Extraction Plan and Subsidence Monitoring Program will be required to be prepared by the Applicant. As part of the Extraction Plan the Applicant will be required to confirm the status of the Bulli Seam goaf areas. Pending the status of the Bulli Seam goaf areas the Applicant would be required to re-evaluate any mine plans accordingly to ensure that subsidence is appropriately managed;
  - imposing a maximum incremental vertical subsidence limit of 300mm will assist in ensuring a stable bord and pillar layout is established in the Wongawilli Seam and that subsidence impacts are minimised;
  - the Commission is of the view that the Applicant has employed all feasible and reasonable measures to avoid swamp impacts by adopting the bord and pillar mining method and considers that this substantially reduces the risk of impact to swamps as a result of the proposal. Based on the subsidence predictions and outcome of the quantitative risk assessment, the Commission is of the view that impacts to swamps as a result of the proposed mining would be negligible;
  - as a precautionary measure, the Applicant will be required to provide a suitable offset for any biodiversity and swamps in accordance with the Biodiversity Offsets Scheme under the *Biodiversity Conservation Act 2016*;
  - the Applicant will be required to ensure negligible leakage and negligible reduction in the water quality of Cataract Reservoir;
  - induced groundwater drawdown impacts are predicted to be limited to minor reductions in baseflow to Cataract Creek, Cataract River and Bellambi Creek and are unlikely to be observable for all practical purposes;
  - the Project would not significantly change either the rate of flow from the adit or the quality of this water, when compared to the operations under the Existing Approval;
  - the Applicant will be required to obtain all necessary water licences for the Project, including during rehabilitation and following mine closure;
  - the Project would have a neutral impact on water quality within the catchment and would not contravene the aims of the Sydney Drinking Water Catchment SEPP;
  - the Applicant will be required to design, install and maintain flood levees to protect mining areas from a 100-year ARI flood event and to ensure no increased flooding impacts on roads or privately-owned land;
  - the risks of adverse air quality impacts are low and can be adequately managed through the implementation of best practice mitigation, monitoring and management measures;
  - the Applicant will be required to comply with operational noise criteria and set specific noise operating conditions;
  - the proposed noise mitigation measures, including the implementation of noise mitigation bunds, walls and barriers prior to the commencement of mining operations, will ensure that noise impacts on the local area, in particular truck

- movements are minimised;
  - the Project will not present significant additional adverse visual impacts, particularly with implementation of the proposed visual mitigation measures. The Applicant will also be required to take all reasonable steps to minimise the visual and off-site lighting impacts of the development;
  - the Project is unlikely to result in an adverse impact on road safety, the road network or road users, subject to appropriate management measures;
  - GHG emissions for the Project have been adequately considered and in the context of the climate change policy framework (including government policy, Objects of the EP&A Act, ESD principles and socio-economic benefits), the impacts associated with the GHG emissions of the Project are acceptable;
  - the Project is projected to generate social and economic benefits for the local area, Illawarra region and to NSW. This includes: a direct capital investment of \$35.3 million, a net economic benefit of up to \$174 million and employment of 205 people during operation and 22 during construction;
  - the Applicant would be required to ensure that the Project does not cause any direct or indirect impact on any identified heritage items. An ACHMP will be required to be prepared for the Project in consultation with BCD and Registered Aboriginal Parties;
  - the Site is suitable for the development;
  - the Project is in accordance with the Objects of the EP&A Act;
  - the Project is consistent with ESD, because the Project would achieve an appropriate balance between relevant environmental, economic and social considerations; and
  - the Project is in the public interest.
292. For the reasons set out in paragraph 291, the Commission has determined that consent should be granted subject to conditions. These conditions are designed to:
- prevent, minimise and/or offset adverse environmental impacts;
  - set standards and performance measures for acceptable environmental performance;
  - require regular monitoring and reporting; and
  - provide for the on-going environmental management of the development.
293. The reasons for the Decision are given in this Statement of Reasons for Decision dated 8 December 2020.



**Professor Alice Clark (Chair)**  
Member of the Commission



**Professor Chris Fell AM**  
Member of the Commission



**Dr Peter Williams**  
Member of the Commission

## APPENDIX A

Table 3 – Comparison of Preferred UEP 2014 and Revised UEP 2019 (Source: Department's FAR)

Aspect	Preferred UEP 2014	The Project
<b>Project Life</b>	5 years	No change
<b>Mining Design and Method</b>	Longwall mining (8 longwalls in 3 blocks) in the Wongawilli Seam across the Wonga East area	Non-caving bord and pillar mining technique in the Wongawilli Seam across the Wonga East area Longwall equipment to be recovered and sold
<b>Mining Reserves</b>	Approximately 4.7 Mt of ROM coal	Approximately 3.7 Mt of ROM coal
<b>Extraction Rates</b>	Up to 3 Mtpa of ROM coal	Up to 1.2 Mtpa of ROM coal
<b>Production Rates</b>	3 Mtpa of product coal	1 Mtpa of product coal
<b>Hours of Operation</b>	Underground Operations: • 24 hours, 7 days a week Surface Facilities and Product Transport: • 24 hours, 7 days a week. • 7.00am - 10.00pm, Mondays to Fridays • 8.00am - 6.00pm Saturdays, Sundays and Public Holidays	Underground Operations: • No change Surface Facilities and Product Transport: • 7.00am - 6.00pm, Mondays to Friday • 8.00am - 6.00pm Saturday. No Sundays or Public Holidays • Provision for restricted operation until 10.00pm Monday to Friday subject to the approval of the Secretary, to cater for unexpected Port closures or interruptions • Use of some surface facilities required to support underground operations (primary sizer building, decline conveyor and tripper system) 24 hours, 7 days a week
<b>Surface Facilities Infrastructure</b>	<ul style="list-style-type: none"> <li>• Two new stockpiles of 140,000 t capacity each with associated reclaim facilities</li> <li>• New sizing plant</li> <li>• New truck loading facilities</li> <li>• Upgrade of existing surface conveyers</li> </ul>	<ul style="list-style-type: none"> <li>• One new product stockpile (approx. 14,000 t capacity) and one new rejects stockpile (approx. 1,500 t capacity)</li> <li>• New enclosed coal processing plant to improve coal quality</li> <li>• New secondary sizing plant</li> <li>• New surge bin in more shielded location</li> <li>• New enclosed conveyors for transfer of ROM coal to secondary sizer, processing plant and truck loading facility</li> <li>• New truck loading facility</li> <li>• Construction of noise barrier along access road and extension to height of existing bunds</li> <li>• Establishment of a designated truck parking area</li> </ul>
<b>Coal Transport</b>	Transport by road to the PKCT for export	No change
<b>Transport Rates and Hours</b>	<ul style="list-style-type: none"> <li>• An average of 17 coal truck loads per hour (maximum 22) between 7.00am - 10.00pm on Mondays to Fridays</li> <li>• An average rate of 19 coal truck loads per hour (maximum 26) between 8.00am and 6.00pm Saturdays</li> </ul>	<ul style="list-style-type: none"> <li>• An average of 16 coal truck loads per hour between 7.00 am - 6.00 pm Monday to Friday and 8.00 am - 6.00 pm Saturday</li> <li>• No coal transport Sundays or Public Holidays</li> </ul>

	<ul style="list-style-type: none"> <li>• An average rate of 10.5 coal truck loads per hour (maximum 14) between 8.00 am and 6.00 pm Sundays and Public Holidays</li> </ul>	<ul style="list-style-type: none"> <li>• If coal transport is required during the evening to cater for unexpected port closures or interruptions, these movements would be limited to an average of 12 trucks per hour between 6.00 pm - 10.00 pm Mondays to Fridays only [subject to the approval of the Planning Secretary]</li> <li>• Trucks arriving at the site between 6:00 am - 7.00 am Monday to Friday or between 7.00 am - 8.00 am Saturday would be required to proceed to the truck parking area on site and turn off engine until loading commences at 7.00 am Monday to Friday or 8.00 am Saturday</li> </ul>
<b>Mine Waste Management</b>	Waste rock used onsite or disposed of at an appropriately licensed facility	Coarse rejects from the processing plant to be trucked off site as fill if it meets requirements for virgin excavated natural material (VENM), stockpiled for emplacement underground or used in the rehabilitation of the site
<b>Employment</b>	Operational workforce of 300 employees and contractors Short-term construction workforce of up to 100 employees	Operational workforce of 205 employees and contractors Short-term construction workforce of 22 employees
<b>Rehabilitation</b>	Progressive rehabilitation over project life, with rehabilitation of all surface facilities following the completion of mining	No change
<b>Capital Investment Value</b>	\$85 million	\$35.3 million