

Our ref: Dendrobium Mine Extension Project (SSI-33143123)

Chris McEvoy  
Manager Approvals Dendrobium Next Domain Project  
South32

Via email: [Chris.McEvoy@south32.net](mailto:Chris.McEvoy@south32.net)

22 July 2022

---

**Subject: Request for Additional Information – Water, disturbance area and employment related matters**

Dear Chris

I refer to the Environmental Impact Statement (EIS) for the Dendrobium Mine Extension Project (SSI-33143123). After careful consideration, the department is requesting that you provide additional information.

You are requested to submit additional information that effectively addresses the issues identified in **Attachment 1**.

Please provide the information, or notification that the information will not be provided, to the department by 12 August 2022. If you cannot meet this deadline or do not intend to provide the additional information, please advise the department via the NSW planning portal.

If you have any questions, please contact Gabrielle Allan on 02 9585 6078 or via email at [gabrielle.allan@dpie.nsw.gov.au](mailto:gabrielle.allan@dpie.nsw.gov.au).

Yours sincerely,

A handwritten signature in black ink that reads "Jessie Evans".

Jessie Evans  
Director Resource Assessments

## ATTACHMENT 1

### Baseflow Reduction

The Department requests a meaningful comparative analysis of the predicted baseflow reductions in key watercourses associated with the project.

It is noted that modelled baseflow reductions for watercourse are presented in Section 6.8 of the Groundwater Assessment (Watershed, 2022) and Section 5.3 of the Surface Water Assessment (HEC, 2022). However, these estimates do not provide a comparison with the existing mean daily flow/baseflow in the watercourses.

It is requested that a summary of predicted baseflow reductions at key watercourses (ie. Donalds Castle Creek, Avon River and Lake Avon) be presented in a simple tabular format and include:

- Mean existing daily flow rate;
- Maximum baseflow reduction as a result of the project and cumulatively (refer to Tables 21 and 22 of the SWA); and
- The percentage the baseflow reductions represent compared to the mean existing daily flow rates in each watercourse.

### Classification of Stream Features

It is understood that South32 classified particular stream features as being more significant than other features if they met the definition of “key stream features”. Key stream features were classified as “pools with volumes greater than 100 m<sup>3</sup> and waterfalls with heights greater than 5 m with a pool at the base of the step”. South32 identified and mapped a total of 15 key stream features within the 600 m boundary of the Project area.

Although the Subsidence Assessment (MSEC, 2022) referenced these features and predicted the maximum subsidence effects they may experience, it did not provide a clear estimation of the predicted subsidence impacts for key stream features. Rather, an impact assessment was presented for “stream controlling features”, which were more generally described as “rockbars and other features with an upstream pool” (Section 5.3, MESC). Thirty-one of these features were identified along 3rd order sections of streams located within 400 m of the proposed longwalls (Table 5.10), MSEC. Based on previous observations, MSEC predicted that 5 (or 15%) of these features could experience Type 3 impacts. It is not clear if any of the 5 features which could experience physical damage are also classified as “key stream features”.

The Department requests a clear distinction be made between what is considered a “key stream feature” and a “stream controlling feature”, and an impact assessment be made of both feature types.

### First and Second Order Streams

The Department notes that Section 5.3 of the Subsidence Assessment (MSEC, 2022) provides predictions and impact assessment for first, second and third order unnamed streams. However, the following further information is required to inform the assessment of the impacts on first and second order streams:

- the total length of first and second order streams located above and within 400 m of proposed longwalls in Area 5;
- the number of stream controlling features and pools located on first and second order streams above and within 400 m of proposed longwalls in Area 5; and
- the assessed number of Type 3 impacts for stream controlling features and pools located on first and second order streams above and within 400 m of proposed longwalls in Area 5.

### Employment numbers

Please provide clarification of the stated existing and proposed operational workforce, noting that:

- Section 4.1 of the EIS states *'The Project would provide continued employment for the existing Dendrobium Mine workforce of approximately 650 personnel as well as an additional 50 operational personnel'*; and
- Section 2.6.2 of the Economic Assessment (EY, 2022) states that *'Over the period of 2022 to 2034, IMC advises that the Project would employ an average of 333 FTE workers. During this period, employment increases up to 557 FTEs in 2028'*.

Please provide a clear breakdown of the anticipated Dendrobium Mine workforce annually over the life of the Project.

### Extent of Clearing

The EIS for the previous project identified a maximum disturbance footprint for ventilation shaft site 5A of 7.5ha (2019 EIS section 3.4.3), while the EIS for the current project identifies a maximum disturbance footprint for ventilation shaft site 5A of 15ha (2022 EIS section 4.4.3). Please provide an explanation for this increase in disturbance area and demonstrate how the extent of clearing has been minimised to the greatest extent practicable.

### Figures

Please provide:

- One figure showing the location of key built and natural features in the vicinity of Area 5 (ie. consolidation of Drawings MSEC1181-08, 09, 14 and 15 of the Subsidence Assessment); and
- A revision of Drawing MSEC1181-09 of the Subsidence Assessment, including removing the Map 01-03 outlines and showing the location of the key stream features.