



# Australian Parents for Climate Action Submission to the NSW Independent Planning Commission's Determination of the Dendrobium Extension Project (SSD-8149)

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Australian Parents for Climate Action represents over 14,000 parents, grandparents and carers from across Australia. We are Australia's leading organisation for parents advocating for a safe climate. Our supporters are from across the political spectrum, across Australian electorates (including those affected by this project), and from different socio-economic positions. We seek non-partisan responses to climate change and its impacts.

We are focused on pushing Australian governments and businesses to take urgent action to cut Australia's carbon emissions to net zero as quickly as possible. We encourage Australia to take a leadership role on the world stage, leading by example and calling for other nations to take the necessary action to protect our children's futures.

For more information, visit [www.ap4ca.org](http://www.ap4ca.org)

This submission was prepared by Sydney based volunteer David McEwen, an independent climate risk consultant.

# Submission

Australian Parents for Climate Action and its members ***strongly oppose*** this project for the following reasons:

1. Its incompatibility with Paris-aligned and NSW carbon emissions reduction targets and a safe climate.
2. Its unacceptable impacts on urban water supply given climatic shifts that are likely to reduce East Coast rainfall, increase evaporation and deliver more extremes including prolonged drought and intense rainfall.
3. EIS claims of the importance of proximity to the BlueScope Steelworks are overstated in the context of the project's size.
4. Reduction in supply of metallurgical coal is needed to accelerate the uptake and lower the costs of alternative low carbon methods of steel production.
5. The manifold serious concerns relating to the quality of water within the catchment affected by this project (on top of clear and compelling evidence of material catchment damage from the mine's existing operations).

## **1. Incompatible with Emissions Reduction Targets and a Safe Climate**

*Any expansion of fossil fuel extraction is utterly incompatible with the objectives of the Paris Agreement to maintain a safe climate. Regardless of the Independent Planning Commission's operational constraints, a determination in favour of this project (and any other fossil fuel project) condemns NSW and the world to a hotter and more dangerous future, with more intense and/or frequent extreme weather events, greater variability of water and food supplies, adverse human health outcomes, compromised biodiversity, rising sea levels destroying coastal property assets and values, and many other deleterious effects.*<sup>1</sup>

Australia's overriding obligation under the Paris Agreement is to hold "the increase in the global average temperature to well below 2°C... and pursuing efforts to limit the temperature increase to 1.5°C... recognising that this would significantly *reduce the risks and impacts* of climate change."<sup>2</sup>

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<sup>1</sup> <https://climatechange.environment.nsw.gov.au/Impacts-of-climate-change>

<sup>2</sup> [https://unfccc.int/sites/default/files/english\\_paris\\_agreement.pdf](https://unfccc.int/sites/default/files/english_paris_agreement.pdf)

The IPCC 1.5 degree report states, “in model pathways with no or limited overshoot of 1.5°C, global net anthropogenic CO<sub>2</sub> emissions decline by about 45% from 2010 levels by 2030 (40–60% interquartile range), reaching net zero around 2050 (2045–2055 interquartile range).”<sup>3</sup>

The report notes that there is a dramatic difference in outcomes between 1.5 and 2 degrees of warming, and we think any rational person reading it would conclude that we must do everything in our power to stay below 1.5°C of warming and avoid overshoot.

As climate models are refined with new findings from recent research, there is seldom good news about the expected future impacts. In particular the level at which irreversible climate tipping points might be reached remains uncertain, which is reason enough for accelerating emissions reduction efforts.<sup>4</sup>

What we do know is that even 1.5°C is not “safe” and will devastate Australia, destroying a majority of coral reefs, jeopardising the continuity of water and food supplies, and setting in motion unstoppable multi-metre sea level rise over the coming centuries, which will in time inundate our major cities and destroy billions of dollars of coastal infrastructure.<sup>5</sup>

Nevertheless, “to constrain global warming to within the Paris goal of 1.5 degrees, global fossil fuel production will need to fall by roughly 6 per cent a year over the next decade. Coal, oil and gas production will need to fall by 11 per cent, 4 per cent and 3 per cent a year respectively.”<sup>6</sup> Clearly the only way to achieve this is to impose a moratorium on new fossil fuel production including expansion projects such as Dendrobium.

The expansion application is for 25 years additional production following expiry of Dendrobium’s current licences in 2023, implying the mine is still expected to be in production in 2048. This conveys an expectation that its product will continue to supply the BlueScope Port Kembla steelworks, an operation with a material impact on NSW Greenhouse Gas (GHG) emissions, being responsible for 1.4% of the national total (through its operations both in NSW and elsewhere).<sup>7</sup>

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<sup>3</sup> <https://www.ipcc.ch/sr15/>, Chapter 2, Executive Summary

<sup>4</sup> <https://www.nature.com/articles/d41586-019-03595-0>

<sup>5</sup> <https://climate.nasa.gov/news/2865/a-degree-of-concern-why-global-temperatures-matter/>

<sup>6</sup>

<https://www.smh.com.au/environment/climate-change/un-report-rightfully-shames-australia-over-fossil-fuel-plans-20201202-p56jxw.html>

<sup>7</sup>

<https://www.abc.net.au/news/2019-12-11/wollongong-steel-city-commits-to-become-carbon-neutral/11785378>

However, the NSW Government has set a target of net zero emissions by 2050.<sup>8</sup> And Wollongong, home of BlueScope, has also set itself the goal of carbon neutrality by 2050.<sup>9</sup> To have any hope of achieving this, by the mid 2040s the only activities that should be producing GHG emissions should be in the agricultural sector. *All* uses of fossil fuels will need to have been curtailed, including the consumption of metallurgical coal.<sup>10</sup> The proponent, and more importantly DPIE, *must* clearly articulate how the project is compatible with NSW's net zero target.

It should also be recognised that NSW's interim emissions reduction target of 35% off 2005 levels by 2030 is inadequate. Applying the IPCC recommendations of a 45% reduction off 2010 by 2030, the minimum target for NSW to be pulling its weight is 79.3MT CO<sub>2</sub>-e per annum by 2030 (which equates to a 50% reduction if the 2005 baseline is used).<sup>11</sup> Anything less than that is equivalent to asking the rest of the world to do the heavy lifting on NSW's behalf.

In light of this - and consistent with the Paris Agreement's ratchet clause (and the increasingly ambitious interim emissions reduction targets being set by other jurisdictions, such as the UK's recent announcement of 68% off 1990 by 2030<sup>12</sup> and the European Union's 55%<sup>13</sup>) - it is hoped that the NSW Government will increase its 2030 reduction target. Its capacity to do so will be significantly constrained should projects such as the Dendrobium extension be approved in the proposed form.

*At the very least, a significantly reduced extension timeframe should be mandated to ensure the Government has the capability to achieve its net zero target in future.*

While we acknowledge that current laws are wholly inadequate to constrain greenhouse emissions, decisions to increase the extraction and use of fossil fuels at this point in history will in future be viewed as acts of inter-generational genocide.<sup>14</sup>

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<https://www.environment.nsw.gov.au/-/media/OEH/Corporate-Site/Documents/Climate-change/net-zero-plan-2020-2030-200057.pdf>

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<https://www.abc.net.au/news/2019-12-11/wollongong-steel-city-commits-to-become-carbon-neutral/11785378>

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<https://climateactiontracker.org/press/australia-can-move-net-zero-emissions-2050-and-would-benefit-it-new-report/>

<sup>11</sup> Derived via data in:

<https://www.industry.gov.au/data-and-publications/national-greenhouse-gas-inventory-quarterly-updates>

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<https://www.theguardian.com/environment/2020/dec/03/uk-vows-outdo-other-major-economies-emissions-cuts-by-2030>

<sup>13</sup> <https://www.bbc.com/news/world-europe-55273004>

<sup>14</sup> <https://behindthenumbers.ca/2019/02/14/the-all-too-ugly-truth-climate-change-is-generational-genocide/>

## **2. Unacceptable impacts on urban water supply given climatic shifts that are likely to reduce East Coast rainfall, increase evaporation and deliver more extremes including prolonged drought and intense rainfall.**

There is ample evidence from WaterNSW and other sources that the existing Dendrobium mine's damage to the water catchment and loss of water has been significantly understated. As the NSW Independent Advisory Panel for Underground Mining noted, "it is not possible, at this stage, to be comfortable that the worst-case losses from the surface water regime have been identified. Stream depletion can arise from combinations of reductions in overland and groundwater flow to the streams and increases in stream losses to the groundwater."<sup>15</sup>

Projections of future climate by CSIRO, Bureau of Meteorology and other sources consistently find that the warming trend engendered by increasing anthropogenic greenhouse gas emissions will lead to a) more severe droughts; b) overall declines in rainfall in south eastern Australia; c) increased evaporation (reduced runoff into streams, rivers, lakes and dams); and d) the increase in atmospheric water vapour retention contributes to an increase in extreme rainfall events.<sup>16</sup> The latter produce flash flooding; denude topsoil and vegetation cover (creating water contamination issues and longer term concerns with catchment health); and may stress dam infrastructure.<sup>17</sup> Increased drought and heat also increases bushfire risk within catchments, which, when droughts break following fires, may compromise water quality due to ash runoff entering dams.<sup>18</sup>

Clearly, greater Sydney's water catchment is facing significant and increasing stressors. It is grossly irresponsible to compound those stressors by continuing to compromise, reduce and endanger water supplies through expansion of longwall mining under the catchment.

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<sup>15</sup> Department of Planning, Industry and Environment, Assessment Report, Dendrobium Mine Extension Project, State Significant Development SSD-8194, October 2020, p68.

<sup>16</sup> Summarised in <https://www.climatecouncil.org.au/resources/water-security-report/>

<sup>17</sup>

<https://www.smh.com.au/environment/climate-change/australian-water-supplies-at-risk-from-extreme-weather-study-finds-20140121-316qw.html>

<sup>18</sup>

<https://www.epa.nsw.gov.au/-/media/epa/corporate-site/resources/water/20p2093-bushfire-impacts-on-water-quality.pdf>

### **3. EIS claims of the importance of proximity to the BlueScope Steelworks are overstated in the context of the project's size.**

BlueScope's Port Kembla steelworks is noted as a major customer of Dendrobium's output. The proximity of the mine to the steelworks is cited in the EIS as an important factor in the Illawarra steel industry in terms of keeping costs down.<sup>19</sup> However, this benefit is overstated in the context of the project's size.

The existing South 32 / Illawarra Metallurgical Coal facilities at Dendrobium and Appin currently produce around 5.5 million tonnes per annum (with Dendrobium the larger of the two),<sup>20</sup> which is over 2.5 times the metallurgical coal needed to support BlueScope's 2.6 million tonnes<sup>21</sup> of steel output.<sup>22</sup> The sites produce a further 1.5Mt thermal coal output, markets for which are already showing signs of structural decline as the adoption rate for renewables accelerates.<sup>23</sup>

The majority (estimated at around two thirds) of Dendrobium's product is destined for remote markets, which substantially undermines the claim that proximity is a critical factor.

We question the importance of the project *at its current scale* in terms of its contribution to the Illawarra steel industry and associated employment levels, noting the recently approved Russell Vale project and current demand difficulties being experienced by the nearby Peabody Metropolitan metallurgical coal facility.<sup>24</sup> We contend that BlueScope's Port Kembla facility could continue to thrive with substantially smaller local mining operations.

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<sup>19</sup>

[https://www.south32.net/docs/default-source/dendrobium-eis/11-section-9---evaluation-and-conclusion.pdf?sfvrsn=38f1715c\\_5](https://www.south32.net/docs/default-source/dendrobium-eis/11-section-9---evaluation-and-conclusion.pdf?sfvrsn=38f1715c_5) section 9.1.3.

<sup>20</sup>

<https://www.south32.net/docs/default-source/sustainability-reporting/fy20-sustainability-reporting/2020-annual-report.pdf>

<sup>21</sup> <https://www.bluescopeillawarra.com.au/about-us>

<sup>22</sup> BHP cites 770 kg of metallurgical coal to produce one tonne of steel:

<https://www.bhp.com/our-businesses/our-commodities/metallurgical-coal/#:~:text=Metallurgical%20coal%20is%20a%20primary,in%20basic%20oxygen%20blast%20furnaces>

<sup>23</sup>

<https://www.theguardian.com/environment/2020/may/17/coal-industry-will-never-recover-after-coronavirus-pandemic-say-experts>

<sup>24</sup>

<https://www.abc.net.au/news/rural/2020-12-02/peabody-to-pause-helensburgh-metropolitan-mine/12941532>

#### **4. Reduction in supply of metallurgical coal is needed to accelerate the uptake and lower the costs of alternative low carbon methods of steel production**

In its 2030 emissions reduction plan, the NSW Government has made a commitment to develop a green hydrogen industry (production of hydrogen through electrolysis of water using renewably generated electricity). In addition to reducing dependence on fossil gas (methane), a key application of green hydrogen is to enable the production of low carbon steel, by replacing the use of metallurgical coal. A viable low carbon steel industry is essential to a thriving net zero emissions economy.<sup>25</sup>

Indeed, rapidly building a low carbon steel manufacturing capability in Australia and NSW would position us well for a future where our trading partners, many of whom have already committed to net zero emissions targets, begin to differentiate their steel sourcing by its embodied carbon content. Already, the European Union has announced plans to impose a carbon border adjustment mechanism, or tax, which would greatly advantage steel producers using green hydrogen, while penalising manufacturers continuing to use metallurgical coal or fossil gas methods.<sup>26</sup>

Currently, green hydrogen is relatively expensive compared with metallurgical coal, and steelworks will require capital intensive modifications to accommodate the use of green hydrogen. There are three ways that this can be achieved:

1. Green hydrogen will become more affordable to the extent it is rolled out rapidly at scale, in the same way that solar panels, wind turbines and battery storage has now exceeded price parity with conventional thermal coal generation for electricity. The next decade is critical in driving the so-called “learning curve” to establish a cost effective green hydrogen supply industry.
2. Constraining the supply of metallurgical coal, which will in turn increase its costs and make it relatively less attractive in comparison with the emerging green hydrogen alternative.
3. Government mandates to provide industry incentives for the adoption of green hydrogen (e.g. support for capital conversion works) and disincentives for the continuance of traditional reliance on metallurgical coal. While probably beyond the scope of a state government, imposing a redistributive carbon price would work admirably as a disincentive.

A responsible government would be pushing all three of these measures at pace, which would include rejecting the Dendrobium application in its current form, and instead working closely with metallurgical coal providers and BlueScope to map out the future pathway to net zero emissions.

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<sup>25</sup> <https://grattan.edu.au/report/start-with-steel/> explores the opportunity of establishing an Australian green steel industry

<sup>26</sup> <https://www.bcg.com/en-au/publications/2020/how-an-eu-carbon-border-tax-could-jolt-world-trade>

As it stands, the project risks becoming a stranded asset as the NSW government belatedly realises that net zero 2050 is unachievable with a steel industry that continues to rely on metallurgical coal beyond the mid 2030s.

**5. The manifold serious concerns relating to the quality of water within the catchment affected by this project (on top of clear and compelling evidence of material catchment damage from the mine's existing operations).**

These concerns have been thoroughly addressed in the submissions of objection on these grounds, made by Protect Our Water Alliance,<sup>27</sup> Water NSW,<sup>28</sup> and many other groups. We support those submissions and the concerns raised therein.

**Conclusion**

*We strongly recommend the Commission reject the project in its current form given the harm it will cause. The extension is excessive in size and duration, and the economic outlook for the Illawarra steel industry is in no way contingent on the project's approval at the current duration and scale. At this critical point in history, with only 10 years to halve emissions and three decades to achieve net zero and begin the drawdown process, allowing this project to proceed - or indeed **any** expansion of fossil fuel supply - amounts to an act of inter-generational genocide.*

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<sup>27</sup> <https://www.protectourwateralliance.org/dendrobium-ipc-submission-guide>

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[https://www.waternsw.com.au/\\_data/assets/pdf\\_file/0006/147696/WaterNSW-second-submission-to-the-Independent-Expert-Panel-IEPMC.pdf](https://www.waternsw.com.au/_data/assets/pdf_file/0006/147696/WaterNSW-second-submission-to-the-Independent-Expert-Panel-IEPMC.pdf)