**Submission on Dendrobium Extension Project (SSD 8194)**

**Illawarra Escarpment Alliance**

15 December 2020

The Illawarra Escarpment Alliance (EscA) was established in 2019 as an alliance of local groups and individuals concerned to protect the cultural and environmental heritage of the Illawarra Escarpment.

EscA objects to the Project in its current form and would like to see some changes to it. EscA members are concerned about the potential impact of the Project on the Illawarra Escarpment’s environmental and cultural heritage. As with other proposed coal mining expansions in the region, we are concerned that this Project may negatively impact the escarpment’s environmental heritage, through its general contribution to global climate change and its specific contribution to local fire risk. We are also concerned about the negative impact of the Project on local biodiversity. And we are concerned about the damage it may do to Aboriginal heritage in the area.

**Aboriginal heritage**

EscA has several indigenous members and supporters. We are aware that the Illawarra Local Aboriginal Land Council, an EscA member organisation, has objected to the project and that the project area has been found to contain many items with cultural significance. We believe that the local Aboriginal community should be fully consulted and their concerns heard and responded to, and this clearly has not happened to their satisfaction. Risks of damage through subsidence need to be taken seriously, particularly as previous predictions of subsidence appear to have underestimated its extent.*[[1]](#footnote-2)*

**Climate change**

One concerning aspect of this Project is its contribution to climate change. Climate change modelling for the Illawarra region will contribute to a hotter climate, longer dry periods and more intense rain events, greater loss of soil moisture, and greater bushfire risk. Climate change poses huge risk to the ecological communities of the Illawarra escarpment, as to ecological communities globally. Every new mine or mine extension adds to the carbon pollution burden, and to the threat to the escarpment. Climate change poses risks to individual species and to ecological communities of the escarpment, and is listed a key threatened process in both the state and federal listings of Illawarra subtropical rainforest as a threatened ecological community.

We appreciate that Scope 3 emissions are not counted at the point of production under the Paris Agreement, but nonetheless this project will contribute 235.9Mt of CO2-equivalent to global carbon emissions over the proposed life of the mine.

There are also direct impacts that do not appear to have been taken into account. Recent research has found that coastal upland swamps provide carbon capture and storage ecosystems services.*[[2]](#footnote-3)* Neither the proponent nor DPIE seems to have included the project’s impact on these as part of its calculation of the greenhouse gas emissions associated with the project, nor the loss of these CCS ecosystem services.

Although the replacements for metallurgical coal for steel-making are still early in their development, they are happening. The need for action on climate change is so urgent that we believe that this project should not have such a long approval period, one that assumes that the status quo will continue until 2048. That is only 2 years before the NSW government’s deadline for reaching net zero emissions. We would prefer to see a coordinated plan for transitioning the Illawarra towards green jobs, including low-emissions green steel. There doesn’t need to be an either-or here, coal mining jobs or no jobs at all.

**Bushfire risk**

More specifically, EscA is concerned that the Project may increase bushfire risk to the Illawarra escarpment vegetation, particularly but not only that portion of the Illawarra escarpment that is included in the Illawarra Escarpment State Conservation Area (IESCA), part of the national parks estate in New South Wales. The DPIE’s Assessment Report does not seem to address this issue, as far as EscA members could tell.

The Project is adjacent to a portion of the IESCA. Potential impacts of this project on the IESCA should be considered. If it were not for mining rights in relation to portions of the IESCA, the IESCA would most likely have been gazetted as a national park long ago.

The Project will contribute to bushfire risk through climate change, as mentioned above, raising risk of fire on the Illawarra escarpment and in the IESCA. We also have concerns that drying impacts on the vegetation of the Special Areas west of the escarpment cliff line may also increase local bushfire risk. For example, research finds that when upland swamps dry out, they don’t recover from fire and may become more fire-prone.[[3]](#footnote-4) An open letter to the Premier of NSW by scientists and published on 18 May 2020 made this point, and called for a suspension of approval processes for any further planning applications or post-approval plans (for mining in the Schedule 1 Special Areas of the Sydney Drinking Water Catchment. They wrote: ‘We further encourage the Government to undertake planning for the phase-out of mining in the Metropolitan and Woronora Special Areas. We note that while these areas have been degraded by mining, they still contain some of the few areas of pristine bushland left in NSW. With just two mines currently active, phase out with no further approvals would seem timely.’*[[4]](#footnote-5)*

EscA is concerned that the Project will contribute to the drying out of the vegetation in the Special Areas. This will increase the bushfire risk, both in the catchment area itself, but also to the wooded eastern slopes of the escarpment behind Wollongong, and also the city of Wollongong itself.

In terms of fire history, there is a history of fires approaching the Illawarra region from the west and damaging natural areas and property. In 1968 fire burned down the escarpment from the west, from where it was able to spread rapidly northwards.[[5]](#footnote-6) More recently, the Hall Road fire of October 2013 and the Morton fire of January 2020 at times both moved westward towards the Illawarra region, although neither reached the eastern slopes of the escarpment itself.[[6]](#footnote-7) The Illawarra was lucky not to be affected during the horrific fire season of 2019-20, but this luck is most unlikely to hold for the entire life of the project, particularly given the increasing prevalence and intensity of bushfire across the country.

The rainforest and wet sclerophyll vegetation of the Illawarra escarpment are considered to function as a fire barrier. However, on extremely hot and dry days, such as were experienced last summer, even this kind of vegetation can burn if fire reaches it. *Should another fire of the intensity of 1968 occur, the damage would be even worse as there is now much more housing on the escarpment slopes and foothills, and critically endangered subtropical rainforest that has recovered since 1968 would be impacted.*

Given the above points, it it is critical to protect the vegetation to its west as much as possible, both for the sake of those areas, and for the sake of the Illawarra escarpment and its critically endangered subtropical rainforest[[7]](#footnote-8) and other ecological communities. *Moisture in the soil of the land above is important in slowing down any fire, and damaged upland swamps just won’t retain so much moisture. They need to be protected from damage.*

It is worth remembering also that the vegetation of the Woronora plateau and Illawarra escarpment is one of the last large unburnt natural areas in NSW, and is therefore critical for local biodiversity conservation and also potentially to support revegetation efforts in bushfire-affected areas elsewhere in the state.

**Negative impact on biodiversity**.

EscA’s final major concern is the negative impacts of the proposal on biodiversity in the affected area. The area is to the west of the escarpment that is EscA’s particular focus, but it is adjacent to the escarpment, and under some definitions forms part of the escarpment. The area contains upland swamps that are listed as endangered ecological communities under federal and state legislation. Of 46 upland swamps in the project area, 25 would suffer surface cracking as a result of mining, reducing their capacity to retain water after large rains such as east coast lows. The DPIE Assessment Report states that this may lead to a drier swamp community or turn the vegetation into woodland, i.e. would degrade or even destroy the endangered ecological community. There are also risks of erosion and increased bushfire risk.

This is not acceptable. Nor is the proposal to offset the endangered ecological communities of the area (EECs). There are literally no replacements for these areas of EEC; their extent is highly geographically restricted to start with and they can’t be created de novo or recreated after damage.

**Conclusion**

EscA would like to see a revised Project proposal that takes more seriously the Aboriginal community’s concerns, that does less damage to the endangered upland swamps of the region, and that anticipates a timely transition to green steel in line with NSW commitment to net zero carbon emissions by 2050. This could be partly achieved through a shorter approval period for the project, shorter longwall mines and/or use of less destructive mining methods such as bord and pillar rather than longwalls.

1. Advisory Group members including EscA will get a copy of the statement of requirements for the assessment (review of environmental factors/REF) contract shortly, but we will not be given a formal opportunity for feedback – we will have to quickly review for critical defects and respond with urgency. hSubsidence Report for Dendrobium Mine, MSEC, 2019, pp 35 – 37, accessed at:  
   <https://www.planningportal.nsw.gov.au/major-projects/project/9696> – shows predictions of 2-2.5m subsidence, but actual subsidence of 2.5-3m. [↑](#footnote-ref-2)
2. KIRSTEN Cowley, K.L. & K.A. KIRSTIE Fryirs (2020) Forgotten peatlands of eastern Australia: An unaccounted carbon capture and storage system. Science of the Total Environment. 730 (2020) 139067. <https://doi.org/10.1016/j.scitotenv.2020.139067>. Accessed 15 December 2020. [↑](#footnote-ref-3)
3. Research findings are summarised in Water NSW’s submission to the Independent Expert Panel on Mining in the Sydney Water Catchment – Task 1 Matters; see e.g. p.79. <https://www.waternsw.com.au/__data/assets/pdf_file/0020/132167/WaterNSW-submission-to-the-IEP-Task-1-of-Terms-of-Reference-vB.pdf>. May 2018. Accessed 27 October 2020. [↑](#footnote-ref-4)
4. Open letter to the Premier of NSW. <https://sites.google.com/site/specialareasconcerns/>. 18 May 2020. Accessed 27 October 2020. [↑](#footnote-ref-5)
5. Drought, wind and heat: when bushfire seasons start earlier and last longer. Owen Price. <https://theconversation.com/drought-wind-and-heat-when-fire-seasons-start-earlier-and-last-longer-101663>. August 17 2018. Accessed 27 October 2020. Illawarra could burn: academic. Michelle Hoctor. <https://www.illawarramercury.com.au/story/613226/illawarra-could-burn-academic/> February 15 2009. Accessed 27 October 2020. [↑](#footnote-ref-6)
6. Wildfire conditions in Australia the worst in 40 years. Wildfire Today. <https://wildfiretoday.com/2013/10/21/wildfire-conditions-in-australia-the-worst-in-40-years/>. 21 October 2013. Accessed 27 October 2020. Morton fire upgraded to watch and act. <https://www.illawarramercury.com.au/story/6575462/morton-fire-upgraded-to-watch-and-act/>. 10 January 2020. Accessed 27 October 2020. [↑](#footnote-ref-7)
7. Amendment to the list of threatened ecological communities under the *Environment Protection and Biodiversity Conservation Act 1999* (EC148 and EC61). <https://www.legislation.gov.au/Details/F2019L01143>. Accessed 27 October 2020. [↑](#footnote-ref-8)