

1 June 2022

Director – Resource Assessments  
Development Assessment, NSW Department of Planning & Environment  
Locked Bag 5022  
Parramatta NSW 2124

*Via online submission*

Dear Director

**Dendrobium Mine Extension Project (SSI-33143123)**

RDA Illawarra supports the Dendrobium Mine Extension Project and is of the opinion that it is essential to the State for economic and social reasons.

The Dendrobium Mine Extension Project proposal is supported by an Environmental Impact Statement that incorporates feedback from the local community and key stakeholders; the intent being to reduce the environmental and cultural impacts of the project whilst delivering the significant economic benefits of the project.

RDA Illawarra supports the Dendrobium Mine Extension Project and is of the opinion that it is essential to the Region, State and Nation for the following reasons: -

1. Rejection of the Application would be harmful to the regional economy, resulting in significant job losses at South 32, BlueScope and the Port Kembla Coal Terminal
2. Approving the application will generate more jobs and secure investment in the region
3. Sovereign manufacturing risk to the steel industry is mitigated.

The attached submission by RDA Illawarra elaborates on these key themes and the economic imperative of this project for the region, State and our Nation.

RDA Illawarra supports the Dendrobium Mine Extension Project and requests its endorsement by the NSW Department of Planning & Environment, and its approval by the Minister.

Yours sincerely



Debra Murphy  
CEO  
RDA Illawarra



Submission to NSW Department of Planning and  
Environment

# Dendrobium Mine Extension Project (SSI-33143123)

Submitted by RDA – Illawarra

## Summary

Illawarra Coal Holdings Pty Ltd (a subsidiary of South32) has made an application for an extension to the scope and duration of its operations at its Dendrobium Mine as State Significant Infrastructure. Their proposal is supported by an Environmental Impact Statement (EIS) that incorporates feedback from the local community and key stakeholders; the intent being to minimise the environmental and cultural impacts of the project whilst delivering its significant economic benefits.

**RDA Illawarra supports the Dendrobium Mine Extension Project** and is of the opinion that it is essential to the Region, State and Nation for the following reasons: -

4. **Rejection of the Application would be harmful to the regional economy**, resulting in significant job losses at South 32, BlueScope and the Port Kembla Coal Terminal
5. **Approving the application will generate more jobs and secure investment in the region**
6. **Approval means sovereign manufacturing risk to the steel industry is mitigated.**

The Dendrobium Coal Mine lies within the Illawarra region and its operation makes a significant contribution to the local, State and National economy – as has local coal mining for the past 100 years. The application by Illawarra Coal Holdings is to extend the Dendrobium mine into a new underground area and continue use of existing mine infrastructure until 2041. This will entail the extraction of a planned 5.2 million tonne per annum (Mtpa) of raw coal and the use of existing infrastructure to process and transport ‘washed’ coal to Port Kembla for use in steelmaking operations or for export. It will also necessitate the development of some ancillary mine infrastructure to facilitate ventilation, gas and water management.

Dendrobium Coal Mine produces **metallurgical coal** that is blended with other metallurgical coals to achieve the quality **required for steelmaking operations, which is its primary use.**

**Metallurgical coal** (once converted to coke) is used in the production of steel **and is critical to the operation of ironmaking blast furnaces at BlueScope** – and around the world. There is currently no alternative technology available of a commercial scale that will replace the blast furnace method of ironmaking. Although BlueScope is researching the development of alternative, sustainable technology using hydrogen, it is unlikely this will be available and proven at the scale required before 2040.

Currently, coal from Dendrobium mine has three key markets; BlueScope (Port Kembla steelworks), Liberty Primary Steel (Whyalla Steelworks) and export through Port Kembla Coal Terminal (PKCT) to other steelmaking operations globally. **Although other sources of metallurgical coal are available, achieving the required blended quality will significantly increase costs for downstream users and has the potential to force the closure of primary steelmaking operations for Australian flat product steel – a significant sovereign risk issue.**

**Rejection of this application** for continuation of the Dendrobium Coal Mine **will have a significant impact on the operations of Illawarra Coal Holdings and BlueScope**, one of its key downstream customers. That will have a **major impact on the regional, State and National economies** through reduced viability of the Southern Coalfield economic ecosystem (including the steelworks, coal mining, PKCT and associated support industries including Manufacturing).

Rejection of the application could result in: -

- ▶ Loss of 5,500 direct jobs in the Illawarra
- ▶ 25,000 fewer indirect roles nationally
- ▶ \$6.4 billion/annum reduction in regional GRP
- ▶ A \$10.7 billion/annum hit to the Australian economy<sup>1</sup>.

**The Illawarra economy** is recovering from the impact of COVID-19 and **has lost over 4,700 higher paid jobs in Mining, Construction and Information Technology during the past five years**, whilst adding 5,600 lower paid jobs in Other Services, Arts & Recreation, Agriculture, Health Care & Social Assistance and Administration & Support.

**Rejection of the Application could result in the loss of a further 650 higher-paid mining roles in the region, along with the potential for significantly reduced operations at BlueScope (steelmaking), PKCT (exports) and throughout the Southern Coalfields, with the flow-on affecting over 25,000 direct and indirect jobs throughout Australia.**

Illawarra Coal Holdings has previously made an application for an expansion of its Dendrobium operations, which was refused by the Independent Planning Tribunal based on the potential impact of the mine development on the Metropolitan Special Area.

The current application has a redesigned mine plan with a reduced mining area, limited longwall operations, less impact on surface water, fewer affected heritage sites and larger buffer zones for key rivers and dams. RDA Illawarra supported the previous application on economic grounds and believes **the revised Environmental Impact Statement (EIS) and Proposal deliver a sustainable compromise that will protect sensitive environments, water catchments and storage.**

Approving the application with its revised, reduced scope – and lower environmental impact – will: -

- Create 50 full-time jobs
- Deliver 100 jobs during construction
- Secure ongoing employment of 1,800 direct high-paid, mining roles
- Support the continued viability of steelmaking at Port Kembla
- Protect sensitive environments
- Secure water storage and supply
- Alleviate impact of the mine development on the Metropolitan Special Area.

**RDA Illawarra supports the Dendrobium Mine Extension Project and requests its endorsement by the NSW Department of Planning & Environment, and its approval by the Minister.**

## Background

Illawarra Coal Holdings Pty Ltd (a subsidiary of South32) operates the Dendrobium Mine, an underground metallurgical coal mine located within the Southern Coalfield of NSW and eight kilometres (km) west of Wollongong.

Mining operations at the Dendrobium Mine include five approved underground Mining Areas, 1, 2, 3A, 3B and 3C (see Figure 1). Longwall mining is currently being undertaken in Area 3B, with extraction largely complete in Areas 1, 2 and 3A. It is uncertain if Illawarra Coal Holdings can

extract the remaining reserves in the approved Area 3C and potential timing of this depends on their ability to effectively drain gas from the seam to allow safe mining operations.

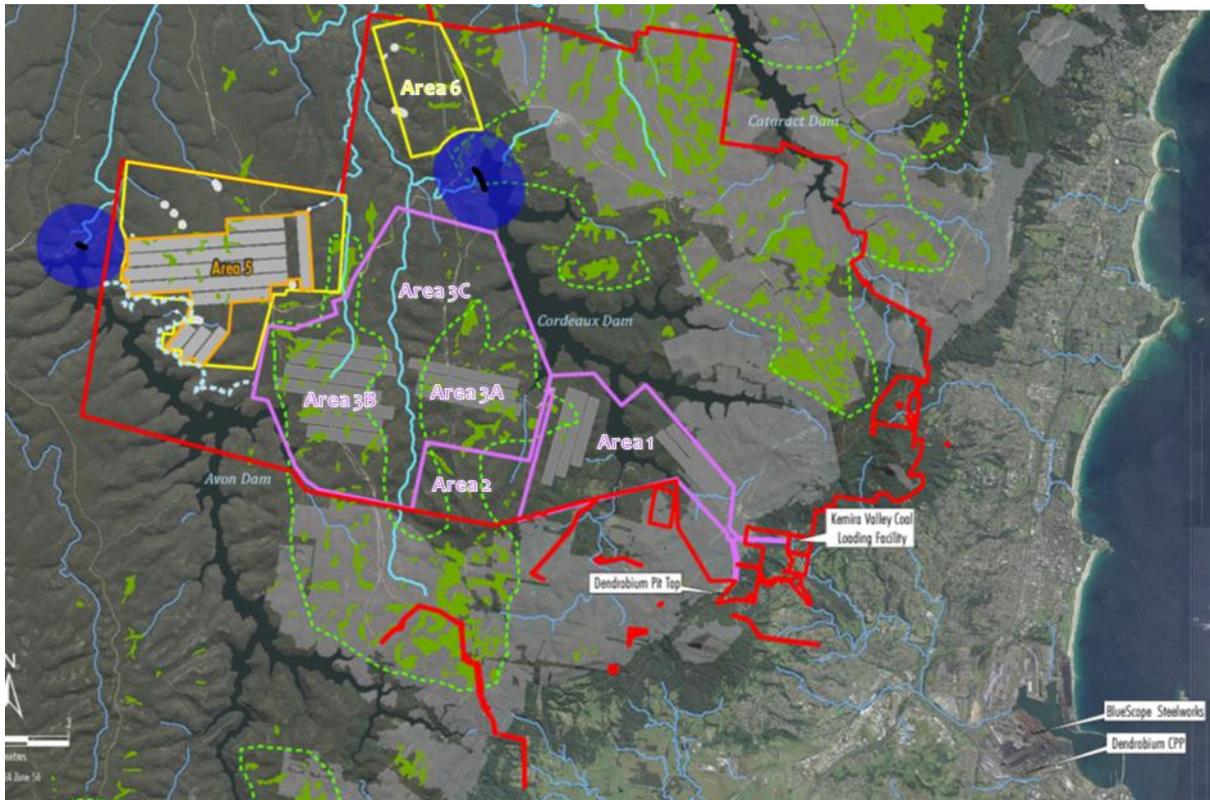


Figure 1: Dendrobium site plan showing mining areas & location of key infrastructure

Illawarra Coal Holdings has previously made an application for an expansion of its Dendrobium operations into Areas 5 and 6, to extend the mine life. That application was refused by the Independent Planning Tribunal based mainly on the assessed potential impact of the mine development on the Metropolitan Special Area.

The current application has a redesigned mine plan with a reduced mining area (part of Area 5 only), limited longwall operations, less impact on surface water, fewer affected heritage sites and larger buffer zones for key rivers and dams.

## Support for the application

RDA Illawarra supports approval of the Project, for three reasons:

1. The consequences of rejecting the Application would be harmful to the regional economy, resulting in significant job losses at South 32, BlueScope and the Port Kembla Coal Terminal
2. Approving the application will generate more jobs and secure investment in the region
3. Sovereign manufacturing risk to the steel industry is mitigated.

## Economic Impact of rejecting the Application

### *Loss of higher-paid jobs*

The Illawarra's economy has seen significant changes with job losses in high-paid roles – particularly in Mining, Construction and Information Technology. A Cadence Economics<sup>2</sup> report included in previous submissions calculated that a mining job attracts nearly three times the pay of an average job in New South Wales.

During the last five years the Illawarra has shed over 500 mining jobs, nearly 4,100 in Construction and 125 in its emerging Information Technology sector<sup>3</sup> – all well-paid industries. The COVID-related impact on hospitality and retail sectors has cost the region a further 2,500 jobs.

Conversely, the region has added over 5,600 lower paid jobs in Other Services, Arts & Recreation, Agriculture, Health Care & Social Assistance and Administration & Support sectors – all of which pay less than half the salary or wages on offer in Mining.

Rejection of the Application could result in the loss of a further 650 higher-paid mining roles in the region, along with flow-on through the local economy that could result in a significantly reduced operations at BlueScope (steelmaking), PKCT (exports), throughout the Southern Coalfields – affecting over 25,000 direct and indirect jobs throughout Australia.

### *Loss of direct and indirect jobs*

The Project is important to the continued viability of the broader Southern Coalfield economic ecosystem that employs an estimated 5,500 direct personnel in the Illawarra, and approximately 25,000 direct and indirect workers nationally<sup>4</sup>.

Without approval of the Application, the Dendrobium Mine and other Illawarra Coal operations may become less viable (including Appin Mine), resulting in the PKCT and other Southern Coalfield mines becoming commercially unfeasible and further direct job losses of approximately 2,500 personnel<sup>5</sup>.

Modelling by RDA Illawarra<sup>6</sup> indicates the impact of this scenario on Gross Regional Product (GRP) would be \$6.0 billion per year, without the flow-on effect in the region and nationally.

## Regional Jobs & Growth

### *Positive affect on jobs*

Approval of the Application will secure continued operation of the Dendrobium Mine until 2041, and of PKCT for exports, as well as planned investment at Port Kembla Steelworks (PKSW), the largest manufacturing facility in NSW and Australia, ensuring the continued manufacturing of flat steel products in NSW and supply of approximately 2.2 million tonnes of these products used in a range of infrastructure and construction activities of key importance to the NSW economy.

The continued operation of PKSW will also secure approximately 4,500 direct jobs at the site (BlueScope employees and full-time contractors) as well as an estimated 10,000 indirect jobs in the region – many of them skilled and in advanced manufacturing. Most of these roles are in NSW and make a major economic contribution to the State.

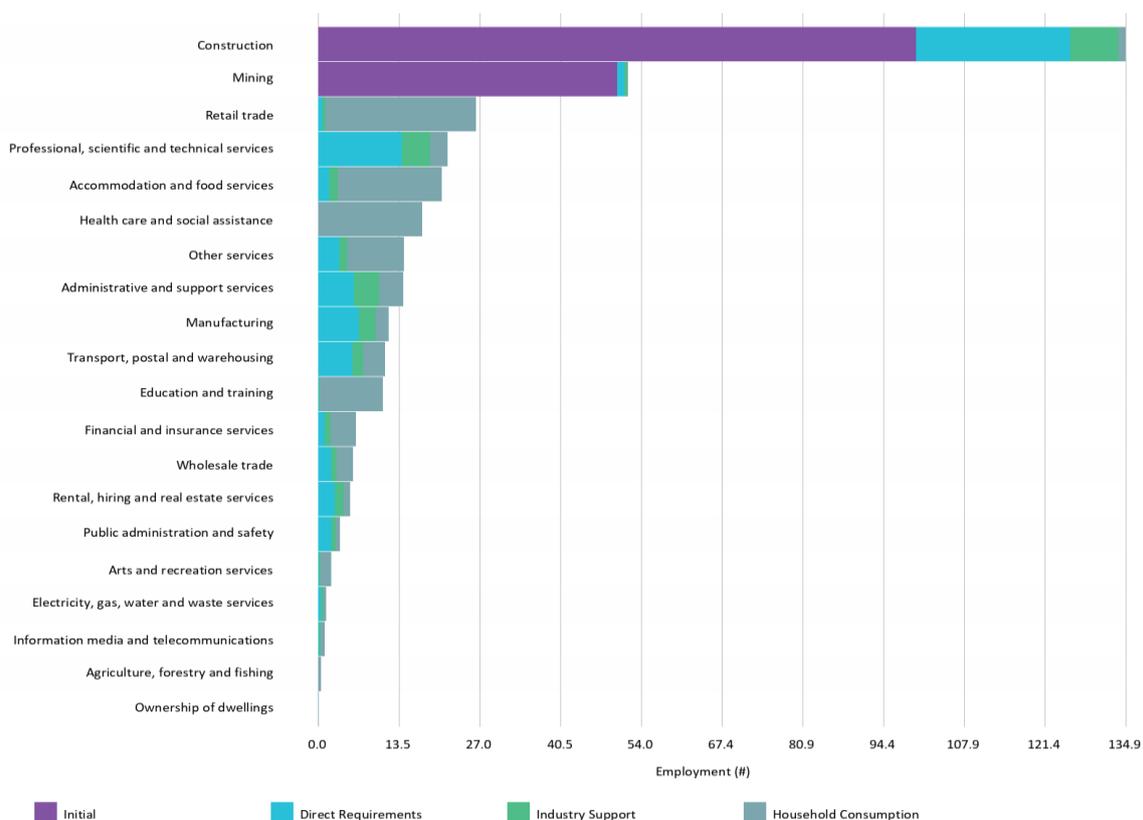
An enduring operation at Dendrobium will create a further 50 full-time roles (at higher-than-average mining salaries) and 100 during the construction/development phase. This will have a beneficial impact on the regional economy, adding over 200 indirect roles and more than \$115 million to GRP (see Table 1)

Impact Type	GRP (\$)	Income (\$)	Jobs (FTE)
<b>Initial Stimulus in Local Economy</b>	\$88.7m	\$25.4m	150
<b>Direct Requirements (First Round Type I) Impacts</b>	\$9.7m	\$7.1m	75
<b>Industry Support (Subsequent Round Type I) Impacts</b>	\$3.9m	\$2.9m	30
<b>Household Consumption Impacts (Indirect Type II)</b>	\$14.3m	\$7.9m	104
<b>TOTAL</b>	<b>\$116.6m</b>	<b>\$43.3m</b>	<b>359</b>

Table 1: Impact of approving the Application is positive for the region – delivering more jobs and increased GRP

Key employment impacts locally at a 1-Digit ANZSIC level are indicated in Chart 1 below, with the top three impacted sectors as measured by employment being: -

- ▶ Construction (37% of total jobs)
- ▶ Mining (14% of total jobs)
- ▶ Retail trade (7% of total jobs)



Whilst additional roles in Retail (and the fifth-ranked Accommodation) are relatively low-paid, these are two sectors badly affected by the COVID-19 pandemic, and any recovery stimulus would be welcome in the region.

### Securing future investment

Historically, BHP's operations included both the current Port Kembla steelmaking operations of BlueScope and the Illawarra Coal Holdings operations of South 32. There are strong physical and commercial links (created decades ago by BHP) that still exist today and remain strong and linked, despite the organisations now being separate entities. It is estimated that Illawarra Coal provides **over 60%** of BlueScope's metallurgical coal required to produce steel at Port Kembla.

BlueScope is currently progressing a separate submission to NSW DPE regarding its planned Blast Furnace 6 Reline Project (SSI-22545215), which has Critical State Significant Importance and will secure the ironmaking operation at Port Kembla for another twenty years, by which time alternative - more sustainable - technologies may be available. Whilst the applications are not mutually reliant, the BlueScope iron and steelmaking operation is heavily reliant on supply of high quality, competitively priced coal from Dendrobium.

This has been highlighted by both the Australian Competition and Consumer Commission (ACCC) and BAEconomics, which noted the added logistical complexity and transport cost – as well as reduced competitive pressure – from the elimination of local supply from Dendrobium.

Approval of the Dendrobium application will give certainty of supply to key local organisations such as BlueScope and PKCT that will assist in their investment decisions.

### Mitigating Sovereign Risk to Australian Steelmaking

Dendrobium Coal Mine produces metallurgical coal that is blended with other metallurgical coals to achieve the quality required for steelmaking operations, which is its primary use.

Metallurgical coal (once converted to coke) is used in the production of steel as it is critical to the operation of ironmaking blast furnaces at BlueScope – and around the world. There is currently no alternative technology available of a commercial scale that will replace the blast furnace method of ironmaking. Although BlueScope is researching the development of alternative, sustainable technology using hydrogen, it is unlikely this will be available and proven at the scale required before 2040.

Coal from Dendrobium mine has three main markets; BlueScope (Port Kembla Steelworks), Liberty Primary Steel (Whyalla Steelworks) and export through Port Kembla Coal Terminal (PKCT) to other steelmaking operations globally. Although other sources of metallurgical coal are available, achieving the required blended quality will significantly increase costs for downstream users and has the potential to force the closure of primary steelmaking operations for Australian flat product steel – a significant sovereign risk issue.

Currently, Port Kembla steelworks is a regionally cost-competitive steel maker located close to major population centres and is well-serviced by port, rail and road logistics. It is one of only two integrated steelworks in Australia, and the only Australian facility producing hot-rolled steel flat products for downstream processing.

Steel made at the Port Kembla steelworks is used nationally and exported globally for a range of infrastructure and construction projects. BlueScope's Port Kembla facility is the *only* Australian producer of flat products, including plate and coated steel (Colorbond®) for use in the following critical strategic downstream industries: -

- ▶ **Defence:** including submarines and Australian-manufactured armoured vehicles
- ▶ **Infrastructure projects:** such as road and rail projects
- ▶ **Building and construction:** including hospitals, schools, stadiums, residential homes, commercial and industrial buildings
- ▶ **Energy infrastructure:** including wind towers, solar farms, electricity transmission infrastructure and pumped hydro.

Without the continued provision of suitable quality metallurgical coal at a competitive price, ironmaking could be discontinued at Port Kembla Steelworks - and consequently primary steelmaking would no longer occur in NSW from that time. This will mean that all flat product steel will be imported.

Cessation of iron and steelmaking in Australia is an issue of national importance, as the complexity and capital cost to establish replacement facilities may be prohibitive if Port Kembla Steelworks ceases primary production.

Additionally, COVID-19 and other geo-political issues have disrupted many global supply chains, highlighting the risk of being too reliant upon overseas suppliers for critical products.

Loss of primary iron and steelmaking capability at Port Kembla would have significant consequences for the local region, the State of NSW and Australia - including impaired supply chain resilience for industries of critical strategic significance such as defence, construction, infrastructure and energy.

## About RDA Illawarra

RDA Illawarra are neutral brokers who collaborate across all levels of government, community and business for the growth of Illawarra's regional economy.

RDA Illawarra has made no political donations in the past two years.

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## References

- <sup>1</sup> *Review of the Key Economic Interactions between the Dendrobium Mine and Related Entities in the Wollongong Region*, BAEconomics (2020).
- <sup>2</sup> *Dendrobium Mine – Plan for the Future: Coal for Steelmaking*, Cadence Economics, (May 2019)
- <sup>3</sup> *ABS Catalogue 6291.0.55.001 - RQ1 - Employed persons by Industry division of main job (ANZSIC), Labour market region (ASGS) and Sex*, February 2017 vs. February 2022
- <sup>4</sup> *Review of the Key Economic Interactions between the Dendrobium Mine and Related Entities in the Wollongong Region*, BAEconomics (2020).
- <sup>5</sup> *ibid*
- <sup>6</sup> *Input / Output model*, DataAU using AEC data, RDA Illawarra, (May 2022)