



Dendrobium Extension Project – Area 5

Amended application: SSI-33143123

Submission by

WAG

Wilton Action Group

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Background: Wilton Action Group (WAG)

The Wilton Action Group formed in February 2018 after discussions at the NSW Department of Planning (DPE) community engagement sessions for the proposed Wilton North Planned Precinct. Since forming our group, we have over 750 registered Facebook supporters. Our group is not anti-development but is concerned about the implementation of transparent planning processes and ecologically sustainable development for the benefit of present and future residents of Wilton and Wollondilly. To date, we have seen gross failures in the planning processes for the proposed developments at Wilton known as Wilton New Town, including a failure to factor in the future impact of mining on the water supply for Wilton New Town.

The context of this submission: SSI Declaration for Dendrobium mine

The NSW Government has recently declared the Dendrobium mine extension as State Significant Infrastructure (SSI), despite the Independent Planning Commission's (IPC) rejection of the mine's extension as a State Significant Development (SSD) in 2021. In February 2021 the IPC decided to block the mine's expansion because it would have unacceptable impacts to water security as well as biodiversity, threatened ecological communities and cause irreversible damage to 58 identified Aboriginal cultural artefacts and values. It also found the mine would cause serious degradation to 25 watercourses and swamps in the Metropolitan Special Area and release significant amounts of greenhouse gases.

Quote from IPC decision February 2021:

Extract:

The Commission has today (Friday 5 February 2021) determined to refuse the state significant development application, finding the risks of adverse impacts on the environment are high, and that those impacts are not appropriately manageable and are likely to be irreversible.

Significant concerns have been raised about the proposed mine design, subsidence, ground and surface water impacts, biodiversity and upland swamps, Aboriginal cultural heritage and greenhouse gas emissions.

"[T]he level of risk posed by the Project has not been properly quantified and based on the potential for long-term and irreversible impacts --particularly on the integrity of a vital drinking water source for the Macarthur and Illawarra regions, the Wollondilly Shire and Metropolitan Sydney --it is not in the public interest."

Following the recent Federal election, it is clear the electorate wants urgent action on climate change including phasing out of fossil fuels. What does this mean for South32's Dendrobium extension proposal?

With the NSW government declaring the Illawarra will be one of five renewable energy zones, it is clear the Illawarra will need renewable energy, green steel, not another coal mine. This is where the future is heading to provide sustainable jobs and incomes. This proposal should include an investigation on how Bluescope Steel's coal needs will be met while it transitions to zero carbon steel

<https://www.energy.nsw.gov.au/renewables/renewable-energy-zones>

The new plan would extend the life of the Mine to 2041 and would involve the extraction of millions

of tonnes of coal each year. This is the first time that a coal mine has been declared State Significant Infrastructure in NSW and would set an alarming precedent.

A terrible precedent being created

The SSI declaration removes the IPC and any independent decision-making body from the approval process, making the NSW Minister for Planning and Homes the consent authority for the project. The Planning Department previously recommended that the IPC approve the project and the planning minister has now given himself the power to decide on this project. The removal of independent oversight calls into question the role of IPC and the Department of Planning, Industry & Environment (DPIE) and suggests the 'capture' of the State Government and most NSW political parties by coal companies. It is untenable for the DPIE to do the assessment of this project since they previously backed the flawed claims by South32, which were rejected by the IPC.

We note these that to address the key concerns raised by the IPC, IMC has re-designed the Project to reduce the overall footprint thereby reducing potential impacts through:

- **approximately 60% reduction in longwall mining area (from the previous application);**
 - **approximately 60% reduction in surface water losses (from the previous application);**
 - **no predicted connective fracturing from the seam-to-surface when using the Tammetta equation;**
 - **no longwall mining beneath 3rd, 4th and 5th order (or above) streams;**
 - **approximately 50% reduction in the length of 1 st and 2nd order streams longwall mined beneath;**
 - **approximately 40% reduction in the number of swamps (listed as threatened) longwall mined beneath (from the previous application);**
 - **no longwall mining beneath identified key stream features;**
 - **reduction in number of previously identified Aboriginal heritage sites directly mined under from 22 to six sites (with the likelihood of direct impacts to these six sites expected to be approximately 1 in 10 based on extensive monitoring of subsidence-related impacts to heritage sites);**
 - **no longwall mining beneath previously identified high archaeological significance Aboriginal heritage sites;**
 - **increased longwall mining setback distance (at least 400 m) from the Avon River, Cordeaux River and Donalds Castle Creek;**
 - **minimum longwall mining setback distance of 300 m from the Full Supply Level of the Avon Dam;**
- and
- **minimum longwall mining setback distance of 1,000 m from dam walls.**

Wilton Action Group therefore continues to object to the amended South32 Dendrobium mine extension proposal on the following original and additional grounds:

- (1) Cumulative Impact on water quality and supply for current and future residents of Wollondilly Shire and the Illawarra including future developments in Wilton and Appin

- (2) The extinguishing of mining rights by South32 for its Appin 8 seam under the Wilton North development against the reputational damage from continuing to mine under the catchment
- (3) Already questionable assumptions in South 32/ DPIE assessment of impacts on water supply and the Dendrobium mine's subsidence on rivers, swamps, streams and creeks
- (4) Although the dam wall setback distance extension of 1000 metres is a step forward vital risk modelling and dam monitoring questions from the DPIE assessment for Dam Safety NSW and Water NSW still flow from this and cumulative impacts of Dendrobium long wall mining on Avon, Cordeaux and Nepean dams. The mining expansion risks damage to critical WaterNSW infrastructure, including the dam walls of Avon and Cordeaux Reservoirs, the Lower Cordeaux Dam Project and WaterNSW's Deep Water Access Project. We note that WaterNSW was of the view that 1500 metres was the minimum safe setback for dam wall safety.
- (5) Inadequate compensation for damage arising from this extension and cumulative impacts of Dendrobium long wall mining on Avon, Cordeaux and Cataract dams
- (6) The lack of sufficient factoring of climate change impact on this Dendrobium extension along with a refusal by DPIE and South 32 to allow Scope 3 emissions to be permitted for South 32's GHG reduction strategy when Scope 3 emissions are now established policy for additional emissions reduction by BHP and most recently by Glencore.
- (7) The DPIE's acknowledgment of the damage that the expansion will cause, and yet it still supports the expansion. DPIE in its assessment report says: "Anticipated subsidence impacts include fracturing of streambeds and diversion of surface water underground; losses from the reservoirs due to increased permeability in the solid rock mass separating them from longwall voids; and impacts on surface water quality, including an increase mobilisation of metals such as iron. Stream function would be impacted due to cracking of creek beds, loss of pool holding capacity and loss of baseflow reporting to streams from upland swamps and near-surface aquifers." <https://www.ipcn.nsw.gov.au/projects/2020/10/dendrobium-extension-project-ssd-8194>
- (8) The economic analysis commissioned by the DPIE to assess the Dendrobium Expansion Environment Assessment was rejected by the IPC, particularly around the reliance of Bluescope Steel on the project. So, who will conduct the investigation and assessment of the importance of local coal supply to BlueScope Steel? And what are the terms of reference for that?
- (9) Who will conduct the economic costs/benefits assessment of the revised project? Will DPIE ensure that this work will go through a rigorous tender process where the credibility of any would-be contractor is thoroughly vetted? Will DPIE ensure that it does not provide a biased brief or Terms of Reference to the contractor?
- (10) Will the NSW DPIE uphold the current requirement of the Koala SEPP 2020 for habitat value in its assessment of South32's EIS?

What kind of impact and legacy will South 32's Dendrobium extension project leave?

*The single most important land use in the Southern Coalfield is as water catchment". **Southern Coalfield Inquiry, 2008.***

It is estimated that it will take 100 years for groundwater levels to stabilise in Area 5 and 200 years for Area 6. <https://www.ipcn.nsw.gov.au/projects/2020/10/dendrobium-extension-project-ssd-8194pp105-106>. Thus the drawdown/dewatering impacts of the mining will remain long after we are gone. This is a problem that we will hand down to future generations, descendants that will be more challenged by climate change, subject to more extreme weather events, longer and more severe droughts and more serious bushfire risk.

The NSW Independent Advisory Panel for Underground Mining says that:

“At this stage, because there is a lack of clarity as to if and how Dendrobium Mine can be sealed, it should be assumed that surface losses from the catchment will occur over the long term and potentially in perpetuity.”

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-8194%2120201102T055834.983%20GMT>

The discharge water from the mining will also need to be managed and treated, perhaps in perpetuity, and this is another burden that we leave for future generations. Previous mining at Dendrobium has already burdened future generations with a legacy of water loss and contamination and this expansion will make it much worse.

The Wilton development and impact on it of the South 32 expansion

Wilton is a small peri-urban town in the Wollondilly Shire. The town is dissected by the Canberra to Sydney Hume Motorway and the notoriously dangerous Picton Road, which travels east to Wollongong, and west to Picton. The Wilton New Town area is proposed for large-scale development (16,000 + homes for a projected population of over 60,000 people – a city the size of Port Macquarie – now called Wilton 2040 by the DPIE) Our analysis of the planning studies exhibited by DPIE is that the land area is highly constrained and costly to develop. The area has significant natural resources, including coal and is part of the Nepean River Catchment which is an important part of the Sydney Water Catchment. It is highly bushfire prone, and features many threatened species (including important populations of Koalas)

The “Kruck Report”, which is an important 2013 NSW government investigation into the coexistence of mining and housing development in the Wilton area and the Nepean/ Sydney Catchment, has not been publicly released due to its current Cabinet in Confidence status. Does this report suggest perhaps a precautionary principle in planning for the then Wilton New Town development which does not seem to have been applied in the planning for the Wilton 2040 draft plan? See:

<https://www.planning.nsw.gov.au/News/2018/Plan-for-Vibrant-Wilton-Growth-Area>

As currently intended, the Wilton New Town/2040 developments will nearly double the population of the Wollondilly Shire itself which will make the provision of a stable, clean water supply the highest priority for such a large scale development

WAG notes Wollondilly Shire Council’s objection to the Dendrobium mine extension in its submission to the DPIE in 2019 based on a report to Council which resulted in Council adopting a resolution in its Extraordinary Meeting of 24 September 2019 to:

- *Oppose the expansion of the Dendrobium Colliery Extension mining operations and formally object to the proposal until the potential impacts on water sources (e.g. drinking water) and supplies are addressed to the satisfaction of Water NSW.*
- *Request that a Public Hearing be held as part of the investigation by the Independent Planning Commission.*

Council is aligned with WAG concerns on future water supply for Wilton and other Growth Areas outlined below.

4) Potential Impacts of the Expansion Project Application to Potable Water Supplies

The Wollondilly LGA receives its water supply directly from Avon and Cataract Dams located within a section of the Drinking Catchment Area covered by the Dendrobium Project Area rather than Warragamba Dam. The potential adverse implications to this water supply (with associated economic and aesthetic effects) from water loss as a consequence of mine induced fracturing is consequently viewed as being a potential impact of the Project.

This issue has implications to the adequate servicing of current and future Development applications received by Council as well as servicing Growth Areas that includes Wilton and Appin within Wollondilly. However, the EIS would appear not to contain a discussion and assessment of the implications of the Project to the ongoing continuation of potable water supply in a regional context. It would also not appear to have investigated potential long-term associated social and economic implications of any such reduction in supply to consumers.

At the Special Community Forum as part of the Wollondilly Shire Council Extraordinary meeting held on 30 April, 2018 at which Council withdrew in principle support for Wilton New Town, WAG called for:

Commissioning of a full hydrological analysis to determine the future adequacy of the water supply for Wilton New Town's projected population of 50-60,000 people - allowing for impacts of factors like climate change and future mine closures on that critical, limited water supply from the local dams.

WAG repeated this call for a full hydrological assessment for the Wilton New Town development at Community Forums at Wollondilly Council in 2019-20.

In its submission to the Independent Expert Panel on Mining in the Catchment, Water NSW gives some assurance on that with its preliminary work in assembling the stakeholders on a broad hydrological and hydrogeological study being started across the catchment. They recognise that it is a very complex and challenging task for the predictive modelling required but one that is vitally needed with the mining impacts now in overdrive across the Sydney catchment

WAG fully supports Water NSW's total opposition to mining in the catchment where it will damage water quality and infrastructure. <http://waternsw.com.au/water-quality/catchment/mining>. It is worth quoting Water NSW's submission to the Independent Expert Panel that 'from the Water NSW viewpoint, the single most important consequence ... is that subsidence induced by the Dendrobium mine longwalls is likely to be resulting in significant diversion of surface water which would otherwise contribute to greater Sydney's water supply,'
www.chiefscientist.nsw.gov.au/data/assets/pdf_file/000/2-WaterNSW-submission.PDF pp11-12

In its March 2020 submission, WaterNSW stated it “*remains strongly opposed to this project*” and raised concerns about impacts on Avon and Cordeaux Rivers which could adversely affect “*WaterNSW’s ability to supply high quality water to its customers*”.

Loss of Water –acceptability of water supply losses from Sydney drinking water catchment and whether these impacts can be reduced and/or offset

If South 32 truly believe that urban development and mining are now incompatible, then such arguments would also be true of the incompatibility of drinking water catchment and coal mining. Coal mining could continue in proposed urban development areas by completing the mining operations before commencing urban development, thus separating and mitigating impacts in time (mine, then develop into urban areas after subsidence effects have settled). There is no such luxury for the drinking water catchment, which is required to service the ever-expanding population now and into the future. There is no acceptable or offsettable losses. Every drop of water is required to service the drinking water needs of the expanding population. The water supply for Sydney is very constrained. During the drought we just experienced, the dam levels fell to between 20 and 30 percent, with the current population. This is unacceptably low, and it was at the time thought that the water may run out before the drought broke.

No authority has actually checked that we have sufficient raw water supply to support the approved growth in the Wollondilly, and Macarthur areas, so it cannot be known or adequately assessed at this point in time if any losses to the catchment could be tolerated.

On water quality there has been inadequate consideration of water quality loss. The current cumulative contaminant loading in the reservoirs as a consequence of mining is not known but would seem likely to be significant. The then SCA (now WaterNSW) estimated that between February 2002 and June 2011, 19 and 5 tonnes of iron and manganese oxides/oxyhydroxides respectively were added into Woronora Reservoir from Waratah Rivulet.

The Upper Nepean Scheme feeds the Macarthur area. It cannot receive water from the Warragamba Dam. This proposal compromises the sole source of supply of water for this area, which cannot be mitigated by a desalination plant as it is too far from the coast to be economically viable (water would need to be pumped up the escarpment, which is not economically viable).

The Upper Nepean Scheme, which lies above the Dendrobium proposal, also supplies water to Wollongong and Greater Sydney. It is currently being used to support the water supply from Warragamba dam which has been heavily impacted by bushfires earlier in the year, leaving the water quality heavily impacted and difficult to treat. This is likely to be an increasingly frequent occurrence with climate change. The water quality in other areas impacted by bushfire have taken two years to return to acceptable limits. That is two years that that this particular area of catchment will be required to support the water quality and quantity needs of Greater Sydney, for every major bushfire event now and in the future.

See: <https://www.watarnsw.com.au/about/newsroom/2020/bushfire-inquiry-commends-watarnsw-for-protection-of-catchment-and-water-quality>

"Due to heavy rain on the Warragamba catchment shortly after the bushfires, there were severe concerns around impact that bushfire ash and run-off from the damaged catchment would have on water quality.

The inquiry found that WaterNSW successfully configured its water supply system to source water from alternative sources which helped avoid major impacts on water supply."

<https://www.waternsw.com.au/about/newsroom/2020/waternsw-experts-maintain-water-quality-for-sydney>

"During December 2019 and January 2020, more than 320,000 hectares of the Warragamba Catchment was ravaged by fire.

In summary: No alternative is provided to this destructive expansion which will cause permanent damage to our water catchment

There should be no mining in the Special Areas of Greater Sydney Water Catchment; this is the stated position of WaterNSW and the legislated purpose of Special Area protection.

It is unacceptable that DPIE not only support this destructive mining expansion, but also required no alternative mine design options to reduce the damage should an expansion proceed. Having failed to explore any alternatives, the DPIE is claiming without evidence that narrower longwalls would not cause significant damage and “would come at an unsustainable economic cost” for the mining company.

<https://majorprojects.planningportal.nsw.gov.au/prweb/PRRestService/mp/01/getContent?AttachRef=SSD-8194%2120190301T021109.930%20GMT>

The NSW government requires South32 to consider alternatives, including mining in domains for which they have existing approvals and modifying the design to “avoid key sensitive surface features, including swamps and water storage infrastructure”.

<https://www.ipcn.nsw.gov.au/projects/2020/10/dendrobium-extension-project-ssd-8194>

South32 have failed to address these imperatives and yet the Department has supported the proposal rather than uphold standards of responsible planning which should consider all stakeholders: the community, environment, and future residents and generations for whom this will be a major burden with significant and yet still unknown impacts.

WAG urges the Minister not to approve this amended Dendrobium extension proposal as there are simply too many risks across a matrix of factors we have analysed. Combined they can have a force multiplier impact the full severity and duration of which can create a legacy for South32 of toxic alienation from all the other stakeholders. Therefore It is imperative that the precautionary principle guide the Minister’s deliberations on this decision before any short term economic or political considerations.

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