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Our Ref: HW2015-1413

Resource Assessments
NSW Department of Planning and Environment
23-33 Bridge Street
Sydney NSW 2000

Attention: Genevieve Seed

Dear Genevieve

RE: CABBAGE TREE ROAD SAND QUARRY (SSD 6125)

Thank you for your correspondence of 27 November 2015 to Hunter Water seeking comments and recommended conditions of consent for the proposed sand quarry at Cabbage Tree Road, Williamtown.

The proposed development involves extraction of sand from land owned by Port Stephens Council (Council); specifically Lot 1 in DP 224587, Lot 121 in DP 556403, Lot 11 in DP 629503 and Lot 1012 in DP 814078.

The proposed development falls within the Tomago Sandbeds Special Area as gazetted in the *Hunter Water Regulation 2015*. The Special Area requires appropriate management to protect the Tomago Aquifer drinking water source from potential pollution caused by industry or other activities.

The aquifer can supply up to 30% of the region's drinking water supply, and plays an important strategic function for Hunter Water as a drought reserve. In accordance with the *Hunter Water Regulation 2015*, the ongoing ecological health of the Sandbeds catchment is of paramount importance to Hunter Water.

Hunter Water requires all development in drinking water catchments to demonstrate a Neutral or Beneficial Effect (NorBE) on water quality. A development is considered to demonstrate NorBE if the development:

- (a) has no identifiable potential impact on water quality, or
- (b) will contain any water quality impact on the development site and prevent it from reaching any watercourse, waterbody or drainage depression on the site, or
- (c) will transfer any water quality impact outside the site where it is treated and disposed of to standards approved by the consent authority.

Hunter Water notes that the proposed development does not include groundwater extraction. Furthermore, the Environmental Impact Statement (EIS) for the proposed development indicates that the proposed development will not change or affect the existing drainage on the site, and the groundwater modelling, calibrated against 50 years of Hunter Water groundwater monitoring records, indicates that the groundwater levels would not significantly change as a result of the proposed extraction.

Hunter Water's primary concerns regarding the protection of drinking water in relation to the proposed development, therefore, are:

- Extraction depths - particularly ensuring that extraction is limited to 1 metre above the maximum predicted groundwater level;
- Management of surface water and spills to ensure that any contamination is cleaned up immediately and does not infiltrate the sandbeds; and
- Rehabilitation and future use of the site to protect the drinking water source in the future.

If the development proposal is approved, Hunter Water expects that an annual operational review will be undertaken with key stakeholders, including Hunter Water, similar to those required for other local sand mining facilities. We trust that information relevant to this review, such as plans and monitoring data, will be submitted to stakeholders prior to the review taking place.

In order to address the concerns noted above, Hunter Water recommends that the following Conditions of Approval be adopted if the development proposal is approved:

- The Proponent shall not extract sand or other extractive materials or carry out any work in the extraction area below a level of 1 metre above the predicted maximum groundwater elevation, with the exception of topsoil salvage and replacement activities. That is, topsoil salvaged prior to extraction activities by way of site preparation may be removed to a limit of 0.7 metres above the predicted maximum groundwater elevation and stockpiled for subsequent replacement in the same location on completion of the extraction activities for rehabilitation purposes.
- The Proponent shall ensure that the final landform of the extraction area is at least 1 metre above the predicted maximum groundwater elevation.
- No details are provided on the proposed on-site pump-out system. We expect that this system will be located and constructed in accordance with Port Stephens Council's Development Assessment Framework (DAF) for onsite sewerage.
- During extractive operations, the elevation of land from which sand is being extracted must be monitored using survey methods by taking regular measurements (using a laser level or other appropriate method) in accordance with an industry standard procedure by a person appropriately qualified in surveying techniques. This includes a survey of the extraction floor levels, which shall be presented in the form of plans to demonstrate compliance with the extraction limits. The plans are to be submitted to Hunter Water as part of the annual operational review. Hunter Water must be notified if the extraction levels fall below the allowable level for any reason.
- The post extraction landform must be surveyed on completion of the primary site rehabilitation works and the results presented in the form of plans to demonstrate compliance with the extraction limits. The plans are to be submitted to Hunter Water as part of the annual operational review.
- The Proponent must not store fuel, oil, grease, wastewater, chemicals or any similar potential groundwater contaminants within the Tomago Sandbeds Special Area.
- Section 4.10.5 notes that refuelling will "be undertaken, where possible, within a bunded concrete pad area...". Any refuelling of plant or equipment undertaken on site must be performed on a hardstand area located outside the Tomago Sandbeds Special Area, which is either appropriately bunded or adequately contained and

managed such that spills will be readily captured and not able to infiltrate to groundwater.

- The Proponent must remove all machinery used in the extractive operations from the Tomago Sandbeds Special Area at the end of each day's operation.
- Prior to the commencement of operations, the Proponent must develop a Spill Management Procedure designed to prevent, clean-up and minimise adverse impacts on the quality or quantity of groundwater able to be extracted from the Tomago Sandbeds Special Area from all potential contaminants that may be used on site, such as hydrocarbons. The Procedure shall include remediation plans to be implemented in the event of incidents or events occurring that may adversely affect the Tomago Sandbeds Special Area.
- Prior to the commencement of operations, a Groundwater Monitoring Plan must be prepared and submitted to Hunter Water for approval. The Plan shall include the parameters to be measured, sampling locations, sampling frequency and details of action to be undertaken in the event of unexpected results, such as detected contamination. The Plan should acknowledge and accommodate the PFOS/PFOA groundwater contamination in the area.
- At the completion of mining activities, the site shall be revegetated with native species to protect the underlying drinking water aquifer in accordance with a Site Rehabilitation Plan that is approved by Hunter Water prior to the commencement of operations. The Site Rehabilitation Plan shall include details such as completion criteria, species and density to be established for respective strata, methods of establishment, weed control, monitoring and management timeframes.

Portions of the site are subject to restrictive covenants that benefit Hunter Water. The intent of the covenants is to protect the drinking water source from inappropriate development that may threaten water quality. While Hunter Water does not object to the proposed quarry if the recommended conditions of consent are adopted, it retains an interest in the future use of the land. Hunter Water should be consulted about any proposed future use of the site.

If you require further advice or clarification regarding the submission, please contact me on (02) 4979 9545.

Yours sincerely

 12.2.16
per / **Malcolm Withers**
Senior Developer Services Engineer