



Gary Brassington  
Approvals Manager  
South32 Illawarra Metallurgical Coal  
Port Kembla NSW 2502

07/03/2022

Dear Mr Brassington

**Bulli Seam Operations Project (MP08\_0150)**  
**Appin Mine Extraction Plan LW709 to 711 & LW905 – Request for Additional Information**

I refer to the assessment of the Appin Mine Extraction Plan (EP) for Longwalls 709-711 and 905 and the advice received from the Biodiversity Conservation Division (BCD) within the Department. I understand BCD's advice dated 23 February 2021 and 24 November 2021 have been provided to you.

The Department has carefully reviewed BCD's advice and notes that it raises several issues regarding the updated groundwater model and the adequacy of the existing water monitoring program. For the Department to progress with its assessment of the EP, a response to the issues raised by BCD is required.

**Attachment 1** outlines the key concerns of BCD for which the Department is seeking further information.

Please provide the requested information to the Department by 28 March 2022. If you are unable to provide the requested information by the due date, please provide a timeframe detailing the provision of the information.

Please contact Nagindar Singh on 8289 6873 or at email [nagindar.singh@planning.nsw.gov.au](mailto:nagindar.singh@planning.nsw.gov.au) for any questions or additional information.

Yours sincerely

**Director, Resource Assessments**

## Attachment 1 – Surface and Groundwater Issues

### Groundwater Modelling and Peer Review

It is noted that the numerical groundwater model has been re-calibrated using additional monitoring data since the EP was submitted in October 2021. The Department seeks advice as to whether the groundwater model has been peer-reviewed, as per the *NSW Aquifer Interference Policy*. If not completed or currently underway, please provide a commitment for this to be undertaken.

### Ditton-Merrick Model versus Tammetta Model for Height of Continuous Fracturing Predictions

The Department notes IMC's previous justification for use of the Ditton-Merrick model versus the Tammetta model for calculating the Height of Continuous Fracturing (HoCF). It also notes the Independent Expert Panel for Mining in the Catchment Report's recommendation of deferring to the Tammetta equations until such time further investigations are completed (IEPMC, 2019).

In this circumstance, the Department considers that there would be value in providing a comparison of the HoCF equation calculations and a qualitative assessment of the potential surface impacts.

### Groundwater Assessment

BCD considers that the Groundwater Assessment appears to rely on bore data from areas adjacent to the longwalls rather than in areas where maximum subsidence and impacts are likely to occur. The Department requires justification for the selection and exclusion of bores used to calibrate the groundwater model.

### Groundwater Monitoring

The Department notes that there is only one alluvial monitoring bore near the third order section of Navigation Creek proposed in the monitoring program. The Department requests that IMC consider expanding the existing monitoring program to include alluvial monitoring bores in third order sections of Navigation Creek, Navigation Creek Tributary 1 and Foot Onslow Creek that will be directly undermined and ensure that at least 12 months of data have been collected prior to extraction, wherever possible. Consideration should also be given to inclusion of piezometers over the longwalls.



### Surface Water Monitoring

The surface water monitoring sites shown in Figure 8 of SLR (2021) and Figure 4 of SLR (2022) do not include any flow monitoring in watercourses or water level monitoring in pools over the proposed longwalls or at the existing NAV1, FO1 and HC10 water quality monitoring sites.

The Department requests IMC update the existing monitoring program, or provide justification otherwise, for additional monitoring of flows and standing water levels in watercourses above and adjacent to the proposed longwalls.