

18 September 2019

Att: Department of Planning and Environment

Thank you for the opportunity to make a submission to the Dendrobium Mine Extension Project ('the Project'), as input for the New South Wales Government's consideration of the proposed extension to the Dendrobium Coal Mine.

BlueScope notes that South32's Environmental Impact Statement provides commentary on a range of aspects of the Project, including an environmental management strategy, describing environmental mitigation measures and monitoring. We have not sought to address these areas because as steelmakers, we are not experts in mining and water catchment management.

The purpose of BlueScope's submission is to emphasise to the NSW Minister for Planning and the Independent Planning Commission for the Project the critical importance of a continuation of mining at the Dendrobium Mine situated in the Southern Coalfield of NSW. This continuation is vital for the continuing protection of the economic health of the Illawarra region and NSW at large, including the 3,500 direct jobs and 5,400 indirect jobs that rely on Port Kembla Steelworks, the largest steel production facility in Australia.

The Dendrobium Mine Project produces metallurgical coal for steelmaking. Currently, there is no economically viable, commercial-scale alternative to the use of metallurgical coal in the blast furnace method of steelmaking, which is employed at Port Kembla Steelworks. The Project would provide a local and continued supply of metallurgical coal to the Steelworks, allowing BlueScope to continue to generate at least \$6.5 billion in regional economic output for the Illawarra region.

BlueScope's Economic Impact in the Illawarra, NSW and Australia

In the Illawarra specifically, BlueScope's impact is even more striking. The Port Kembla Steelworks and Springhill Works together employ approximately 3,500 people directly and are responsible for a further 5,400 indirect jobs in the Illawarra region. BlueScope's effect represents 10% of jobs in the region (8,900), 11% of Gross Regional Product (\$1.6 billion) and 24% of the region's total output (\$6.5 billion).

In NSW, BlueScope accounts for almost 1% of Gross State Product (\$4 billion) and 0.6% of FTE jobs (19,200).

BlueScope's effect on the nation is sizable, representing 0.4% of Gross Domestic Product and Household Income, whilst supporting 33,641 FTE jobs across the country¹.

About BlueScope Steel

BlueScope is Australia's largest steel manufacturer and the only flat steel producer. BlueScope employs 6,500 people in Australian regions and cities to supply our nationwide customers in the building and construction, manufacturing, transport, and agriculture sectors. BlueScope also exports steel products and is a global leader in premium coated and painted steel products, operating in 17 countries.

Steel is a fundamental building block of any modern society and a domestic steel manufacturing capability is a critical and strategically valuable asset for Australia's future economic security and prosperity.

Keeping production costs at globally competitive levels is critical to the viability of the highly trade-exposed Australian steel industry, which accounts for only 0.3 percent of global steel capacity. The

¹ Illawarra Regional Information Services (IRIS), BlueScope Economic Impact Study 2017

local industry operates under very low tariffs and non-tariff barriers and faces intense competition as excess global steelmaking capacity has led to the dumping of foreign-made steel into the Australian market. The Australian steel industry also exports approximately 700,000 – 800,000 tonnes of steel products each year, to a diverse range of markets including Asia and North America.

BlueScope's goal is to have sustainable businesses in Australia that generate sufficient cash flow and return for investors to support reinvestment in them. In an open market with low trade barriers, the only way to achieve this goal is to have a cost structure that is competitive with imported steel and competitors in major export markets.

BlueScope's Commitment to Sustainability

BlueScope believes that sustainability is integral to the long-term growth of the company, and that steel plays a critical role in supporting sustainable local communities and a sustainable society. To this end, BlueScope and its coal supplier, South32, seek a regulatory and licensing regime that is stable and predictable, and promotes the safe and sustainable operation of the Dendrobium Mine according to proven scientific findings.

The company takes a lifecycle approach, seeking to improve the performance of its products over their entire lifecycles, with a focus on the four principles of a circular economy: reduce, reuse, remanufacture and recycle.

BlueScope supports the Paris Agreement on climate change and the individually determined national targets of the countries in which it operates. The company believes that climate change presents both risks and opportunities for its operations and stakeholders. It recognises that investors, customers and the communities in which it operates are increasingly demanding that the company disclose these risks and opportunities and take action to improve its greenhouse gas emissions and energy efficiency.

Accordingly, the company publicly reports in accordance with the recommendations of the Task Force on Climate-related Financial Disclosures (TCFD). BlueScope has also set a public target of a one per cent year-on-year reduction in the greenhouse gas intensity of its three steelmaking plants globally (scope 1 and 2). In FY2019, GHG intensity fell by 1.2 per cent compared to FY2018².

In 2018 the company embarked on a seven year, 233,000MWh per annum renewable Power Purchasing Agreement, for a new 500,000 panel solar farm at Finley in NSW. This project, which is currently being commissioned, will contribute to the decarbonisation of the electricity grid by an estimated 300,000 tonnes CO₂-e per annum.

BlueScope is also implementing a pipeline of energy efficiency projects. In FY2018 BlueScope completed some 71 projects, from a pipeline of 111. Examples of recent projects include:

- A self-generation upgrade at Port Kembla using recovered output gas to generate electricity (No.22 Turbo Alternator project), which reduced electricity grid demand by 7%, equivalent to 46,000t CO₂-e p.a.
- Upgrades to LED lighting across BlueScope's global footprint in sites ranging from large scale manufacturing facilities to small processing and warehousing locations, reducing both energy costs and scope 2 emissions.

BlueScope reduced its absolute emissions in Australia by approximately 40 per cent, when it closed a blast furnace in 2011.

Many of BlueScope's products are registered under the Australian environmental product declaration program, which provides detailed information about their environmental performance, can assist in determining the environmental impact of buildings and infrastructure that use these products, and can help earn points for Green Star building projects.

² BlueScope's FY2019 Financial Results Presentation, 19 August 2019

Efficiency of Operations at Port Kembla and the Need for Metallurgical Coal

Coal is one of a small group of raw materials – along with iron ore and fluxes – that are essential ingredients in the manufacture of virgin iron and steel.

Based on its properties, a coal can be classified by rank, from lowest to highest, with lower rank coals containing less carbon, more moisture and having lower calorific values. In general terms, based on rank, coal can be classified as either thermal coal or metallurgical coal.

Thermal coal is primarily used in power generation or cement manufacture.

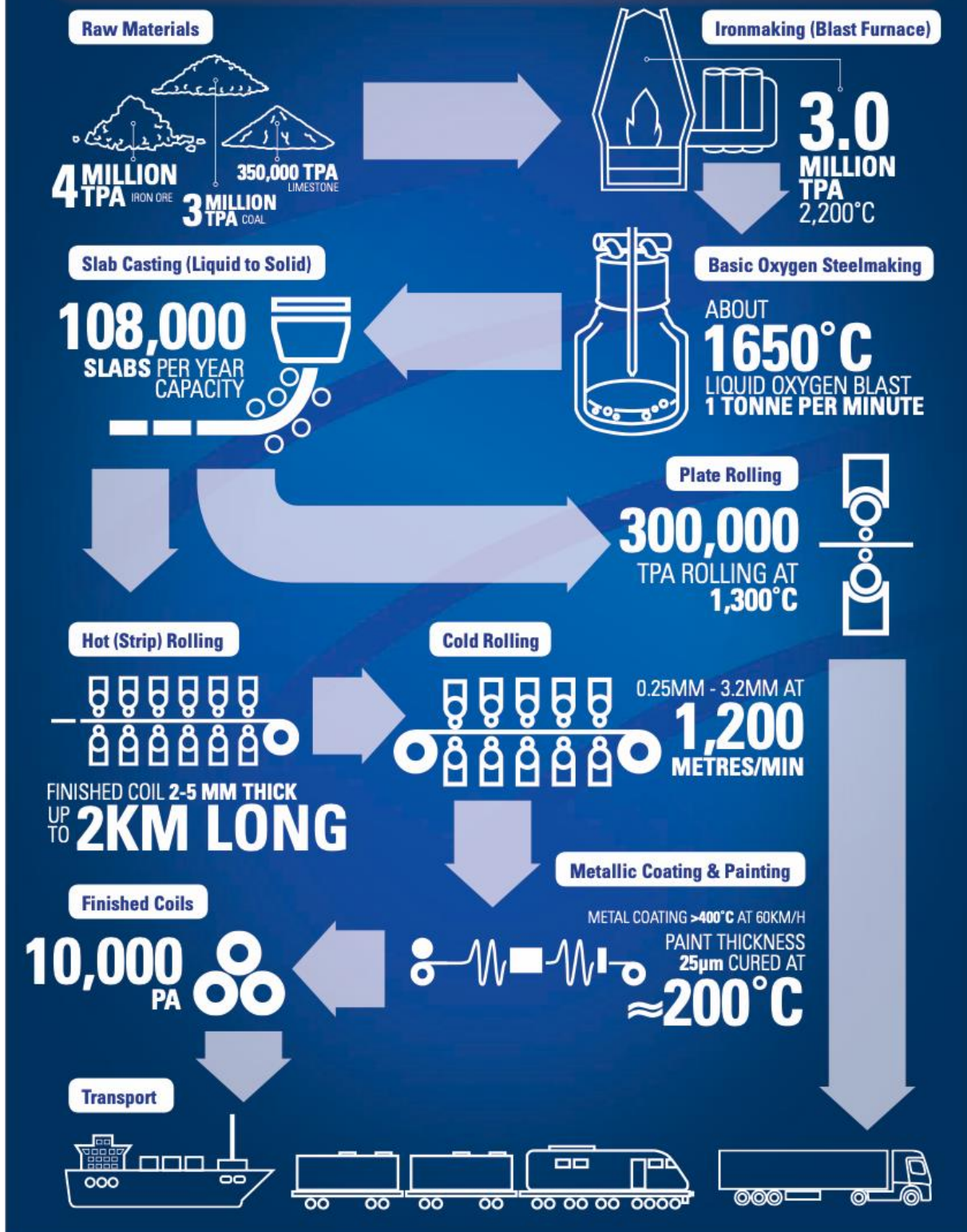
Metallurgical coals are primarily used in the production of iron and steel and can be grouped into four classes as follows:

- **Hard coking coal (HCC)** – Has a very high level of carbon and forms stronger coke. Coke strength is essential for efficient blast furnace operation.
- **Semi-hard coking coal (SHCC)** – High levels of carbon, but not as high as HCC. Not as competent in making stronger coke. May have higher levels of impurities.
- **Semi-soft coking coal (SSCC)** – May be used in the coke blend, although only in limited quantities and subject to the cokemaking technology and the quality of the other coals being used in the blend.
- **PCI coal** – Limited coking coal characteristics. Used primarily for its energy/combustion value and injected into the blast furnace.

The diagram below depicts how steel is made at the Port Kembla Steelworks. The pathway from raw materials to finished steel products involves many processes. BlueScope's processes are guided by the BlueScope Australia Steel Products Manufacturing Quality Policy, which reflects the company's commitment to continual improvement.



Making Steel at the Port Kembla Steelworks



BlueScope, like all other coke manufacturers, seeks to optimise the blend of coals it uses in order to reduce its manufacturing costs and remain internationally competitive. However, there are technical limits to the extent of this substitution, as a proportion of higher quality coals are needed to ensure efficient blast furnace performance and iron production.

There are broadly two types of coal in the world: thermal or 'energy' coal, which is used for generating electricity; and metallurgical or 'coking' coal, which is used to manufacture iron and steel.

There are a number of alternatives to thermal coal for the production of electricity, including gas generation, wind, solar and hydro.

There are currently no alternatives to the use of metallurgical coal for the production of virgin iron and steel. There is research & development being undertaken worldwide to find a way to manufacture virgin iron without coal, but there is yet to be a commercially viable breakthrough. That is because the carbon in the coal is the essential ingredient in the chemical reaction to extract iron from iron ore. While steel can be manufactured from scrap via the electric arc furnace (EAF) process, global demand for steel is growing, meaning there is not enough scrap worldwide to meet demand solely from the EAF route. Virgin iron still needs to be manufactured from iron ore and metallurgical coal.

These technologies include the use of hydrogen as a reductant to produce iron, which has yet to be demonstrated at a commercial scale. Even then, the technology will require a fundamental transformation in energy generation and hydrogen supply infrastructure to enable steel producers to adopt this technology.

The production of virgin iron units manufactured using coke from metallurgical coal will continue to be the predominant method of making iron and steel in Australia and worldwide for the foreseeable future.

The Importance of Stability in Dendrobium Mine's Coal Supply

Given the just-in-time nature of coal supply, and the lack of cost-effective alternative sources of supply, it is very important that BlueScope has access to the Dendrobium Mine local coal supply and that is subject to the least possible interruption.

For this reason, BlueScope works closely with its coal suppliers to understand their extraction plans, including milestones such as longwall changes and maintenance shut-downs.

Unexpected variations to licensing conditions for existing longwalls, or restrictions on future extraction plans, have the potential to interrupt coal supply, make mining less viable, and curtail investment in mines. Any of these outcomes would be of concern to BlueScope and other local stakeholders, if they threatened the viability of the Steelworks.

The Continuation and Optimal Use of Existing Infrastructure

BlueScope is widely recognised as producing the world's best quality coke due to its unique location adjacent to the Southern Coalfields; one that makes it logical and economically advantageous to use high quality coal, which in turn ensures reliable, consistent and efficient production of high-quality coke.

The Port Kembla Steelworks consumes approximately 3 million tonnes per annum of coal, of which over 90 per cent is sourced from mines in the Illawarra region. The principal Illawarra mine sources currently are the South32/Illawarra Coal Dendrobium and Appin mines, Peabody's Metropolitan mine, and the SIMEC Tahmoor mine.

Because of its proximity to the Southern Coalfields, BlueScope has been able to economically optimise its blend of coals while maintaining an output of coke of the required quality. In particular, the compatibility in coal properties between Dendrobium and Metropolitan coals, due in large part to them coming from adjacent locations, has facilitated a synergy within the coal blend that, in BlueScope's view, is quite unique and unable to be replicated to any meaningful extent.

In addition to consuming coke in its iron and steelmaking operations BlueScope also sells surplus coke to export customers.

Coal is supplied to the Steelworks from the Southern Coalfields in a 'just-in-time' (JIT) arrangement. This coal is transported to the Steelworks in daily deliveries by truck and rail transport. Local coal supplies are supplemented by coal shipped from other regions to berths at Port Kembla adjacent to the Steelworks. These primary raw materials berths are at a high utilisation level, and any significant increase in seaborne coal imports would require very substantial capital investment to expand the facilities. BlueScope has recently estimated such investment to be at least \$150 million.

Illawarra Coal operates a coal washery within the Steelworks, with a dedicated conveyor belt system feeding two coal beds. At any one time, one of these beds is being filled with new coal supplies while the other is being run down to feed BlueScope's cokemaking plant, with these coal beds being built and depleted on a weekly cycle.

There are no facilities at Port Kembla Steelworks to allow BlueScope to stockpile coal sufficient to feed the coal beds, and therefore the operation of the Steelworks is reliant on uninterrupted just-in-time supplies of coal from the Southern Coalfields.

BlueScope estimates that replacing local coal supply with coal shipped from interstate (or overseas) would increase steel production costs by between \$50 million and \$100 million per annum, principally as a result of higher logistics costs.

The Port Kembla Steelworks will continue to rely on competitive sources of locally mined coal for the foreseeable future. In fact, it is not an exaggeration to say that without access to the coal supply from the Southern Coalfields, the Steelworks would not have been built in the Illawarra region. Without this supply, steelmaking would struggle to remain viable at Port Kembla.

The importance of the local coal supply to BlueScope was also observed in the ACCC's consideration of the proposal for South32 to acquire Peabody's Metropolitan mine in 2016 (subsequently abandoned). The ACCC identified the effective existence of a "...narrower market for the supply of coking coal to Australian customers and suppliers in this market (that) may be limited to coal producers in the Illawarra".³

Conclusion

Thank you again for the opportunity to make a submission.

In conclusion, the Project would provide a local and continued supply of metallurgical coal to the BlueScope Steelworks, allowing BlueScope to:

- Generate \$6.5 billion in regional economic output (24 per cent of the Illawarra's total economic output), \$1.6 billion of gross regional product (11 per cent of the Illawarra's gross regional product) and \$800 million of household income (13 per cent of total household income in the region).
- Employ 3,500 people directly and 5,400 indirectly.
- Obtain a competitive advantage for its iron and steel manufacturing facilities, which enhances BlueScope's competitiveness against foreign steel importers and in steel export markets.
- Produce high quality coke, which in turn contributes to the manufacture of high-quality steel products.
- Develop export markets for high-quality coke.
- Avoid costly investment in berths, plant and equipment that would be required to import coal from interstate or overseas.

We would respectfully urge the NSW Minister for Planning and the Independent Planning Commission for the Project to be fully cognisant of the negative economic effects that would occur if mining at the Dendrobium Mine was ceased or made unviable by an unfavourable regulatory environment.

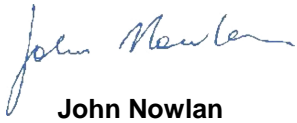
An ongoing supply of competitively priced metallurgical coal from the Dendrobium Mine is an essential feedstock for the Port Kembla Steelworks, thereby supporting the jobs, investment, exports and local economic activity generated by the Steelworks.

We would be happy to provide further information in support of this submission, including meeting with you in person. We would also be very happy to host you on a tour of the Steelworks, in order to aid your understanding of our operations and the role of locally sourced coal as an essential feedstock.

For further information, or if you have any questions, please do not hesitate to contact me on 02 4240 1802, or Manager Government Relations, David Jenkins on 03 9666 4022.

³ ACCC, 'Statement of Issues – South32 Proposed Acquisition of Metropolitan', 23 February 2017, paragraph 59.

Yours sincerely

A handwritten signature in blue ink, appearing to read "John Nowlan". The signature is fluid and cursive, with the first name "John" and last name "Nowlan" clearly distinguishable.

John Nowlan

CHIEF EXECUTIVE – AUSTRALIAN STEEL PRODUCTS