

Rix's Creek South Mine

SSD6300 Independent Planning Commission of NSW Meeting

29 July 2019



WE CARE. WE DELIVER.



OUR PURPOSE: We are a proud and successful Australian mining and engineering group

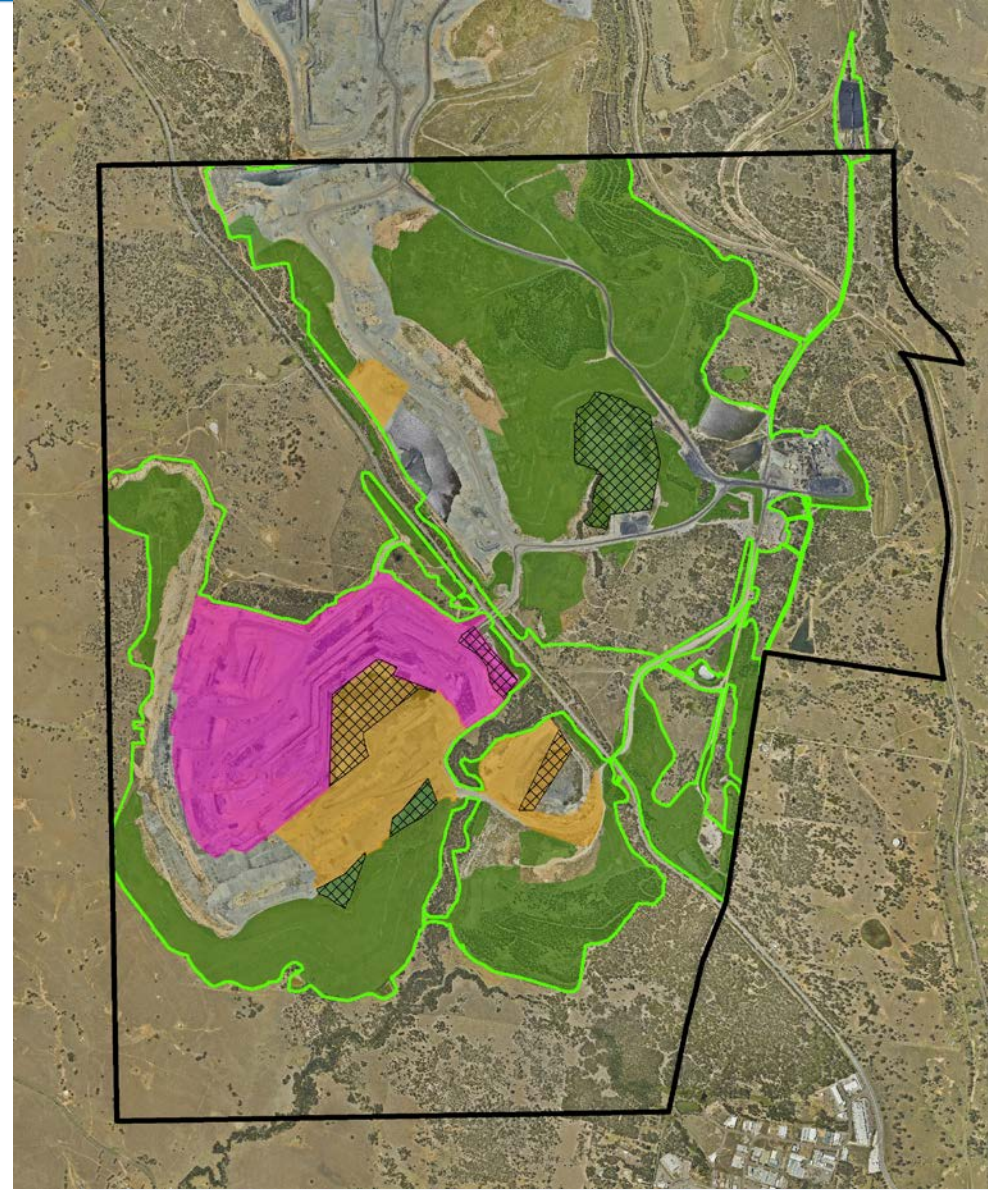
OUR VISION: We seek excellence in all we do: respecting our history as we shape our future

OUR VALUES: We Care. We Deliver.

Overview

Rix's Creek South

- Rix's Creek South (RCS) is part of Rix's Creek Mine
- Mining commenced in the late 1800s
- Owned and operated by the Bloomfield Group since 1990
- 70% of employees reside locally (33% Singleton, 13% Cessnock and 25% Maitland shires)
- Rix's Creek Coal Mine has taken on 9 trainees since 2018 and is planning to expand this going forward
- The business currently supports 30 apprentices and will be seeking to employ a minimum of 7 in 2020
- RCS operates under DA 49/94 valid to 24 March 2020



Overview – RCS Continuation Revised Project

- Bloomfield purchased the Integra Open Cut Mine in December 2015, renamed it Rix's Creek North and commenced to operate RCS and RCN as one mine.
- After the acquisition the following changes to the project were made:
 - ✓ Reduction in annual coal volume extraction from 4.5 Mtpa ROM to 3.6 Mtpa ROM
 - ✓ Reduction in noise and air quality impacts
 - ✓ A step change in the proportion of mining fleet which is sound attenuated
 - ✓ Elimination of the need to build a stand alone rail loop
 - ✓ Removal of the requirement to divert Stonequarry Creek and Deadmans Gully

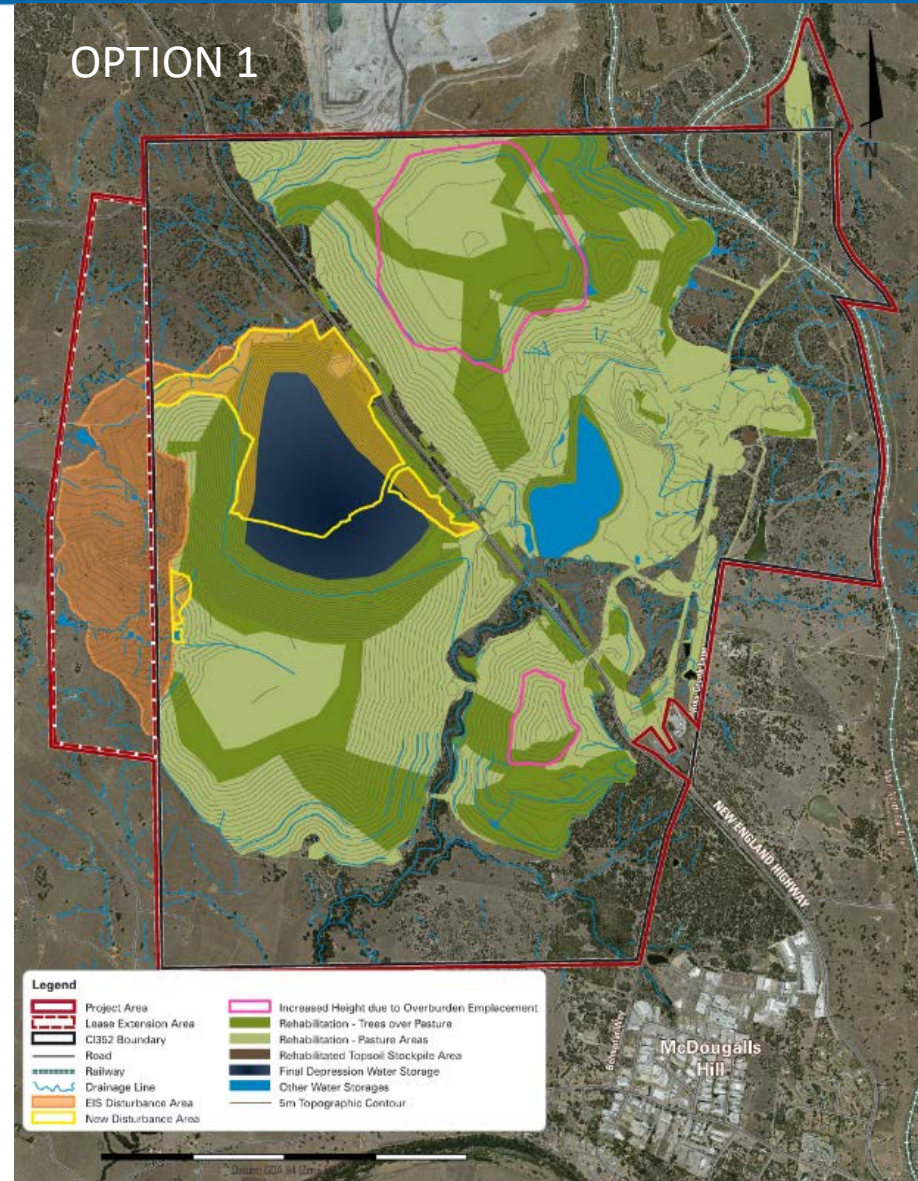
The resulting disturbance footprint for the proposed 21 year Continuation Project is small at approx. 1/8th the size of the current approved area.

- IPCN presented its Review Report dated 31 August 2018 with 26 recommendations and stated
“...if the applicant can satisfactorily address the various recommendations contained within this review report the Project may have merit.”
- Bloomfield considered each recommendation from the IPCN Review Report and included actions and commitments to address them in an updated proposal to Department of Planning in December 2018. One of the IPCN recommendations included a revision to the mine plan.

Revised Mine Plan – Options

Option 1

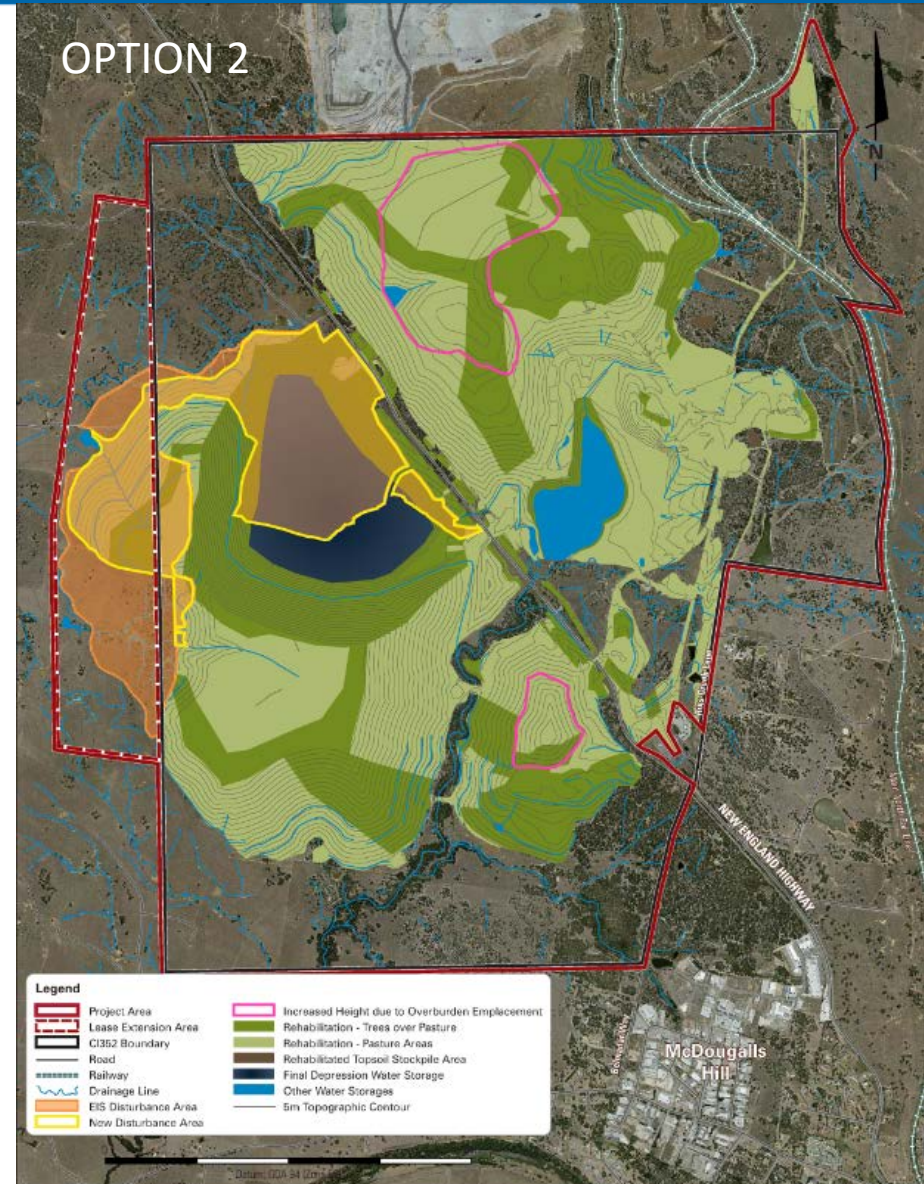
- Remove the need for the Western overburden emplacement area
- Overburden to be reallocated to the North Pit and South Pit dump and rehabilitated areas
- Increase in height of the current overburden emplacement areas



Revised Mine Plan – Options

Option 2

- Remove the need for the southern half of the Western overburden emplacement area
- Overburden to be reallocated to the North Pit and South Pit dump and rehabilitated areas
- Footprint for the North Pit OEA smaller than Option 1
- Height of the North Pit OEA will be lower than Option 1 by 10m



Benefits and impacts of the Options (compared to the original proposal)

Option 1

- 34% reduction in the biodiversity offset credits
- 50% increase in truck haulage and costs due to volume, distance and elevation
- Re-disturbance 24 ha of established planted woodland on the North Pit OEA
- Reduction in Class 4 & 5 land post-mining due to slopes

Option 2

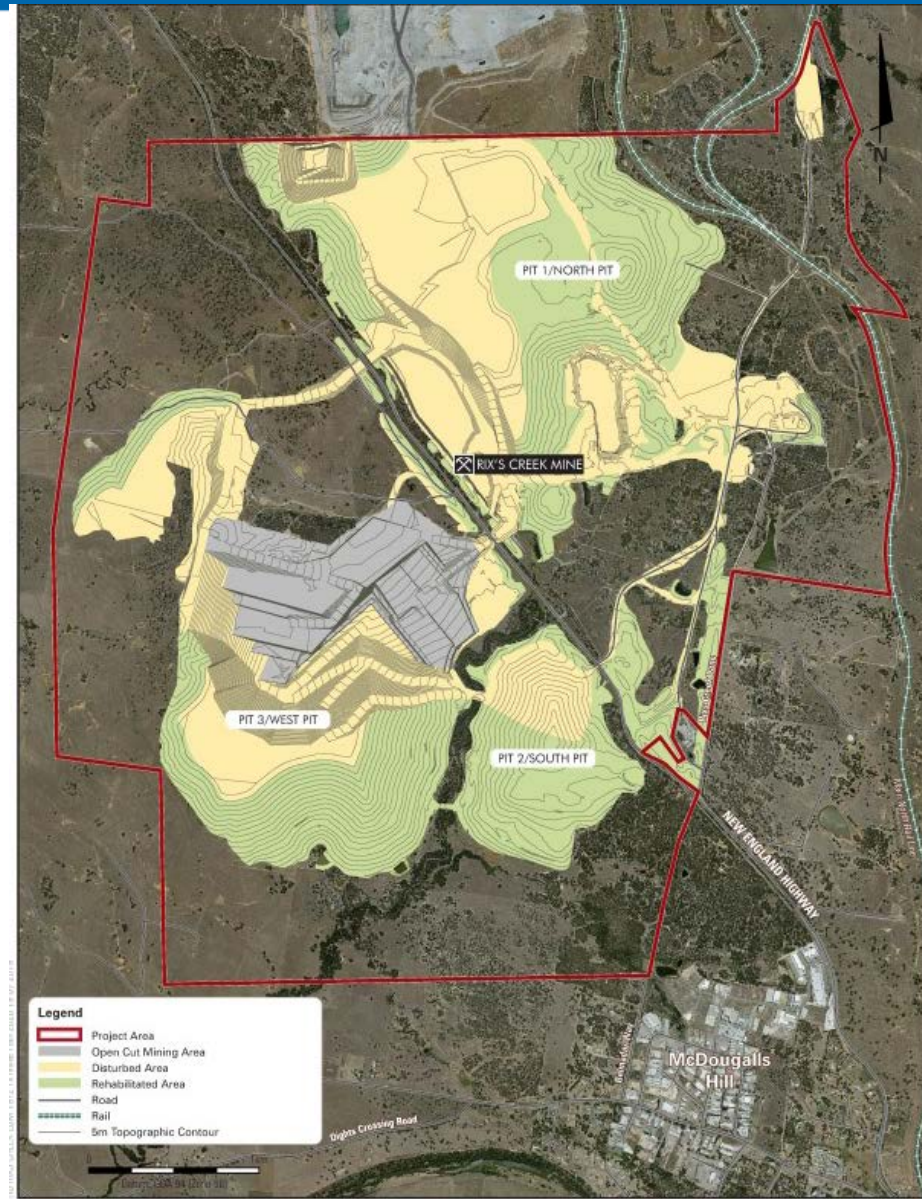
- 24% reduction in the biodiversity offset credits
- Cost increase due to additional haul distance (but a lower increase than Option 1)
- Re-disturbance of 4 ha of younger planted woodland on the North Pit OEA
- A more usable final landform in comparison with Option 1 (reduction of slope areas)

Option 2 is Preferred and Recommended

- **Biodiversity** – a reduction in required credits of 24% when compared to the original proposal and minimal loss of established mature rehabilitation
- **Visual impact and final landform assessments** - Option 2 provides a better outcome than Option 1, with a 10m lower North Pit dump height.
- **Noise and dust impacts** – no material difference between Options 1 and 2.
- **Flexibility** – Option 2 provides the greatest operational flexibility with multiple emplacement destinations that will provide options to mitigate real-time weather impacts and best manage noise and dust potential.
- **Cost assessment** - essentially cost neutral between option 2 and EIS proposal (\$0.9M additional cost for Option 2 on NPV basis).

Option 2 - RCS Development - 2020

- Active mining continues in West Pit progressing north
- Overburden Emplacement on North Pit dump (over some existing rehabilitation) and in the West OEA and West Pit
- South Pit Tailings Dam capping continuing
- Rehabilitation continues at West Pit and commences at the West and North OEAs
- Production level is approximately 2.5 Mtpa ROM



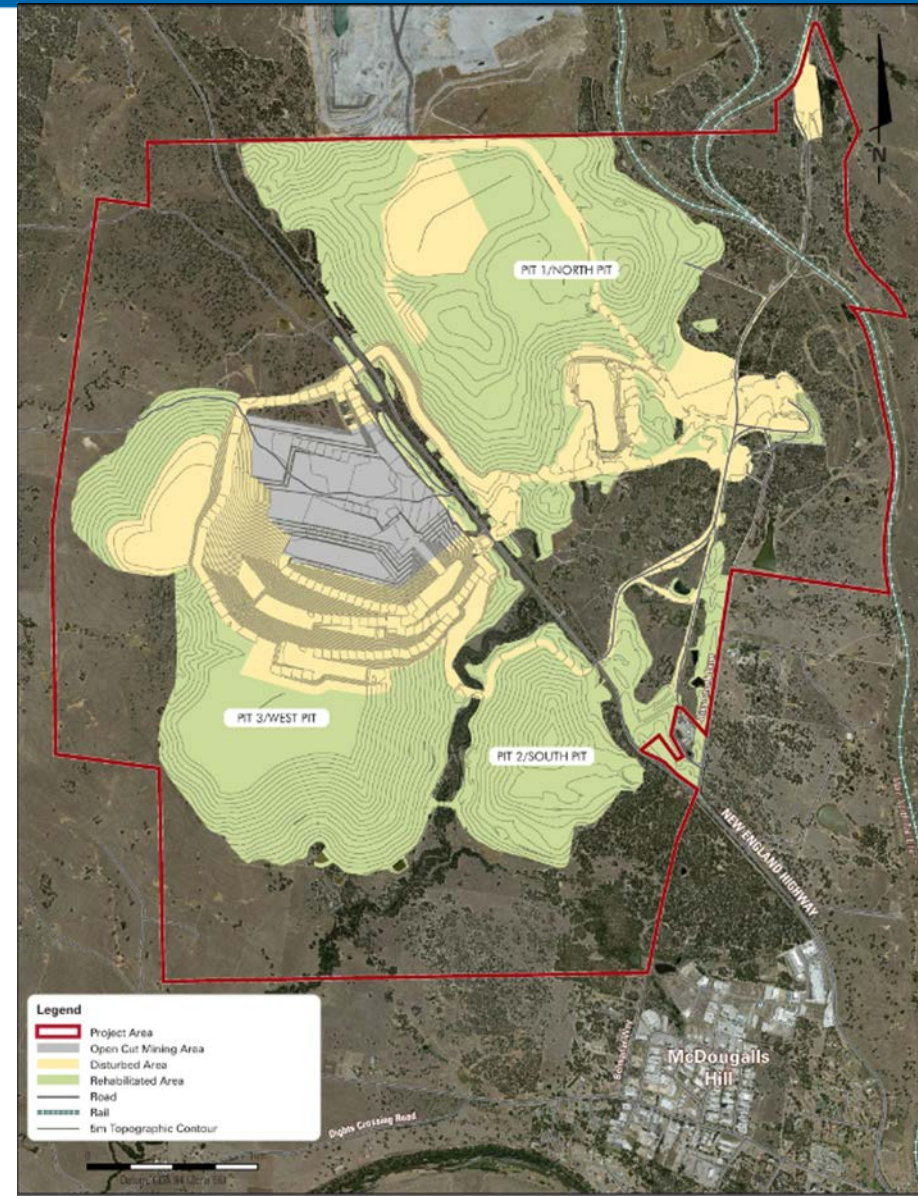
Option 2 - RCS Development - 2023

- Active mining continues in West Pit progressing further north
- Overburden Emplacement on North Pit dump and in the West OEA and West Pit
- South Pit Tailings Dam rehabilitated
- Progressive rehabilitation continues at West Pit and West and North OEAs
- Maximum production levels approximately 3.6 Mtpa ROM



Option 2 - RCS Development - 2026

- Active mining continues in West Pit progressing further north
- Overburden Emplacement continues backfill behind mining in West Pit
- Overburden Emplacement in Western OEA and the North Pit OEA nears completion
- Rehabilitation significantly progressed at Western OEAs and North Pit OEA
- Production levels reduces to approximately 2.1 Mtpa ROM



Option 2 - RCS Development - Final Landform

Final Landform with the changes compared to the EIS case being

- Reduced Western OEA
- Increased height on the South Pit dump
- Increased height on the North Pit dump



- Rehabilitation Strategy has been updated to include:
 - ✓ Principles of the Strategic Framework
 - ✓ Objectives and practices
 - ✓ Knowledge base
 - ✓ Stakeholder Engagement Strategy
 - ✓ Engagement with CCC and register of additional consultation
 - ✓ Final void
- Continue to actively graze cattle on rehabilitated land

Media reports relating to Rehabilitation at mine sites

DRG inspection in June 2019 identified:

- *“areas of high weed density”.*
- *“unexplained areas of low species diversity within pasture rehabilitation areas”*
- *“a disconnect between monitoring records for rehabilitation areas against completion criteria and rehabilitation maintenance activities”.*

In Response Bloomfield has;

- **Weed Density-** Actively continued with the current weed management plan with a focus on the area identified by the Resources Regulator. Rixs Creek Mine spends in excess of \$50,000 per annum in weed management on site.
- **Species Diversity.** – During July, NSW Department of Primary Industries / NSW Agriculture spent 3 days surveying the area. They recorded 59 species over the 3 days with 27 species found in the area inspected by Resources Regulator.

Of the 27 species identified there were:

- Four native grasses
 - Three pasture grasses
 - One Legume and nineteen forbs.
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- **Monitoring Records -** Mining Operations Plan to be updated to address the minor issue raised.



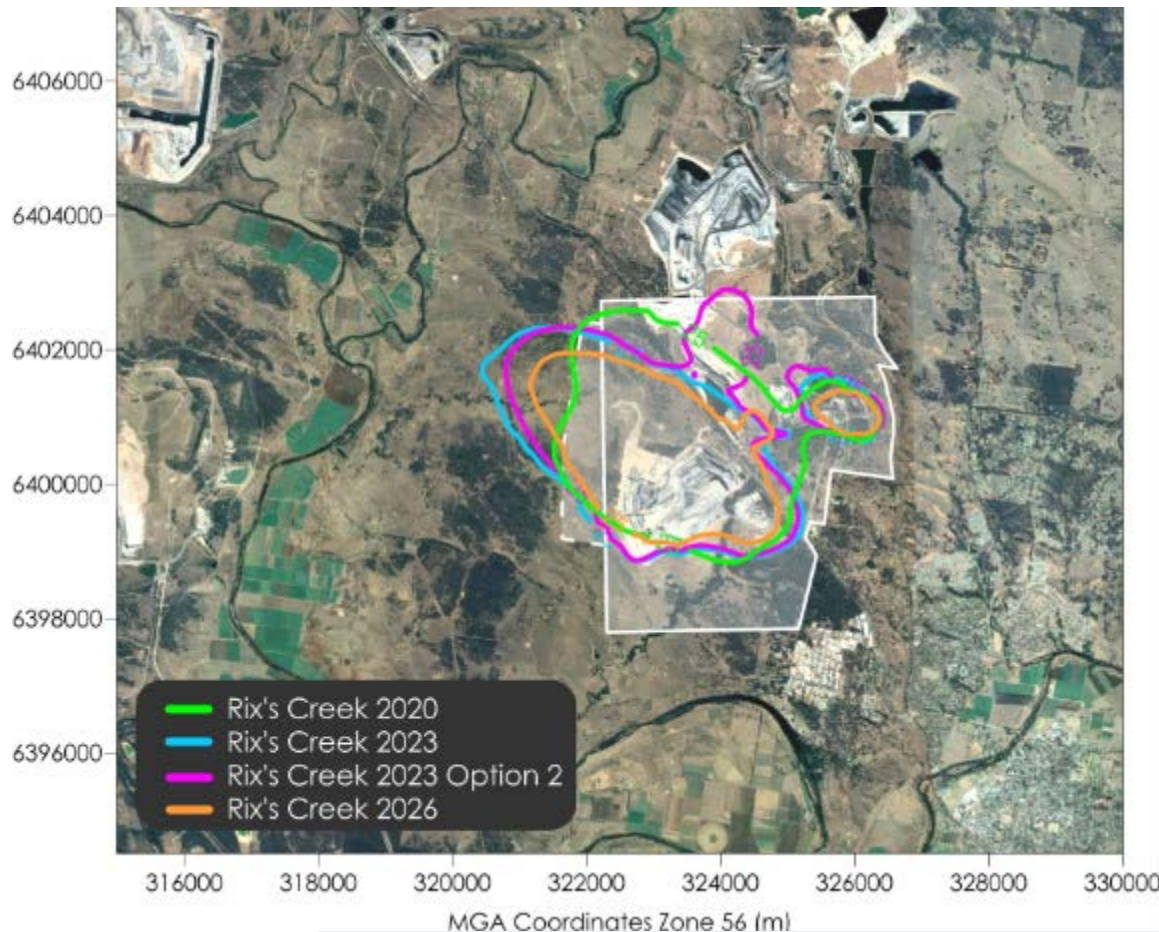
- A copy of the Noise Management Plan can be found on the website
- The website provides contact details for the 24 hour community/blasting hotline
- The current attenuated equipment list has been provided and timing for additional works confirmed in recommended Conditions
- Cladding of CHPP has been completed
- Noise is monitored at offsite receptor locations during evening and night times
- Management actions include operational modifications and progressive shutdown
- NSW EPA noted “*Robust and Comprehensive Noise Management System*”



Air Quality variance over time

- PM10 incremental average contribution
- Trend shows a gradual reduction in impact with time
- Further reduction is anticipated when North Pit dump and Western OEA are complete and production levels reduce
- Meteorological conditions will continue to be monitored to manage and minimise impacts

Rix's Creek PM10 incremental annual average (contribution 25 u/g m³ PM 10)

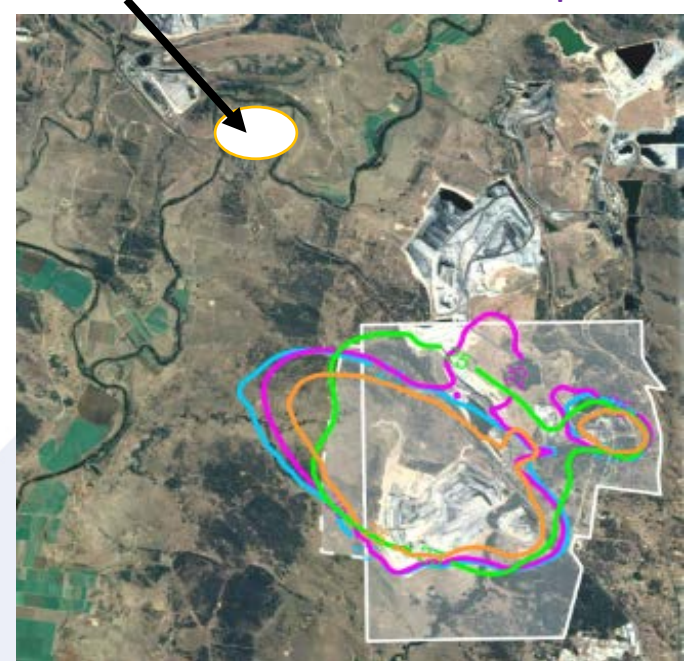


- Ongoing use of Proactive and Reactive System and TARP
- Rix's Creek Mine utilises a predictive model "ENVMET" system which forecasts dust risk which is reviewed daily to inform modification to operations.
- Protocol developed which includes the following:
 - Link to Upper Hunter AQ Monitoring Network.
 - Website update: contact details for EPA Environment Line and link and instructions on how to use the Environment Line

Media reports relating to the RCS Air Quality Assessment

- Recently DPE asked Bloomfield to assess additional receptors north west of our proposed operations. These receptors are further from the mine than other receptors that were assessed as part of the air quality modelling.
- Bloomfield has always acknowledged that the assessment process has to be thorough and has willingly addressed reasonable requests for additional or ancillary information
- The Rix's Creek South Continuation Project's 'Air Quality Impact Assessment' (AQIA) –
 - has been the subject of many reviews by experts and regulators
 - is sound, and does not require any change to provide the additional information requested.
 - has been with the DPE and in the public domain since 2015.

Location of additional receptors



- Annual Scope 1&2: 0.009% of Australia's annual emissions and 0.011% Australia's 2020 commitment under the Paris Agreement .
- Greenhouse gases were included in economic assessment .
- Product coal is exported to Japan (metallurgical and thermal) , Taiwan (metallurgical) and South Korea (thermal) .
 - ✓ Japan and South Korea are signatories to the Paris Agreement and have GH reduction targets.
 - ✓ Taiwan has also developed GH reduction targets under its *Greenhouse Gas Reduction and Management Act* and committed these in their domestic laws.
- Metallurgical coal (60% of coal produced) - demand for steel manufacturing is required throughout the Project life
- Thermal coal (40% of coal produced) - customers' demand to continue with new power stations currently being commissioned in Japan and Korea.

Conclusion

- RCS owned and operated by Bloomfield since 1990.
- Through its operations, activities and actions over nearly 30 years, RCS has the demonstrated support of the local Council, businesses, and community and charity groups.
- Employment of
 - up to 217 FTE employees and up to 56 FTE external contractors at Rix's Creek South.
 - Employment for Bloomfield's corporate personnel and internal engineering services.
- Significant economic benefits are provided to the Hunter community in the form of wages and expenditure for suppliers and contractors. (Current year: Group - \$289M; RCS allocation \$114M)
- The Bloomfield Group is an Australian owned company and contributes to Federal and State Governments with royalties and taxes. (Current year: Group - \$102M; RCS allocation \$49M)
- Provides an ongoing capacity to support community initiatives.
- The Option 2 project area is only a 15% increase to the current approved disturbance area. 43% of the current approved footprint is rehabilitated with approximately 60 hectares already sustainably grazed by cattle.
- The Project will provide a logical extension of the existing operation recovering additional coal resources and allowing for a systematic sequence to provide a long term stable final landuse.

Our Purpose - What we do

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Our Vision - What we aspire to be

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Overview

Rix's Creek Mine Locality

- Singleton Mining Precinct: Rix's Creek North, Ashton, Integra, Ravensworth and Glendell
- Infrastructure: Main Northern Rail line, New England Highway, various minor roads
- Maison Dieu Industrial Area to South

