

11 May 2022

Jessie Evans
Director, Resource Assessments
Department of Planning & Environment
Via Email: jessie.evans@dpie.nsw.gov.au

Contact: Ravi Sundaram
Telephone: 0428226152
Our ref: D2022/34996

Dear Jessie

DENDROBIUM MINE (DA60-03-2001) – MOD 9 - Gas Management Infrastructure– Submissions Report

I refer to the Department's referral on 27 April 2022 requesting advice from WaterNSW on the Submissions Report prepared by South32.

WaterNSW provided advice to the Department on the modification proposal in March 2022 (our reference D2022/18206). Whilst South32 has addressed several issues raised by WaterNSW, the following residual issues and/or recommendations still need consideration.

Fire Risk and Management

WaterNSW acknowledges the expertise and work by David Peterson. WaterNSW reiterates that its previous recommendations on fire Asset Protection Zone (APZ) be implemented as:

- The Bushfire Management Plan by David Peterson (2022) indicates greatest fire risk from north and north-west and recommends a 45m APZ be established. However, 45m APZ is provided from north only at one single point in the development.
- Recommendations made by WaterNSW are based on utilizing a mixture of distances recommended for buildings, protection for people on-site, and a practical application of them to implement and maintain acknowledging the site limitations.

WaterNSW requests the Department to include a condition in any approval granted for the modification application that specifies above requirements and requiring Dendrobium Mine to finalize the Bushfire Management Plan in consultation and to the satisfaction of WaterNSW.

WaterNSW does not support the use of untreated mine water for fire-fighting purposes. Mine water has a different pH and chemical signature to surface water and any leaks would have a deleterious effect on the surrounding vegetation. A significant incident in the past within the Metropolitan Special Areas resulted in mine water being discharged during a fire at Nebo No. 4 shaft that impacted Lizard Creek swamp adversely. WaterNSW recommends fire-fighting water to be fresh water trucked in or rainwater collected on site and stored in tanks with associated pumps.

3. Access – Fire Road Upgrades

The site will be accessed via unsealed Fire Roads (6, 6C, 6F and 6K). Access is also being sought during wet weather for the construction stage. As such, WaterNSW reiterates its recommendation that any approval granted for the modification application includes a condition requiring Dendrobium Mine to prepare a Fire Road Upgrade Works Plan in consultation with and to the satisfaction of WaterNSW.

WaterNSW recommends the following additional requirements, to that previously specified, to be addressed in the Fire Road Upgrade Plan:

- Investigations for traffic counts to estimate current base load traffic on Fire Roads 6, 6C, 6F and 6K and determine how much the increase in construction traffic will impact the road.
- Pre and Post construction dilapidation surveys and geotechnical investigations of the fire roads required for access need to be done to:
 - understand the potential impacts

- inform road design and necessary upgrades of the unsealed fire roads to withstand construction traffic, and
- determine remedial action.

Note there has been damage to some of these fire roads due to flooding caused by significant rainfall events.

- The Bailey Bridge over Sandy Creek is showing signs of deterioration. The following issues have been identified during a recent site inspection by WaterNSW which need to be addressed:
 - Sediment build-up on the road deck
 - Rusted deck plates and un-greased bearing pins
 - Some of the deck plates are unattached and lifting off the bridge
 - The abutments are buried in sediment and are difficult to inspect for damage
 - The settling ponds near the approaches to the bridge are undersized for the volume of runoff
 - Vegetation is encroaching on the bridge structure, and
 - Flood debris is jammed in section of the bridge supports.

It is recommended that:

- An engineering inspection of the bridge should be undertaken as it was overtopped by floodwaters during the recent rains
- A load rating for the bridge is required to inform bridge upgrade necessary to ensure that the construction traffic will not over-load it.

Please feel free to contact Dr. Ravi Sundaram if you would like to discuss any of the above matters further.

Yours sincerely



Daryl Gilchrist
a/Manager Catchment Protection