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NSW Department of Planning, Industry and Environment
PO Box 39
Sydney NSW 2001

Attention: Deana Burn
Via email: deana.burn@planning.nsw.gov.au

Dear Deana

**RE: RESOURCE RECOVERY FACILITY AND TRUCK PARKING DEPOT – 21D & 21F SCHOOL DRIVE, TOMAGO – ADVICE ON ENVIRONMENTAL IMPACT STATEMENT**

Thank you for your referral of 15 December 2020 requesting Hunter Water's comment on the proposed Resource Recovery Facility and Truck Parking Depot at 21D (Lot 11 DP 270328) and 21F (Lot 8 DP 270328) School Drive, Tomago and a small portion of Lot 301 DP 634536. This letter follows previous advice provided by Hunter Water to Jackson Environment and Planning, dated 1 September 2020, during preparation of the Environmental Impact Statement (EIS).

Hunter Water understands that this development involves the storage and processing of up to 98,000 tonnes of solid and liquid waste materials per year, including some putrescible and hazardous wastes.

The development site is located on the Tomago Sandbeds aquifer and is adjacent to, but outside of, the Tomago Special Area as gazetted in the *Hunter Water Regulation 2015*. The Tomago Special Area boundary approximately aligns with the aquifer limits and typically follows lot boundaries. The Tomago 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. The aquifer requires appropriate management to protect the water source from potential pollution caused by industry and other activities.

The proposed development is located close to the aquifer margin, where the hydraulic gradient generally directs groundwater flows to the south, towards the Hunter River. While recognising the presence of contamination in parts of the site due to the previous industrial use, Hunter Water notes the close proximity of the proposed development to the Special Area and considers that contaminated runoff from the site has the potential to infiltrate into the groundwater source. The proposed recycling activities at the Tomago Resource Recovery Facility, particularly activities associated with hazardous materials, may have the potential to introduce contaminants (oils, greases and chemicals) into the aquifer if appropriate management and operational procedures are not implemented.

Section 2.24 "Integrated Water Management" of the EIS provides a description of the water management strategy used for the previous development at the site. This includes details on the size of existing rainwater tanks, the existing onsite sewerage treatment system (including reuse as subsurface irrigation), and proposed methods for dealing with process water reject

(stored separately and tankered off site). This information contradicts details provided in the Soil and Water Management Plan prepared by Northrop, included as Appendix J of the EIS. For the purpose of this letter, it has been assumed that the details in the Soil and Water Management Plan are correct.

**Pollution Spills**
To support the recycling operations and truck parking depot, some storage tanks for fuels, liquid waste and waste oils are to be constructed outdoors within self-bunded and secure storage tanks. The waste and recovery processing for each of the plants and facilities is proposed to be performed indoors, with the buildings designed to prevent potential pollutants from entering the stormwater system. Bunding is to be provided around the interior perimeter of the three main buildings, to provide an emergency storage volume.

Adequate detail is not contained in the EIS to justify that the specified bunded volume is sufficient to contain possible spills of potentially hazardous waste. Hunter Water recommends that all bunding on site, with the purpose of containing hazardous waste, be designed and constructed in accordance with the relevant Australian Standard.

As stated in the EIS, a Pollution Incident Response Management Plan and an Environmental Management Plan will be prepared for the site. Hunter Water recommends that the procedure for a spill should include the requirement for immediate clean-up and to notify Hunter Water within 24 hours of any spills occurring that infiltrate the aquifer.

**Water Supply**
The expected potable water demand for the proposed development is estimated to be 0.73 ML / year, and will primarily service bathroom (hand washing) and kitchenette use. Two 100 kL rainwater tanks capturing rainfall runoff from the roof of Building 1 and Building 2 will supplement this supply and be used for toilet flushing. The proposed water demand for kitchen and bathroom facilities are within Hunter Water's supply capabilities. The potential use of potable water for process water is addressed under the next heading.

**Process Water and Wastewater**
The Soil and Water Management Plan has stated that the volume of water required from Hunter Water's supply to be used as process water is negligible. The EIS also appears to understate the volume of process wastewater to be generated from the development. The process water system is stated to be a "closed loop" where it is captured and reused until it is lost through evaporation. It is expected that wastewater would be generated through site activities (for example, hosing internal floor areas and washing down trucks). Hunter Water recommends that a more detailed assessment be provided to justify the "closed loop" statement. Expected volumes of process wastewater, and the likely concentrations and types of contaminants contained within it, should be clearly identified and reported.

Although the majority of waste transported to the site will be recycled on site, some waste is to be disposed at a lawful landfill. The EIS suggests that some of the liquid waste from the Drill Mud Recycling Facility and the Packaged Food Recycling Plant may be disposed of by Hunter Water. Hunter Water requests clarification of this and, if so, information be provided detailing the pollutant types and loads expected to be generated by the site activities to clarify the feasibility of trade waste management requirements.

**Sewage Wastewater**
The site is currently serviced by an Envirocycle M23 on-site sewage treatment system. A recent condition inspection found it to be in a "reasonable" condition and provided recommendation to replace or repair broken or failed components.

The existing system is stated to have a treatment capacity of 4.5-5 kL / day with a 1 L/s peak treatment rate. Treated water is stored in separate holding tank and periodically pumped off site. No on-site disposal currently exists or is planned for future development at the site.

As the expected sewer demands for the facility will be less than the previous use of the site, the existing system is deemed to have sufficient capacity. Hunter Water considers that increasing the capacity of onsite storage tanks or increasing the pump out frequency, as stated in the EIS, are viable solutions should the existing system be found to be under capacity in the future.

Hunter Water is satisfied that the existing wastewater system is suitable for the proposed site operation, however it is recommended that a follow up inspection be undertaken to confirm repair of system has been undertaken to a satisfactory standard.

**Stormwater**
As detailed in the Soil and Water Management Plan, no changes are proposed to the existing stormwater drainage system on site 21D. Although the site is currently unoccupied, it was previously used for wire and cable manufacturing. The existing stormwater system consists of detention storages, infiltration tanks and two water quality treatment devices, namely a Humeceptor STC-5 and a Humes Jellyfish HF-1800.

MUSIC modelling included in the Soil and Water Management Plan indicates that the existing system will achieve reductions in loads of TSS, TP, TN and gross pollutants, satisfying Councils water quality targets. Hunter Water would like to note that the model was developed using standard parameters in accordance with the NSW MUSIC Modelling Guidelines (BMT WBM, 2015). It is unclear if pollutant loads have been calculated specifically for the proposed use of this site (i.e. waste resource recovery facility), or if standard “industrial” parameters have been adopted. Hunter Water is concerned that pollutant loads generated for the site may be underestimated in the modelling based on the proposed change in use.

The proposed stormwater system for site 21F (the truck parking depot) consists of pits fitted with filter inserts to capture and remove gross pollutants and an oil absorbent pillow to capture and remove small amounts of oil or hydrocarbons. A stormwater treatment chamber contains filter cartridges to remove fine sediments and nutrients such as phosphorous and nitrogen. Stormwater is then conveyed to an underground infiltration tank which uses void forming storage units (e.g. Atlantis Flo-cell or similar) wrapped in a permeable geotextile, allowing infiltration into the natural soils at the base of the tank. The volume of storage and infiltration limits of the tank limit runoff to less than the pre-developed site.

In the event of high flows exceeding capacity of underground infiltration tank, stormwater will pond on the hardstand carparking area before draining onto the adjacent lot (Lot 70 DP 634535) via a level spreader. The level spreader is located along the north eastern site boundary and has been designed to discharge surface water off site in a way that will mimic the natural flow regime of the site. Hunter Water previously requested that the EIS demonstrate that the proposed stormwater management system will appropriately capture all potentially contaminated stormwater from the development and divert it away from the drinking water catchment.

Measures to maintain and monitor the effectiveness of the existing or proposed stormwater controls have not been included within the EIS or Soil and Water Management Plan. Hunter Water recommends that methods to sample and monitor stormwater quality on the site and discharging away from the site be considered and addressed in the Environmental Management Plan.

**Groundwater Contamination**
In addition to risks associated with stormwater run-off, investigations conducted as part of the Detailed Contamination Assessment indicated that the site has been impacted by contamination comprising of heavy metals at concentrations exceeding guideline values for commercial and industrial land use. It is suggested in the EIS that implementation of a Remedial Action Plan proposed for the site will enable the site to meet environmental requirements.

Hunter Water recommends that a site contamination and groundwater quality monitoring plan be included in the Environmental Management Plan to demonstrate the effectiveness of the proposed site management controls. Hunter Water would be interested in the opportunity to review the results of site monitoring for this purpose.

If you require further advice or clarification regarding the submission, please contact me on (02) 4979 9676.

Yours sincerely

**Wesley Jones**
**Development Services Engineer**