

OUT17/2274

Mr Joel Herbert
Resource Assessments
NSW Department of Planning and Environment

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Dear Mr Herbert

**Ardmore Park Quarry (PA 07_0155 MOD 3)
Comment on the Environmental Assessment (EA)**

I refer to your email of 12 January 2018 to the Department of Industry in respect to the above matter. Comment has been sought from relevant branches of Lands & Water and Department of Primary Industries.

Any further referrals to Department of Industry can be sent by email to landuse.enquiries@dpi.nsw.gov.au.

The department has reviewed the EA for the proposed modification and provides the following advice:

- The proponent should note that landowner consent and an authority to occupy will be required from Crown Lands for the crossing of Bungonia Creek.
- The proponent should identify Crown Lands and Bungonia Park Trust as adjoining landholders impacted by the proposal.
- A 50% increase in water demands for dust suppression from 22ML/pa to 33ML/pa has been predicted. The water demand for processing has been maintained at the volume required for a production limit of 400 000tpa of 70ML/yr, even though the modification is to increase the production limit to 580 000tpa. The proponent should detail the water demands for the proposed production limit increase.
- The EA indicates an additional 100ML water access licence (WAL) has been purchased for use at this site if required. The proponent should note this licence is yet to be linked to the site for use therefore cannot be considered as part of the water supply for the project. If this WAL is required for the modification project it is recommended an assessment of the ability to access this volume and the potential impacts on water users and the environment be addressed within the current modification assessment process
- The proponent should detail what demands other than the quarry are placed on the groundwater bore at the site for use on the property to confirm the water availability for the proposed development and the potential requirement for the additional WAL purchased.
- The Hydrogeology Assessment (Appendix 10) indicates the expansion will be of the basalt only to the base flow bottom level of ~615m AHD. However section 2.2.1 of the Environmental Assessment (EA) refers to "*Working benches within the sand*"

underlying the basalt” and “The floor of the extraction area would reflect the natural base of the sand deposit which dips gently to the south between 605m and 615m AHD’. This indicates intent to quarry the underlying connected palaeo-alluvial aquifer. However no assessment of impact or quantification of groundwater take from the sand (palaeo-alluvial aquifer) has been provided. The proponent should provide an assessment of quarrying impact upon groundwater within the connected palaeo-alluvial aquifer to address the requirements of the Aquifer Interference Policy (AIP). The maximum annual groundwater take will need to be accounted for by holding sufficient entitlement in a Water Access Licence for the relevant water source.

- To assist in understanding the site and predicted impact, cross sections of the conceptual hydrogeology model and plots of contoured groundwater level for each separate aquifer presented in the Hydrogeology Assessment should be provided.
- Groundwater levels for monitoring bores are measured in three different aquifers, basalt, palaeo-alluvial, and basement sandstone. The recorded deeper basement sandstone groundwater level for BHAP6 (licence 10CA117207 – WAL30111) has a strong influence upon groundwater level surfaces if plotted all together, indicating a conical drawdown to this pumping bore. This is not considered to be representative of the groundwater levels in the aquifers of concern, the basalt and the connected underlying palaeo-alluvial aquifer at the proposed quarry extension site. There is also a notable lack of groundwater level monitoring data at the site of the basalt quarry operations and proposed extension area. The proponent should, within the next month, install a nested groundwater monitoring bore, measuring levels of groundwater in both basalt and palaeo-alluvial aquifers, immediately north of the current basalt - sand quarrying and planned extension area.
- Groundwater level monitoring bore BHAP7 is listed as “lost”. The proponent should be required to replace this bore prior to any approval being granted.
- Table 21 in the EA refers to triggers, actions, responses and reporting for the project. The water level trigger for affected bores refers to drawdown of greater than 15% attributable to the project. To aid in interpretation the proponent should clarify what the corresponding water level is in each bore.
- The spring flow trigger in Table 21 refers to a significant decrease in the spring flow rate, which is defined as a flow rate of less than 0.1L/s. This indicates the flow rate needs to be less than 0.1L/s before the trigger is reached. It is recommended this be reviewed to consider the acceptability of the impact before this trigger is reached.
- In the case that approval is granted for the project, the following should be included as conditions of consent:
 - Inclusion of the new nested monitoring bore in the groundwater monitoring plan and the updated Water Management Plan.
 - The proponent must update the Surface Water Management Plan and Groundwater Management Plan in consultation with DoI Water (water.referrals@dpi.nsw.gov.au).

Yours sincerely



Alex King
Director Cabinet and Legislation Services
27 February 2018