



# Rix's Creek Continuation of Mining Project SSD 6300

## Determination

## Statement of Reasons for Decision 12 October 2019

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12 October 2019

## SSD 6300

### Rix's Creek South Continuation of Mining Project

## 1 INTRODUCTION

1. On 20 June 2019, the NSW Independent Planning Commission (the **Commission**) received from the NSW Department of Planning, Industry and Environment (the **Department**) a State Significant Development (**SSD**) Application 6300 (**SSD 6300**) for the Rix's Creek South Continuation of Mining Project. Bloomfield Collieries Pty Ltd (the **Applicant**) is seeking approval to expand and continue open cut mining operations at Rix's Creek South Coal Mine (the **Project**) for an additional 21 years (the **Application**).
2. The Commission is the consent authority in respect of the Application under section 4.5(a) of the *Environmental Planning and Assessment Act 1979* (**EP&A Act**) and clause 8A(1) of the *State Environmental Planning Policy (State and Regional Development) 2011* (**SEPP SRD**). This is because:
  - SSD 6300 constitutes a State Significant Development under section 4.36 of the EP&A Act as the Application is for 'development for the purposes of coal mining', as specified in clause 5 of Schedule 1 to the SEPP SRD; and
  - the Department received more than 25 submissions from the public objecting to the Application.
3. Professor Mary O'Kane AC, Chair of the Commission, nominated herself (Chair), Andrew Hutton and Tony Pearson to constitute the Commission determining the Application.

### 1.1 Site and locality

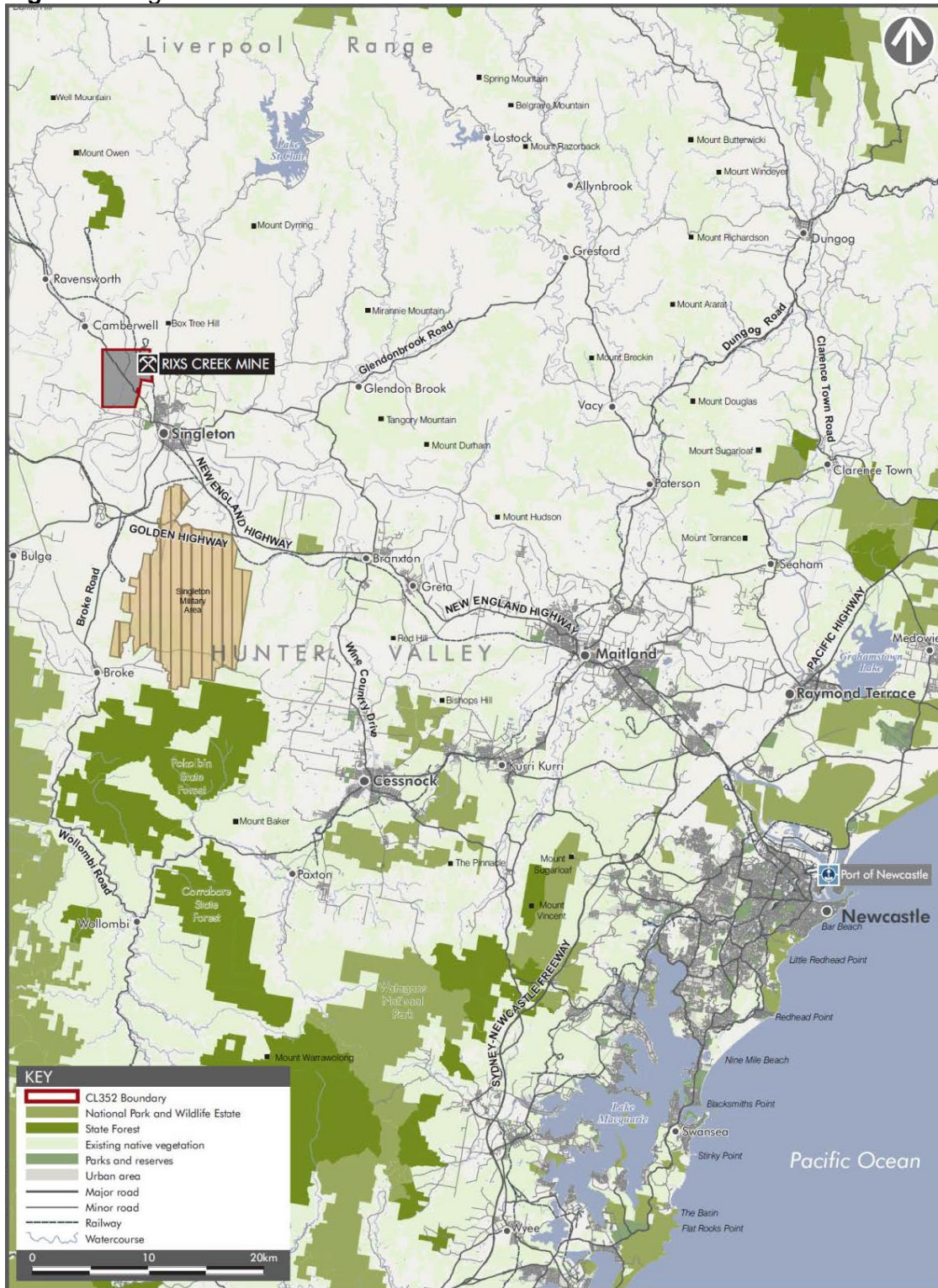
4. The Project is situated approximately 5 km from the township of Singleton in the Singleton Local Government Area (**LGA**). The township of Singleton has grown in the last 16 years; in 2003 the town's edge was approximately 8 km from the Project, in 2019 the town's edge is 5 km away. Figure 1 shows the location of the Project in relation to Singleton.
5. The Applicant is seeking approval to expand and continue the operation of the Project for 21 years from the date of consent.
6. The Project area is divided by the New England Highway.
7. The Project and Rix's Creek North Mine are jointly owned and managed as an integrated mining complex (the **Rix's Creek Integrated Mining Complex**). The Project and Rix's Creek North Mine operate on different mining leases and under separate development consents. Figure 2 shows the local site context and Project area.
8. The Rix's Creek Integrated Mining Complex includes shared operations such as:
  - Run of Mine (**ROM**) coal is transported from Rix's Creek North Mine and sent to the Project for processing and train loading;
  - product coal is transported using heavy rail from loading facilities on the Project site; and

- operational equipment is shared across the Rix's Creek Integrated Mining Complex.
9. The Project is one of more than 20 operational coal mines in the Hunter Valley located between Singleton and Muswellbrook, with 18 operational mines within 10 km. The closest of these to the Project, apart from Rix's Creek North Mine include Mt Owen Mining Complex, Ravensworth Complex and Ashton Coal to the northwest, all of which are open cut. The Glennie's Creek Underground Mine is also nearby. The Glennie's Creek Underground Mine and the Rix's Creek North Mine were formerly both part of the Integra Mine. The Applicant purchased the open cut operations in 2016. Figure 3 shows the location of the Project site and Rix's Creek North Mine in relation to the other operational mines in the area. The Project is one of the smallest mines in the Hunter coalfield.
10. The land on which the Application is situated is primarily zoned RU1, primary production under the *Singleton Local Environmental Plan 2013* (the **Singleton LEP**). The Project also contains small sections of land zoned:
- SP2, Infrastructure; and
  - E2, Environmental Conservation.

Land uses surrounding the Project include agriculture, light industrial and residential. Figure 4 shows the land zoning of the Application.



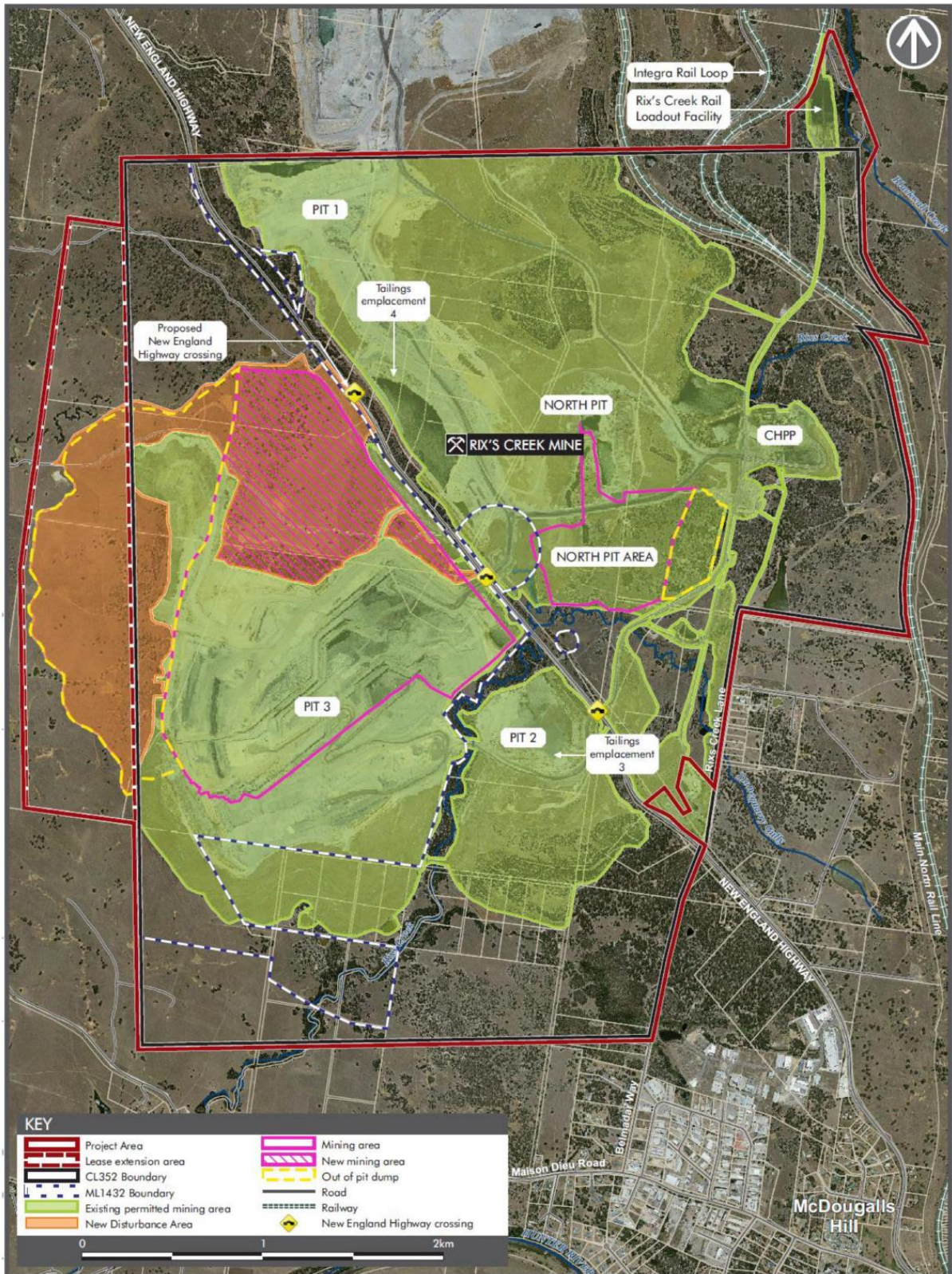
**Figure 1: Regional context**



**Source:** The Department's Final Assessment Report (SSD 6300) June 2019



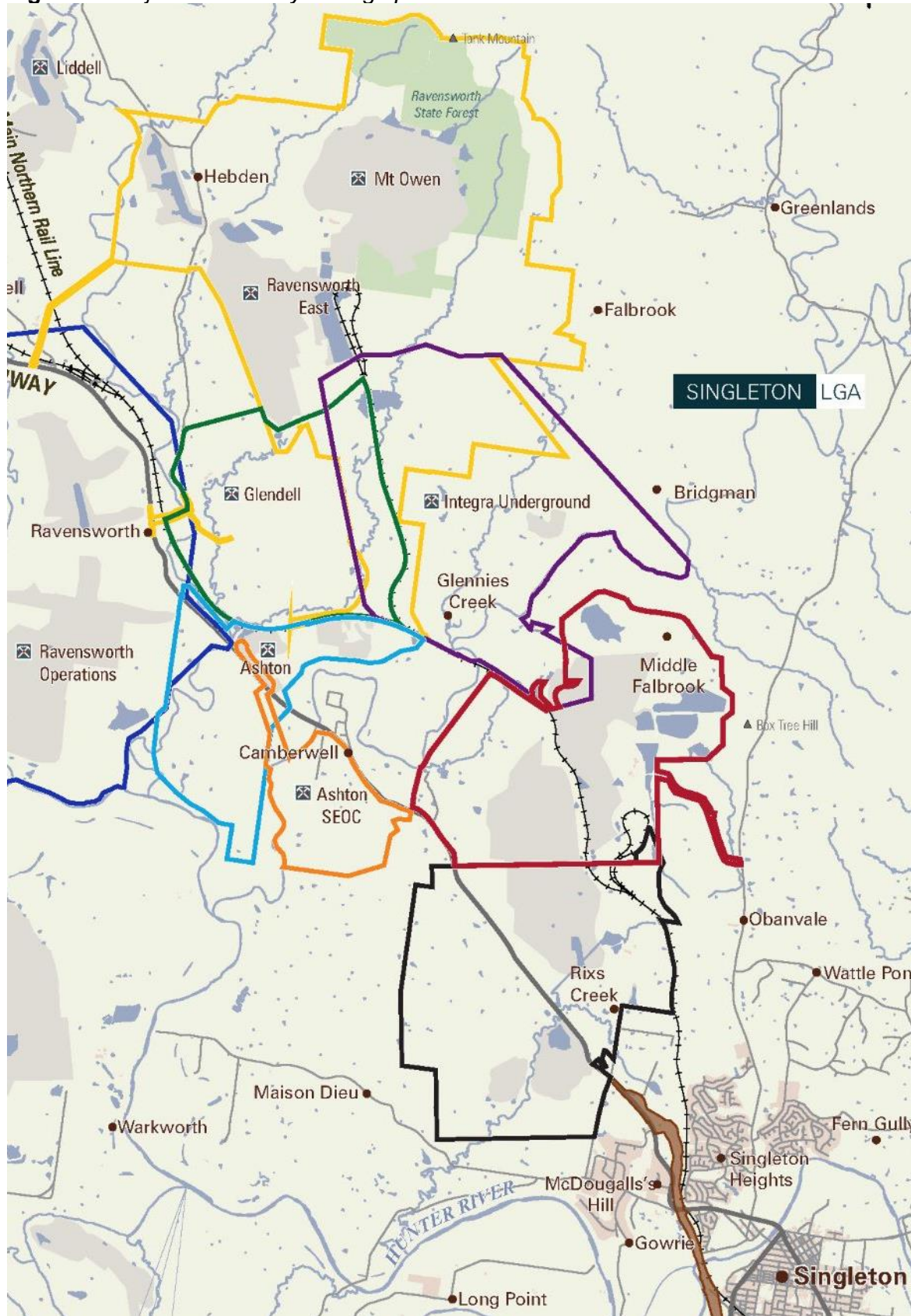
**Figure 2: Local site context and project area**



**Source: The Department's Final Assessment Report (SSD 6300) June 2019**



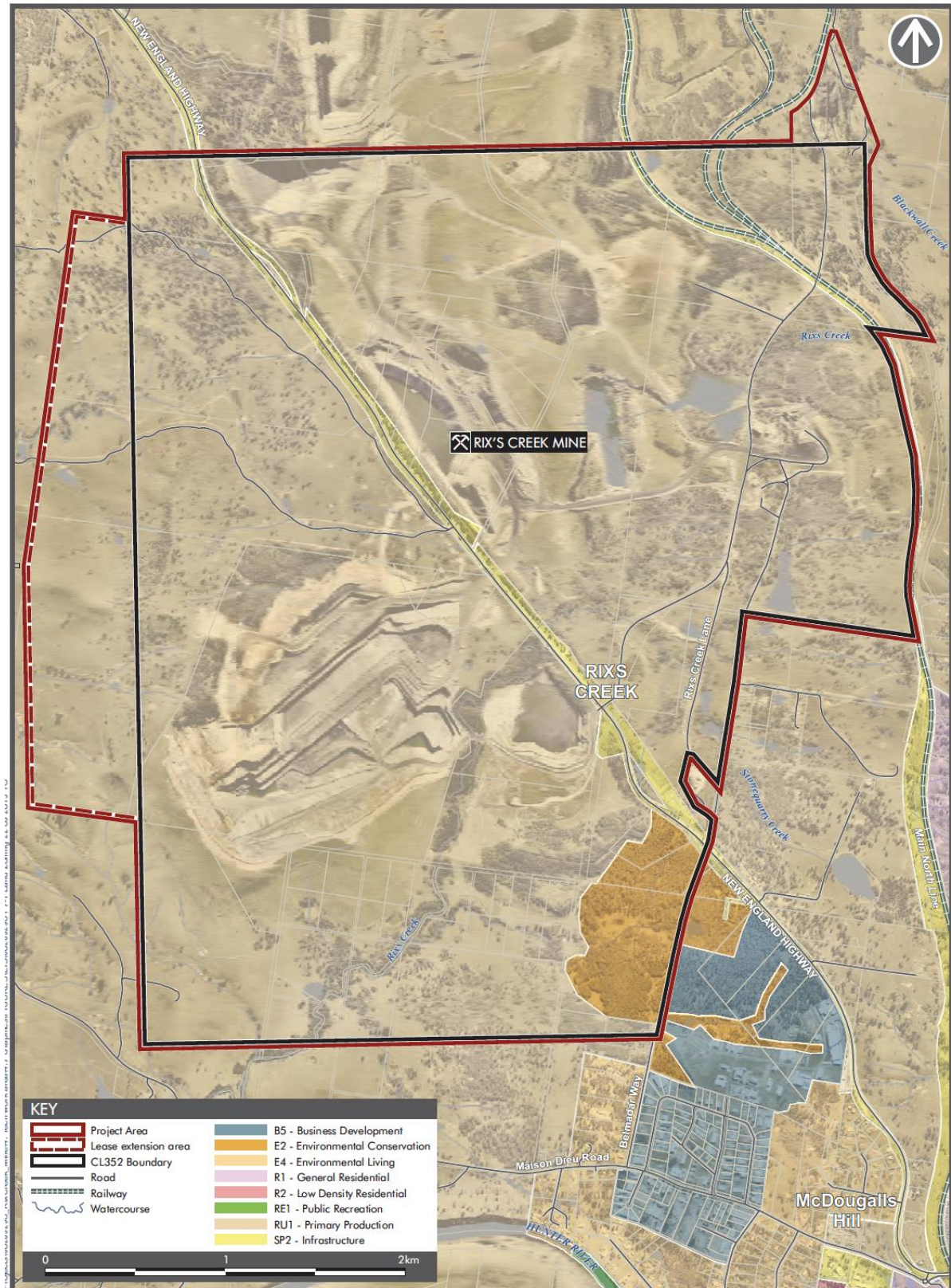
**Figure 3: Project and nearby mining operations**



**Source:** The Applicant's presentation to the Commission 9 July 2019



**Figure 4: Project Land Zoning Map**



**Source:** *The Applicant's Environmental Impact Statement 26 October 2015.*

## 1.2 Background to Application

11. The Project currently operates under DA 49/94, which permits the extraction of coal from the Project until 24 March 2020. The 10th modification to DA 49/94, approved on 12 June 2019, was for a minor extension to the operational life of the mine; from 24 June 2019 to 24 March 2020.
12. The Application has been amended throughout the assessment process. An Environmental Impact Statement (**EIS**) was originally lodged with the Department (when it was the Department of Planning and Environment) on 2 November 2015. On 12 December 2017 the Minister for Planning requested that the Commission carry out a review (the **Review**) of the Application.
13. The Commission carried out the Review and published its findings, including 26 recommendations, on 31 August 2018 (the **Review Report**). The Applicant provided a Response Report (the **Response Report**) to the Department on 10 December 2018. The Applicant's Response Report included two options to reduce the area occupied by the western overburden emplacement area (**OEA**). These two options are referred to as Option 1 and Option 2. The Department prepared an assessment report entitled the "*Final Assessment Report*" (**FAR**) which considered the Applicant's Response Report against the Commission's Review Report, and included recommended conditions of consent. The Department considered "*that Bloomfield has appropriately implemented or otherwise addressed all of the Commission's recommendations. Based on the Applicant's Response Report and additional information provided by Bloomfield, and consultation with key Government agencies, the Department considers that all residual assessment issues have been resolved or can otherwise be conditioned.*"

## 1.3 Summary of the Project before the Commission

14. Based on information provided in the Applicant's Response Report and the Department's FAR, the Application before the Commission for determination includes the following key aspects:
  - *the continuation of existing multi-seam benching open cut mining operations, the Rix's Creek Continuation of Mining Project (the Project), within Coal Lease (CL) 352 and Mining Lease (ML) 1432;*
  - *the Project would allow the Mine to continue its open cut mining operations and utilisation of existing mine infrastructure to process up to 3.6 million tonnes per annum (Mtpa) of ROM coal beyond the life of its current consent, extending the life of mining [for 21 years from the date of consent];*
  - *the Project also includes a new mine lease area (currently known as Mine Lease Application Area (MLA) 487) to the west of the existing ML to accommodate the proposed new overburden emplacement area;*
  - *the Project includes all development approved under the existing development consent DA 49/94 (as modified in this application), which would be surrendered.*
15. The Application before the Commission specifically includes:
  - expanding the disturbance area to accommodate the mining extensions and OEA storage;
  - continuing open cut mining for 21 years from the date of consent;
  - mining south of Pit 1 and expanding open cut mining northwest of Pit 3 (and into the Hebden seam);
  - increasing coal extraction and processing from 2.8 Mt per annum to 3.6 Mt per annum (to produce an additional 25 Mt of product coal over the Project life);

- two options for overburden emplacement described below:
    1. Option 1: Increasing the height and area of the existing overburden areas in North Pit dump (of which some areas have been progressively rehabilitated) and South Pit dump to eliminate the need for the new OEA west of Pit 3 (**Option 1**).
    2. Option 2: Increasing the height and area of the existing overburden areas in North Pit dump and South Pit dump, requiring a footprint for a new OEA west of Pit 3, noting that this revised OEA footprint is smaller than the original footprint proposed in the EIS (**Option 2**).
  - constructing a second cut and cover tunnel underneath the New England Highway;
  - increasing employment from 130 full time employees per annum up to 217 full time employees in certain years of the project life (approximately three years leading up to 2023);
  - progressively rehabilitating the Project to return the land to grassland for grazing, with areas of open woodland for native ecosystem reestablishment;
  - operating 24 hours a day, 7 day a week;
  - an estimated \$57.5 million (net present value (**NPV**)) of capital investment; and
  - an estimated \$1,544.50 million (NPA) of economic benefits to NSW, including royalties of \$104.30 million (NPV) over the life of the Project.
16. The Application with both Option 1 and Option 2 is summarised in Table 1 and depicted in Figures 5 and 6 for Options 1 and 2 respectively.



**Table 1: Key aspects of the Application**

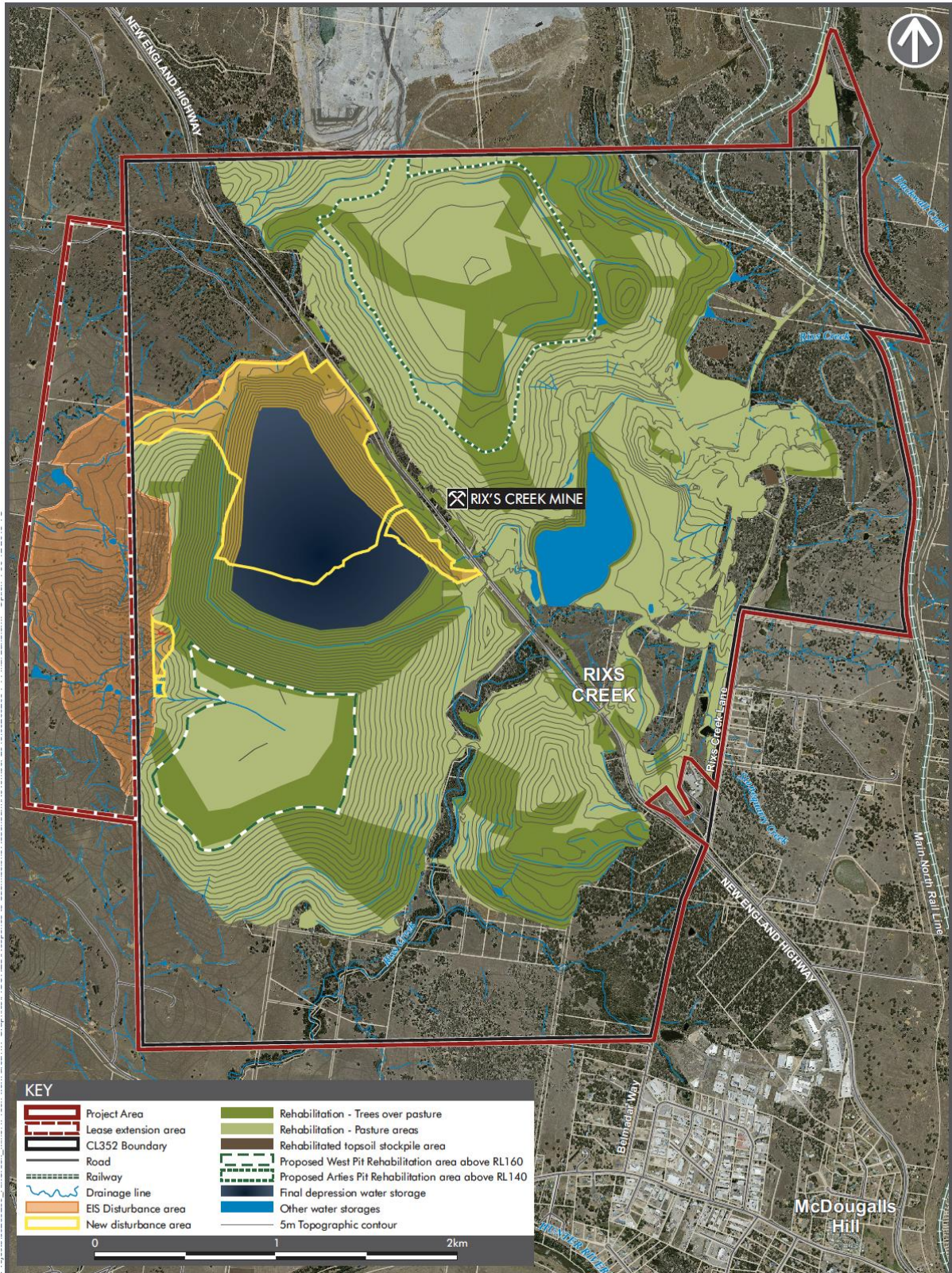
Aspect	Approved under DA 49/94	SSD 6300	
		Option 1	Option 2
Development application and mining lease boundaries	<ul style="list-style-type: none"> <li>Total area of 1,818 ha</li> </ul>	<ul style="list-style-type: none"> <li>Additional 170 ha mining lease area</li> </ul>	
Mine life	<ul style="list-style-type: none"> <li>21 years, ending March 2020</li> </ul>	<ul style="list-style-type: none"> <li>21 years, ending 2040</li> </ul>	
Mining areas	<ul style="list-style-type: none"> <li>Pits 1, 2 and 3</li> </ul>	<ul style="list-style-type: none"> <li>Mining just south of Pit 1</li> <li>Extend Pit 3 to the northwest</li> </ul>	
Maximum extraction rate	<ul style="list-style-type: none"> <li>16.1 Mbcm (~2.8 Mt per annum ROM coal)</li> </ul>	<ul style="list-style-type: none"> <li>3.6 Mt per annum ROM coal</li> </ul>	
Mining method	<ul style="list-style-type: none"> <li>Open cut multi-seam bench mining using blasting and truck and excavator fleet</li> </ul>	<ul style="list-style-type: none"> <li>No change</li> </ul>	
Mining depth	<ul style="list-style-type: none"> <li>Pit 1 to Liddell and Arties seams</li> <li>Pit 2 to Barrett seam</li> <li>Pit 3 to Barrett seam</li> </ul>	<ul style="list-style-type: none"> <li>Pit 1 no change</li> <li>Pit 2 no change</li> <li>Pit 3 to Hebden seam</li> </ul>	
Overburden emplacement	<ul style="list-style-type: none"> <li>OEA and progressively backfill pits</li> </ul>	<ul style="list-style-type: none"> <li>Use existing OEA and progressively backfill pits</li> <li>Increase existing OEA heights outlined below to accommodate 17.52 Mbcm                             <ul style="list-style-type: none"> <li>North Pit dump by 16 m (to a max 170RL), and</li> <li>South Pit dump by 30 m (to a max 145 RL).</li> </ul> </li> </ul>	<ul style="list-style-type: none"> <li>OEA and progressively backfill pits</li> <li>New western OEA to accommodate 9.01 Mbcm (max 165 RL)</li> <li>Increase existing OEA heights outlined below to accommodate 8.5 Mbcm:                             <ul style="list-style-type: none"> <li>North Pit dump by 6 m (to a max 160RL), and</li> <li>South Pit dump by 30 m (to a max 145 RL).</li> </ul> </li> </ul>
Coal processing	<ul style="list-style-type: none"> <li>On-site coal handling and preparation (CHPP) for Project Site and Rix's Creek North Mine</li> <li>Processing capacity of 4.5 Mt per annum</li> </ul>	<ul style="list-style-type: none"> <li>No change</li> </ul>	
Tailings management	<ul style="list-style-type: none"> <li>Tailings storage facilities in sections of Pits 1 and 2</li> </ul>	<ul style="list-style-type: none"> <li>Dried tailings with overburden and continued use of Pit 1 tailings storage facility</li> </ul>	
Transport	<ul style="list-style-type: none"> <li>ROM coal trucked to onsite CHPP via internal haul roads</li> <li>Product coal trucked to rail loading facility and rail transport to Port of Newcastle</li> </ul>	<ul style="list-style-type: none"> <li>No change</li> </ul>	
Operating hours	<ul style="list-style-type: none"> <li>24 hours, 7 days a week</li> </ul>	<ul style="list-style-type: none"> <li>No change</li> </ul>	
Employment	<ul style="list-style-type: none"> <li>130 employees</li> </ul>	<b>Year: FTE</b>	

		2020: 162 2023: 217 2026: 136 2030: 135 2035: 80 2039: 46	
Infrastructure	<ul style="list-style-type: none"> <li>Construction and operation of surface facilities, including CHPP, coal stockpiles, admin and amenities facilities, workshop and rail loading facilities</li> <li>Construction of tunnel beneath New England Highway</li> </ul>	<ul style="list-style-type: none"> <li>Continued use of surface facilities</li> <li>Construction of second tunnel beneath New England Highway</li> </ul>	
Site access	<ul style="list-style-type: none"> <li>Road access via Rix's Creek Lane off the New England Highway</li> </ul>	<ul style="list-style-type: none"> <li>No change</li> </ul>	
Disturbance area	<ul style="list-style-type: none"> <li>Approximately 1,032 ha</li> </ul>	<ul style="list-style-type: none"> <li>Additional 234.37 ha</li> <li>Includes 105.11 ha of vegetation area for mining</li> </ul>	<ul style="list-style-type: none"> <li>Additional 257.17 ha</li> <li>Includes 155.67 ha of vegetation area for mining and western out of pit dump</li> </ul>
Biodiversity offsets	<ul style="list-style-type: none"> <li>Biodiversity offset strategy of 118.32 ha for MOD 5</li> <li>Retiring 2,716 biodiversity offset credits</li> </ul>	<ul style="list-style-type: none"> <li>Retiring 3,824 biodiversity offset credits</li> </ul>	<ul style="list-style-type: none"> <li>Retiring 4,428 biodiversity offset credits</li> </ul>
Rehabilitation and final landform	<ul style="list-style-type: none"> <li>Progressive rehabilitation of the mine site to pasture and trees over grass</li> <li>Minimise OEA slope and heights and merge imperceptibly with undisturbed land</li> <li>Two final voids</li> <li>Return the land to a condition suitable for a range of post-mining uses</li> </ul>	<ul style="list-style-type: none"> <li>Continued progressive rehabilitation to pasture and trees over grass, including entirely backfilling Pit 1 and leaving one final void in Pit 3.</li> </ul>	

**Sources:** *The Department's FAR, the Review, and the Applicant's response to queries following Applicant meeting on 5 August 2019*



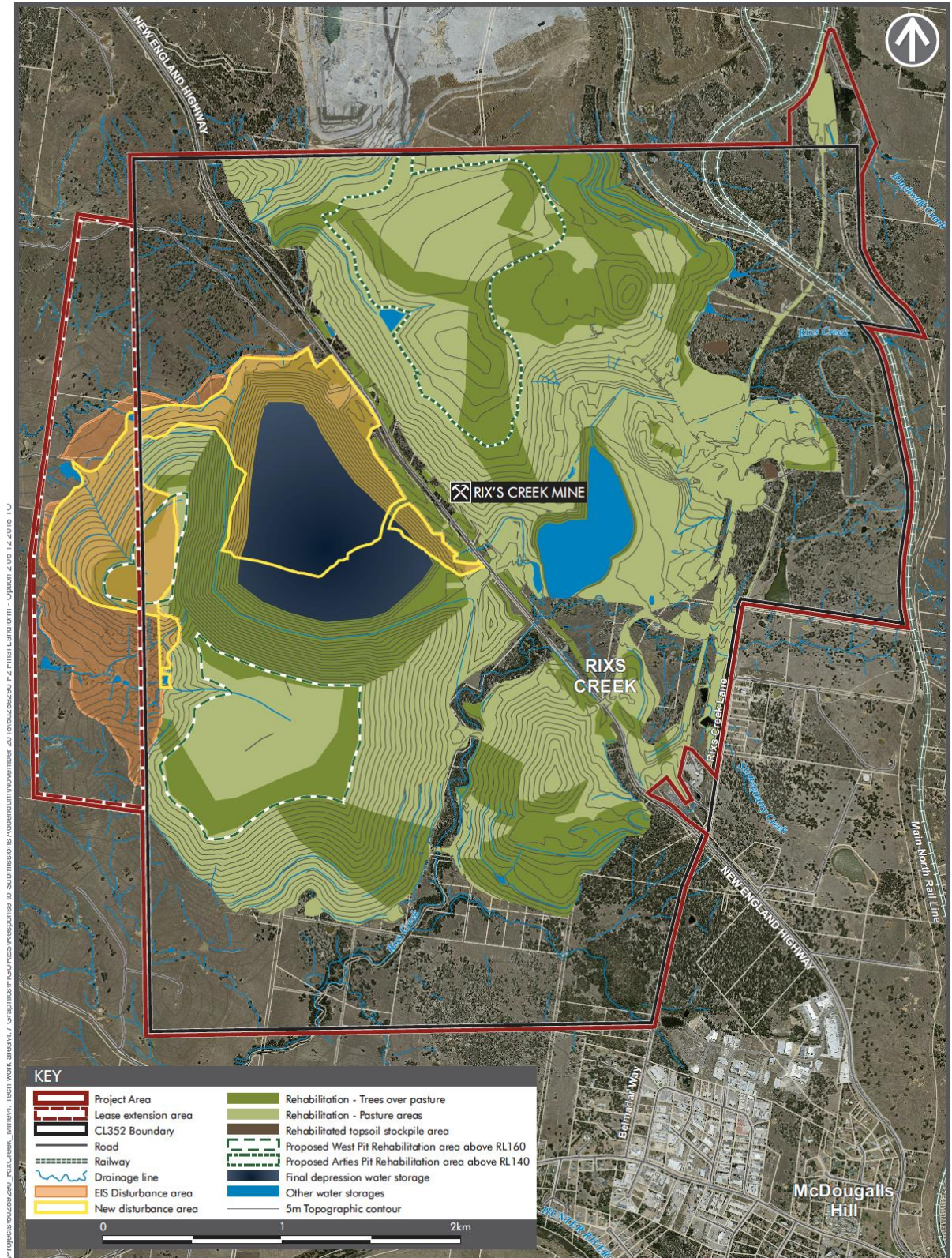
**Figure 5: Graphical representation of the Option 1 of the Application**



Source: *The Applicant's Response Report*



**Figure 6: Graphical representation of the Option 2 of the Application**



**Source: The Applicant's Response Report**



## 1.4 Stated need for Application

17. In relation to the need for the Application, the Applicant's EIS dated 26 October 2015, says the Application is needed to meet customer contracts and provide ongoing employment for employees, "[t]he key objectives for the Project are aimed at addressing the strategic need for the continuation of the existing open cut mining operations at the [m]ine to enable the company to meet (sic) its long term ongoing customer contracts. These long term contracts have provided stability for the operations which in turn has provided long term employment for staff and ongoing social and economic benefits."
18. The Applicant stated that the Project currently provides employment for 130 employees and the Application will create up to 87 additional jobs when at maximum production. The Department's Preliminary Assessment Report dated May 2018 (**PAR**) also states that the Application would allow community initiatives to continue: "*Bloomfield considers that the Project would allow for the continuation of community benefit initiatives including the Bloomfield Foundation, which provides grants and funding to local health and social groups as well as schools and sports clubs.*"

## 2 THE DEPARTMENT'S CONSIDERATION OF THE APPLICATION

### 2.1 Key steps in Department's consideration of the PAR

19. On 2 November 2015 the Department received the Application. The Department stated in its PAR that it:
  - "publicly exhibited the EIS from 3 November 2015 to 3 December 2015:
    - on the Department's website;
    - at the Department's Information Centre;
    - at Singleton Shire Council's office; and
    - at the Nature Conservation Council's office;
  - advertised the exhibition in the Newcastle Herald, Hunter Valley News and Singleton Argus;
  - notified relevant public authorities (NSW Government agencies and Singleton Shire Council); and
  - notified relevant authorities in accordance with the Mining SEPP and Infrastructure SEPP."
20. The Department received submissions from Singleton Council (the **Council**) and eight NSW government agencies (listed under the names relevant prior to the March 2019 NSW State Election):
  - the Office of Environment & Heritage (**OEH**);
  - the Environment Protection Authority (**EPA**);
  - Ministry of Health (**NSW Health**);
  - the Department of Primary Industries (**DPI**) Water Division and Division of Agriculture;
  - the Department of Resources and Geoscience (**DRG**);
  - Roads and Maritime Services (**RMS**);
  - the Heritage Council of NSW (**Heritage NSW**); and
  - the Dams Safety Committee (**DSC**)
21. The Department states in its PAR that there were no objections from agencies and most of the concerns raised by the agencies in the revised response to submissions (**RRTS**) were satisfied: "*No public authorities objected to the Project. However, most*

*raised issues or expressed concerns with specific aspects of the Project and/or provided recommendations relating to their administrative and regulatory responsibilities...*

*Following the provision of additional information in the Revised RTS, most public authorities advised the Department that they are satisfied that their concerns have been adequately addressed and/or can be managed through appropriate conditions of consent."*

22. The Department explained in its PAR that the Council emphasised the importance of a comprehensive assessment of noise and air quality impacts. Council advised that conditions on the final landform should allow flexibility to adapt to community and industry views over time. Council also advised that a local planning proposal seeking to rezone land southeast of the Project is under consideration.
23. A total of 131 public submissions was received during the public exhibition period; 44 objections to the Application (approximately 34%) and 85 (approximately 65%) in support of the Application with two submissions (approximately 1%) providing comments on the Application. The key issues raised in objection were:
- air quality and associated health impacts from dust;
  - increased operational noise on nearby residents;
  - greenhouse gas (**GHG**) emissions from burning coal and the impact on the climate;
  - contamination of nearby waterways and associated impacts on agriculture;
  - adequacy of the groundwater assessment;
  - size and hazards of the final void;
  - clearing of squirrel glider habitat and the Central Hunter Valley Eucalypt Forest and Woodland (**CHVEFW**) a Federally listed critically endangered ecological community (**CEEC**); and
  - lack of clarity on biodiversity offset strategy.

The key issues by those in favour were:

- local and regional socio-economic benefits;
  - job security;
  - financial community contributions;
  - negative socio-economic impacts if the Application is not approved; and
  - good record of environmental performance.
24. On 10 May 2018 the Department concluded its PAR detailing its assessment of the considerations and evaluation based on the information before it. The Department concluded that *"[b]ased on this assessment, the Department considers that Bloomfield has designed the Project in a manner that achieves an appropriate balance between maximising the recovery of a recognised coal resource of State significance and minimising the potential impacts on surrounding landowners and the environment, as far as is practicable.*

*The Department's assessment has identified several minor matters for clarification that would strengthen the assessment of the Project, such as the approach to staged offsetting and associated disturbance areas, greater clarity around the estimated economic benefits to the State and further details on the [Planning Agreement] offer. The Department does not expect this information to materially change its preliminary*



*findings on the overall merits of the Project, but rather assist in the development of robust and specific conditions to govern the Project.”*

## 2.2 The Commission’s Review process and public hearing

25. On 12 December 2017, the then Minister for Planning requested the Commission review the Application in accordance with the former section 23D of the EP&A Act and clause 268R of the *Environmental Planning and Assessment Regulation 2000*. The Terms of Reference for the Review required the Commission to:
- *carry out a review of the Rix's Creek Coal Mine Extension Project, by:*
    - *considering the EIS for the development, the issues raised in submissions, the response to submissions, any other information provided concerning the development by the Applicant and any information provided during the course of the review or as part of the public hearing;*
    - *considering the likely economic, environmental and social impacts of the development in the locality, the region and the State;*
    - *assessing the merits of the development as a whole, having regard to all relevant NSW Government policies and guidelines; and*
    - *providing recommendations on any additional reasonable and feasible measures that could be implemented to avoid, minimise and/or manage the potential impacts of the development;*
  - *hold a public hearing during the review ...; and*
  - *submit its final report on the review to the Department of Planning and Environment ...*
26. Under sections 4.16(7) and 5.9 of the EP&A Act, the consent authority must consider the findings and recommendations of the Review.
27. On 10 May 2018, the Department’s PAR was referred to the Commission. It concluded *“[o]verall, the Department believes that the benefits of the Project would outweigh its costs and that the proposed mine plan strikes an appropriate balance between protecting the environment and local community and realising the significant economic benefits of the Project to the region and the State of NSW. Consequently, the Department’s preliminary findings are that the Project would be expected to deliver a net benefit, is in the public interest and is approvable, subject to strict conditions.”*
28. On 6 June 2018, the Commission held a public hearing at the Charbonnier Motor Inn, Singleton. Katherine Richardson SC and Kate Lindeman assisted the Commission in conducting the public hearing as Counsel Assisting. The Commission’s Review Report summarises the key issues from the 11 speakers at the public hearing:
- *“air quality:*
    - *cumulative air quality exceedances are expected in Camberwell with potential harm to Camberwell residents through exposure to high levels of particulate matter; and*
    - *there is no evidence of threshold for safe exposure to particulate matter on people.*
  - *noise:*
    - *the Project would be unable to meet the required noise levels, particularly during noise-enhancing weather conditions;*
    - *the Project’s proximity to Singleton and Camberwell would increase the operational noise impacts on residences. There may be potential harm to the occupants in Singleton and Camberwell through exposure to high levels of noise; and*

- *negative impact on health because of high volume of traffic noise during certain shifts and knock-off times.*
- *cumulative impacts:*
  - *the cumulative impacts of air quality, noise, biodiversity and species loss, and loss of land due to multiple voids has not been adequately or accurately assessed by the Department;*
  - *the Project will result in a significant land use conflict due to its proximity to Singleton;*
  - *the principles of ecologically sustainable development and intergenerational equity have not been met by this Project;*
  - *cumulative impacts of blasting concurrently with neighbouring mines was not considered;*
  - *the Department's conclusions that environmental impacts on amenity can be adequately managed are not supported;*
  - *the Department's report did not consider future modifications of the 18 operational mines in the area; and*
  - *the cumulative impacts of loss of critically endangered habitat, irreversible damage to water sources, and toxic final voids have not been adequately assessed or mitigated for the Project.*
- *water:*
  - *the impacts on ground and surface water, the scale of the drawdown, loss of base flows to the Hunter River and accumulation of high-saline water bodies in the landscape have not been adequately assessed; and*
  - *there are concerns in relation to the continued permanent impact on the groundwater systems, including no plan to address the 143ha of toxic final void, which is understood to be six times saltier than seawater.*
- *final void:*
  - *the Department's PAR fails to assess the economics of the final void's maintenance, monitoring and classification. The Department's PAR also fails to develop a plan to address the final void;*
  - *there will be reduced surface water flowing into the Hunter River catchment due to the 140 ha void becoming a pit lake; and*
  - *there are concerns in relation to the connectivity of the rehabilitated land.*
- *biodiversity:*
  - *there is no clarity on how the 2,716 ecosystem credits required by the Land and Environment Court orders will be met in relation to the identified shortfalls in biodiversity offsetting arrangements;*
  - *further details of the biodiversity value catching system, associated offsetting policies and flora and fauna assessment are required;*
  - *loss of opportunity for species movement in the Central Hunter due to the removal of vegetation; and*
  - *loss of critically endangered Central Hunter Valley eucalypt forest and woodland.*
- *cost benefit analysis:*
  - *questions raised in relation to whether the economic benefit includes such things as the devaluing of coal in the future, termination of contracts for coal, automation of the fleet; and*
  - *the cost benefit analysis has not included:*
    - *the cost of managing the final void in perpetuity;*
    - *the cumulative loss of catchment to the Hunter River;*
    - *the increased cost to the health system of poor air quality in the Hunter;*
    - *the loss of ecosystem and biodiversity; and*
    - *the project fails to meet the key goals of the Hunter Regional Plan 2036.*

- *economics:*
    - *the applicant supports local businesses and local jobs.*
  - *social impacts (both positive and negative):*
    - *the Department's PAR acknowledges that the social impact assessment was not completed using the new assessment guidelines;*
    - *there are health risks to the nearby residents, especially the residents of Camberwell. The health impacts on the nearby residents are unacceptable;*
    - *the applicant has lost its social license to operate the Mine due to alleged land clearing in relation to the Land and Environment Court proceedings;*
    - *the applicant is committed to supporting the community through the provision of funding to local community, environment and education groups;*
    - *there is a positive culture at the Mine. The applicant is proudly an Australian owned company and privately held;*
    - *the Project is crucial as it will sustain local employment, generate local and regional economic benefits, and provide positive social partnerships; and*
    - *if approved, the Project will provide benefits of lower visibility, lower dump elevations, reduced noise levels and improved air quality."*
29. The Commission engaged and published reports from two independent experts providing advice on the rehabilitation strategy; and the mine schedule planning, overburden emplacement and final landform respectively.
30. The Unger Report reviewed the rehabilitation strategy for the Project (**Unger Report**) and was published on 5 July 2018. The Unger Report states:
- *"the Rehabilitation Strategy for Rix's Creek Continuation of Mining project should be a roadmap for the company and its external stakeholders that integrates mine rehabilitation and closure (MR&C) throughout the life of mine;*
  - *no evidence is provided in the Rehabilitation Strategy that demonstrates that the two primary rehabilitation land uses of grasses for grazing and trees over grasses for native ecosystems meet any standard;*
  - *several Mine Rehabilitation and Closure domains are omitted from key aspects of the Rehabilitation Strategy (e.g. water filled and/or tailings-filled voids). The strategy document appears to be an adaptation of a Mining Operations Plan ... and does not adequately integrate all closure requirements which are explicit (in the existing Development Consent) or perhaps less explicit but likely to be needed to address environmental protection (EPL-related) matters for closure (e.g. surface and groundwater quality);*
  - *there is no evidence of a MR&C-specific risk register so it is possible that a systematic MR&C risk and opportunity assessment process has not been undertaken by the company. In the absence of such a MR&C risk and opportunity register it is possible that insufficient attention has been given to some aspects of the Rehabilitation Strategy."*
31. The Deswick Report was a review of mine schedule planning, overburden emplacement and final landform (**Deswick Report**) and was published on 2 August 2018. The objectives of the report were to:
- *"minimise out-of-pit dump requirements, spoil re-handling and haulage;*
  - *minimise final pit void size;*
  - *planning for closure."*



The findings of the Deswick Report were:

- *“increasing the batter angle of the West Pit Out of Dump [also known as Western OEA] from 10 degrees to an arbitrary maximum of 18 degrees would reduce the new land disturbance by 17 ha;*
- *the West Pit Out of Pit Dump is not required if the North Pit Dump height is increased from 145RL to 160RL and the South Dump height is increased from 117RL to 140RL. Although this would re-disturb 110 ha of previously rehabilitated land in the North Pit Dump, the new land area disturbed would reduce by 108 ha;*
- *no practical and economic means to significantly reduce the size of the final void could be identified.”*

32. On 31 August 2018, the Commission published its Review Report. The Commission made 26 recommendations regarding aspects of the Application that required clarification, further assessment, clearer justification or stronger conditions to ensure that potential impacts are avoided, minimised and/or mitigated. Recommendations also requested that the Applicant undertake greater stakeholder engagement on future detailed rehabilitation planning and provide greater accessibility of information to the community.

33. The Review Report’s 26 recommendations can be categorised as follows:

- three recommendations on air quality,
- four recommendations on noise and blasting,
- eight recommendations on rehabilitation and mine closure planning,
- one recommendation on final void and final landform,
- two recommendations on surface water, groundwater and void water,
- one recommendation on biodiversity,
- three recommendations on social and economic impacts, and
- four recommendations on heritage.

34. The Review Report concluded *“...the Commission’s preliminary view is that the Project as a whole has merit if the various recommendations contained within this Review report can be satisfactorily addressed. However, the Commission notes that its views may change on any determination decision, including because of the provision of additional information in response to this review, information provided to the Commission independently of this review, additional matters raised in undertaking its final assessment of the project, or other relevant factors. The Commission also notes that conditions of consent have not formed part of this review and would need to be given detailed consideration at the determination stage.”*

### **2.3 The Department’s consideration of the Applicant’s Review Response**

35. On 10 December 2018, the Applicant’s Response Report (responding to the Review Report) was submitted to the Department.

36. Following assessment of the Response Report, and further consultation with relevant agencies, the Department requested additional information from the Applicant to assist in developing the Department’s FAR and draft recommended conditions of consent, for consideration by the Commission in its determination of the Project. These additional responses were provided to the Department on 22 February 2019 and 15 May 2019.

37. The Applicant has indicated through its Response Report that the Application has been amended, including the EIS. The Applicant's Response Report provided options for the proposed out of pit overburden emplacement. This was in response to the Commission's Review recommendation 16 (discussed in section 5.10.6 of this SoR). The Applicant's Response Report provided a 'trade off' study. The trade-off study introduced Option 1 and Option 2. The trade-off study considered the impacts of the original EIS over burden storage, Option 1 and Option 2. Option 1 and Option 2 are illustrated in Figure 5 and Figure 6 respectively. Option 1 and Option 2 are summarised in Table 1 and Table 9. The detailed impacts are explained within section 5 of this SoR.

## 2.4 The Department's FAR

38. The Department's FAR, dated 19 June 2019, addresses the Commission's Review, and includes an assessment of the additional information provided by the Applicant and government agencies, along with recommended draft conditions of consent. The Department advises that the FAR is to be read in conjunction with the PAR.
39. The Department consulted with the government agencies listed in paragraph 20.
40. The Department's FAR responds to the 26 recommendations from the Commission's Review and assesses a further four matters:
- aboriginal cultural heritage;
  - the Planning Agreement (**VPA**);
  - the future formal integration with Rix's Creek North Mine to form the Rix Creek Integrated Mining Complex; and
  - GHG emissions.
41. The Department's FAR considered both Option 1 and Option 2 for overburden emplacement (described in Table 1). The Department's FAR contains recommended conditions of consent for Option 2. On 10 September 2019 the Commission sought the Department's advice on appropriate conditions (or changes to conditions) of consent for Option 1 in order to consider the merits of both options thoroughly. A response was provided on 24 September 2019 as described in paragraph 69.
42. The Department's FAR concluded that *"Bloomfield has addressed all of the Commission's recommendations in its response report, including revising its mine plan (i.e. Option 2) to improve environmental outcomes. The Department also considers that all residual assessment issues have been resolved or can otherwise be conditioned..."*

*The Department considers that the Project is a logical and strategic brownfield extension of the existing open cut mining operations at Rix's Creek South Mine. The Project would recover a significant additional coal resource with fewer environmental impacts than would be expected from an equivalent greenfield project. The Department considers that the proposed management, mitigation and offset measures would appropriately minimise and compensate for the residual adverse social, environmental and economic impacts of the Project. The Project would provide substantial social and economic benefits to the local community and the Department considers that it would deliver a net benefit to the State...*

*The Department considers that its recommended conditions provide a comprehensive, contemporary and precautionary approach to the regulation and management of the Project...*

*The Department considers that the benefits of the Project outweigh its residual costs and considers that the Project is in the public interest and is approvable, subject to strict conditions of consent."*

43. Sections 5.9 and 5.10 of this Statement of Reasons (**SoR**) set out the Commission's assessment of how the recommendations contained in the Commission's Review Report have been addressed by the Applicant and the Department and set out the Commission's assessment of the Application as a whole.

### **3 THE COMMISSION'S MEETINGS AND SITE VISIT**

44. As part of its determination, the Commission met with various persons and organisations as set out below. All meeting transcripts, notes and correspondence have been made available on the Commission's website.

#### **3.1 Meeting with the Department**

45. The Commission sent a letter dated 8 July 2019 to the Department outlining the issues for discussion at a meeting the following day. This letter was published on the Commission's website on 19 July 2019. On 9 July 2019, the Department met with the Commission and discussed the following:

- the Department's assessment of the Applicant's Response Report;
- the progressive status of rehabilitation and the Department's views of a Rehabilitation Strategy compared to a Rehabilitation Management Plan;
- rehabilitation review practises and interface between the Department and the Resource Regulator;
- mine development and life of mine timeframes;
- conditions of consent and statement of commitments;
- air quality particulates and information sources;
- the need for a meeting with the Ministry of Health;
- State and Commonwealth biodiversity practices; and
- economic considerations.

46. The transcript of the meeting was made available on the Commission's website on 10 July 2019 and the Department took a number of matters on notice. The Department's response to the matters taken on notice is described in Section 4.

#### **3.2 Meeting with the Applicant**

47. On 9 July 2019, the Commission met with the Applicant, received a presentation, and discussed the following:

- employment as a result of the Application;
- the relationship between the Project, the Application, and the Rix's Creek North Mine with the Applicant's intention to combine operations as the Rix's Creek Integrated Mining Complex;
- education/information on air quality particulates and 'mine-owned' premises;
- trade off study, Option 1 and Option 2 rationale and biodiversity values;
- continuous improvement practices and stakeholder engagement;



- rehabilitation, final landforms, unexpected care and maintenance due to sudden mine closure.

The presentation and the transcript of the meeting were made available on the Commission's website on 10 July 2019.

48. The Applicant took a number of matters on notice and responded to the Commission on 5 August 2019. The Applicant's response was made available on the Commission's website on 22 August 2019.

### 3.3 Meeting with Singleton Council

49. On 29 July 2019, the Commission met with the Council (including Councillors and officers) and discussed the following:

- the Project's and the Application's contribution to Singleton and the region;
- the Project's ongoing employment of staff and contractors who live and work locally;
- the Project's proximity to town reflecting on noise and air quality matters; including discussion on the *Upper Hunter Air Quality Alliance*;
- stakeholder engagement;
- strategic growth of the Singleton township and region;
- rehabilitation;
- post mining land uses and landforms.

50. The transcript of the meeting was made available on the Commission's website on 31 July 2019.

### 3.4 Meeting with Ministry of Health

51. On 15 August 2019, the Commission met with the Ministry of Health and the Department, and discussed the following:

- Ministry of Health representatives confirmed the Ministry was comfortable with air quality assessment reports and conditions of consent for consideration (contained within the Department's FAR);
- access and interpretation of air quality data to the community;
- tenants of 'mine-owned' properties and publicly available information such as fact sheets;
- dissemination of information into the public domain.

52. The transcript of the meeting was made available on the Commission's website on 21 August 2019.

### 3.5 Site inspection

53. On 29 July 2019, the Commission conducted an inspection of the Application area with the Applicant. Representatives of community groups were invited to attend, but none attended. One community member expressed a desire to attend if the site inspection date was able to be moved. The site inspection was carried out to gain a familiarisation of the Application options following the Review Report and to specifically sight the locations of proposed overburden storage. Two stops were made during the site inspection to sight the overburden emplacement areas for Option 1 and Option 2:

- Option 1: Increasing the height and area of the existing overburden areas in North Pit dump (of which some areas have been progressively rehabilitated) and South Pit dump to eliminate the need for the new OEA west of Pit 3.
- Option 2: Increasing the height and area of the existing overburden areas in North Pit dump and South Pit dump, requiring a footprint for a new OEA west of Pit 3, noting that this revised OEA footprint is smaller than the original footprint proposed in the EIS.

54. Notes from the site inspection were made available on the Commission's website on 22 August 2019. Subsequent to the Commission publishing the site inspection notes, the Applicant submitted points of clarification via e-mail. These were made available on the Commission's website on 3 September 2019.

### 3.6 Public meeting

55. On 29 July 2019, the Commission held a public meeting at the Singleton Civic Centre, 12 Queen Street, Singleton. The Commission received 38 requests to speak at the public meeting (including from the Applicant). Of the 38 registered speakers; 27 spoke at the public meeting. Eleven of those who were registered did not actually speak at the meeting. Rachel Mansted attended the public meeting, assisting the Commission as Counsel Assisting.

56. The public meeting schedule of speakers was made available on the Commission's website on 26 July 2019.

57. The transcript of the public meeting was made available on the Commission's website on 31 July 2019 and a copy of the material presented at the public meeting was made available on the Commission's website on 8 August 2019.

58. Of the 27 registered speakers, who spoke at the meeting; 24 spoke in support of the Application (including the Applicant) and three spoke in opposition to the Application. An opportunity to lodge written comments with the Commission was provided until seven days following the public meeting i.e. 6 August 2019. A total of 949 comments was received by the Commission in relation to the Application, with 28 comments in objection and 919 comments in support of the Application. Two comments were received which did not indicate either support or objection for the Application. All written comments were made available on the Commission's website on 8 August 2019.

59. In summary, the main issues raised in verbal and written submissions to the Commission included:

- Air quality impacts:
  - air quality mitigation practises should be notified;
  - air quality exceedance notification;
  - air quality assessment is inadequate;
  - availability of air quality documentation;
  - air quality in the region is above the limits of the *National Environment Protection Measure for Ambient Air Quality*;
  - desire for independent assessment of air quality for the region;
  - cumulative impacts are too high on surrounding areas (Singleton Heights, Maison Dieu and Camberwell);
  - Upper Hunter Air Quality Monitoring Network and EPA Dust Stop and Pollution Regulation Program is not effective.

- Noise impacts:
  - noise mitigation practices should be notified;
  - Option 2 does not comply with noise requirements;
  - cumulative impacts are too high on surrounding areas including the growth of Singleton Heights and the Singleton township.
- Biodiversity:
  - legacy clearing activity;
  - land degradation and loss of habitat;
  - consideration of threatened species (particularly the Squirrel Glider);
  - uncertain ability to obtain credits for the Project in the region;
  - concerns about unresolved staged biodiversity offsetting;
  - habitat fragmentation, habitat corridors should be required;
  - concern that rehabilitation should not be used as a biodiversity offset.
- Final landform, rehabilitation and site closure:
  - concerns that the final landform is yet to be confirmed;
  - concerns that a site void is to remain;
  - ongoing management and monitoring of site void;
  - required ongoing environmental improvement;
  - poor rehabilitation has been completed to date;
  - caretaker and unforeseen closure;
  - weed management practices.
- Water resources
  - impact of mine voids on water quality;
  - water loss, and drought impacts.
- Climate and greenhouse gas emissions:
  - impacts of climate change are worsening and should not be ignored;
  - clarification sought that customers of the project are party to the Paris Agreement;
  - EIS is believed to be invalid with respect to climate change.
- New England Highway:
  - inadequate details and assessment of the cut and cover tunnel under the New England Highway.
- Economic and social benefits:
  - generational coal mining benefits to community;
  - employment opportunities (direct and indirect), training and partnership opportunities;
  - social benefits provided to the community as a result of the Project;
  - Applicant is a responsible, good corporate citizen;
  - Australian owned company, supporting local businesses.
- Adverse health, economic and social impacts:
  - impacts of mining on the community and concerns over cumulative health impact;
  - loss of quality of life due to mining;
  - fragmentation of township, community and culture (including Aboriginal culture);
  - property acquisition is not possible for Camberwell residents;
  - concerns that the cost to public health is not considered against the economic benefit of the Project;
  - concerns raised over the reduced demand for coal during the proposed life of the Project;



- ability of the Project to economically achieve rehabilitation if coal pricing trends change;
- conflict between mine and the growth of the Singleton township;
- saturation of mines within the region.
- Community rights to appeal and conditions of consent:
  - community should have the ability to have oversight of the condition of consent drafting process;
  - community opposition was reflected in ‘boycott’ of public meeting by some community representatives. Representations were made (in written comments received by the Commission) that community members should have ability to undertake a NSW Land and Environment Court merits appeal.
- Transitional provisions:
  - unsatisfactory transitional arrangements of the *NSW Industrial Noise Policy 2017* and the *Biodiversity Conservation Act 2016*.

#### 4 ADDITIONAL INFORMATION

60. The Commission wrote to the Department on 8 July 2019 and 17 July 2019 seeking additional information as a result of the meeting with the Department described in paragraph 45.
61. On 23 July 2019, the Department wrote to the Commission to advise it had *“identified an inadequacy in the Bloomfield Group’s assessment of air quality impacts resulting from the Rix’s Creek Continuation of Mining Project. The air quality impact assessments provided to date in respect of the Project have not considered a number of sensitive receivers. The Department has discussed this matter with Mr Geoff Moore, of the Bloomfield Group [the Applicant], and the company has committed to provide an addendum report which will focus on potential impacts to each of these receivers as soon as practicable...”* The Department explained to the Commission that the Applicant would submit revised material and that the Department would assess it and then forward both the new material and its assessment to the Commission. This correspondence was made available on the Commission’s website on 23 July 2019. The updated air quality report submission was received along with other information as described in paragraphs 69 and 71.
62. On 29 July 2019, the Commission received a request from a community member. The request asked for time to make comment on the revised air quality material once the document was available. On 29 July 2019, the Commission confirmed that the standard review period (seven days) would be made available for community members to comment on the revised air quality material. This correspondence was made available on the Commission’s website on 29 July 2019. The actual review period was longer than seven days commencing on 24 September 2019 and concluding on 11 October 2019 as described in paragraphs 69 and 79.
63. The Commission wrote to the Applicant (via e-mail) on 23 August 2019 and again on 6 September 2019 requesting incremental progressive rehabilitation mapping and tabulated information. The first e-mail request was made available on the Commission’s website on 26 August 2019 and the second request made available on 6 September 2019.
64. The Applicant partially responded to the request on 6 September 2019 (**Applicant’s Response 1**) providing incremental progressive rehabilitation mapping for overburden

Option 1 and Option 2 until 2030, along with an Agricultural Productivity Assessment. This information was made available on the Commission's website on 9 September 2019 (noting that the Agricultural Productive Assessment was not available as it was commercial-in-confidence).

65. The Commission wrote to the Applicant (via e-mail) on 10 September 2019 requesting:
- progressive rehabilitation mapping for the remaining years (from 2030 until the end of mine life – 21 years in total);
  - clarification on definitions of disturbed area and rehabilitation areas notated on rehabilitation mapping;
  - clarification on whether the Mining Lease 487 is required for both Option 1 and Option 2;
  - staged conceptual surface disturbance for Option 1 in a mapped and tabulated format (Option 2 was contained in the Department's FAR).
66. The Applicant responded to the request on 18 September 2019 (**Applicant's Response 2**) providing:
- a letter from the Applicant;
  - biodiversity staging for Option 1; and
  - progressive rehabilitation mapping for the remaining years (from 2030 until the end of mine life – 21 years in total).
- This information was made available on the Commission's website on 18 September 2019.
67. On 10 September 2019 the Commission wrote to the Department (via e-mail) seeking additional information on:
- recommended conditions of consent for consideration for Option 1 (Option 2 was included in the Department's FAR),
  - Mining Lease application and tender process for a new mining lease.
68. On 13 September 2019 the Commission wrote to the Department (via e-mail) seeking advice from the Department on property acquisition rights of residences in the vicinity of the Rix's Creek South coal mine site, with a particular interest in Camberwell. This request was to seek "*advice on properties that are afforded mitigation and acquisition rights for other mines in the area, not just Rix's Creek South*". This e-mail was made available on the Commission's website on 13 September 2019.
69. The Department responded to multiple requests on 24 September 2019. The requests were made by the Commission on 8 July 2019, 17 July 2019, 10 September 2019 and 13 September 2019. On 24 September 2019 the Department provided (the **Department's Additional Information**):
- covering letter answering questions;
  - updated Air Quality Assessment addendum reports (dated 9 August 2019, 2 September 2019) completed by the Applicant, along with a summary air quality report by the Applicant;
  - the Department's consideration of the revised air quality assessment reports;
  - revised Recommended Conditions of Consent – expanding sections to deal with acquisitions in Camberwell;
  - a tabulated summary of recommended conditions addressing the Commission's Review recommendations;
  - a tabulated summary of state agency consultation informing recommended conditions of consent;

- a tabulated statement of commitments;
- a copy of the Applicant's letter to the Department dated 2 April 2019 regarding GHG emissions, and a copy of a previous letter from the Department's Secretary to the Commission regarding GHG emissions;
- biodiversity credit requirements for Option 1 and Option 2.

The updated Air Quality Assessment addendum reports from the Applicant along with the Department's assessment of the same addresses an oversight in the EIS with regard to air quality impacts on properties north west of the Application, including Camberwell. The updated Department assessment of the Applicant's material resulted in amended proposed conditions of consent for voluntarily acquisition from the Department, as discussed in section 5.10.1. This information described in paragraph 69 was made available on the Commission's website on 25 September 2019.

70. On 25 September 2019 the Commission sought written confirmation from the Department that the revised Air Quality Assessments (described in paragraph 69) were considered to be adequate by the Department.
71. On 25 September 2019 the Department confirmed that it was satisfied with the adequacy of the Air Quality Assessments, and that the inadequacy (raised by the Department on 23 July 2019) had been addressed and the Department was satisfied.
72. The correspondence described in paragraph 70 and 71 was made available on the Commission's website on 25 September 2019.
73. On 19 September the Commission sought additional clarification from the Coordinator-General Environment, Energy and Science (**EES**). The Commission sought EES' comments on the impacts of Option 1 and Option 2 on biodiversity and also provided EES with the opportunity to comment on draft recommended conditions for Option 1 (comments from this group on Option 2 were considered by the Department in its finalisation of the FAR).
74. The correspondence described in paragraph 73 was made available on the Commission's website on 19 September 2019.
75. On 27 September 2019 EES confirmed that both Option 1 and Option 2 "*ensure avoidance of a large area of native vegetations that was proposed to be cleared under [the EIS]*" (**EES's Additional Response**). EES confirmed it is "*satisfied with the assessment of credit yield within the draft conditions of consent from [the Commission, for Option 1].*"
76. The correspondence described in paragraph 75 was made available on the Commission's website on 29 September 2019.
77. On 1 October 2019 the Commission sought confirmation from Singleton Council that it is satisfied with the revised rehabilitation conditions. On 1 October 2019 Singleton Council confirmed that the rehabilitation conditions are consistent with representations made during the meeting on 29 July 2019.
78. The correspondence described in paragraph 77 was made available on the Commission's website on 3 October 2019.
79. On 4 October 2019 the Commission published a purported determination that was not valid as the consultation period for the Department's Additional Information (published



on the Commission's website) had not yet elapsed. On the same day, the Commission removed the determination material from the Commission's website and published a statement extending the consultation period to provide further opportunity to comment on the Department's Additional Information until midday, 11 October 2019.

80. The Commission received 24 written comments on the Department's Additional Information. One was a general comment. Of the remaining 23 comments, the main issues raised in written submissions to the Commission included:
- air quality cumulative impacts;
  - air quality monitoring;
  - air quality data accuracy;
  - overburden option 1 and 2 comparison;
  - health impacts as a result of air quality;
  - environmental impacts having been assessed and mitigated;
  - information and statutory consultation supporting the application over a number of years;
  - commentary on the public interest;
  - climate change and greenhouse gas emissions;
  - comments on conditions of consent; and
  - procedural fairness and complaints on process.
- The 24 comments referred to above (of which 16 were in support, seven were in objection, and one was a comment) were considered by the Commission, and were published on the Commission's website on 11 October 2019.
81. On 11 October 2019 the Commission sought clarification from the Department as to whether the Ministry of Health was consulted during the Department's assessment of the Applicant's air quality addendum reports.
82. On 11 October 2019 the Department responded "*the Department did not require further agency input to inform its response to the questions posed by the Commission. In particular, I note that the addendum to the air quality assessment provided on 24 September 2019 was undertaken to clarify the predicted air quality impact levels at specific receiver locations in Camberwell Village. The Department's assessment of the additional air quality information was undertaken in accordance with the EPA's Approved methods for the modelling and assessment of air pollutants in NSW and used this additional information to inform its final recommendations in relation to acquisition and mitigation rights.*

*The Department notes that NSW Health had previously confirmed its satisfaction with the recommended conditions in a meeting with the Commission dated 15 August 2019, and did not need to consult further with NSW Health to inform its recommendations for affording acquisition and mitigation rights in accordance with the Voluntary Land Acquisition and Mitigation Policy."*

## 5 THE COMMISSION'S CONSIDERATION

### 5.1 Material considered by the Commission

83. In its determination, the Commission has carefully considered the following Project-related material (**Material**):
- the EIS (including all accompanying specialists' reports);

- all public submissions made to the Department in respect to the public exhibition period from 3 November 2015 to 3 December 2015;
- Response to Submissions (**RTS**) prepared by the Applicant made available to the Department including revised accompanying specialists' reports dated 20 October 2016;
- Peer Review of Economic Assessment, by the Centre for Internal Economics, June 2016;
- Peer Review of the Revised Economic Assessment, by the Centre for Internal Economics, May 2017;
- Revised Response to Submissions (**RRTS**) prepared by the Applicant made available to the Department (including revised accompanying specialists' reports) dated 24 November 2017;
- Memo from AECOM on behalf of the Applicant dated 21 February 2018 and Memo from the Applicant to the Department on 21 March 2018 responding to Department's request for information;
- Revised Specialist Assessments; biodiversity impacts (2 March 2018), blasting impacts (28 February 2018) and economic assessment (14 March 2018) provided by the Applicant to the Department;
- the Department's PAR;
- the Unger Report and the Deswick Report;
- the Review Report from the Commission;
- the Applicant's Review Response;
- the Department's FAR;
- presentation from the Applicant on 9 July 2019;
- Applicant's Response 1 and 2 responding to the Commission's request for information;
- air quality addendum reports for the *Camberwell Impacts* dated 9 August 2019, and revised and reissued on 2 September 2019, and the 20 August 2019 *Camberwell Residence Summary paper*;
- the Department's technical review of the air quality addendum reports for the Camberwell residents (undated, provided to the Commission on 24 September 2019);
- information provided during the Commission's separate meetings with the Applicant, the Department and Singleton Council;
- the Department's Additional Information responding to the Commission's requests for information. Note this included revised recommended conditions of consent, replacing the FAR recommended conditions of consent;
- all material and information provided to the Commission when meeting with Singleton Council;
- all material and information provided to the Commission when meeting with the Ministry of Health;
- the EES Additional Response to the Commission's request for information;
- the Council's satisfaction of rehabilitation conditions;
- all Government agency correspondence, advice, submissions and response to submissions made to the Department;
- all correspondence with the Applicant during the determination period;
- all public written submissions made to the Department during the public exhibition period;
- all material and information provided to the Commission at the public meeting, including verbal presentations and written presentations and associated presentation documents, aids and other information;

- all public written comments made to the Commission both prior to and following the public meeting; and
- all public written comments made to the Commission during the initial consultation period and extended consultation period on the Department's Additional Information.

## 5.2 Mandatory considerations

84. In determining this Application, the Commission was required to take into consideration, and has taken into consideration the following mandatory considerations, as provided in section 4.15 of the EP&A Act (**mandatory considerations**):

- the provisions of all:
  - environmental planning instruments (**EPIs**) (as described in paragraph 88); and
  - proposed instruments that are or have been the subject of public consultation under the EP&A Act and that have been notified to the Commission (unless the Secretary has notified the Commission that the making of the proposed instrument has been deferred indefinitely or has not been approved); and
  - planning agreements that have been entered into under section 7.4 of the EP&A Act, and draft planning agreements that a developer has offered to enter into under section 7.4 (as described in paragraphs 101 and 102); and
  - the *Environmental Planning and Assessment Regulation 2000* (**Regulation**) to the extent that it prescribes matters for the purposes of section 4.15(1) of the EP&A Act;
- that apply to the land and/or the development 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 development;
- submissions made in accordance with the EP&A Act and Regulation; and
- the public interest.

85. In determining this Application, the Commission has also considered:

- the *NSW Noise Policy for Industry* dated 2017 (**NPI**);
- the *Approved methods for the modelling and assessment of air pollutants in NSW* dated 2016;
- the *NSW Climate Change Policy Framework* dated November 2016;
- the *NSW Government Guide to Cost-Benefit Analysis* dated March 2017;
- the draft *NSW Government Guidelines for the economic assessment of mining and coal seam gas proposals 2015*;
- the draft *Economic Evaluation in Environmental Impact Assessment*;
- *NSW Aquifer Inference Policy*;
- the *Voluntary Land Acquisition and Mitigation Policy* (**VLAMP**);
- the *Commonwealth Environmental Protection and Biodiversity Conservation Act 1999* (**EPBC Act**);
- the *Commonwealth Environment Protection and Biodiversity Conservation Regulations 2000*
- the *NSW Biodiversity Conservation Act 2016* (**BC Act**);
- the *NSW Biodiversity Offsets Policy for Major Projects 2014*;



- the *Principles for the Use of Biodiversity Offsets in NSW 2013*;
- the *Interim policy on assessing and offsetting biodiversity impacts of Part 3A, State significant development and State significant infrastructure projects 2011*;
- *Social Impact Assessment Guidelines* dated September 2017;
- *Singleton Council Community Strategic Plan - Our Place: A Blueprint for 2022* dated 2012;
- *Upper Hunter Strategic Regional Land Use Plan (UHSRLUP)* dated September 2012; and
- *Strategic Framework for Mine Closure (ANZMEC-MCA)*.

86. The Department's PAR included an assessment of the Project against the relevant provisions of the following EPIs:

- *State Environmental Planning Policy No. 33 - Hazardous and Offensive Development*;
- *State Environmental Planning Policy No. 44 - Koala Habitat Protection*;
- *State Environmental Planning Policy No. 55 - Remediation of Land*;
- *State Environmental Planning Policy (Mining, Petroleum and Extractive Industries) 2007 (Mining SEPP)*;
- *State Environmental Planning Policy (Infrastructure) 2007*;
- *State Environmental Planning Policy (State and Regional Development) 2011*;
- *Hunter Regional Environmental Plan (Heritage) 1989*; and
- *Singleton Local Environmental Plan 2013 (SLEP)*.

87. The Department's PAR states "in line with the requirements of section 4.15 of the EP&A Act, the Department's assessment of the Project has given detailed consideration to a number of statutory requirements. These include the:

- objects found in section 1.3 of the EP&A Act; and
- the matters listed under section 4.15(1) of the EP&A Act, including applicable environmental planning instruments and regulations.

*The Department has considered all of these matters in its preliminary assessment of the Project."*

### 5.3 Relevant Environmental Planning Instruments

88. Under section 4.15 of the EP&A Act, the Commission considered the following relevant environmental planning instruments (EPI):

- *SEPP (State and Regional Development) 2011*;
- *SEPP (Mining, Petroleum Production and Extractive Industries) 2007 (Mining SEPP)*;
- *SEPP (Infrastructure) 2007*;
- *SEPP No. 33 - Hazardous and Offensive Development*;
- *SEPP No. 44 - Koala Habitat Protection*;
- *SEPP No. 55 - Remediation of Land*;
- *Hunter Regional Environmental Plan (Heritage) 1989*; and
- *Singleton Local Environmental Plan (SLEP) 2013*.

89. The Department's PAR states "the Department has noted Bloomfield's consideration of these matters in the EIS and assessed the Project against the relevant provisions of these instruments (see Appendix D). Based on this assessment, the Department is satisfied that the Project can be carried out in a manner that is consistent with the aims, objectives and provisions of these instruments."

90. The Commission has reviewed the EPIs listed above in paragraphs 86 and 88, and those identified in the Applicant's EIS, the Department's PAR and the Department's FAR. The Commission is satisfied with the Department's assessment of the relevant EPIs for the reasons described in paragraphs 91 and 92. The Department's PAR and the Department's FAR provide a detailed consideration of the relevant EPIs, and whether the Project is consistent with the aims and objectives of the relevant EPIs.
91. The Commission acknowledges and agrees that the assessment of relevant EPIs contained in the Department's FAR identified where recommended draft conditions of consent have been proposed by the Department to minimise, mitigate and/or manage potential impacts of the Application to achieve acceptable environmental and amenity outcomes as required by those EPIs.
92. The Commission generally accepts the Department's assessment and recommendations described in paragraphs 86 and 87. In some cases, the Commission finds that additional or adjusted conditions are warranted in order to minimise, mitigate and/or manage potential impacts of the Application to achieve acceptable environmental and amenity outcomes as required by the relevant EPIs. These additional or adjusted conditions are explained further in Sections 5.10 of this SoR.

#### 5.4 Commonwealth Approvals

93. The Commission notes that on 27 November 2014, the Project was determined to be 'not a controlled action' under the EPBC Act.
94. The Department's PAR states "*[t]he Department recommends that Bloomfield consult directly with Commonwealth Department of Environment and Energy (DoEE) as to whether the Project should be re-referred as a result of this identified increase.*"
95. The Department's FAR states that "*the Department notes that Central Hunter Valley Eucalypt Forest and Woodland (CHVEFW) was listed by the Commonwealth under the EPBC Act on 7 May 2015, following the Commonwealth's decision of 27 November 2014 that the Project was 'not a controlled action'. In accordance with section 158A of the EPBC Act, the later CHVEFW listing event does not apply to the Project because the 'not a controlled action' decision had already been made.*

*Nevertheless, the Department recognises the importance of considering impacts to this CEEC despite it not being considered a matter of national environmental significance (MNES). The Department also notes that, even if the listing applied to the Project, not all patches of CHVEFW are considered MNES as they must meet minimum diagnostic characteristic and condition thresholds. However, all patches of CHVEFW have biodiversity value and therefore must be considered under State legislation."*

State biodiversity legislation issues are described further in Section 5.10.6.

#### 5.5 Site Verification Certificate

96. The Department's PAR states that "*[w]hile the new mining lease area [MLA 487] is not located on Biophysical Strategic Agricultural Land (BSAL), or within a Equine or Viticulture CIC, Bloomfield undertook soil testing to validate the BSAL mapping. Bloomfield applied for and was issued a Site Verification Certificate (SVC) on 29*

*August 2014 in accordance with the Upper Hunter Strategic Regional Land Use Plan. The SVC is essentially an exemption from the Gateway Process because the proposal will not affect BSAL...*

*Accordingly, a mining lease application was lodged on 23 February 2015 (MLA 487)."*

97. The Commission finds that the Applicant undertook testing, obtained a SVC and lodged an application for a Mining Lease (MLA 487) described in paragraph 96.
98. The Commission notes that MLA 487 is subject to an approval subsequent to this Application.

## **5.6 Permissibility under relevant Local Environment Plans**

99. The Department's PAR states that the Project *"is predominantly zoned RU1 (Primary Production) under the Singleton LEP. Open-cut mining is permissible with consent in the RU1 zone under the Singleton LEP. The construction of a cut and cover tunnel (i.e. a road) on land zoned SP2 (Classified Road) is also permissible with consent under the Singleton LEP. Although there are small parcels of land zoned SP2 (Railway) and E2 (Environmental Conservation) also located in the Project area, no development is proposed on this land. Consequently, all components of the Project are permissible with development consent under the Singleton LEP."*

Figure 4 shows the land zoning of the Rix's Creek South Mine.

100. The Commission agrees with the Department's analysis. The Commission finds that the Application is permissible with consent under the Singleton LEP, for the reasons set out in paragraph 99.

## **5.7 Planning Agreement**

101. The Commission notes that the Department was satisfied with the in-principle agreement established between the Applicant and the Council to the value of \$432,000. The Department's FAR states *"[f]ollowing successful discussions between Bloomfield and Council over the size and use of the proposed contributions, Bloomfield provided Council with a draft [agreement] on 27 June 2018. The terms of the draft [agreement] included a contribution of \$432,000 to the Singleton Community and Economic Development Fund. The Department notes that this amount equates to 0.99% of the capital investment value (CIV) of the Project and therefore aligns with Council's November 2017 resolution to calculate mine-related development contributions based on a basis of either cents per tonne or 1% CIV Council advised on 27 March 2019 that it had reached in principle agreement with Bloomfield over the proposed [Voluntary Planning Agreement]."*

*The Department considers that the proposed development contributions are reasonable in terms of quantum and use and has therefore recommended a condition requiring Bloomfield to finalise the [Planning Agreement] with Council within 6 months of commencement of development under SSD 6300.*

102. The Commission agrees with the Department's analysis of the planning agreement described in paragraph 101. It is one of the Department's recommended conditions of consent that the Applicant enter into a planning agreement with the Council in



accordance with the terms of its offer, within six months of commencement of development under the consent as permitted by section 7.7(3) of the EP&A Act.

## 5.8 Associated modification and consents

103. The Commission notes that operation of the Project is currently approved under DA 49/94 and is operated in conjunction with Rix's Creek North Mine as described in paragraphs 7-9.
104. The Department's PAR states that *"under DA 49/94, Bloomfield is required to establish and secure a biodiversity offset of 118.32 ha in the eastern part of the site, to compensate for the proposed biodiversity impacts of Mod 5 (which approved an as-yet unbuilt rail loop and associated loading facilities). This offset area includes a mix of woodland and forest endangered ecological communities, as well as derived native grassland. However, since the purchase of Rix's Creek North and its existing rail infrastructure, Bloomfield is no longer proposing to construct the rail loop at Rix's Creek. Consequently, the associated disturbance and offset is no longer required, and Bloomfield has committed to surrendering the approval inherent in Mod 5 as part of this Project."*
105. The Commission notes that the Department's FAR states the *"Department has endeavoured to carry over all significant outstanding obligations, ongoing commitments and project-specific conditions from DA 49/94 to the recommended conditions of consent, in order to ensure that Bloomfield retains responsibility for all previously imposed but not-yet-completed requirements. This would enable DA 49/94 to be surrendered following commencement of the new consent."*
106. The Commission is satisfied with the Department's analysis as described in paragraph 105. The Commission has adopted the recommended conditions of consent requiring the Applicant to retain responsibility for all previously approved impacts which are not yet complete.
107. The Commission notes the Applicant's desire to operate the Project and the Rix's Creek North Mine as a single operation, namely the Rix's Creek Integrated Mining Complex. The Commission supports this in principle and notes that other consents and development approvals may be required in the future for this to occur more fully.

## 5.9 Social and economic impacts

### *Issues in the Review & Recommendations*

108. The Commission made three recommendations during its Review in relation to economics:
  - R20:** *that the Applicant provide further information in relation to how it has determined its "base case" financial parameters, including the assumptions relating to commodity price and exchange rate forecasts, and references to other available commodity price and exchange rate forecasts.*
  - R21:** *that the Applicant provide a more detailed discussion of the likelihood and range of feasible alternatives to the "base case" referred to above, including, but not limited to its selection of the downside coal price scenario of 25% and the World Bank commodity price scenario.*

**R22:** *that the Applicant provide further information (including relevant risk minimisation strategies) in relation to how it has considered severe downside scenarios (including, but not limited to, the World Bank commodity price scenario), in accordance with the Guideline for the Use of Cost Benefit Analysis in Mining and Coal Seam Gas Proposals 2012 and accompanying Technical Notes.*

#### *Applicant's Consideration*

109. In response to the Commission's Review, the Applicant submitted a Review Response including a revised economic assessment dated 2018.
110. The Applicant's Review Response notes that in relation to Recommendation 20 *"the Base Case refers to what is assumed to occur in the absence of the project. The Project Case refers to the change in net economic benefits achieved by the project when compared to the Base Case. While Base Case and Project Case activities differ, the key financial parameters are used in the two scenarios are identical to deliver a like-for-like comparison.*

*Key financial parameters relevant to the development of the Base Case include coal commodity prices and exchange rates. It should be noted that the DPE Guidelines for the economic assessment of mining and coal seam gas proposals (2015) do not state a clear preference for any forecast of coal prices and exchange rates and suggest that "the onus is on the proponent to clearly explain reasoning as to why the selected assumptions are representative of the project's costs and benefits."*

111. The Applicant's Review Response further states that the Project *"produces two types of coal: semi-soft coking coal and thermal coal. The two coal types have different respective uses, markets, customers and prices. Approximately 60 per cent of the historical and forecast production schedule at Rix's Creek is semi-soft coking coal.*

*The economic analysis uses forecast coal prices from Macquarie Bank due to:*

- the consistent derivation of data by Macquarie Bank;*
- the scope of available data (annual data until 2030); and*
- the level of detail available for specific coal types relevant to Rix's Creek operations (thermal and semi-soft coking coal).*

*The forecasts are specific to Australian coal prices and show a higher correlation with actual historic and current coal prices received for coal produced by Rix's Creek compared to alternate sources."*

Further detail regarding yearly forecast exchange rates was provided in Appendix J of the Applicant's Review Response.

112. In relation to Recommendation 21 the Applicant's Review Response noted that *"[i]n order to aid the IPCs [the Commission's] interpretation on the likelihood of potential downside price scenarios occurring, KPMG has prepared a review of the historical variability of coal price and exchanges rates [refer to Appendix I of the Applicant's Review Response].*

*Further analysis of severe downside scenarios identified that decreases in coal prices and increase in exchange rates that would reduce the net economic benefits of the project to zero are generally outside the range of historical fluctuations.*

*Importantly, when considering the potential implication of the unfavourable exchange rates or prices Bloomfield notes that it is a relatively small company with an excellent relationship with its customers as evidenced through its long term customer relationships established over more than 30 years of operations. Over this same time Bloomfield has proven its ability to manage economic cycles in a manner which does not impact on the long term viability of the business.”*

113. In relation to Recommendation 22 the Applicant’s Review Response noted that “[t]he cost-benefit analysis for the project was undertaken in accordance with the *Guideline for the Use of Cost Benefit Analysis in Mining and Coal Seam Gas Proposals (NSW Government, 2012)* and included the requisite discount rates, identification of risks and uncertainties and unquantified factors. A sensitivity analysis was undertaken to examine the robustness of the mine during downside scenarios. The sensitivity analysis demonstrated that mine remains viable during the assessed downside scenarios.”
114. The Applicant confirmed in the Applicant’s Review Response that the economic assessment was consistent with the *Guideline for the Use of Cost Benefit Analysis in Mining and Coal Seam Gas Proposals 2012*.
115. The Applicant’s further information (as described in paragraphs 47 and 48) included details of full time equivalent employees (FTE). The Applicant stated that the Project will employ up to 217 FTE employees and up to 55 FTE external contractors in certain years of the project (approximately three years leading up to 2023), with expenditure in wages, suppliers and contractors totalling \$114M.
116. The Department’s PAR states “currently, Bloomfield provides community funding through the Bloomfield Foundation. Between 2006 and 2014, the Bloomfield Foundation contributed \$2.6 million (\$325,000 per annum) in funding and sponsorship to a range of recipients in the local region...  
  
*Bloomfield has committed to continuing the Bloomfield Foundation over the life of the Project. Additionally, Bloomfield has proposed to contribute through a Planning Agreement.”*
117. The Applicant has established in-principle support for a planning agreement which would provide a further \$432,000 for local community uses as described in paragraph 101.
118. The Applicant’s economic assessment outlines the following economic benefits:
  - capital expenditure = \$57.5M NPV;
  - operating and maintenance expenditure = \$882.3M NPV;
  - revenue based on forecast coal prices = \$1,271.8M NPV;
  - royalties at the 8.2% for open cut coal mines = \$104.3M NPV;
  - company income tax attributable to NSW = \$50.9M NPV;
  - NPV of \$744.4M with a Benefit Cost Ratio (BCR) of 1.6 at a 4% discount rate; and
  - NPV of \$614.2M with a BCR of 1.7 at a 7% discount rate.
119. The Applicant’s Revised Economic Assessment (March 2018) provides “more detailed coal price forecasts from Macquarie Bank [to] inform the 2018 analysis. These forecasts differentiate between Thermal and Semi Soft Coking coal extracted from



*Rix's Creek. The forecasts used in the 2015 analysis did not enable this differentiation. Recognising that revenue benefits are a significant driver of the overall analysis results, sensitivity analysis were undertaken using alternate sources of price forecast information."*

120. The Applicant's Review Report states that "[t]he financial costs associated with the two options indicate an overall additional cost of \$7.9M associated with Option 1 and a cost of \$1.2M for Option 2. The magnitude of these costs, while not insignificant, is not considered to be of a level that would rule in or out either of the options or the EIS submitted case."

#### *Department's Assessment*

121. The Department's FAR states that the Applicant's RRTS Economic Assessment "*estimated that the Project would result in an overall benefit for the NSW community of \$272.7 million NPV. This benefit included \$104.3 million in royalties, \$116.9 million in wage premium and \$50.9 million in company tax attributable to NSW.*"
122. The Department (via consultation with DRG) considered a range of cost impacts of Scope 1 and 2 greenhouse gas emissions, which were quantified at \$6.7M and \$25M respectively by the independent economic assessment. The Applicant's estimate is similar to the lower end of the independent economic assessment's estimate. The Department also states "*Notwithstanding, the Department is satisfied that even if CIE's [independent economic assessment] highest estimated carbon price were to apply, it would not significantly affect the overall benefit of the Project.*"
123. The Department's FAR confirms the sensitivity analysis undertaken by the Applicant. "*The purpose of a sensitivity analysis is to assess the sensitivity of the CBA to changes in key assumptions to quantify the best and worst outcomes based on upside and downside risks. The [EIS] sensitivity analysis found that the Project would still be economically viable... under the lower World Bank coal price assumptions or the higher +1000 basis points exchange rate assumption.*"
124. The Department's FAR concludes that "*Bloomfield provided an addendum report to the 2018 Economic Assessment, prepared by KPMG [refer to Appendix J of the Applicant's Response Report]. This report clarified that the same financial parameters had been used in the base case and the Project case, provided additional background on the coal price assumptions and AUD/USD exchange rate used in that EA, included additional sensitivity analysis of severe downside risks and elaborated on Bloomfield's corporate risk minimisation strategies.*

*This additional information demonstrates that the Bloomfield has considered significant downside parameters. While this is ultimately a matter for Bloomfield, the additional analysis demonstrates that the Project would remain economically viable under downside coal price and exchange rate scenarios and Bloomfield has in place sufficient risk mitigation strategies to withstand these scenarios. The Department remains of the view that the Project would generate significant economic benefits to the NSW community and would contribute to employment and expenditure in both the local and regional economies."*

125. The Department's Additional Information provided to the Commission states that "*[t]he costs expressed in Table 6 of the Department's Assessment Report [the FAR] are not*

*expressed in NPV terms, as these costs are anticipated to accrue over the life of mining operations, with rehabilitation efforts and associated costs expected to continue following the cessation of mining operations.*

*Bloomfield however, provided an additional response to the Commission (dated 5 August [2019] that included NPV calculations of the incremental costs for Options 1 and 2, being \$7.9 M NPV and \$1.2 M NPV respectively.”*

#### *Public Comments*

126. Speakers at the public meeting spoke in support of the Application stating that the Bloomfield Foundation (part of the Bloomfield Group) financially supports local schools, junior sporting teams, town festivals, community groups and community projects.
127. Speakers at the public meeting, and written comments received thereafter, made representations in support of the Application describing that, if approved, the Application will have many positive benefits for the Singleton community, local contracting companies and local businesses around the Singleton district. This includes the provision of generational employment opportunities and financial security for the mine workers, contractors and local businesses that provide goods and services to the Project.
128. 917 parties registered comments on the Commission’s website in support for the Application.
129. Speakers at the public meeting and those who provided written comments objecting to the Application raised concerns about:
  - the fragmentation of the community and community cultures caused by mining;
  - the economic viability of the project into the future, presenting global trends towards renewable energy, and risks to rehabilitation;
  - saturation of coal mines in the region and the proximity of residential growth areas for surrounding townships;
  - the ability for Camberwell residents to access voluntary acquisition; and
  - the cost of public health cost is not considered against the economic benefit of the project

#### *Commission’s Consideration*

130. The Commission acknowledges the public’s comments described in paragraphs 126-129.
131. The Commission considers that the Applicant has appropriately met the Review Report recommendations 20, 21 and 22 because of the additional detail provided in the Applicant’s Response Report, the Department’s FAR and the Department’s Additional Information. The Commission accepts that although the Applicant didn’t provide broker forecasts beyond the Macquarie Bank World Forecasts the Commission accepts that the economic assessment was completed in accordance with the *guidelines for the economic assessment of mining and coal seam gas proposals 2015* and sensitivity analysis included downside scenarios.
132. The Commission accepts the sensitivity analysis provided by the Applicant and independent economic assessment completed by the Department.

133. The Commission accepts the Department's consideration of the economic assessment of the Application that there is net benefit to the State as outlined in paragraph 124 because the BCR is greater than 1.0, and the Commission finds that the Application would generate significant benefits through royalties and income tax attributable to NSW, as set out in paragraph 121.
134. The Commission considered a range of scenarios, including those with a potential for lower demand for thermal coal. The Commission also considered the Application's BCR of 1.7 as per paragraph 118, and considered risks of potential early closure. The Commission has addressed this through the increased frequency reporting and detailed rehabilitation management in section 5.10.4 of this SoR.
135. The Commission has also considered in detail the economic impact of Option 1 and Option 2. The Commission finds that the economic impacts of Option 1 and Option 2 are \$5.6M or \$0.9M, respectively (NPV calculations of the incremental costs for Options 1 and 2, being \$7.9 M NPV and \$1.2 M NPV respectively).

The Commission finds that the economic impact of Option 1 or Option 2 is relatively small when compared with the capital expenditure or maintenance costs of the Project. Furthermore, the Applicant confirmed that "the magnitude of these costs [for the two options], while not insignificant, is not considered to be of a level that would rule in or out either of the options or the EIS submitted case" in its Review Response.

## 5.10 Likely impacts of the development on both natural and built environments

### 5.10.1 Air quality

#### *Issues in the Review & Recommendations*

136. The Commission made three recommendations during its Review in relation to air quality:
- R1:** that the Applicant demonstrate how its operational procedures will incorporate continual improvement to further reduce the generation and dispersion of particulate matter.
- R2:** that the Applicant develop a protocol to assist those stakeholders concerned about air quality impacts to better:
- access the data from the Upper Hunter Air Quality Network; and
  - provide instruction on how to use the Environment Line provided by the NSW Government.
- R3:** that the Applicant provide further evidence of the policies and protocols in place to manage mine-owned residences, including clarification as to whether termination rights are only triggered in relation to dust exceedance, or whether termination at any time is a general at will right of occupancy of a mine owned residence.

#### *Applicant's Consideration*

137. On 9 July 2010, the Commission met with the Applicant. The Applicant stated that operations on the Project site are heading further west, and generally moving further away from the residential areas of Singleton.



With regard to Recommendation 1, the Applicant’s Review Response confirmed that it had *“developed an Air Quality and Greenhouse Gas Management Plan which documents how the operational procedures of the mine incorporate continual improvement in management of air quality and methods to reduce the generation and dispersion of particulate matter...*

*The measures briefly described in [Table 1 of the Combined Rix’s Creek North and Rix’s Creek South Combined Air Quality and Greenhouse Gas Management Plan- Version 1.3 Approved 19 December 2017] under adverse conditions are largely aimed at preventing potential exceedance of 24-hour average PM10 criteria and also to manage short-term events. The Mine will operate measures to respond to changing dust conditions using real-time weather and dust monitoring data and a range of approved potential actions that can be taken at short notice.”*

The Applicant provided extracts of the management plan to outline the management actions, proactive measures, and reactive measures that are utilised to manage air quality.

- 138. At the Public Meeting, on 6 June 2019, employees of the Applicant described actions undertaken on site to manage air quality. The activities described by employees were generally consistent with the trigger levels and responses outlined by the Applicant in its Review Response and included real time dust monitoring, dust emission identification and shut down procedures when necessary.
- 139. With regard to Recommendation 2, the Applicant’s Review Response provided information describing the Applicant’s community engagement channels and information pathways. The Applicant provided evidence of having recently updated its website to provide a pathway for community members to access air quality information and NSW government complaint pathways.

With regard to Recommendation 3, the Applicant’s Review Response states that *“[i]ndividual tenants have the opportunity to take action as per their tenancy agreement inclusive of termination clauses. Tenants are also provided a copy of the ‘Mine Dust and You Factsheet’ developed by NSW Health to help inform them of associated risks and dust management practices. An updated hardcopy of the fact sheet was provided to the tenants surrounding Rix’s Creek South in October 2018 and clarification was provided regarding their option to terminate without penalty due to air quality concerns.”*

- 140. The Applicant’s Review Response states that the air quality analysis of Option 1 and Option 2 overburden emplacement areas is as follows:

**Table 2: Air Quality Trade-Off Analysis Source: Excerpt of the Applicant’s Review Report**

	<b>Original EIS</b>	<b>Option 1</b>	<b>Option 2</b>
<b>Total TSP emissions (kg/yr)</b>	2,432,562	2,468,421	2,456,291
<b>Percentage change of Total TSP emissions</b>		1.5%	1.0%

*“Notably, the predicted change in dust impacts is small, and within the modelling accuracy and the normal variation that naturally occurs in background dust levels daily or between years.*

*The comparison shows that the proposed trade-off options would only influence dust levels in the close vicinity to the site of the activity and that no significant or reasonably measurable change in dust levels at any off-site receptor would occur from the mine as a result of the proposed trade-off options.”*

#### *Department's Assessment*

141. With regard to Recommendation 1 the Department's FAR states that “*Bloomfield has committed to continually revise and update its air quality mitigation and management measures to reflect operational changes and advancements in technology, and to document these improvements in its Air Quality and Greenhouse Gas Management Plan (AQGGMP). The Department is satisfied with this approach and has recommended conditions to ensure that Bloomfield continues to implement best practice over the life of the mine and document these measures in the AQGGMP...*

*The Department considers that Bloomfield's current and proposed air quality management measures align with contemporary best practice for NSW coal mines but recognises that further improvements should be pursued over time to improve the Upper Hunter Valley airshed by reducing all major industrial sources of dust. This need is reinforced by the ongoing concerns raised by the community, special interest groups and NSW Health over air pollution and associated social and health impacts.”*

142. With regard to Recommendation 2 the Department's FAR states “[t]here are a number of channels to obtain information on air quality in the Upper Hunter. Stakeholders can contact Bloomfield or Government regulators to make an enquiry, lodge a complaint, review monitoring data or learn more about air pollution. To assist concerned or interested stakeholders in finding this information, Bloomfield has recently updated its company website with links to the Upper Hunter Air Quality Network and the Government's Environment Line (131 555 or submit an online request via [www.epa.nsw.gov.au/about-us/contact-us/environmentline](http://www.epa.nsw.gov.au/about-us/contact-us/environmentline)).

*The Department considers that, between the company and Government agencies, there is sufficient information/data available, either online or over the phone, to enable all interested or concerned stakeholders to make an informed judgement and/or a complaint over air quality.*

143. With regard to Recommendation 3 that Department's FAR states “*Bloomfield leases a number of its unused residential properties and manages these via negotiated tenancy agreements and informal consultation. Bloomfield also clarified in its Response Report that tenants can terminate these agreements at any time without penalty due to air quality concerns.*

*The Department supports mining companies leasing out their mine-owned properties, so long as the tenants are made aware of the potential health risks and are able to terminate their tenancy agreement without penalty at any time. The Department considers that these tenancy rights can be provided through strict conditions of consent.*

144. The Department recommended that privately owned vacant lots be afforded acquisition opportunities upon request (similarly to private residences). The Department also recommend that privately owned vacant lots be afforded additional mitigation upon request opportunities if tenants wish to take up these options, consistent with the *Voluntary Land Acquisition and Mitigation Policy for State*

*Significant Mining, Petroleum and Extractive Industry Developments (NSW Government, 2018).*

145. The Department concluded in its FAR that recommended conditions of consent be included to reflect EPA's advice that *"the Department has recommended comprehensive air quality conditions to ensure that Bloomfield complies with contemporary air quality criteria, minimises cumulative amenity and health impacts, operates an appropriate air quality management system and prepares and implements a suitable AQGGMP.*

*In drafting these conditions, the Department has given careful consideration to addressing the EPA's advice on the Project and its broader dust mitigation initiatives. The EPA advised that Bloomfield should demonstrate increased vigilance in mitigating trackable (i.e. wheel-generated) haul road dust and stabilising exposed areas susceptible to dust generation.*

...

*the Department agrees with this advice and has tailored the recommended conditions to pay particular attention to these issues. Further, in line with the EPA's initiatives to reduce emissions from 'non-road' diesel combustion engines, the Department has also recommended a condition requiring Bloomfield to ensure that all non-road mobile diesel equipment with engines >30 litres used on the site include reasonable and feasible diesel emissions reduction technology.*

*The Department has recommended specific conditions to protect nearby landowners and tenants from the air quality impacts of the development. This includes conditions to protect tenants of mine-owned land), acquisition and mitigation procedures for the 74 receivers and vacant landholdings ... and the ability for landowners to request an independent review of air quality impacts at their residence or property."*

#### *Ministry of Health's Consideration*

146. The Department FAR's states that *"NSW Health advised that it continued to have concerns over the Project's predicted air quality impacts and the ability to comply with National Environment Protection Measures (NEPM) goals for particulate matter... Following review of the draft conditions, NSW Health advised its concerns has been addressed."*

147. The Commission met with the Ministry of Health and the Department as described in paragraph 51. At the meeting, Ministry of Health representatives confirmed its satisfaction with the assessment and the recommended conditions. The availability of the transcript for this meeting is described in paragraph 52.

#### *Public Comments*

148. Speakers at the public meeting, (employees of the Applicant) made representations in support of the Application's ability to respond to weather patterns and implement monitoring, mitigation and management actions (including shut down).
149. Speakers at the public meeting and written comments received thereafter objected to the Application outlining the following concerns:
- air quality mitigation practices should be notified;
  - air quality exceedance notification;
  - air quality assessment is inadequate;



- availability of air quality documentation;
  - air quality in the region is above the limits in the *National Environment Protection Measure for Ambient Air Quality*;
  - *Upper Hunter Air Quality Monitoring Network* and *EPA Dust Stop and Pollution Regulation Program* is not effective.
  - desire for independent assessment of air quality for the region;
  - cumulative impacts are too high on surrounding areas (Singleton Heights, Maison Dieu and Camberwell);
  - property acquisition is not possible for Camberwell residents;
  - concerns that the cost to public health is not considered against the economic benefit of the Project; and
  - conflict between mine and the growth of the Singleton township.
150. Additional written comments received in response to the publication of the Department's Additional Information on 24 September 2019 on the Commission's website outlined the following concerns:
- air quality cumulative impacts;
  - air quality monitoring;
  - air quality data accuracy;
  - health impacts as a result of air quality; and
  - comments on conditions of consent.
151. One community member provided conditional support for the Application if their recommended conditions of consent were included:
- *eliminate visible mine blasting plumes into the atmosphere, by*
    - *smaller blasts, and*
    - *improved blast hole stemming material & depth use.*
  - *control mine operations to WHO Guidelines using a 'New Mine Surrounding PM2.5 Network' for each 45degree quadrant*
  - *mine to progressive shutdown operations as valley drifting air patterns cumulative 15 Minute PM10 and PM2.5 readings exceed NSW Health Guidelines.*
- The Commission has considered this comment as an objection.

*Further matters raised by the Commission*

152. The Commission sought confirmation from the Ministry of Health as outlined in paragraphs 146 and 147.
153. The Commission acknowledges that the Department initially found an inadequacy with the Applicant's air quality assessment after the matter was referred to the Commission. Paragraphs 61, 69 and 70 outline the request for information, the Department's assessment and the Department's satisfaction with the addendum reports. The public was given the opportunity to comment until 4 October 2019 (as described in paragraph 62) on the Department's Additional Information available on the Commission's website. This comment period was extended to 11 October 2019 as described in paragraphs 62 and 79.
154. On 10 September 2019 the Commission requested information from the Department on the Camberwell property acquisition arrangements (described in paragraph 68) in place for the Project, Rix's Creek North Mine and surrounding coal mines.

155. On 24 September 2019 the Department provided the Department's Additional information including the following matters related to air quality:
- updated Air Quality Assessment addendum reports (dated 9 August 2019, 2 September 2019) completed by the Applicant and a summary air quality report by the Applicant;
  - the Department's consideration of the revised air quality assessment reports;
  - revised recommended conditions of consent – expanding sections to deal with acquisitions in Camberwell;
  - a tabulated summary of recommended conditions addressing the Commission's Review recommendations,
  - a tabulated summary of state agency consultation informing recommended conditions of consent;
156. The Department's consideration of the revised Air Quality Assessment resulted in revised recommended conditions of consent. These revised recommended conditions provided additional properties with access to tiered land acquisition powers upon request. Figure 7 shows the recommended conditions of consent with notations of tiering arrangements for each property and mine operator. The properties highlighted yellow are additions to the consent to provide transparent acquisition rights to the owners of these properties.

**Figure 7: Adjusted Recommended Conditions of Consent**

Acquisition Basis	Land
Noise, Air Quality	R1 (Lot 1 DP 1137660) Lot 1 DP 121623 <sup>c</sup> Lot 1 DP 1244196 (formerly Lot 1 DP 1136411) <sup>c</sup> Lot 54 DP 252692
Air Quality	R170 (Lot 2 DP 1111313) <sup>c</sup> R171 (Lot 75 DP 1124347) <sup>c</sup> Lot 3 DP 1111313 <sup>c</sup> Lot 2 DP 804005 Lot 52 DP 252692 Lot 53 DP 252692 N88 (Lot 103 DP 852484) <sup>d</sup> Lot 104 DP 852484 <sup>d</sup> N91 (Lot 102 DP 852484) <sup>d</sup> Lot 106 DP 855187 <sup>d</sup> N161 (Lot 105 DP 855187) <sup>c</sup> N172 (Lot 1 and 2 Section 8 DP 758214) <sup>b</sup> N103 (Lot 4 DP 758214) <sup>c</sup> Lot 1 DP 248748 <sup>c</sup> Lot 5 DP 758214 <sup>c</sup> Lot 6 DP 758214 <sup>c</sup> Lot 7 DP 758214 <sup>c</sup> Lot 3 DP 758214 <sup>c</sup> Lot 8 DP 758164 <sup>c</sup> Lot 2 Section 9 DP 758214 <sup>c</sup> Lot 9 DP 758214 <sup>c</sup> Lot 44 DP 1166047 <sup>b</sup> Lot 5 DP 1166047 <sup>b</sup> N105 (Lot 3 DP 1088108) <sup>e</sup>

<sup>a</sup> The locations of the land referred to in Table 7 is shown in Appendix 3.

<sup>b</sup> The Applicant is only required to acquire these properties if acquisition is not reasonably achievable under the approval for Rix's Creek North Mine.

<sup>c</sup> The Applicant is only required to acquire these properties if acquisition is not reasonably achievable under the approval for Rix's Creek North Mine or Ashton SEOC.

<sup>d</sup> The Applicant is only required to acquire these properties if acquisition is not reasonably achievable under the approval for Rix's Creek North Mine, Ashton SEOC or Glendell Mine.

<sup>e</sup> The Applicant is only required to acquire these properties if acquisition is not reasonably achievable under the approval for Rix's Creek North Mine or Glendell Mine.

**Source:** The Department's Additional Information

157. The Department's Additional Information covering letter states "[t]he Department has also considered the potential impacts on the amenity of nearby receivers and maintains there would be relatively negligible differences between the two options from a visual, air quality and noise perspective. While the Department does not consider the minor difference in impacts to affect the overall merits of either project option, should the Commission seek to approve Option 1, it would be advised to review the acquisition and mitigation rights afforded under Conditions D1-D2 to Part D."
158. The Department's Air Quality Addendum Assessment Report states "[t]he Department notes that this assessment has been undertaken based on the consideration of modelled air quality impacts associated with Option 2, which is consistent with the approach contained in the Department's [FAR]. However, the Department also notes that Bloomfield's response of 5 February 2019 contained revised numeric predictions for a representative worst-case air quality scenario (2023) and that this modelling

*indicates that Option 1 is likely to result in virtually identical PM<sub>2.5</sub> impacts and very similar PM<sub>10</sub> impacts as a result of the project.”*

159. The Department’s Air Quality Addendum Assessment Report confirms that *“Bloomfield has raised no objections to the recommended conditions of consent, including the proposed provision of additional acquisition rights to residents in Camberwell.”*
160. The Department confirmed on 25 September 2019 that the Air Quality Assessment was considered to be satisfactory and had rectified the previous inadequacy that had been identified.
161. On 11 October 2019 the Department confirmed that additional consultation with Ministry of Health was not required as described in paragraph 82.

#### *Applicant’s Response on Further Matters*

162. The Applicant provided updated Air Quality Assessment addendum reports to the Department and these reports were made available to the Commission on 24 September 2019 and are discussed in paragraphs 69-71.

#### *Commission’s Consideration*

163. The Commission acknowledges the public’s comments summarised in paragraphs 148-151.
164. The Commission considers that the Applicant has appropriately met the Review Report recommendations 1, 2 and 3 because of the additional detail provided in the Applicant’s Response Report, the addendum air quality reports provided to the Department, the Department’s assessment of the addendum reports and revised recommended conditions of consent.
165. Although the Commission notes that the Applicant has responded to the Commission’s Review, and additional information has been provided by the Department as described in paragraph 73, the Commission has imposed an additional condition of consent for air quality management for the purpose of making information accessible to the public. The condition is described in greater detail in paragraph 174.
166. The Commission accepts and adopts the Department’s assessment of the revised air quality assessment (described in paragraphs 141-145) and the trade-off air quality assessment for Option 1 and 2.
167. The Commission accepts that the Ministry of Health is satisfied with the assessment and recommended conditions (described in paragraphs 146 and 147).
168. The Commission accepts that the Department’s recommended conditions, B25, contain requirements for the Applicant to undertake mitigation and management actions outlined by community members (described in paragraph 145).
169. The Commission accepts and has imposed conditions of consent for increased ‘property acquisition rights’ for private vacant land holders, and increased ‘landowner mitigation request’ opportunities as outlined by the Department.



170. The Commission accepts and has imposed the Department's revised recommended conditions of consent for increased 'property acquisition rights' for Camberwell residents described in paragraphs 156-158. In this regard the Commission accepts the Department's view that the further consultation with the Ministry of Health was not necessary to inform its recommendation affording additional acquisition and mitigations rights.
171. The Commission agrees with the Department's Air Quality Addendum Assessment Report and the appropriateness of the assessment for consideration of Option 1 or Option 2 (described in paragraph 158).
172. The Commission accepts the Department's recommended condition that a management plan is required, and will be independently reviewed every three years to include continuous improvement in air quality management and mitigation actions.
173. The Commission finds it is warranted for condition E14 to be expanded upon to require the Applicant's website be maintained to include hyperlinks to:
  - Government sources (for air quality and noise information), and
  - Compliant management contact details for the Applicant and the NSW Government Environment Line (refer to condition E14(a)(xiii)).

### 5.10.2 Noise

#### *Issues in the Review & Recommendations*

174. The Commission made three recommendations during its Review in relation to noise:
  - R4:** that the applicant make available on a timely basis information relating to how it is managing noise impacts, including its adaptive management practices and how it proposes to use such practices to manage the Project's noise impacts to conform to the ANC. Such information should include the Noise Management Plan, which should be made available to the public on the applicant's website or in hard copy where requested. The Noise Management Plan published by the applicant should outline the process to be undertaken by the applicant in modifying operations where noise exceedances occur, and include a 24/7 contact number for the applicant and details of the Environment Line provided by the NSW Government.
  - R5** that the applicant provides a full and detailed list of all equipment to be used at the mine, including a schedule for noise attenuation, where it is planned.
  - R6** that the applicant commits to completing the cladding of the Coal Handling and Preparation Plant prior to the extraction of any coal under any Project consent, if approved.

#### *Applicant's Consideration*

175. The Applicant conducted noise modelling as part of the EIS under both neutral and noise enhancing conditions. The Applicant proposed Achievable Noise Criteria (**ANC**) rather than Project Specific Noise Limits (**PSNLs**) as the statutory noise compliance limits of the Project.

**Table 3: Achievable Noise Criteria****Source: The Applicant's EIS**

<b>Noise Assessment Group</b>	<b>PSNL</b> <i>(Background + 5 dB(A))</i> <i>L<sub>Aeq15 min</sub> dB(A)</i> <i>Day/evening/night</i>	<b>ANC</b> <i>L<sub>Aeq15 min</sub> dB(A)</i> <i>in all periods</i>	<b>Sleep disturbance criteria</b> <i>L<sub>A1,1 min</sub> dB(A)</i>
A	38/38/38	42	48
B	43/42/37	42	47
C	43/42/37	42	47
D	36/36/35	40	45
E	36/36/35	40	45
F	36/36/35	40	45
G	39//39/37	40	48
H	38/38/37	40	47
I	37/37/37	40	47
J	39/39/37	40	47
K	35/35/35	40	45
L	37/37/37	40	47
M	39/39/38	40	48
N	42/42/39	40	49
O	35/35/35	40	45

176. The Applicant's EIS further states "[a]s the purpose of amenity criteria is to prevent cumulative increases in industrial noise from exceeding acceptable amenity limits, a cumulative noise assessment has been undertaken where the cumulative noise from existing industrial sources, combined with predicted noise from the project is assessed. Amenity criteria shown in [Table 4] have been adopted as suitable criteria for the cumulative noise assessment."

**Table 4: Cumulative Noise Criterion**      **Source: EIS Noise Assessment**

Noise Assessment Group	Period	RBL <sup>1</sup>	Acceptable Amenity Criterion	Maximum Amenity Criterion	Intrusiveness Criterion/PSNL <i>L</i> <sub>Aeq,15minute</sub> dB
			<i>L</i> <sub>Aeq,period</sub> dB	<i>L</i> <sub>Aeq,period</sub> dB	
A	Day	33	50	55	38
	Evening	33 <sup>2</sup>	45	50	38
	Night	33 <sup>2</sup>	40	45	38
B	Day	38	50	55	43
	Evening	37	45	50	42
	Night	32	40	45	37
C	Day	38	50	55	43
	Evening	37	45	50	42
	Night	32	40	45	37
D	Day	31	55	60	36
	Evening	31 <sup>2</sup>	45	50	36
	Night	30	40	45	35
E	Day	31	55	60	36
	Evening	31 <sup>2</sup>	45	50	36
	Night	30	40	45	35
F	Day	31	55	60	36
	Evening	31 <sup>2</sup>	55	50	36
	Night	30	40	45	35
G	Day	34	50	55	39
	Evening	34 <sup>2</sup>	45	50	39
	Night	32	40	45	37
H	Day	33	50	55	38
	Evening	33 <sup>2</sup>	45	50	38
	Night	32	40	45	37
I	Day	NA <sup>4</sup>	50	55	37
	Evening	NA <sup>4</sup>	45	50	37
	Night	NA <sup>4</sup>	40	45	37
J	Day	34	50	55	39
	Evening	34	45	50	39
	Night	32	40	45	37
K	Day	30 <sup>3</sup>	50	55	35
	Evening	30 <sup>2</sup>	45	50	35
	Night	30	40	45	35
L	Day	NA <sup>4</sup>	50	55	37
	Evening	NA <sup>4</sup>	45	50	37
	Night	NA <sup>4</sup>	40	45	37
M	Day	34	50	55	39
	Evening	34 <sup>2</sup>	45	50	39
	Night	33	40	45	38
N	Day	40	55	60	45
	Evening	37	45	50	42
	Night	34	40	45	39
O	Day	30 <sup>3</sup>	50	55	35
	Evening	30 <sup>3</sup>	45	50	35
	Night	30 <sup>3</sup>	40	45	35

Notes:

1. Rating Background Level *L*<sub>A90</sub> dB;
2. Preceding time period RBL adopted in accordance with INP application notes;
3. INP default minimum RBL of 30 dB applied; and
4. NA indicates PSNL set at consent criterion for neighbouring mine, RBL not used.

177. The Applicant's conducted noise modelling predictions as part of the Review Report. The noise modelling predictions considered the original EIS predictions against Options 1 and 2. The predictions and comparison for Option 2 against the EIS predictions are contained in Table 5. The predictive analysis shows that noise impacts are predicted to lower over time, from 2020 towards 2026, this is consistent with the operation progressively moving away from sensitive receptors.

**Table 5: Predictive noise impacts Option 2 compared to EIS (2020, 2023, 2026)**  
**Source: The Applicant's Review Report**

Noise Assess. Group	EPL Criterion	2020 Option 2 (change relative to EIS)				2023 Option 2 (change relative to EIS)				2026 Option 2 (change relative to EIS)			
		Day	Even.	Night 1	Night 2	Day	Even.	Night 1	Night 2	Day	Even.	Night 1	Night 2
A	41	39 (0)	39 (0)	40 (0)	38 (0)	38 (0)	39 (0)	39 (0)	38 (0)	38 (0)	39 (0)	38 (0)	
B	42	41 (0)	41 (0)	43 (0)	40 (0)	40 (0)	42 (0)	41 (0)	40 (0)	40 (0)	42 (0)	41 (0)	
C	42	41 (0)	41 (0)	43 (0)	38 (0)	40 (0)	40 (1)	42 (0)	41 (0)	39 (0)	39 (0)	42 (1)	40 (0)
D	40	40 (1)	43 (0)	44 (0)	37 (0)	39 (1)	39 (0)	40 (0)	38 (0)	38 (0)	39 (0)	39 (0)	38 (0)
E	40	38 (0)	39 (0)	39 (0)	34 (0)	37 (1)	36 (0)	37 (0)	35 (0)	36 (0)	36 (0)	37 (0)	35 (0)
F	40	37 (2)	37 (0)	38 (0)	31 (0)	34 (0)	33 (0)	33 (0)	30 (1)	33 (0)	34 (0)	35 (0)	32 (0)
G	40	43 (0)	42 (0)	44 (0)	40 (0)	41 (0)	41 (0)	42 (0)	40 (0)	40 (0)	40 (0)	41 (0)	39 (0)
H	40	42 (0)	42 (0)	42 (0)	39 (0)	40 (1)	39 (0)	40 (0)	38 (0)	38 (0)	38 (0)	38 (0)	36 (-1)
I	40	36 (-2)	36 (0)	35 (0)	33 (0)	33 (0)	32 (0)	32 (0)	30 (0)	34 (0)	34 (0)	34 (0)	32 (0)
J	40	46 (1)	44 (0)	44 (0)	42 (0)	42 (0)	40 (0)	42 (1)	38 (1)	42 (0)	41 (0)	42 (0)	39 (0)
K	40	41 (-1)	43 (0)	43 (0)	37 (0)	36 (0)	37 (0)	38 (1)	34 (1)	39 (0)	38 (1)	38 (0)	33 (0)
L	40	37 (-1)	37 (-1)	35 (0)	33 (0)	36 (0)	39 (0)	35 (0)	34 (0)	35 (0)	37 (0)	34 (1)	33 (1)
M	40	36 (-2)	35 (0)	34 (0)	30 (0)	34 (2)	35 (1)	34 (1)	33 (1)	33 (0)	32 (0)	31 (0)	29 (-1)
N	40	35 (0)	35 (0)	35 (0)	33 (0)	35 (1)	36 (0)	37 (1)	35 (0)	34 (0)	35 (0)	35 (0)	34 (0)
O	40	36 (0)	36 (-1)	38 (0)	35 (0)	35 (0)	36 (1)	37 (0)	37 (1)	35 (0)	36 (1)	37 (1)	36 (0)

Notes:

1. Result in brackets is difference between EIS prediction and prediction for relevant option;
2. Orange highlight indicates positive change (increase); and
3. Green highlight indicates negative change (decrease).

178. With regard to Recommendation 4, on 9 July 2019, the Applicant confirmed the following when meeting with the Commission:

- the Noise Management Plan is available on the website;
- noise management actions include operations modifications and progressive shut down;
- contact details are available for 24 hour community and blasting complaints hotline;
- contact details are available for the NSW Government Environment Line and an instruction is available on how to use and find further information.

179. With regard to Recommendation 5, on 9 July 2019 the Applicant stated that the equipment list with the noise attenuation schedule had been provided to the Commission within the Review Response. The Applicant also provided a schedule of noise attenuation improvements over a six year period.



180. The Applicant's Review Report states a *"full list and detail of all equipment currently anticipated to be used at the mine is provided in Appendix C [of the Review Report]. This list includes details of installed and proposed sound attenuation equipment across the fleet."*
181. With regard to Recommendation 6, on 9 July 2019, the Applicant stated that the cladding of the CHPP was complete.
182. The Applicant's Review Report included a trade-off study assessing the benefits of removing the western overburden emplacement area against the potential environmental impacts associated with increasing the heights of the existing North Pit Dump and South Pit Dump. The Applicant's Review Report assessed noise impacts for Option 1 and Option 2 overburden emplacement areas. The Applicant's Review Report states that *"the trade-off options present no material differences to the overall noise impact assessment outcomes compared with the EIS noise impact assessment, and a similar degree of noise management would be required to deliver noise compliance during adverse weather conditions regardless..."*
- The assessments completed for the trade-off study indicate that there are no material differences to the overall noise and dust impact assessment outcomes for both Option 1 and Option 2 compared with the EIS assessments."*
183. On 9 July 2019, when the Commission met with the Applicant, the Applicant stated that operations on the Project are heading further west, and generally moving further away from the residential areas of Singleton.

#### *Department's Assessment*

184. The Department states in the PAR that the Project has issues with noise and supports the use of ANC and that *"the mine is an existing operation with legacy noise issues and an encroaching suburban environment to the east and southeast"* and *"the Department and EPA endorsed the proposed use of ANC instead of PSNLs as target noise limits for the Project."*
185. The Department's PAR states *"[t]he Department is satisfied that the proposed blasting activities would comply with relevant amenity guidelines for privately-owned residences. ...*

*on 27 October 2017, the EPA released the Noise Policy for Industry (NPI), which replaces the INP as the relevant NSW Government policy for the management and control of industrial noise sources. The development application for the Project predated this release and the transitional arrangements stipulate that, apart from those aspects of the NPI that relate to low frequency noise, the INP continues to apply as the relevant NSW Government policy for the assessment and determination of the Project...*

*A review of the mine's attended noise monitoring results between 2014 and 2017 indicates that there were no exceedances of its existing noise criteria. However, the mine continues to receive noise complaints, which reflects its close proximity to Singleton and surrounding suburbs and the large number of potentially affected privately-owned residences and the outdated nature of the mine's existing noise criteria"*

186. The Department's PAR further states in regard to cumulative noise impacts that *"Bloomfield has committed to proactively adapting operations to comply with new lower intrusive noise criteria at all receivers. This would deliver a beneficial change to an existing operation with legacy noise issues. Notwithstanding, three receivers are predicted to exceed the cumulative amenity criterion. Acquisition of these three receivers is already recommended due to air quality impacts. Therefore, the Department would not recommend any additional noise-related mitigation or acquisition rights."*
187. In regard to Recommendation 4, the Department's FAR states that *"the Department considered that the proposed proactive and reactive measures in the draft Noise Management Plan attached to the Applicant's Review Response (draft updated Noise Management Plan dated 30 November 2018 (NMP)) demonstrated that Bloomfield is capable of adaptively managing its operations to ensure compliance with the ANC, and to quickly return to compliance in the rare event that noise levels should exceed the ANC. These adaptive measures align with contemporary best practice employed at other mines in NSW. The Department agrees that these measures should be further described in the NMP and has recommended conditions, accordingly, including requiring the NMP to include a protocol for identifying and responding to noise exceedances..."*

*To assist Government regulators in overseeing the Project's noise management, the Department has also recommended conditions requiring Bloomfield to:*

- monitor and record all major equipment use and make this data readily available at the request of the Department or the EPA;*
- record the daily adaptive management measure implemented on the site, including how operations were modified or stopped to comply with ANC, and make these records readily available at the request of the Department or the EPA; and*
- regularly publish, on its website, a comprehensive summary of monitoring results...*

*The Department agrees [with the Commission] that companies should openly share key documents such as management plans, monitoring data and Annual Reviews with the community and for many years has required this information to be made publicly available on company websites. The Department has therefore recommended applying its standard administrative condition which would require Bloomfield to continue making key documents available on its company website to ensure that interested or concerns stakeholders remain appropriately informed."*

*In regard to Recommendations 5 and 6, the Department's FAR states that "Bloomfield has recently recompleted cladding the CHPP and has committed to progressively updating its equipment so that its mining fleet is fully attenuated by Year 6 of the Project. The Department has recommended conditions to ensure that the remaining fleet attenuation program be further detailed in the NMP for the Project."*

188. The Department's FAR considered acquisition of vacant land due to noise impacts and stated that *"three vacant lots should be afforded acquisition rights under the VLAMP due to noise impacts. As discussed [in paragraphs 144, 145 and 156] these same three lots should also receive acquisition rights due to air quality impacts. Two of these lots (Lot 1 DP 121623 and Lot 1 DP1136411) should be afforded acquisition rights due to exceedances of the night-time amenity criterion of 45 dB(A) across more than 25% of the land, but only if acquisition cannot be activated under the project approvals for Ashton SEOC and/or Rix's Creek North. The remaining lot (Lot 54 FP*

252692) should be afforded acquisition rights due to exceedances of the daytime amenity criterion of 55 dB(A) across more than 25% of the land. “

189. The Department’s FAR concludes that “*subject to these conditions, the Department and the EPA consider that the noise impacts of the Project are acceptable.*”

#### *Council Comments*

190. On 29 July 2019 the Commission met with Councillors and officers of the Council. Representations were made at the meeting that the Applicant had been operating the existing site responsibly and had proven to be able to alter its operation to respond to weather conditions and complaints. Some of the commentary from the meeting included the following:
- “*they plan the operation to minimise the noise... but if there is a complaint... you know, they get out there. They’re monitoring it... and that feeds back into their model as well. So they’re validating that model constantly...*”;
  - “*as a mine closest to the town, um, we have very few complaints about their, ah, discharges in comparison to others within the – within our local government area*”;
  - “*as far as Bloomfield, I think they are by far the most trusted coal mine in our Local Government area.*”
- The transcript of the meeting was made available on the Commission’s website on 31 July 2019.

#### *Public Comments*

191. Speakers at the public meeting, and written comments received thereafter objected to the Application outlining the following concerns:
- noise mitigation practices should be notified;
  - Option 2 does not comply with noise requirements;
  - cumulative impacts are too high on surrounding areas including the growth of Singleton Heights and the Singleton township.
192. On 29 July 2019, at the public meeting, a production supervisor from the Project provided details on how operational noise is managed. The production supervisor outlined that a model to predict weather patterns, wind changes and variations of inversions is used to work to. The production supervisor stated that monitoring from sophisticated noise equipment in the community provides real time data which allows decisions to be made on modifying or shutting down operations. He also stated that when operations are close to noise limits, operations are modified, and if that doesn’t bring the noise levels down, the operations in that area are shut down.
193. Employees from the Project spoke at the public meeting explaining that noise impacts are constantly monitored, and operations stop when noise levels are close to the limits. Speakers stated that machines are brought back online one at a time to ensure noise conditions are satisfied.

#### *Commission’s Consideration*

194. The Commission has considered the community’s and the Council’s comments.
195. The Commission is of the view that the Applicant’s Review Response (described in paragraphs 176-183) has sufficiently addressed the Commission’s Recommendations

4, 5 and 6. The Commission is satisfied with the Applicant's Review Response that the cladding of the Coal Handling that Preparation Plant has been completed. The Applicant has committed to the proposed additional attenuation activities and to providing information on the Applicant's website.

196. The Commission has considered the stated need for the ANC described in paragraphs 175-177, the acceleration of the noise attenuation improvements provided by the Applicant in the Response Report described in paragraphs 179 and 180 and the adaptive noise management practices, outlined in the Applicant's draft revised NMP, and described in paragraphs 179-183.
197. The Commission finds that although complying with the noise limits as per the Mining SEPP is preferable, the Commission accepts that noise impacts have been appropriately assessed and agrees with the Department's and EPA's consideration that the ANC can apply because of the measures the Applicant has taken as per paragraphs 176-183 to support the Department's statement in paragraphs 188 and 189.
198. The Commission accepts the premise that the mining activity is generally moving away from the Singleton township over time and that noise impacts for Singleton township should abate over time.
199. The Commission accepts and agrees with the Department's assessment of cumulative noise impacts (described in paragraphs 188 and 189) and finds that properties affected by cumulative noise exceedances are afforded acquisition rights for noise impacts.
200. The Commission finds that the Department's recommended conditions of consent appropriately deal with property acquisition rights, and noise mitigation management.
201. The Commission finds it is warranted for condition E14 to be expanded upon to require the Applicant's website be maintained to include hyperlinks to:
  - Government sources (for air quality and noise information), and
  - Compliant management contact details for the Applicant and the NSW Government Environment Line (refer to condition E14(a)(xiii)).

### 5.10.3 Blasting - airblast overpressure and vibration

#### *Issues in the Review & Recommendations*

202. The Commission made one recommendation during its Review in relation to airblast overpressure:

**R7:** that the Applicant update its Blast Impact Assessment to provide additional monitoring and management measures specifically related to the preservation of the Coke Ovens.

Note – the Coke Ovens are structures (made of stone) where coal from nearby historic mines was processed into coke for industrial purposes. AECOM's Non-Indigenous Heritage Impact Assessment dated 15 October 2015 states that the Coke Ovens "provide material evidence of the development of industrial development and coke manufacturing processes".



### *Applicant's Consideration*

203. The Applicant implements a blast management system under DA 49/94 to mitigate blast impacts and ensure compliance with its blasting criteria. This system utilises the Environmental Meteorological System to model potential ground vibration and airblast impacts of planned blasts.
204. The Applicant's Blast Impact Assessment (**BIA**) considered ground vibration alongside airblast overpressure and flyrock impacts. The BIA predicted that airblast overpressure and ground vibration levels would comply with the 95% criteria at all monitor locations. The monitor locations are located at nearby privately-owned residences. The highest levels are expected to be at the south-southeast of the Project due to the shortest separation distance from pit 3. The BIA predicts no noticeable or material impact of airblast overpressure at private residences.
205. The Applicant's BIA applied the amenity ground vibration limit of 5mm/s for 95% of blasts and 10mm/s for all blasts each year.
206. With regard to Recommendation 7, the Applicant's Review Report included a specific blast impact assessment for the Coke Ovens and provided updated blast management activities (including additional monitoring locations) for the preservation of the Coke Ovens. The BIA recommended an interim ground vibration limit of 10mm/s. The BIA further describes that the Coke Ovens may be able to withstand a higher limit, but that additional blast impact survey work would be required to develop an appropriate safety factor and blast impact controls.

### *Department's Assessment*

207. The Department's PAR states that *"a review of the mine's blast monitoring results between 2014 and 2017 indicates that there have been no exceedances of the blast criteria. Occasional blasts exceed the 115 dB criterion, but these have not exceeded 5% of blasts per year. This successful performance is reflected in the mine's complaints history, with Bloomfield commonly receiving less than five blast-related complaints per year. This compliance and complaints history indicates that Bloomfield operates an effective blast management system. This is important as Bloomfield proposes to undertake Project-related blasts using the same system."*
208. The Department's PAR concluded that *"in respect of blasting, the Department considers that the Project could be straightforwardly managed to comply with relevant blast vibration and overpressure criteria at nearby receivers."*
209. The Department's FAR states that *"Bloomfield provided an updated BIA in its Response Report which included special recommendations on how to monitor and manage the Coke Ovens to ensure they are protected from blasting-related damage. These recommendations would be further detailed in the BMP..."*

*The Department considers that Bloomfield has sufficiently updated its BIA to address the [Commission's] recommendation. The Department has recommended that Bloomfield comply with blasting criterion of 10mm/s ground vibration unless further surveys identify an acceptable higher criterion. In consultation with the Heritage Division, the Department has also recommended that the monitoring and management measures recommended in the BIA be further detailed in a Blast Management Plan*

*(BMP) for the Project which would include a specific strategy to monitor, mitigate and manage the effects of blasting on the Coke Ovens.”*

210. The Department’s FAR further states that *“the Department has also included specific conditions providing additional rights for owners of privately owned land within 3km of the mining area. These conditions require Bloomfield, at the request of the landowner, to engage a suitably qualified, experienced and independent person to undertake a pre-blasting property information and/or a property investigation during the course of mining, if suspected damage occurs. If blasting related damage is confirmed... Bloomfield would be required to repair this damage.”*
211. The Department’s FAR confirmed that OEH’s Heritage Division *“... provided advice following review of the draft conditions. The Heritage Division provided suggestions on how to impact the BMP and Historic Heritage Management Plan (HHMP) to ensure the Coke Ovens are adequately protected.”*
212. The Department’s FAR concluded that *“subject to these conditions the blasting impacts of the Project are acceptable.”*

#### *Public Comments*

213. Speakers’ comments at the public meeting and written comments received thereafter have in relation to overpressure noise been addressed in the noise section of this report section 5.10.2.

#### *Commission’s Consideration*

214. The Commission acknowledges the public’s comments summarised in paragraph 213 (referring to section 5.10.2).
215. The Commission agrees with the Department that the effects of airblast overpressure can be sufficiently managed through the application of existing practices and through preparing a contemporary Blast Management Plan. The Commission accepts the view of the Department that the Applicant’s prior operational mitigation activities have demonstrated a capability for managing airblast overpressure subject to blasting conditions recommended by the Department in paragraph 208.
216. The Commission is of the view that the Applicant’s updated BIA (described by the Department in paragraphs 209-211) has sufficiently addressed the Commission’s Recommendation 7. The Commission is satisfied that the proposed additional monitoring activities and criterion will manage and mitigate structural impacts to the Coke Ovens, local heritage item.
217. The Commission is of the view that the Department’s recommended conditions of the consent, reviewed by the Heritage Division, are appropriate to mitigate and manage blast and vibration impacts, including those related to the preservation of the Coke Ovens.

### **5.10.4 Rehabilitation**

#### *Issues in the Review & Recommendations*

218. The Commission made nine recommendations during its Review in relation to rehabilitation:

**R8:** that in order to address the principles of *Strategic Framework for Mine Closure*, the Applicant implement the recommendations of the Unger Report requiring the Applicant to prepare a stakeholder engagement strategy that ensures that stakeholders' specific issues of rehabilitation and closure are addressed appropriately in the Rehabilitation Strategy.

**R9:** that the Applicant records all targeted consultation on mine rehabilitation and closure planning within the Rehabilitation Strategy and demonstrate where issues raised in community consultation have been considered in the development of the Rehabilitation Strategy.

**R10:** that the Applicant collates and includes all relevant rehabilitation objectives and practices identified within the MOP and other EIS documents into the Rehabilitation Strategy so that it is a consolidated reference for the rehabilitation and closure of the mine.

**R11:** in order to address the principles of *Strategic Framework for Mine Closure*, the Commission recommends that the Rehabilitation Strategy:

- a) identify all mine closure domains;
- b) label and describe all domains including the proposed post-mining land use;
- c) ensure that rehabilitation and closure objectives, performance standards and completion criteria exist for all domains;
- d) consider sudden unplanned closure and temporary closure (care and maintenance);
- e) include a detailed commitment register;
- f) identify and consult with stakeholders to explore closure risks and opportunities further; and
- g) include a plan to ensure that the Rehabilitation Strategy is updated and refined regularly to reflect changes in mine development and operational planning, and environmental conditions.

**R12:** that the Applicant carry out an evaluation of the socio-economic impacts of mine closure during the preparation of, and in the regular updates to, a Detailed Mine Closure Plan.

**R13:** that the Applicant include a section within the Rehabilitation Strategy outlining the knowledge base around past rehabilitation performance. This is intended to demonstrate that the site is able to achieve the proposed post-mining land use. This knowledge base should be a summary of all existing baseline aspects as they relate to mine closure and demonstrate the outcomes from past rehabilitation showing where any lessons learnt have been incorporated into the rehabilitation and mine closure planning for the site. The inclusion of this information in the Rehabilitation Strategy could further improve the provision of information to the community on progressive rehabilitation performance and site knowledge which would support the proposed post mining land uses.

**R14:** that the Rehabilitation Strategy be revised to demonstrate a risk based approach to rehabilitation and closure. This would include the preparation of a register outlining the risks and opportunities relating to the closure of the mine. This should include not only the risks and opportunities relating to the physical closure and

rehabilitation works, but also give regard to any existing legacy or residual (future) risks in accordance with the Principles of the *Strategic Framework for Mine Closure*.

**R15:** that the Rehabilitation Strategy be revised to include additional detailed information around the final void water levels and water quality, including an assessment of any potential beneficial uses for the water that could be considered following closure of the mine.

**R16:** was classified under Rehabilitation in the Review, however it has been addressed in the Biodiversity and threatened species.

219. The Commission retained two experts who produced reports relevant to rehabilitation; the Unger Report and Deswick Report described in paragraphs 30 and 31 respectively.
220. The Review recommendations reflect the recommendations made in both the Unger Report and the Deswick Report.

#### *Applicant's Consideration*

221. The Applicant's Review Response contained an updated Rehabilitation Strategy.
222. The Applicant's Review Response states that *"the Rehabilitation Strategy includes details of the proposed stakeholder engagement strategy. This information provides an outline that would be refined during the preparation of the final Rehabilitation Management Plan that is prepared in consultation with [the Department] and the RR."*
223. The Applicant further responded to Recommendations 8 and 9 in its Review Response advising that its proposed stakeholder engagement strategy includes:
- engaging with the community through the Community Consultative Committee, newsletters and community information line;
  - recording all actions and outcomes from consultation activities;
  - identifying key agency stakeholders;
  - maintaining a stakeholder feedback register; and
  - a flexible approach to allow appropriate consultation feedback to be incorporated.
224. The Applicant responded to Recommendation 10 stating in its Review Response that *"the updated Rehabilitation Strategy (Appendix E) [of the Review Response] includes objectives consistent with the Mining Operation Plan and EIS such that it is a consolidated reference document."* The Applicant also responded to Recommendations 11, 13 and 14 by referencing the relevant tables and sections of its updated Rehabilitation Strategy and stating the Rehabilitation Strategy will continue to be updated over the life of the project.
225. In regard to Recommendation 12, the Applicant's Response Report states, *"overall social and economic impacts from the project have been comprehensively assessed during the preparation of the EIS"* and referenced the Social Impact and Opportunity Assessment (Umwelt, July 2015) and Economic Assessment (KPMG, July 2015).
226. The Applicant's Response Report further stated *"the potential impacts of the project on social and economic factors have been comprehensively assessed as part of the EIS."*



*Subject to approval, the development of a detailed Mine Closure Plan would be undertaken taking into consideration life of mine social and economic issues as identified in the EIS. This would be built on through the life of the mine as social and economic impacts have the potential to change. Through ongoing consultation with key stakeholders including DPE, the community and Singleton Council, the Mine Closure Plan would be regularly updated in order to addresses evolving stakeholder expectations.”*

227. The Applicant responded to Recommendation 15 by referencing its updated Rehabilitation Strategy in relation to final void characteristics. The Applicant also states, “*that there is a life of mine of approximately 20 years, over which time the range of potential beneficial uses may change significantly.*” The Applicant stated that it “*will continue to be actively involved in UHDM [Upper Hunter Mining Dialogue water quality study] and its operational assessment of post mining beneficial uses. This will allow input from key stakeholders to be included in the beneficial reuse planning and for the latest in community and regulator expectations regarding beneficial reuse to be incorporated into mine closure planning.*”
228. The Applicant prepared a trade-off study for overburden emplacement, described further in paragraph 16 and Table 1. The study outlined a commitment to rehabilitation slope profiles and soil classification for areas of ‘post mining rehabilitation areas’, and ‘post mining undisturbed areas’ included Tables 6 and 7.

**Table 6: Option 1 Land and Soil Classification Source: The Applicant’s Response Report**

Slope	Post Mining Total – in rehab areas*		Post mining Total – Undisturbed *		Total(ha)	%
	Class	Area (ha)	Class	Area (ha)		
<10°	2	9.7	2	91	100.7	81
10°	4	9.8	4	4.1	13.9	11
10° – 18°	5		5	9.1	<b>9.1</b>	7
>18°	6	-	6	0.2	0.2	0
	-	19.5	-	104.4	123.9	100

**Table 7: Option 2 Land and Soil Classification Source: The Applicant’s Response Report**

Slope	Post Mining Total – in rehab areas*		Post mining Total – Undisturbed *		Total(ha)	%
	Class	Area (ha)	Class	Area (ha)		
<10°	2	30.4	2	53.7	84.1	68
10°	4	34.9	4	2.6	37.5	30
10° – 18°	5	-	5	2.1	<b>2.1</b>	2
>18°	6	-	6	0.2	0.2	0
	-	65.3	-	58.6	123.9	100

229. On 29 July 2019, at the public meeting, the Applicant verbally commented on the findings from the RR’s compliance inspection of rehabilitation that occurred in April 2017. In addition, the Applicant stated at the public meeting that:
- the high weeding density was predominately on the edge of the rehabilitation areas. “*We spent a lot of effort and money in managing weeds. The weed management is an ongoing task, and certainly in dryer conditions without water, as any person on the land knows, any areas are a target for weeds, and it’s a case for prioritising the important areas.*”
  - there are 27 species in the rehabilitation area, which the Applicant did not consider to be “*low species diversity.*”

230. On 29 July 2019, at the site inspection, the Applicant stated that Option 2 will provide a better landform for cattle grazing end use. Option 2 minimises the area of rehabilitated slopes to above 10 degrees, which reduces the potential erodibility of grazing areas. This was reiterated in the Applicant’s Response Report.

*Department’s Assessment*

231. The Department’s PAR described that the Applicant’s consent DA 49/94 permits “two final voids would remain in the landform... [whereas] the proposed development [would] continue progressive rehabilitation entirely backfilling pit 1, leaving one final void in Pit 3.”
232. The Department’s FAR assessed the Applicant’s Response Report against the Commission’s Review recommendations. The Department’s FAR states “[t]o address the Commission’s recommendations, Bloomfield provided an updated rehabilitation strategy in its Response Report. The Department has reviewed the updated rehabilitation strategy and acknowledges that it should continue to be reviewed post – determination, in a Rehabilitation Strategy required by conditions of consent. The Rehabilitation Strategy would be supported by a rolling series of 3-yearly Rehabilitation Management Plans. Within this framework, the Department has developed draft conditions of consent to reflect the Commission recommendations.”
233. The Department’s FAR contains a summary table of recommended conditions addressing the Commission’s recommendations. Table 8 provides this detail.

**Table 8: Summary of Rehabilitation Strategy Recommendations**

<b>Recommendation</b>	<b>Comment</b>	<b>Relevant Condition</b>
<b>R8</b> Include a stakeholder engagement strategy	The Department has incorporated into the recommended requirements of the Rehabilitation Strategy	B77(n) The Rehabilitation Strategy must include a stakeholder engagement plan to guide rehabilitation and mine closure planning processes and outcomes
<b>R9</b> Record consultation	The Department’s standard administrative conditions include a requirement that all management plans or strategies include evidence of any required consultation	A20 The applicant must provide details of the consultation undertaken, including: (i) the outcome of that consultation, matters resolved and unresolved; and (ii) details of any disagreement remaining between the party consulted and the Applicant and how the Applicant has addressed the matters not resolved
<b>R10</b> Consolidate all rehabilitation objectives	The Rehabilitation strategy should detail the overall long-term rehabilitation objectives and outcomes for the site. However, a separate and detailed Rehabilitation Management Plan which would contain short-term objectives is still required by the Department and Resources Regulator for regulatory purposes	B77(d) The Rehabilitation Strategy must describe the overall rehabilitation outcomes for the site, and address all aspects of the rehabilitation including mine closure, final landform (including final voids), post-mining land use/s and water management

<p><b>R11</b></p> <ul style="list-style-type: none"> <li>• Identify all mine closure domains</li> <li>• Label and describe all domains including the proposed post-mining land use</li> <li>• Ensure that rehabilitation and closure objectives, performance standards and completion criteria exist for all domains</li> <li>• Consider sudden unplanned closure and temporary closure (care and maintenance)</li> <li>• Include a detailed commitment register</li> <li>• Identify and consult with stakeholders to further explore closure risks and opportunities further</li> <li>• Include a plan to ensure that the Rehabilitation Strategy is updated and refined regularly to reflect changes in mine development and operational planning, and environmental conditions</li> </ul>	<p>The Department has incorporated most of these recommendations into the requirements of the Rehabilitation Strategy. The Department considers that a 'commitments register' would be better placed in the Rehabilitation Management Plan, as this plan would detail the specific measures to improve the rehabilitation knowledge base over a 3-year planning cycle</p>	<ul style="list-style-type: none"> <li>• B77(g) The Rehabilitation Strategy must identify and describe all mining and rehabilitation domains, and define completion criteria for each</li> <li>• B77(j) The Rehabilitation Strategy must describe how rehabilitation will be integrated with the mine planning process, including a plan to address premature or temporary mine closure</li> <li>• B79(j) The Rehabilitation Management Plan must describe any further, work, research or consultation that will be undertaken to expand the site-specific rehabilitation knowledge base, reduce uncertainty and improve rehabilitation outcomes</li> <li>• B77(l) The Rehabilitation Strategy must include a risks and opportunities assessment and risk register</li> <li>• B77(p) The Rehabilitation Strategy must include a program to periodically review and update this strategy at least every three years</li> </ul>
<p><b>R12</b> Evaluate socio-economic impacts of mine closure</p>	<p>The Department has recommended that the Rehabilitation Strategy incorporates measures to address socio-economic impacts of mine closure and notes that it has also separately recommended that Bloomfield prepare and implement a Social Impact Management Plan to manage and mitigate social impacts over the life of the Project</p>	<ul style="list-style-type: none"> <li>• B77(m) The Rehabilitation Strategy must investigate ways to minimise adverse socio-economic effects associated with rehabilitation and mine closure</li> </ul>
<p><b>R13</b> Outline the knowledge base around past rehabilitation performance</p>	<p>As part of each Annual Review, Bloomfield would be required to report on its rehabilitation performance and consider ways to improve its performance</p>	<ul style="list-style-type: none"> <li>• NA</li> </ul>

	moving forward. Further, specific rehabilitation measures would be detailed in the Rehabilitation Management Plan and these measures would be carefully reviewed by the Department and the Resources Regulator to ensure that best practice techniques are being implemented on the site	
<b>R14</b> Prepare a register outlining the risks and opportunities relating the rehabilitation and mine closure	The Department has recommended that the Rehabilitation Strategy identify risks or threats to rehabilitation and opportunities to improve or strengthen rehabilitation	<ul style="list-style-type: none"> <li>• B77(l) The Rehabilitation Strategy must include a risks and opportunities assessment and risk register</li> </ul>
<b>R15</b> Include final void details and potential beneficial re-use opportunities	Addressed separately in Section 2.5 [of the Department's FAR]	<ul style="list-style-type: none"> <li>• B77(k) The Rehabilitation Strategy must investigate opportunities to refine and improve the final landform and final void outcomes over time</li> </ul>

**Source:** *The Department's FAR*

234. On 9 July 2019 the Department stated in a meeting with the Commission that it considers the “*conditions represented best practice for the management of open cut coal mining in New South Wales.*”
235. During the meeting the Commission referenced the recently released mine closure guidelines prepared by the International Council on Mining and Metals (the **ICMM**). The Department advised that it had not reviewed the Integrated Mine Closure: Good Practice Guide (**ICMM Guide**), February 2019, which integrates sudden mine closure plans into standard mine operation plans. The Department considered that sudden mine closure is addressed through the *Mining Act 1992*, requiring security deposits at the right scale to close and rehabilitate the mine.

#### *Public Comments*

236. Speakers at the public meeting and comments received objected to the Application outlining the following concerns:
- finalised landform is yet to be confirmed;
  - concerns that a site void is to remain;
  - ongoing management and monitoring of a site void;
  - required ongoing environmental improvement;
  - poor rehabilitation completed to date;
  - caretaker and unforeseen closure; and
  - weed management practises.
237. On 29 July 2019, at the public meeting, representations were made by a number of employees (and parties who lease land from the Applicant) that rehabilitation had been undertaken successfully and with diversity of species.



238. At the same public meeting on 29 July 2019, and written comments received thereafter, community members objected to the Project stating that the Applicant's rehabilitation performance to date had not been adequate.

*Further matters raised by the Commission*

239. On 9 July 2019, the Commission met with the Applicant. One of the matters discussed was how the Project would plan for sudden mine closure of the Project.
240. On 6 September the Applicant provided the Commission with a portion of information requested by the Commission; Applicant's Response 1 being progressive rehabilitation mapping for overburden Option 1 and Option 2 until 2030, along with an Agricultural Productivity Assessment (described in paragraph 64).
241. The Commission reiterated its request for progressive rehabilitation plans for the life of the Project (beyond 2030). The Applicant provided this information within the Applicant's Response 2.

*Applicant's response on further matters*

242. The Applicant stated at the meeting with the Commission 9 July 2019 that there will be progressive rehabilitation into the future, decreasing the areas requiring rehabilitation in the final parts of the project. The Applicant also stated at the meeting with the Commission on 9 July 2019 and in the additional information provided 5 August 2019 that the rehabilitation cost estimate bond, administered by DRG, is the control for early final closure.

*Further matters raised by the Department*

243. On 24 September 2019 the Department provided the Department's Additional Information to the Commission. This information included revised recommended conditions of consent. The revised conditions recommended that the Rehabilitation Strategy be reviewed every five years.

*Commission's Consideration*

244. The Commission acknowledges the public's comments summarised in paragraphs 236-238.
245. The Commission accepts the Applicant's Response Review and the Applicant's Additional Information 1 and 2. The Commission accepts the Department's conditions meet the Review recommendations for rehabilitation for Recommendations 8, 9, 10, 12, 13, and 14. There are two areas that could be strengthened to meet Recommendations 11 and 15.
246. The Commission notes paragraphs 47, 134, 239 and the Applicant's response described in paragraph 243. However, the Commission finds that, given the proximity of the Application to Singleton and Maison Dieu, any risk of sudden mine closure should be further mitigated. The Applicant must continue to demonstrate that it is prepared for the possibility of sudden mine closure within a Rehabilitation Strategy involving consultation with stakeholders. The Commission finds that a Rehabilitation Strategy review frequency of every three years is warranted (refer to condition B72(p)).

247. The Commission finds that adjustment is warranted to the Department's recommended condition B72(l) to include unplanned closure/care and maintenance specifically within future rehabilitation risk assessment.
248. The Commission has considered the NSW best practice as per paragraph 234 and the security bond that will be in place for the Project described in paragraph 242.
249. The Commission considers that the Rehabilitation Strategy conditions (contained in B72) are a good example of an Applicant being provided a framework to progress a rehabilitation strategy with the Council and community stakeholders to align rehabilitation landforms with Council's strategic plans and expectations. The Commission finds that this is appropriate given the proximity of the Project to the Singleton township.
250. The Commission considers the Applicant's response to Recommendation 15 addresses the recommendation. The purpose of Recommendation 15 was for the Applicant to consider opportunities as they emerge and implement these opportunities early to take advantage of them. This could perhaps include landform design by considering opportunities that might emerge from operating both the Rix Creek North and South as a single Mining Complex. These opportunities may require obtaining the necessary approvals in the future to place overburden inside the Rix's Creek North (operating under a separate consent) to achieve better rehabilitation and post mining land use outcomes across the Rix's Creek Integrated Mining Complex. The Commission encourages the Applicant to consider overburden placement strategies across the Rix's Creek Integrated Mining Complex as part of future applications for consent.
251. The Commission has considered overburden emplacement Option 1 and Option 2 in regard to rehabilitation. The Applicant's consideration is described in paragraph 229. The Commission finds that although Option 1 would result in less native vegetation disturbance, the Commission accepts the Applicant's need for operational flexibility to manage impacts on air quality and noise during unfavourable weather conditions. The Commission accepts the progressive rehabilitation profile of Option 2 overburden emplacement area and the Applicant's position that the rehabilitation slopes of Option 2 are more suitable for cattle grazing as an end use (than Option 1) as described in paragraph 230.
252. The Commission has considered the rehabilitation slope provided by the Applicant, described in paragraph 230, and found that the impact of 'post mining rehabilitation area' slopes for Option 1 compared to Option 2 were negligible in so far as all rehabilitation slopes of the 'post mining rehabilitation areas' were at a gradient of no steeper than 10°. This is one of the contributing factors of the Commission's decision to favourably consider Option 2.

### **5.10.5 Groundwater and surface water**

#### *Issues in the Review & Recommendation*

253. The Commission's Review Report acknowledges concerns raised by the community on the issue of groundwater and surface water. The Commission agreed with the Department's assessment that potential impacts of the Application on ground, surface and void water were not unreasonable. However, the Commission concluded that inadequate information had been provided on the water-related impacts associated

with backfilling of the North Pit Void. The Commission stated that it was of the view that “*additional assessment could be undertaken by the Applicant within its Rehabilitation Strategy to investigate the future post-mining opportunities for the void and void water re-use opportunities, and that this assessment could be updated regularly through the Project’s consent life, if approved.*”

254. The Commission made two recommendations during its Review in relation groundwater:

**R17:** that the Applicant explore opportunities to undertake an assessment of void water re-use. Where opportunities are identified, these should be included in the Rehabilitation Strategy.

**R18:** that the Applicant investigate water impacts related to any interaction with the backfilled North Pit Void consistent with those undertaken for the South Pit Void.

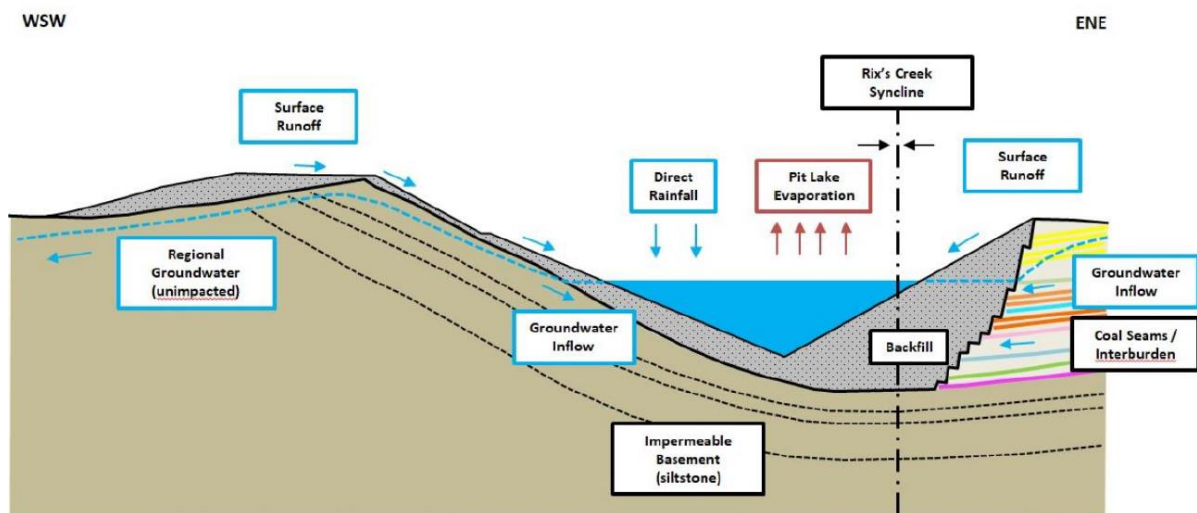
*Applicant’s Consideration*

255. The Applicant’s Response Report provides a commitment within the submitted rehabilitation strategy “*a commitment to undertake an assessment of opportunities for the reuse of void water. It is considered that it is best to undertake this assessment moving forward so as to allow a thorough review of potential reuse options. Bloomfield commits to undertaking this assessment.*”

256. The Applicant’s Review Report included an additional investigation of the backfilled North Pit, consistent with the previous investigations undertaken for the South Pit Void (Figure 8). The South Pit Void is proposed to operate as a groundwater sink, whereas the North Pit is to be backfilled and act as a freshwater dam.

**Figure 8: Southern Pit Void (below)**

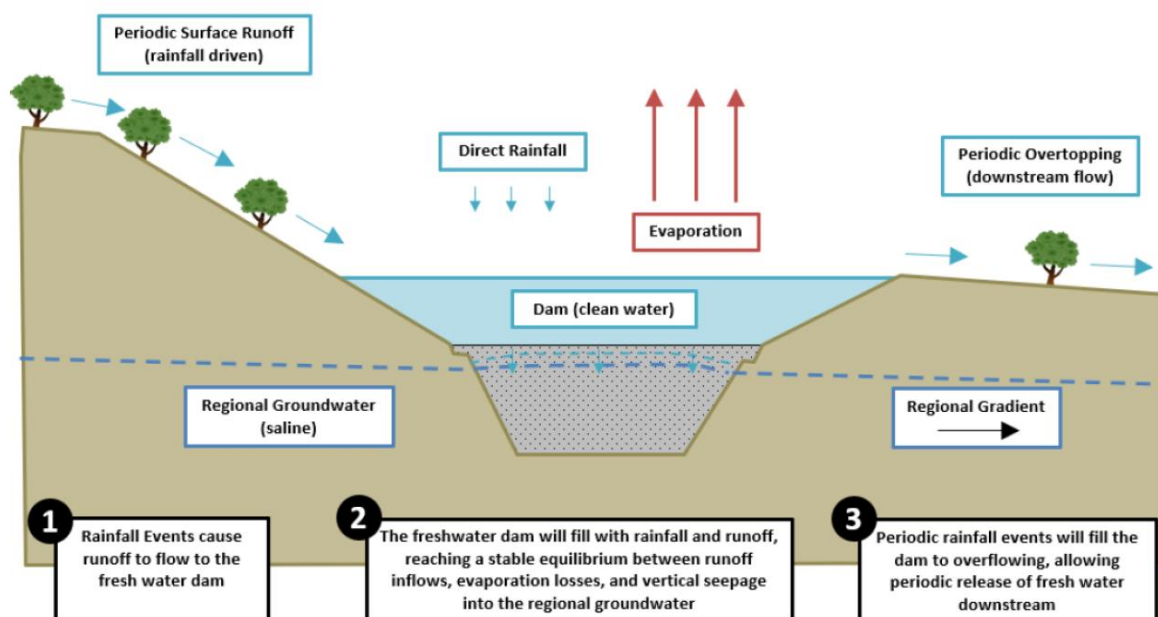
**Source: The Applicants Response Report**



257. The Applicant’s Response Report included an investigation by RPS predicting water quality of the freshwater dam (the backfilled North Pit Void). The schematic illustration Figure 9 illustrates the interaction between the surface water and the groundwater, showing how the dam would remain a freshwater dam as opposed to a groundwater sink.

Figure 9: Northern Pit Void (below)

Source: The Applicants Response Report



258. The Applicant's Response Report concluded that "that the above water table North Pit void (the freshwater dam), will sustainably operate as intended (i.e. a freshwater dam, with periodic freshwater releases into the Rix's Creek drainage line). It is also confirmed that such a dam in the above water table pit void will not impact upon future water quality of the regional groundwater resource."

#### Department's Assessment

259. In regard to Recommendation 17 the Department's FAR concluded that "in its Response Report and updated rehabilitation strategy, Bloomfield has committed to investigation design alternatives for the final void and investigation opportunities to reuse the void water. The Department accepts this approach and has recommended that the Rehabilitation Strategy for the Project includes a requirement to investigate opportunities to refine and improve the final landform and final void outcomes over time and to improve the post-minding beneficial land uses for the site (including the final void)."

260. The Department's FAR states that RPS's North Pit Void groundwater study found:
- "the groundwater system would naturally recover to regional equilibrium levels (refer to Figure 9);
  - the floor of the dam (i.e. the top layer of the backfilled material) should be lower permeability material, to avoid surface water seepage into the groundwater system;
  - the remaining depression (of dam) would fill with rainfall and surface run-off;
  - the dam would be a maximum of 9m deep and would take a number of years to fill;
  - dam water would be lost to evaporation, seepage, and periodic overflows into the Rix's Creek drainage line (once fully filled/equilibrated); and



- *these inflows and outflows would ensure that the dam maintains freshwater quality and would therefore be suitable for a variety of uses.”*

261. The Department’s FAR includes recommended *“comprehensive water management conditions to ensure that Bloomfield carefully manages soil erosion, water supply and discharges; compensates landowners if their bores are impacted by the development; compiles with strict water performance measures; and prepares and implements a details Water management Plan.”*

262. In regard to Recommendation 18 the Department’s FAR concluded that *“as part of its Response Report, Bloomfield provided an additional groundwater study to demonstrate that the North Pit Void would have negligible impact on the regional groundwater system. The Department accepts this finding and maintains that using the North Pit Void as a freshwater dam would be an acceptable outcome from the post-mining landform.”*

#### *Public Comments*

263. Speakers at the public meeting and written comments received thereafter objected to the Application outlining the following concerns:
- impacts of mine voids on water quality;
  - water loss, and drought impacts with regard to cumulative impacts of voids.

#### *Commission’s Consideration*

264. The Commission acknowledges the public’s comments summarised in paragraph 263.

265. The Commission notes that the Application would result in a post-mining landform with a one pit void (acting as a groundwater sink), and an additional freshwater dam. This is a reduction in the total number of voids acting as groundwater sinks, from the Project as described in Table 1.

266. The Commission accepts the Department’s assessment described in paragraphs 260 and 261 and finds the groundwater study to be satisfactory.

267. The Commission accepts Applicant’s Response Report and the Department’s recommended conditions meet the Review recommendations 17 and 18. Therefore, the Commission considers that approval should be given subject to the Department’s recommended conditions.

### **5.10.6 Biodiversity and threatened species**

#### *Issues in the Review & Recommendations*

268. The Commission made two recommendations during its Review in relation to biodiversity and threatened species. Recommendation 16 was classified under Rehabilitation in the Review, however the impacts are best covered in this section. These are:

- R16:** that the Applicant prepare a trade-off study assessing the benefits of removing the western overburden emplacement area against the potential environmental impacts associated with increasing the heights of the existing North Pit Dump and South Pit Dump. Any outcomes of the trade-off study, including an assessment of

any environmental impacts, would need to be submitted and considered as part of the final assessment of the Project.

**R19:** that the Applicant detail and commit to an offsetting approach for consideration by the consent authority, which includes, if necessary, details of how its approach will be staged, the timing, offset value and how it could be successfully undertaken.

### *Applicant's Consideration*

269. The Applicant's RRTS noted that the Application would have a disturbance area of 212.8 ha, requiring a total of 5,808 ecosystem credits to be retired. This includes Endangered Ecological Communities (**EEC**) and threatened species habitat:

- Hunter Lowlands Redgum Forest (0.22 ha)
- Central Hunter Grey Box-Ironbark Woodland (0.76 ha)
- Central Hunter Valley Eucalypt Forest and Woodland (47 ha)
- Potential squirrel glider habitat (18.7 ha)

The proposed disturbance areas are focused in the western part of the Project, the extension of Pit 3 and the western OEA.

270. The Applicant's Ecology Assessment, attached to the EIS, states "*[t]he Squirrel Glider was the only threatened fauna species recorded or expected to be present within the Project Area.*"

271. The Applicant's Ecology Assessment further states "*[t]he Project Area and surrounds supports only marginal habitat suitable for the Squirrel Glider, with an abundance of mature trees with hollows, and small stands of remnant forest. However, for the majority of the remnant vegetation assessed, understorey plant species diversity is low, particularly manna producing Acacia plant species, to provide additional foraging resources for the species. The main foraging resource for the Squirrel Glider at Rix's Creek is nectar and pollen during flowering of eucalypt tree species, and canopy invertebrates. This habitat type is characteristic of other known locations of the species in the mid- and upper Hunter Valley, where grazing has substantially modified or removed understorey plant species that would otherwise provide foraging resources for the species. The Upper Hunter populations of the Squirrel Glider occur at much lower densities, and utilise much larger home ranges, than locations where foraging resources and floristic diversity is high (M. Murray, unpubl. data)...*"

The Ecology Assessment later states "*[t]he proposed action constitutes or contributes to several potential key threatening processes, including;*

- *clearing of native vegetation - The proposed Action would result in loss of 17.6 hectares of treed habitat suitable for the Squirrel Glider;*
- *loss of hollow-bearing trees - The clearing of habitat in the western and central patches will result in loss of hollow-bearing trees suitable for the Squirrel Glider. Whilst this loss may occur, a significant number of mature habitat trees with hollows would be retained between the western and central patches, and also to the north of these two areas;*
- *removal of dead wood and dead trees - Dead stags standing in the open paddocks, and also amongst the treed areas, may provide sheltering habitat for the Squirrel Glider."*

272. In response to the Review Recommendation 16, the Applicant prepared two options for overburden emplacement, Option 1 and Option 2, assessing the removal and

reduction of the western OEA. The two options were assessed for biodiversity values, noise impacts, air quality impacts, visual impacts and rehabilitation impacts.

273. The Applicant describes in its Response Report that Option 1 eliminates the western OEA, reducing the Project's new disturbance area to 105.11 ha, reducing the impact on new disturbance areas by 107.67 ha and reducing the number of biodiversity offsets required to 3,824. This includes an area of rehabilitated woodland that the Applicant stated on the site visit is a good example of rehabilitation and its preference is to not re-disturb this area. The Applicant stated that Option 1 will require re-disturbance of 105.13 ha of land that has been rehabilitated, and the re-disturbance of this land does not require biodiversity offsets.
274. The Applicant described in its Response Report that Option 2 reduces the size of the western OEA, reducing the Application's new disturbance areas to 155.67 ha, reducing the impact on new disturbance by 57.11 ha and reducing the number of biodiversity credits required to 4,428. The Applicant states that Option 2 will require re-disturbance of 97.81 ha of land that has been rehabilitated. The Applicant states that re-disturbance of the 97.81 ha of land does not require biodiversity offsets.
275. The Applicant's Response Report states *"[t]he assessments completed for the trade-off study indicate that there are no material differences to the overall noise and dust impact assessment outcomes for both Option 1 and Option 2 compared with the EIS assessments. There will be impacts close to the site of the activity, notably in the North Pit dump, but no significant or reasonably measurable change would occur at any off-site receptor from the mine as a result of either of the proposed trade-off options.*

*One of the focus items behind Recommendation 16 was the potential reduction in biodiversity impacts by removing the need for the Western Out of Pit dump. While Option 1 achieves this outcome it does so at the expense of disturbing established planted woodland on the North Pit dump. Option 2 provides an alternate dump allocation that utilises the part of the Western out of pit dump that provides the most efficient dump volume per area disturbed. This is the northern half of the Western Out of Pit dump footprint. In doing so, this removes the need to disturb the major area of established planted woodland on the North Pit dump."*

276. The Applicant's Response Report considered the visual impact of the two options and states *"[a]s part of the analysis of both Options 1 and 2 there is potential for both the:*
- north Pit dump to be raised in height compared to the EIS base case by 16m and 6m under Options 1 and 2 respectively; and*
  - south Pit dump to be raised in height compared to the EIS base case by 30m under both options....*

*Due to the ultimate height of the screening trees and their close proximity to the road, it is unlikely that the change in dump heights will have an appreciable impact to receivers at this location. To further highlight the existing screening vegetation on the New England Highway [reference is made to Plate 1 - Plate 3 which are images within the Response Report showing screen plantings] which highlight the more established plantings on the eastern side of the New England Highway and the most recent screen plantings on the western side."*

277. A tabulation summary of the Options 1 and 2 is contained in Table 9.

**Table 9: Options Comparison Summary** Source: *Applicant's Response Report*

	<b>Option 1</b>	<b>Option 2</b>
Air quality	No significant impact	No significant impact
Noise	No significant evening or night time impact	No significant evening or night time impact
Visual	South pit dump + 30m North Pit dump +16m	South Pit dump + 30 m North Pit dump + 6m
<b>Biodiversity offsets</b>		
Credits required under FBA	Reduction of 1,984 credits	Reduction of 1,380 credits
Estimate of credits under current BCT Calculator	Reduction of 992 credits	Reduction of 690 credits
Cost @ \$2,750.00 per credit	Reduction of \$2.7M	Reduction of \$1.9M
<b>Cost differential for rehabilitation</b>		
Additional area to be rehabilitated (ha)	21.6	44.4
Cost @ \$10,500.00 per ha	\$0.2M additional cost	\$0.5 additional cost
<b>Haulage</b>		
Average truck numbers (EIS Submission 7.5)	11.2	8.6
Cost	\$10.4M additional cost	\$2.6M additional cost
<b>Total change in cost</b>	<b>\$7.9 M additional cost</b>	<b>\$1.2M additional cost</b>

278. A tabulation summary of the biodiversity impacts of the original EIS, Option 1 and Option 2 are contained in Table 10. Option 1 would require less biodiversity offsets than Option 2.

279. In the Applicant's Review Response, the Applicant indicated a preference for Option 2 "[t]he preference is for Option 2 for the following reasons:

- Option 2 is essentially cost neutral compared with the EIS submission;
- Option 2 provides the greatest operational flexibility with additional dump destinations which allows for air quality and noise impacts to be better managed on a day and night time basis and also to manage variations that occur in daily weather patterns; and
- access to the South Pit and North Pit dump locations are not constrained by the granting of the Mining Lease Application (MLA487) for the Western Out of Pit dump area."

In subsequent material (such as Applicant's Response 1 and 2) the Applicant has reaffirmed its preference for Option 2.

280. In the Applicant's Response Report the Applicant states that "[c]onsidering all of the aspects of the trade-off study, none of the three options (EIS, Option 1, Option 2) are considered impractical or unworkable"



**Table 10:** Comparison of biodiversity impacts between the original mine plan and alternative mine plans (Options 1 and 2)

Location	Vegetation Zone	PCT	EEC under the BC Act	CEEC under the EPBC Act	EIS (Original)		Option 1		Option 2	
					Ha	Credits	Ha	Credits	Ha	Credits
Pit 3 and Western OEA	HU812 Moderate/Good Zone 1: Forest Red Gum grassy open forest on floodplains of the lower Hunter	PCT 1598	Conforms to Hunter Lowlands Redgum Forest EEC	-	0.22	13	-	-	-	-
	HU906 Moderate/Good Zone 2: Bull Oak grassy woodland of the central Hunter Valley	PCT 1692	-	Conforms to CHVEFW CEEC	0.1	4	0.1	4	0.1	4
	HU819 Moderate/Good Zone 4: Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter	PCT 1605	Conforms to Central Hunter Ironbark-Spotted Gum-Grey Box Forest EEC	Conforms to CHVEFW CEEC	17.62	672	10.45	518	15.16	750
	HU962 Moderate/Good Zone 5: Grey Box grassy open forest of the Central and Lower Hunter Valley	PCT 1748	Conforms to Central Hunter Grey Box-Ironbark Woodland EEC	Conforms to CHVEFW CEEC	0.76	28	0.76	28	0.76	28
	HU819 Moderate/Good derived grassland Zone 7: Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter	PCT 1605	-	-	164.58	4,057	78.7	1940	116.78	2879
	HU819 Moderate/Good derived grassland Zone 8: Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter	PCT 1605	-	Conforms to CHVEFW CEEC	29.5	834	15.1	426	22.87	647
-North Pit Dump	HU818 Moderate/Good established Zone 9: Narrow-leaved Ironbark - Grey Box - Spotted Gum shrub - grass woodland of the central and lower Hunter	PCT 2150	-	-	-	-	20.17	788	-	-
	HU818 Moderate/Good Young Zone 10: Narrow-leaved Ironbark - Grey Box - Spotted Gum shrub - grass woodland of the central and lower Hunter	PCT 2150	-	-	-	-	3.96	120	3.96	120
North Pit and South Pit dumps	Disturbed/exotic	-	-	-	-	-	105.13	0	97.81	0
<b>Total</b>					<b>212.79</b>	<b>5,808</b>	<b>234.37</b>	<b>3,824</b>	<b>257.17</b>	<b>4,428</b>

Source: The Department's Additional Information

281. The Applicant's Response Report provided confirmation of the proposed offset strategy and states "[the] offset strategy included the following key steps:
- identifying if suitable credits are available on the market to meet offset requirements;
  - finding potential on-site or off-site offset sites with the biodiversity values required to compensate for the project's impacts. Note that Bloomfield has already engaged ecologists to review its landholdings for potentially suitable offset sites;
  - in the absence of suitable offset credits or properties, applying the variation criteria rules of the FBA and finding suitable offsets to meet the requirements; and
  - payment into the Biodiversity Conservation Trust.

*Bloomfield is committed to the implementation of this strategy and it is the intention to use this strategy as an approach to obtain the required credits through the market, finding appropriate property for suitable offsetting sites or to pay into the Biodiversity Conservation Trust to achieve offsetting requirements.*

*As at the date of this response, Bloomfield has purchased two properties for the purpose of off-setting credits. One of these properties has been fully assessed and an application for Stewardship Site has been made to the NSW Biodiversity Conservation Trust for this property. The second property is currently undergoing biodiversity assessment.*

*While it is acknowledged that some of the credits may need to be off-set by payment into the Biodiversity Conservation Trust, the majority of credits will be off-set through the purchase of off-site properties and the establishment of Stewardship Sites. The quantum and timing will be dependent upon the outcome of the trade-off study. Notwithstanding this, the intent is that Bloomfield will seek to secure all the required off-sets for the project within three years of the consent being granted."*

282. The Applicant submitted a four-stage offset requirement strategy for Option 2 within the Applicant's Review Response, that was also described in the Department's FAR. Table 11 is an excerpt of the Department's FAR.

**Table 11: Proposed staged offset strategy and associated disturbance (Option 2)**

Credit Type	Stage 1 Credits Required	Stage 2 Credits Required	Stage 3 Credits Required	Stage 4 Credits Required	Total Credits Required
Ecosystem Credits					
HU906 Moderate/Good Zone 2: Bull Oak grassy woodland of the central Hunter Valley (PCT 1692)	-	4	-	-	4
HU819 Moderate/Good Zone 4: Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter (PCT 1605)	145	302	217	86	750
HU962 Moderate/Good Zone 5: Grey Box grassy open forest of the Central and Lower Hunter Valley (PCT 1748)	13	-	-	15	28
HU819 Moderate/Good derived grassland Zone 7: Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter (PCT 1605)	1,112	566	871	330	2,879
HU819 Moderate/Good other Zone 8: Narrow-leaved Ironbark - Native Olive shrubby open forest of the central and upper Hunter (PCT 1605)	173	138	153	183	647
HU818 Moderate/Good young Zone 10: Narrow-leaved Ironbark -Grey Box Spotted Gum shrub-grass woodland of the central and lower Hunter (PCT 2150)	120	-	-	-	120
<b>Total</b>	<b>1,563</b>	<b>1,010</b>	<b>1,241</b>	<b>614</b>	<b>4,428</b>

**Source:** *The Department's FAR*

283. At the site visit 29 July 2019 the Applicant stated that the rehabilitation area was a 'good news story' for the industry that provides a case study for successful rehabilitation. The Applicant also stated at the site visit that when considering biodiversity offsets credit amounts, Option 1 is the better option.

#### *Department's Assessment*

284. The Department's FAR assessed the trade-off study and the revised impact of Option 2 stating that "*Option 2 would significantly reduce impacts to endangered ecological communities listed under the Biodiversity Conservation Act 2016 and a critically endangered ecological community listed under the Commonwealth's Environment Protection and Biodiversity Conversation Act 1999 (EPBC).*"

285. The Department's PAR states "*[t]he timing of this listing did not affect the decision that the Project is not a controlled action. However, remapping of CHVEFW provided in the Revised RTS identified a greater extent of impact to CHVEFW (47 ha) than previous identified in the referral to the Commonwealth (19 ha). The Department recommends that Bloomfield consult directly with Commonwealth Department of Environment and Energy (DoEE) as to whether the Project should be re-referred as a result of this identified increase.*"

It is understood from the Department's FAR, described directly above, that the Applicant did not undertake a re-referral of the Application.

286. The Department's FAR considered that the Commonwealth's decision of 21 November 2014 found that the Application is 'not a controlled action'. The Department's assessment found that this decision stands (as per section 158A of the EPBC Act) even though the Central Hunter Valley Eucalypt Forest and Woodland ((**CHVEFW**) **CEEC**) was listed under the EPBC Act on 7 May 2015.
287. The Department's FAR considered the CCHVEFW CEEC under the NSW Framework for Biodiversity Assessment and the NSW Biodiversity Offsets Scheme (previously known as the *NSW Biodiversity Offset Policy for Major Projects*).
288. The Department's FAR recommended conditions that require Stage 1 credits to be retired within 12 months of commencement, and Stages 2 to 4 credits to be retired prior to any vegetation clearance.
289. The Department identified that the biodiversity impacts of the cut and cover tunnel had not been adequately assessed by the Applicant prior to disturbance. The Department has recommended conditions to ensure the biodiversity impacts are properly assessed and managed prior to construction of the cut and cover tunnel.
290. The Department's FAR assessed biodiversity credit availability, and in doing so also considered the Land and Environment Court (the **LEC**) consent orders that needed to be achieved by the Applicant (addressing legacy clearing activity). The Department's FAR states *"Bloomfield has identified and purchased two offset sites ('Berewin' in Rouchel and 'Ranch Road' near Scone Mountain) which ... equates to 84% of the total credits required for [Option 2 Stage 1]. The first offset site, Berewin, is also being used to satisfy the LEC's August 2017 consent orders ... However there are a significant amount of surplus credits that can be used for this Project."*
291. The Department's FAR further states *"for Stages 2 to 4 Bloomfield has committed to fulfilling all offsetting requirements prior to the commencement of clearing for each respective stage, if not earlier."*

*The Department considers that Bloomfield's additional offsetting information sufficiently clarifies how and when the biodiversity impacts would be offset for the Project and it is consistent with the Biodiversity Offset Scheme. The Department also considers that this staged approach minimises risk and provide sufficient certainty that the biodiversity impacts of each stage would be offset prior to) or soon after, in the stage of the Stage 1 land based offsets) the impact occur. OEH also raised no issues with the proposed offsetting strategy."*

292. On 24 September 2019 the Commission received the Department's Additional Information pertaining to the assessment of Option 1 and Option 2. The Department states *"[t]he Department considers that differences in air quality, noise and visual impacts between the two options considered in Bloomfield's response to the Commission's Review Report to be relatively minor. The Department considers that Option 2 would result in a lower dump height for the North Pit, would incorporate more natural macro relief features and drainage lines as part of the final landform and would provide a better long term landform following rehabilitation. On the other hand, Option 1 would provide an improved short to medium term environmental outcome by reducing the area of remnant vegetation to be disturbed by the project."*

*In this case, the trade-off is between the permanent impacts of increased dump height, visual impacts and landform features of Option 1 and the short to medium term*



*impacts of the increased remnant vegetation disturbance of Option 2. While the Department considers that both options would facilitate sustainable post-mining land use outcomes, it believes that Option 2 would provide the greater likelihood of future beneficial land use opportunities in the long term.”*

#### *EES' Additional Information*

293. EES provided EES' Additional information to the Commission on 27 September 2019.
294. EES' Additional Information states “[n]o NSW-listed EEC vegetation would be cleared under either 'Option 1' or 'Option 2'.”
295. EES further states that “Both options [Option 1 and 2] ensure avoidance of a large area of native vegetation that was proposed to be cleared under the original Environmental Impact Statement and EES is satisfied that both options meet the requirements of avoid, minimise and offset in accordance with the principles of the NSW Biodiversity Offsets Policy for Major Projects 2014. However, an additional 7.4 hectares of native vegetation would be avoided under 'Option 1' to that proposed under 'Option 2'.

#### *Public Comments*

296. Speakers at the public meeting, and written comments received thereafter objected to the Application outlining the following concerns:
- legacy land clearing;
  - land degradation and loss of habitat;
  - consideration of threatened species (particularly the Squirrel Glider);
  - uncertain ability to obtain credits for the Project in the region;
  - concerns about unresolved stage biodiversity offsetting;
  - habitat fragmentation, habitat corridors should be required;
  - concern that rehabilitation should not be used as a biodiversity offset.

#### *Further matters raised by the Commission*

297. The Commission requested additional information on the staged biodiversity offsetting. The Applicant's Response 2 provided the requested information (as discussed in paragraphs 63-66). The Applicant's Response 1 and 2 reiterated the Applicant's preference for Option 2.

#### *Applicant's response on further matters*

298. The Applicant's Response 2 and the Department's FAR describe the credit requirement for Stage 1 of the Option 1 and Option 2. These can be summarised as:
- The credit requirement for Option 2 Stage 1 is 1,563 credits being made up of:
    - a. Zone 4 PCT 1605 – 145 credits;
    - b. Zone 5 PCT 1748 – 13 credits;
    - c. Zone 7 HU819 – 1,112 credits;
    - d. Zone 8 PCT 1605 – 173 credits; and
    - e. Zone 10 PCT 2150 – 120 credits.
  - The credit requirement for Option 1 Stage 1 is 1,481 credits being made up of:
    - a. Zone 4 PCT 1605 – 74 credits;

- b. Zone 5 PCT 1748 – 14 credits;
- c. Zone 7 HU 819 – 392 credits;
- d. Zone 8 PCT 1605 – 93 credits;
- e. Zone 9 HU818 – 788 credits; and
- f. Zone 10 PCT 2150 – 120 credits.

299. The Applicant made representations within the Applicant's Response 1 and 2 stating that "Option 2 is the preferred plan for the following reasons:
- provides the greatest operational flexibility with additional dump destinations for managing air quality and noise impacts. The Option 2 Western OEA provides screened emplacement with the majority of the volume at levels 20m below the North Pit OEA;
  - improved final landform outcomes with slopes designed to facilitate cattle grazing with improved productivity and final land use income along with reduced long term erosion compared with Option 1;
  - lower Scope 2 emissions for waste haulage compared with Option 1;
  - improved truck fleet utilization compared with Option 1;
  - biodiversity reduction in credits of 24% compared with the EIS case. The majority of vegetation in the Option 2 Western OEA is grassland and the impact on the area of trees is similar for Option 1 and Option 2;
  - visual impact and final landform assessments: no material difference but Option 2 does have a North Pit dump height 10 metres lower than Option 1;
  - noise and dust impacts comparable to the EIS case;
  - lower waste haulage costs compared to Option 1;
  - cost assessment – Option 2 essentially cost neutral (\$.9M additional cost on NPV basis) compared with EIS case and \$5.5M less than Option 1 (on NPV basis)."

#### *Commission's Consideration*

300. The Commission acknowledges the public's comments summarised in paragraph 296.
301. The Commission considers that the Project is an existing active mining site as there is already a significant amount of disturbed area.
302. The Commission notes that the Applicant has provided information, and the Department has assessed that information related to the LEC consent orders and risks to obtaining biodiversity credits for the Project. The Commission accepts and agrees with the Department's assessment of biodiversity credit availability.
303. The Commission considers that the Applicant has appropriately met the Review Report recommendations 16 and 19 noting the additional detail provided in the Applicant's Response Report and the Applicants Response 1 and 2.
304. The Commission finds that the Department's FAR considered biodiversity impacts, and offsetting arrangements for Option 2 which are greater than those for Option 1.
305. The Commission finds and agrees with both the Department and EES that Option 2 achieves the *NSW Biodiversity Offset Policy for Major Projects* as described in paragraphs 285, 292, 294 and 295.
306. The Commission accepts the Applicant's position that operational activities of the Project could be constrained with Option 1 and that that overburden storage areas on

the North Dump would be steeper presenting the potential for greater erosion risk during rehabilitation.

307. The Commission finds that Option 2 will result in:
  - the North Pit dump being raised in height from the EIS base case by 6m, and
  - the South Pit dump being raised in height by 30m.
308. The Commission notes and agrees with the Department's assessment of visual impacts (described in paragraph 292).
309. The Commission agrees that the differences in air and noise impacts when comparing Option 1 and Option 2 are not significant.
310. The Commission accepts the Department's assessment of the revised offsets strategy as it provides certainty in timing of the offsets and risks in obtaining the offsets in accordance with relevant frameworks and schemes as per paragraphs 291 and 292. The Commission also accepts the Department's proposed conditions on the timing of retiring the required offsets at each stage is suitable for ensuring appropriate credits are retired within a relevant time period and finds that the biodiversity impacts can be appropriately managed, as described in paragraph 288.
311. The Commission also accepts the Department's assessment and conditions related to the biodiversity impacts of the cut and cover tunnel because it is likely to appropriately manage biodiversity impacts through assessments and consultation with the relevant government agency.
312. The Commission notes that the Applicant's Biodiversity Offset Strategy does not include the utilisation of the ecological mine rehabilitation in order to achieve the Project's offset requirements. The Commission is aware that ecological mine rehabilitation requires land to be rehabilitated to a greater ecological standard in order to qualify for offsetting purposes. The Commission notes that financial assurance for the purpose of post mining rehabilitation does not include an obligation for the Resource Regulator (**RR**) to include ecological mine rehabilitation. As the Applicant is proposing a Biodiversity Offsetting Strategy that does not involve ecological mine rehabilitation, the Commission finds that the Department's recommended conditions for offsetting purposes are adequate.

### 5.10.7 Heritage

#### *Issues in the Review & Recommendations*

313. The Commission made four recommendations during its Review in relation to Heritage:
  - R23:** that the Applicant prepare a Heritage Management Plan to provide the Applicant with further opportunities to minimise impacts on the Coke Ovens.
  - R24:** that the Applicant's Heritage Management Plan include an evaluation of the options available to minimise the impact of any tree roots on the integrity of the Coke Ovens.

**R25:** that the Heritage Management Plan identify what additional research should be undertaken regarding the Coke Ovens to determine whether salvage and recording is necessary and/or possible.

**R26:** that the Applicant's Heritage Management Plan and Rehabilitation Strategy detail how the Coke Ovens will be better accessed by the public given the historical significance of the site and provide options on how the site can be managed throughout the life of the Project and beyond mine closure. The Coke Ovens are described further in paragraph 202.

#### *Applicant's Consideration*

314. The Applicant's Response Report provided commitments to prepare a Heritage Management Plan addressing Recommendations 23 to 25 inclusive. The Applicant's response report stated *"Bloomfield is committed to preparing a Heritage Management Plan which would include consideration of opportunities to minimise impacts on the Coke Ovens. Bloomfield has engaged a Chartered Structural Engineer who specialises in conservation of historical structures, (Bill Jordan and Associates), to prepare a Heritage Management Plan for the Coke Ovens..."*

*As part of the Heritage Management Plan that would be prepared in accordance with a development consent Bloomfield would include a research program and evaluation of options available to minimise the impact of tree roots on the integrity of the Coke Ovens...*

*As part of the Heritage Management Plan that would be prepared in accordance with a development consent, Bloomfield commits to undertaking research to determine the potential for salvage and recording of some or all components of the Coke Ovens."*

315. In regard to Recommendation 26, the Applicant's Response Report raised a concern about providing public access to the Coke Ovens while the heritage items were within an active mine, but did commit to *"reviewing potential ways to establish public access to the Coke Ovens, following mine closure. This process would be undertaken in consultation with Singleton Council and OEH."*

316. In regard to Aboriginal cultural heritage in general, the Applicant's disturbance mapping submitted within the Trade-Off Study notes a limited disturbance area for both Option 1 and Option 2. It is implied that proceeding with Option 1 or Option 2 would have reduced impacts on the Aboriginal cultural heritage, and that heritage items mapped by the Applicant, included in the Department's recommended conditions of consent as Appendix 6, would not all require disturbance and salvage.

#### *Department Consideration*

317. The Department's FAR states that the *"the Department recognises the significance of the Coke Ovens and the importance of protecting the heritage site and has therefore recommended conditions based on the [Commission's] recommendations, Bloomfield commitments, and advice from OEH's Heritage Division. The Department has recommended that Bloomfield prepare a Historical Heritage Management Plan for the Project which includes specific conservation measures for the Coke Ovens to;*

- minimise impacts of the development and to improve the integrity of the Coke Ovens;*



- *identify if there is any association with other nearby heritage items (i.e. the 'Mound with Historic Material' and the 'Linear Embankment');*
- *ensure full recording of the Coke Ovens;*
- *provide public access; and*
- *manage the Coke Ovens over the life of the development and post-mining.*

318. The Department's FAR concluded *"that subject to the conditions and the proposed blast specific conditions [described in paragraphs 210 and 212] the Department considers that appropriate mitigation and management measures would be implemented to ensure that the Coke Ovens are managed and protected over the long-term."*

319. *The Department's FAR raised that "in finalising the Project, the Department has identified that Bloomfield has not adequately assessed potential disturbance area (<0.5Ha) for the proposed cut and cover tunnel. The subject area was previously identified as 'rehabilitation' (i.e. already disturbed), however it is now evident that this area was only subject to minor landscaping activities rather than major mining-related rehabilitation. ...*

*The Department has recommended conditions to ensure that this area is assessed for biodiversity and Aboriginal cultural heritage prior to commencing construction of the proposed cut and cover tunnel."*

The Department noted that if the assessment identifies biodiversity values or aboriginal cultural values, then biodiversity credits and an Aboriginal Cultural Heritage Management Plan would need to be prepared in consultation with OEH (now EES).

#### *Public Comments*

320. Speakers at the public meeting and written comments received thereafter objected to the Application outlining the following concerns:
- public comments were made about Aboriginal heritage value and cultural values.

#### *Commission's Consideration*

321. The Commission has considered the summarised public comments described in paragraph 320.
322. The Commission accepts that public access to the Coke Ovens would be limited during mine operations due to safety concerns.
323. The Commission has considered the Applicant's commitment to:
- preparing a Heritage Management Plan which would include considering opportunities to minimise impacts on the historical Coke Ovens; and
  - preparing a Rehabilitation Strategy and Management Plan which includes consideration of public access to the Coke Ovens.
324. The Commission has considered the Department's advice regarding conditions of consent and NSW best practice (as per paragraph 234).
325. The Commission finds that the Department's approach and conditions of consent for further assessment of <0.5Ha of the cut and cover tunnel (described in paragraph 319) are appropriate.

326. The Commission has accepted that the Applicant's Response Report (and commitments therein) and the Department's conditions meet the Review recommendations 23 to 26 inclusive.

### 5.10.8 Greenhouse gas emissions

#### *Applicant's Consideration*

327. The Applicant's Air Quality Impact Assessment estimated that, over the 21 year mine life, the Project, including the Application, would generate a total of:

- 823,790 tonnes (t) of carbon dioxide equivalent (CO<sub>2</sub>-e) of Scope 1 emissions,
- 167,485 t CO<sub>2</sub>-e of Scope 2 emissions, and
- 71.452 Mega-tonnes (Mt) CO<sub>2</sub>-e Scope 3 emissions.

328. The Applicant's EIS states "*[t]he proposed development will generate a total of 823,790 tonnes CO<sub>2</sub>-e of Scope 1 emissions as well as approximately 167,485 tonnes CO<sub>2</sub>-e of Scope 2 emissions and approximately 71,452,371 tonnes CO<sub>2</sub>-e of Scope 3 emissions over its life. In total this equates to 0.009% of total Australian emissions annually and a very small proportion of global GHG emissions. Impacts are therefore expected to be minimal. Management and mitigation measures will be incorporated into the proposed development to reduce Scope 1 and 2 emissions where feasible and practical.*"

329. The Applicant's EIS stated that the Applicant is committed to establishing and implementing a Greenhouse Gas and Energy Efficiency Management Plan for the Project. "*The plan would be aimed at monitoring energy use and reviewing potential avenues for reducing energy consumption and therefore GHG generation. The plan would include the following as a minimum:*

- *monitoring of fuel consumption;*
- *monitoring of total site electricity consumption;*
- *requirements for the maintenance of plant and machinery to ensure efficient operation;*
- *assessment of the potential use of alternative fuels where economically and practically feasible;*
- *ongoing scheduled and preventative maintenance to ensure that diesel and electricity powered plants operate efficiently;*
- *the development of targets for GHG emissions and energy use, as well as monitoring and reporting against these; and*
- *establishment of an energy awareness program for staff and contractors.*"

330. The Applicant's EIS stated that in addition to domestic supply, the Project will export its product coal to Japan, Taiwan and the Republic of Korea (South Korea). It noted that both Japan and South Korea are signatories to the Paris Agreement and that Taiwan has developed GHG reduction targets which are enforced under its *Greenhouse Gas Reduction and Management Act*. A rational inference from the fact of the Project's export to signatories to the Paris Agreement/countries with GHG reduction targets is that market forces in those countries are likely to lead buyers to seek coal products which best meet their requirements and minimise associated emissions.

331. The Applicant's Economic Assessment (by KPMG) in the EIS states that the "*total incremental cost associated with the GHG emissions over the life of the Project are estimated to be \$4.5 million in present value terms.*"

332. The Applicant does not consider the Project to be inconsistent with the climate change policies of either the Commonwealth or NSW governments. The Applicant considers the impacts of its direct GHG emissions to Australia and NSW are negligible and the consumption of the Project's product coal is accounted for within the reduction targets set by Japan, the Republic of Korea (South Korea), and Taiwan.
333. The Applicant's Response Report stated that the proposed trade-off study (Options 1 and 2 described in paragraph 37) will not result in any discernible additional impact above that presented by the Air Quality Impact Assessment. The Applicant however does note a difference in haulage required between the two options; Option 1 would result in an average truck numbers of 11.2 [vehicle movements] compared to 8.6 [vehicle movements] for Option 2.

#### *Department's Assessment*

334. The Department's FAR states *"the Department recognises that coal mines are large initiators of Scope 1, 2 and 3 greenhouse gas emissions which are released through the mining, processing, transportation and later combustion of coal."* The Department's FAR also noted the *"importance of reducing these emissions to limit continued climate change and has further addressed and summarised its consideration of Greenhouse Gas (GHGs) due to additional attention they have attracted after the Rocky Hill Coal Project merit appeal (Gloucester Resources Limits vs Minister for Planning [2019] NSWLEC 7)"*.

*The Department's FAR states "The Department's PAR (section 6.7.2) relied on GHGE cost estimates of \$6.3 million PV from the former March 2017 EA. Even this more conservative estimate would not significantly influence the overall CBS outcomes, which the Department considered, at a minimum, would delivery an overall net benefit of \$120 million NPV to NSW."*

335. On 2 April 2019 the Applicant provided the Department with additional information outlining potential direct and indirect impacts of GHS emissions associated with the Project. This information was assessed by the Department. The Department's FAR states that *"[the] information included an overview of GHG emission assessment completed to date and additional consideration of these impacts relative to the current policy framework, including further consideration of its customers' national commitments to reduce GHG [emissions]"*.
336. The Department's FAR states that *"the Department has carefully considered [Greenhouse Gas Emissions (GHGEs)], from both environmental and economic perspective, in accordance with clause 14 of the Mining SEPP and the requirements and objects of the EP&A Act. Subclause 14(1) of the Mining SEPP requires the consent authority to consider whether conditions should be attached to consents to ensure that the development is undertaken in an environmentally responsible manner, including conditions to ensure that GHGEs are minimised to the greatest extent practicable. Under subclause 14(2), the consent authority, in determining a development application, must also consider an assessment of GHGEs (including downstream emissions) from the development, and must do so having regard to any applicable state or national policies, programs or guidelines concerning GHGEs."*

*The Department's FAR further states that "it is important to note that the NSW Climate Change Policy Framework (CCPF) does not set any prescriptive emission reduction*

*criteria, targets or other outcomes that have application to the private sector or to development assessment and control. The CCPF seeks to manage decisions made by the NSW Government in relation to government assets and services.”*

337. The Department’s FAR stated that *“the Department remains of the view that the Project’s GHGEs have been adequately considered and that these emissions are acceptable, particularly when weighted against the socio-economic benefits of the Project. The Project represents a continuation of existing mining operations. Therefore, this brownfield expansion would not notably add to Australia’s annual contributions. Even if the Paris Agreement or the CCPF was considered applicable, the Department considers that this Project is unlikely to prevent Australia and NSW from achieving its emissions reductions commitments. The Department is also satisfied that it has adequately considered Scope 3 emissions and that these emissions would be further accounted for in the consumers [Nationally Determined Contributions (NDC)]. Further, refusal of the Project would be unlikely to assist in reducing global GHGEs because the supply gap would most likely be readily filled by another coal supplier. There is no shortage of coal producers in the world and coal supply is therefore a very active and competitive market.”*
338. The Department’s FAR concluded by *“recognising the important of requiring Bloomfield to investigate opportunities to reduce its Scope 1 and 2 GHGE over the life of the mine and has therefore recommended a condition requiring Bloomfield to take all reasonable steps to improve energy efficiency and to reduce the Projects GHGEs. Bloomfield would be required to detail these measures in its [Air Quality and Greenhouse Gas Management Plan (AQGGMP)] and report on GHGEs in Annual Reviews.”*

#### *Public Comments*

339. Speakers at the public meeting and written comments received thereafter objected to the Application outlining the following concerns:
- impacts of climate change are worsening and should not be ignored;
  - clarification was sought that customers of the Project are party to the Paris Agreement;
  - one representation asserted that the EIS is believed to be invalid with respect to climate change.
340. Additional written comments received in response to the publication of the Department’s Additional Information on 24 September 2019 on the Commission’s website raised the following issues:
- climate change and greenhouse gas emissions.

#### *Applicant’s further matters*

341. The Applicant provided additional information, in the form of a letter to the Department on 2 April 2019. The ‘Additional Information Relating to Greenhouse Gas Emissions’ letter summarises the Scope 1, 2 and 3 GHG emissions for the Project. The Applicant re-stated the estimated amount of Scope 3 emissions produced by the Project which was calculated to be approximately 71.5 Mt CO<sub>2</sub>-e over a 21-year period.
342. The Applicant’s letter also confirmed that the Scope 3 emissions of the Project were calculated to constitute approximately:
- 0.2% of Japan’s annual GHG emissions target for 2030,



- 0.1% of the Republic of Korea (South Korea)'s annual GHG emissions target for 2030, and
- 0.53% of Taiwan's annual GHG emissions target for 2050.

343. The Applicant's 'Additional Information Relating to Greenhouse Gas Emissions' letter to the Department referenced the four assumptions for carbon costing which were included in the KPMG Economic Analysis. Using Assumption 1, the Applicant estimated that the prorated economic cost of Scope 3 emissions to NSW is \$460,000.

#### *Department assessment of further matters*

344. The Department considered the Applicant's letter dated 2 April 2019 in its assessment, and referenced content from the letter within the Department's FAR. The Department's assessment is described in paragraphs 334-338. of this report.

#### *Commission's Consideration*

345. The Commission has considered the public's comments summarised in paragraph 339 and 340

346. The Commission has considered the likely impact of GHG emissions associated with the Application and the impact that they could have downstream, as per clause 14(1)& (2) of the Mining SEPP. Clause 14(2) of the Mining SEPP states "*in determining a development application for development for the purposes of mining, petroleum production or extractive industry, the consent authority must consider an assessment of the greenhouse gas emissions (including downstream emissions) of the development, and must do so having regard to any applicable State or national policies, programs or guidelines concerning greenhouse gas emissions.*"

347. The Commission finds that GHG emissions associated with the Application have been adequately estimated by the Applicant.

348. The Commission considered the Department's assessment of GHG emissions (including downstream emissions) associated with the Project. It notes that the Department's assessment takes into consideration the relevant State and national policies, programs and guidelines concerning GHG emissions.

349. The Commission has considered the Rocky Hill judgment (described in paragraph 334) particularly in relation to 'carbon leakage' [paragraph 535 of the Rocky Hill judgement]: "*[carbon leakage can occur] where, as a result of more stringent climate policies or more stringent applications of climate policies in a country, businesses move their production from that country to other countries with less ambitious climate policies or less ambitious application of climate policies, which can lead to a rise in global GHG emissions.*"

350. The Commission notes that some of the coal production from the Application is expected to be sold domestically (and therefore become Scope 3 emissions within Australia, and regulated domestically), and that the balance will be exported to Japan, Taiwan and the Republic of Korea (South Korea), which are either signatories to the Paris Agreement (Japan, South Korea) or have developed GHG reduction targets enforced under local legislation (Taiwan). The Commission considered that, in this regard, market forces are likely to lead buyers in those countries with the most significant emissions reductions targets to seek coal products which best meet their

requirements and minimise associated emissions in order to achieve the relevant domestic emissions reduction targets.

351. The Commission accepts the Applicant's submission in relation to the responsibility it has for Scope 1 and 2 emissions. The Commission is satisfied that the Applicant's commitments will minimise Scope 1 and 2 emissions (over which it has direct control) to the greatest extent practicable. The Commission notes that the Applicant does not have direct control over Scope 3 emissions, however that it has committed to a range of measures to reduce such emissions to the greatest extent practicable. Such measures include regular reporting, monitoring and maintaining diesel powered equipment, investigating avenues to minimise electrical consumption and utilise alternative renewable energy sources, as well as staff awareness and waste reduction programs.
352. The Commission has considered the Applicant's submissions, the Department's assessments, the community views, the relevant national and international policies, programs and guidelines, the Mining SEPP and the Court's reasoning in the Rocky Hill judgment. The Commission accepts the Applicant's view on assigning responsibility for Scope 1, 2 and 3 emissions with the Applicant undertaking to do all it can to minimise Scope 1 and relevant Scope 2 emissions and with Scope 3 emissions being the responsibility of the end customer for coal export. As noted in paragraph 330, the consumption of coal in countries that are signatories to the Paris Agreement or have other GHG reduction targets in the export countries should lead to minimised Scope 3 emissions from the Project to the greatest extent practicable.
353. The Commission finds the Department's recommended conditions of consent are adequate to require the applicant to reduce and report on how the Application is minimising Scope 1 and (relevant) Scope 2 emissions that are reasonably controlled by the Applicant, to the greatest extent practicable. The Commission finds that these conditions are adequate and reasonable for a project of this size and nature given the current national and state policies.

#### 5.10.9 Resource recovery

##### *Department's Consideration*

354. The Department's PAR states *"the Department has considered resource recovery in its assessment of the Project, and is satisfied that the Project can be carried out in an efficient manner that optimises resource recovery within environmental constraints. The Department would recommend conditions requiring Bloomfield to implement reasonable and feasible measures to minimise waste and maximise the salvage and re-use of resources within the disturbance area (including water, soil and vegetative resources).*
355. The Department's PAR concluded that *"the resource recovery of the Project is appropriate, as it would maximise recovery of coal while minimising a range of potential environmental impacts."*

##### *Commission's Consideration*

356. The Commission notes that the Application will be one of the smaller existing coal mines in the region as described in paragraph 9.

357. The Commission finds that the assessment of resource recovery was undertaken by the Department and found to be appropriate prior to the Commission undertaking its Review.

#### 5.10.10 Land use and site suitability

##### *Department's Consideration*

358. The Department's PAR considered the strategic and statutory context of the Application. The Department's PAR concluded that *"all components of the Project are permissible with development consent under the Singleton LEP."*

359. The Department's PAR further considered the pre-mining capability and landform stating *"[t]he existing approved final landform at Rix's Creek Mine was designed to reinstate pre-mining land capability, i.e grazing land with stable landforms, compatible with the surrounding landscape, and allow for a range of possible post-mining land uses."*

##### *Commission's Consideration*

360. The Commission's Review considered the Application against the EPIs described in paragraph 86, 88 and 90.

361. The Commission's Review also considered the Application against the Material (described in paragraph 81) which includes the following land use instruments:

- the Object of Ecologically Sustainable Development defined under EP&A Act;
- *Upper Hunter Strategic Regional Land Use Plan*;
- *Hunter Regional Plan 2036*;
- *Upper Hunter Strategic Assessment*;
- *Singleton Land Use Strategy 2008*.

362. The Commission finds that the Application is permissible with development consent, as described in paragraph 100 and 358.

#### 5.10.11 Transport

##### *Applicant's Consideration*

363. The Applicants EIS confirmed that the Application proposes to continue the transportation of material via rail *"the Project would continue to transport product coal from the Integra Coal Operations rail loading facility to the Port of Newcastle for blending and export."*

364. The Applicant's EIS included a Traffic Assessment (**TIA**). The Applicant's Revised Response to Submissions dated 24 November 2017 (**RRTS**) confirmed that *"train movements would remain relatively constant until around 2023. At this point it was predicted that the Bloomfield Mine in East Maitland would close and production at the Mine would increase. For an approximate three year period, rail traffic was predicted to increase by approximately 115 trains per year, or one additional train every three days. From 2025 it is expected that coal production would taper off and the rail traffic generated by the Project would gradually reduce...."*

[Australian Rail Track Corporation (**ARTC**)] *has advised that the required train paths would be available during the peak period to transport coal to Newcastle. Further confirmation of this was obtained in writing from ARTC following the exhibition of the EIS.*

365. The Applicant's TIA considered the impacts of the proposed cut and cover tunnel under the New England Highway and stated that the highway would be *"kept open to traffic via a temporary deviation or 'side-track"*. It also noted that the *"construction of the cut and cover tunnel is expected to take approximately 20 weeks."*
366. The Applicant's RRTS provided a commitment to undertake the cut and cover tunnel in accordance with RMS requirements *"the RMS recommended a number of conditions to be incorporated into the conditions of approval for the Project, if granted. These relate to preparation of a Works Authorisation Deed, Construction Traffic Management Plan and design specifications for the cut and cover tunnel (bridge) and associated Side track Road.*

*The Project would be undertaken in accordance with the conditions imposed on the development consent and it is expected that these would take account of RMS's recommended conditions."*

367. The Applicant's TIA considered employees commuting stating that *"the [TIA] for the Project identified existing and future traffic volumes on the local road network. It found that the additional traffic volumes projected for 2023 which represent the highest level of employment and therefore traffic generation at the Mine would have a negligible impact on the intersection performance of Rix's creek Lane and the New England Highway."*

#### *Department's Assessment*

368. The Department's PAR states that *"the Department considers that the construction of the cut and cover tunnel should be managed under the Interim Construction Noise Guidelines (ICNG) and that a condition of consent should be recommended to ensure Bloomfield adheres to the noise management levels defined in this policy."*
369. The Department's FAR concluded that *"the Department considers that road traffic impacts could be managed under a Traffic Management Plan.*
- *rail transport would continue to be managed through the commercial arrangements with ARTC.*
  - *Bloomfield would also need to consult with RMS to confirm the final design of the new cut and cover tunnel and implement a Construction Traffic Management Plan to manage New England Highway traffic during construction of the tunnel and the associated road deviations.*
  - *subject to these measures, the Department is satisfied that the traffic and transport impacts of the Project are acceptable."*

#### *Public Comments*

370. Speakers at the public meeting and written comments received thereafter objected to the Application outlining the following concerns:
- *inadequate details and assessment of the cut and cover tunnel under the New England Highway.*



### *Commission's Consideration*

371. The Commission has considered the public's comments summarised in paragraph 370.
372. The Commission considered the Applicant's TIA and the Applicant's RRTS in the Commission's Review.
373. The Commission agrees with the Department's view that the Applicant would need to consult with RMS to finalise the design of the proposed cut and cover tunnel and to implement a Traffic Management Plan for the resulting deviations on the New England Highway. Condition C8 requires the Applicant to obtain RMS' approval of a Traffic Management Plan. Conditions C3 – 6 inclusive require the Applicant to be responsible for the design and construction of the cut and cover tunnel, and enter into required agreements with RMS, obtaining RMS' approval prior to construction.
374. The Commission finds that the Department's assessment is adequate. Impacts being appropriately managed through recommended conditions for traffic management (including the cut and cover tunnel) and construction noise are considered to be appropriate.

## **5.11 Additional considerations**

### **5.11.1 Rix's Creek North Mine**

375. The Applicant outlined that the Project is operated in conjunction with Rix's Creek North Mine. This is described in paragraphs 7-9, 103 and 104.
376. The Department's FAR states that "*the Department recognises that Bloomfield operates the [Project] in conjunction with its neighbouring Rix's Creek North Mine and that this would continue if the Project is approved. The Department supports this approach and recognises the operational efficiencies and environmental management benefits that can accrue from this integrated management. The Department has therefore recommended conditions that would allow Bloomfield to:*
- *transfer ROM coal between the two operations to enable coal to be processed at either CHPP;*
  - *integrate the water management systems of the two sites and share water between them;*
  - *combine management strategies, plans or programs across the two sites; and*
  - *operate a joint CCC."*

*The Department also recognises that the integrated management and mine planning would provide opportunities for Bloomfield to minimise cumulative impacts, integrate final landforms and improve rehabilitation outcomes.*

### *Commission's Consideration*

377. The Commission understands that the Applicant has communicated a desire to surrender DA 49/94 for the Project and so the Department has recommended conditions of consent for the Application to allow the future surrender to occur.
378. The Commission agrees with the Department's assessment described in paragraph 376 and supports integrated management to reduce impacts.

379. The Commission encourages the Applicant to consider future overburden movement and placement within the Rix Creek Integrated Mining Complex in an effort to reduce the impact of out of pit emplacement areas and to reduce final pit voids as described in paragraph 250.

### 5.11.2 The public interest

#### *Applicant's Considerations*

380. The Applicant's EIS considered the precautionary and conservative approach and states *"there has been careful and thorough evaluation undertaken in order to recognise the potential for and then avoid where possible, serious or irreversible damage to the environment."*
381. The Applicant's EIS further states *"[t]he Project has initially aimed to avoid and minimise potential impacts on ecological values during mine planning. A detailed ecological assessment undertaken for the Project in combination with the body of ecological knowledge obtained during the operation of the Mine over the previous 25 years was used to provide a high level of certainty regarding the ecological constraints of the Project area."*
382. The Applicant's EIS concludes with the following statement regard to the public interest *"[t]his EIS has assessed the Project against the requirements of the Environmental Planning and Assessment Act 1979 and the principles of Ecologically Sustainable Development. This assessment has concluded that the Project is consistent with the objective of the Act and principles of Ecologically Sustainable Development."*

*In short the Project would also:*

- *generate of a total of \$1,072.2 million of incremental benefits over the life of the Project including revenue and worker wages;*
- *provide continued employment for 375 people;*
- *contribute to an increase in the NSW real gross State product of 0.04 percent and real gross regional product for the Hunter Region of 0.26 percent; and*
- *facilitate increased spending in other sectors, stimulating the demand for goods and services.*

*The benefits of the Project would outweigh its potential impacts, with the implementation of the proposed management, mitigation and offset measures, as recommended by this EIS, in place. It is considered that it is appropriate and in the public interest to approve the Project."*

#### *Department's Consideration*

383. The Department's PAR assessed the Application against the relevant objects of the EP&A Act.
384. The Department's PAR states that *"[t]he Department is satisfied that the Project encourages the proper development of natural resources (Object 1.3(a)) and the promotion of orderly and economic use of land (Object 1.3(c)), since the Project:*
- *comprises permissible land uses on the subject land;*

- *targets a coal resource that has been determined by the Department's Division of Resources & Geoscience (DRG) to be significant from a State and regional perspective;*
- *targets a coal resource that is located almost entirely within existing coal exploration and mining lease boundaries, in a region that is dominated by coal mining operations;*
- *can be largely carried out using existing site and transport infrastructure; and*
- *would provide considerable socio-economic benefits to the community of NSW.*

*Consideration of the protection of the environment (Object 1.3(e)) is provided in Section 6 [of the PAR]. The Department considers the Project has been designed to minimise environmental impacts where practicable, including utilising existing mining and transport infrastructure to extract a State significant coal resource.*

*While some land clearing resulting in the loss of existing vegetation and habitat would occur, Bloomfield has proposed to offset this impact through meeting the requirements of the FBA or the UHSA. In doing so, the Department is satisfied that biodiversity values would be maintained in the long-term. The Department is also satisfied that the impacts to threatened species and habitats can be managed and/or mitigated through appropriate conditions that require biodiversity offsets and detailed rehabilitation strategies.*

*Consideration of sustainable management of built and cultural heritage (Object 1.3(f)) is provided in Section 6.9 [of the PAR]. Following its consideration, the Department considers the Project would not significantly impact the built or cultural heritage of the locality. The Department is satisfied that any residual impacts on heritage can be managed and/or mitigated by imposing appropriate conditions.*

*The Department has also considered the encouragement of ecologically sustainable development (ESD) (Object 1.3(b)) in its assessment of the Project (see Appendix D [of the PAR]). The Department also notes Bloomfield's consideration of these matters (see Section 31.2 of the EIS), and considers that the Project is able to be carried out in a manner that is consistent with the principles of ESD."*

385. *The Department's FAR concludes that "[t]he Department considers that the Project is a logical and strategic 'brownfield' extension of the existing open cut mining operations at Rix' s Creek South Mine. The Project would recover a significant additional coal resource with fewer environmental impacts than would be expected from an equivalent greenfield project. The Department considers that the proposed management, mitigation and offset measures would appropriately minimise and compensate for the residual adverse social, environmental and economic impacts of the Project. The Project would provide substantial social and economic benefits to the local community and would deliver a net benefit to the State.*

*The Department's recommended conditions provide a comprehensive, contemporary and precautionary approach to the regulation and management of the Project. The Department considers that these conditions represent current best practice for regulating open cut coal mines in NSW and would protect the environment and the amenity of the local community and promote the orderly development of the State's significant coal resources.*

*The Department considers that the benefits of the Project outweigh its residual costs and considers that the Project is in the public interest and is approvable, subject to strict conditions of consent.”*

#### *Public Comments and Council Comments*

386. The Commission heard from speakers at the public hearing (held during the Review phase) and the public meeting and received written comments asserting that the Application is not in the public interest for the reasons put forward in section 3.6 of this SoR. Conversely, there were also other public comments (both verbal and written) that the Project is in the public interest because of the economic and social benefits that would be realised as a result of the Project.
387. On 29 July 2019 the Commission met with Councillors of the Council led by the Deputy Mayor along with senior officers of the Council. Those present indicated that the Applicant was regarded as a good corporate contributor locally, with a record for being responsive to issues of major community concern (air quality, noise). They also indicated that the Council and the local community were concerned about the future of the region’s environment post mining and keen to have it protected/rehabilitated to a high level.

#### *Other Considerations*

388. Public interest is a concept that is brought into legislation and into the remit of consent authorities. The concept of the public interest is subject to the scope and purpose of the EP&A Act.
389. The Commission accepts that the public interest includes:
- ensuring the objects of the EP&A Act are upheld;
  - the principles of ESD;
  - community responses based on logically probative evidence.

#### *Commission’s Consideration*

390. The Commission has had regard to the Material before it and has considered the issues raised by speakers at the public meeting and in written comments to the Commission. The Commission has considered the issues raised by the public and whether the Application is in the public interest in its findings contained throughout sections 5.9 to 5.11.2 of this SoR.

The Objects of the EP&A Act (in section 1.3), applicable to the Application are:

- “(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;*
- (b) to facilitate ecologically sustainable development by integrating relevant economic, environmental and social considerations in decision-making about environmental planning and assessment;*
- (c) to promote the orderly and economic use and development of land;*
- (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),*



- (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.

391. The Commission generally agrees with the Department's assessment that the Application has considered and addressed sections 1.3(a), (b), (c), (e), and (f) of the EP&A Act.

The Commission finds that section 1.3(i) of the EP&A Act also applies to the Application. The Commission considers that the Application is consistent with this Object of the EP&A Act because assessment of the Application has been undertaken in consultation with the Council, and consideration has been given to the issues raised by the community and Government agencies, as discussed in section 3.

392. The Commission finds that section (j) of the EP&A Act applies to the Application and has been satisfied by the following:
- the Application was exhibited from 3 November 2015 to 3 December 2015 with 131 submissions received;
  - the Department commissioned independent peer reviews of certain aspects of the Application including air quality and economics;
  - a Review of the Application, including a public hearing was held by the Independent Planning Commission, with 11 verbal presentations and 15 written submissions.
  - a public meeting was held on 29 July 2019 by the Independent Planning Commission, with 27 verbal presentations and 949 written comments, mainly supporting the application.
393. The Commission finds that Option 2 has greater merit than what was proposed in the EIS and appropriately considers section 1.3(e) of the EP&A Act in that Option 2 *"protect[s] the environment, including the conservation of threatened and other species of native animals and plants, ecological communities and their habitats"*. This assessment is described in section 5.10.6 of this report.

#### *The principles of Ecologically Sustainable Development*

394. The Commission notes that section 6(2) of the Protection of the Environment Administration Act 1991 states that ESD requires the effective integration of social, economic and environmental considerations in its decision-making, and that ESD can be achieved through the implementation of:
- the precautionary principle;
  - intergenerational equity;
  - conservation of biological diversity and ecological integrity; and
  - improved valuation, pricing and incentive mechanisms.
395. The Commission agrees that the conservation of biological diversity has been addressed by avoiding and minimising biological impacts and through the biodiversity offset package. The Commission finds that Option 2 upholds the *"promotion of ecological sustainable development"* to a greater extent than what was proposed in the original EIS and the Commission finds that Option 2 is supported. The Commission also finds that the ecological rehabilitation commitments are sound and provide an appropriate framework for ensuring that the mine that is the subject of the Application is rehabilitated adequately post mining. The Commission also agrees that the valuation and pricing mechanisms have been adequately addressed through the CBA and subject to independent review.

396. The Commission finds that the precautionary principle has been utilised throughout the application with appropriate mitigation and management measures set out in the Applicant's EIS and subsequent documentation. The Commission notes that the Department's FAR includes recommended draft conditions of consent, which uphold the precautionary principle, as an example noise, dust and biodiversity conditions. The Commission has expanded on some of the Department's recommended conditions in order to further apply the precautionary principle, in particular for rehabilitation. The Commission has imposed additional measures in relation to air quality and noise complaint handling, and rehabilitation to address impacts of the Application. These expanded conditions address the precautionary principle and intergenerational equity. The expanded conditions also address the provision of greater transparency to community and stakeholders. The Commission finds that intergenerational equity has been addressed through maximising efficiency of the coal resource recovery and productivity on an existing brownfield site.
397. In summary the Commission finds that the Application (utilising Option 2 overburden emplacement area) is consistent with ESD, because the Application, if approved, would achieve an appropriate balance between relevant environmental, economic and social considerations.

## **6 HOW THE COMMISSION TOOK COMMUNITY VIEWS INTO ACCOUNT IN MAKING DECISION**

398. The views of the community were expressed through public submissions and comments received (as part of the exhibition process, the additional consultation period, and during the public meeting as part of the Commission determination process) as discussed in paragraphs 19, 20, 28, 58, 59, 79 and 80.
399. As described in paragraph 396, the Commission carefully considered all the views of the public as part of making its decision and in its consideration of whether the Application is in the public interest. The way in which these concerns were taken into account by the Commission is set out under each issues section (section 5 of this report).

### *Views from the community in objection*

400. Of the 27 registered speakers at the public meeting; three spoke in opposition to the Application.
401. A total of 949 comments was received by the Commission in relation to the Application, with 28 comments in objection. Two comments were received which did not indicate either support or objection for the Application.
402. A total of seven further written comments was received by the Commission in response to the publication of the Department's Additional Information.
403. The main issues raised in the verbal and written comments are described in paragraph 59 and 80.

### *Views from the community in support*

404. Of the 27 registered speakers who spoke at the public meeting; 23 spoke in support of the Application (including the Applicant).
405. A total of 949 comments was received by the Commission in relation to the Application, with 919 comments in support of the Application.
406. A total of 16 further written comments was received by the Commission in response to the publication of the Department's Additional Information.
407. The main issues raised in the verbal and written comments are described in paragraph 59 and 80.
408. The Commission carefully considered all of these views as part of making its decision. The way in which these concerns were taken into account by the Commission is set out in section 5 of this report.

## **7 CONCLUSION: THE COMMISSION'S FINDINGS AND DETERMINATION**

409. The Commission has carefully considered the Material before it.
410. The Commission has carefully considered the two options for overburden emplacement provided by the Applicant in its Review Response and finds that Option 2 is preferable, for the reasons set out in this SoR, and in summary because:
  - Option 2 reduces the size of the western OEA, reducing the Application's new disturbance areas to 155.67 ha, reducing the impact on new disturbance by 57.11 ha and reducing the number of biodiversity credits required to 4, 428, as described in paragraph 274;
  - Option 2 is unlikely to have an "*appreciable visual impact*" as described in paragraph 276;
  - Option 2 overburden emplacement provides the greatest operational flexibility and allows for impacts to be better managed on a day and night time basis and during weather patterns as described in paragraph 279;
  - there is no material difference to noise or air quality impacts, compared with the EIS proposal, as described in paragraph 182;
  - Option 2 provides less steep overburden storage slopes, reducing erosion impacts and being more favourable for agricultural post-mining land uses as described in paragraph 230;
  - Option 2 would require less haulage vehicle movements and therefore less emissions as described in paragraph 333.
411. The Commission finds that consent for the Application should be granted, subject to conditions of consent, for the reasons set out in this SoR, and in summary because:
  - the Application is in respect of an existing brownfield site, with existing operational mining infrastructure, and is operated as the Rix's Creek Integrated Mining Complex as described in paragraphs 1, 7, 8, 9 and Table 1;
  - noise and vibration impacts have been adequately assessed and noise criteria, being ANC, can apply because of the measures the Applicant has taken which have been accepted by the Department and the EPA as described in paragraph 197. Appropriate mitigation, management measures and accelerated noise attenuation are proposed as described in paragraph 196. Appropriate conditions of consent, mitigation and acquisition rights, are described in paragraphs 199-201;

- air quality has been adequately assessed and found by the Department to be aligned with contemporary best practice for NSW coal mines, and improvements should continue to be pursued over time as described in paragraph 141. The Ministry of Health was satisfied with the assessment and recommended conditions as described in paragraphs 147 and 167. Appropriate conditions for ongoing mitigation and management are described in paragraphs 168-173;
- GHG emissions have been adequately minimised as far as practicable and within the capability of the Applicant's control as described in paragraphs 345-352. Conditions of consent have been included to require the Applicant to take all reasonable steps to improve energy efficiency and to reduce the Application's GHG emissions over the life of the Application as described in paragraph 353;
- biodiversity offsets have been quantified and a staged offset strategy identified to retire the necessary biodiversity offsets for the Application (as described in Table 11). Option 2 overburden emplacement protects and minimises impacts to native vegetation compared with the original proposed disturbance in the EIS as described in paragraphs 270-278. Option 2 overburden emplacement provides greatest operational flexibility and allows for impacts to be better managed on a day and night time basis and during weather patterns as described in paragraph 279. Biodiversity impacts have been appropriately assessed and can be managed through conditions of consent as described in paragraph 310. Option 2 meets the *NSW Biodiversity Offset Policy for Major Projects* as described in paragraph 305;
- water resources have been appropriately addressed and conditions of consent proposed to ensure impacts are appropriately managed and mitigated as described in paragraphs 266 and 267;
- rehabilitation and risk of sudden mine closure has been appropriately assessed as described in paragraph 246. The requirement for a Rehabilitation Strategy and Rehabilitation Management Plan, updated every 3 years, and incorporating risks of unplanned closure into risk assessments, provides assurance that the Applicant's closure arrangements will consider unplanned closure and have regard for the Council's strategic planning and community expectations given the close proximity of the Application to the Singleton Township and Camberwell as described in paragraphs 245-247 and 250;
- visual impacts are appropriately assessed and considered to be relatively minor overall given the existing operation as described in paragraph 292, with existing screening already established as described in paragraph 276. Option 2 is unlikely to have an *appreciable visual impact* as described in paragraph 276;
- heritage impacts have been assessed and would be appropriately managed through conditions of consent as set out in paragraphs 323-326;
- blasting impacts have been adequately assessed and would be appropriately managed, as set out in paragraphs 215-217;
- traffic impacts have been adequately assessed and would be appropriately managed, as set out in paragraphs 371-374;
- social and economic impacts have been adequately assessed and appropriately managed, consistent with the *guidelines for the economic assessment of mining and coal seam gas proposals* (as described in paragraph 131). The Application would generate economic and social benefits as a result of employment opportunities and revenue to the State as described in paragraph 133;
- A planning agreement would be entered into by the Applicant and the Council which would provide further benefits locally as described in paragraph 102;
- the Applicant has adequately addressed the recommendations in the Commission's Review Report, for the reasons set out in section 5.10;



- the Application is in the public interest as described in paragraphs 390-396;
- the Application meets the principles of ESD as summarised in paragraph 397.

412. The Commission has determined that the Application should be approved subject to conditions. These conditions are designed to:

- prevent, minimise and/or offset adverse social and environmental impacts;
- set standards and performance measures for acceptable environmental performance;
- require regular monitoring and reporting; and
- provide for the ongoing environmental management of the development.

413. The reasons for this Decision are given in this Statement of Reasons for Decision dated 12 October 2019.



**Mary O'Kane (Chair)**  
Chair of the Commission



**Andrew Hutton**  
Member of the Commission



**Tony Pearson**  
Member of the Commission