

2 July 2018

Contact: *Jim Caddey*  
Telephone: 4824 3401  
Our ref: D2018/69459

Ms May Patterson  
Team Leader  
Resource Assessments  
Department of Planning & Environment  
GPO Box 39  
Sydney NSW 2001

Dear Ms Patterson

**Sutton Forest Sand Quarry (SSD\_6334)**

We are writing in relation to an email received from R. W. Corkery and Co on 22 May 2018 regarding the Environmental Impact Statement for the above proposed sand quarry.

The proposed Sutton Forest Sand Quarry (the project) is located within the declared Sydney catchment area. Pursuant to the *Water NSW Act 2014*, WaterNSW has objectives and functions within declared catchment areas. A key function is to protect and enhance the quality of water.

WaterNSW has adopted a set of principles that establish outcomes it considers as essential to protect the drinking water supplies of the Greater Sydney region from mining impacts – see [https://www.watnsw.com.au/data/assets/pdf\\_file/0010/119890/Mining-principles.pdf](https://www.watnsw.com.au/data/assets/pdf_file/0010/119890/Mining-principles.pdf)

The principles relevant to the project are:

- Protection of water quality – WaterNSW considers that quarrying activities must not result in a reduction in the quality of surface and ground water inflows to Lake Burragorang,
- Protection of water quantity – WaterNSW considers that quarrying activities must not result in a reduction in the quantity of surface and groundwater inflows to Lake Burragorang or loss of water from the Lake's catchment, and
- Sound and robust evidence regarding environmental impacts – Water NSW considers that information provided by the proponent must be detailed, thorough, scientifically robust and holistic. The potential cumulative impacts must be comprehensively addressed.

WaterNSW has reviewed the Environmental Impact Statement prepared by R. W. Corkery and Co (dated 18 May 2018) and undertaken a site inspection. WaterNSW considers the project has the potential to have a neutral or beneficial effect (NorBE) on water quality. However, this would require considerable care in designing, implementing and maintaining water quality control measures. Robust monitoring, reporting, auditing and compliance programs would also be required. This would include programs managed by agencies in particular the key regulators – the Department of Planning and Environment and the Environment Protection Authority.

WaterNSW considers the following require responses from the proponent:

- a) Further details are required of mitigation measures proposed to ensure the project would have a NorBE on water quality at all stages of the project – construction, operation and decommissioning. In this regard it is noted that the site is largely undisturbed and while the quality of water discharging from the site into Long Swamp Creek has not been monitored

it is reasonable to conclude that it would be of a high quality containing few pollutants and in particular sediment. Preventing sediment generated by the project from entering Long Swamp Creek is paramount.

During the site inspection it was noted that some of the proposed water quality mitigation measures had practical constraints when considered in the context of the sites physical features and these were pointed out to the proponent's representatives. A review of the practicality/constructability of all the water quality mitigation measures is required.

Human wastewater would be produced by workers and visitors. Information is required on the suitability of the site for land application and areas nominated for application.

- b) Further details are required of the monitoring, reporting and self-auditing programs aimed at ensuring a NorBE on water quality at all stages of the project.
- c) Having regard for the above a more thorough NorBE water quality assessment is required.
- d) Limited data for groundwater model calibration to Long Swamp Creek stream flow (baseflow) is available. The Groundwater modelling report refers to three levels of model calibration using an "extensive database" of hydraulic conductivity data, groundwater levels and stream flow. However, there are no streamflow measurements, and only one stream flow estimate made by estimating the speed of flow and cross-sectional area from the stream bank.
- e) The groundwater report refers to a maximum of 2.6% reduction of baseflow to Long Swamp and Long Swamp Creek. However, the surface water assessment report predicts a 3.6% reduction of modelled baseflow.
- f) Predictions of baseflow reduction are based on average rainfall, and do not account for dry years or extended drought periods. The potential for reversing of hydraulic gradient (from stream or swamp to the pit) during periods below average rainfall conditions therefore does not appear to have been adequately assessed.

WaterNSW expects the above to be addressed in a Response to Submissions report and will provide further advice to the Department following a review of this report. At that time, if the report satisfactorily addresses the above we will also provide advice on appropriate conditions of approval.

We take this opportunity to advise that WaterNSW considers that if the project is recommended for approval the consent should include performance measures with respect to water management – such as negligible reduction in the quality of surface water being discharged from the site to Long Swamp Creek and negligible reduction in the quantity of water in Long Swamp Creek.

WaterNSW would appreciate continued involvement in the assessment of the proposal. If you wish to discuss the above further, please contact Jim Caddey on 4824 3401 or Dr Girja Sharma on 9865 2501.

Yours sincerely



**MALCOLM HUGHES**  
**Manager Catchment Protection**