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Our Ref: HW2017-775/9

General Manager  
Port Stephens Council  
PO Box 42  
Raymond Terrace NSW 2324

Attention: Dylan Mitchell  
Via email: [dylan.mitchell@portstephens.nsw.gov.au](mailto:dylan.mitchell@portstephens.nsw.gov.au)

Dear Dylan

**RE: DA 16-2019-445-1 – PROPOSED COMMERCIAL PREMISES, MIXED USE DEVELOPMENT AND SUBDIVISION, 795 MEDOWIE ROAD, MEDOWIE**

Thank you for providing MUSIC modelling for the proposed mixed use development for LOT: 1 DP: 1215257, 795 Medowie Road, Medowie. Hunter Water understands that this development includes commercial premises, a medical centre, retail premises, a childcare centre, associated site and civil works, and a four lot Torrens title subdivision of one of the proposed lots.

The proposed development falls within Hunter Water's Grahamstown Dam Drinking Water Special Area as gazetted in the *Hunter Water Regulation 2015*. Grahamstown Dam supplies drinking water to approximately 60% of the population of the Lower Hunter.

Hunter Water's Operating Licence requires compliance with the Framework for Management of Drinking Water Quality that is part of the Australian Drinking Water Guidelines (ADWG). The Framework requires adoption of a multiple barrier approach to water quality, and states that "the most effective barrier is protection of source water to the maximum degree practical". Protection of land within the Special Area is key to ensuring that this barrier is effective. In accordance with the *Hunter Water Regulation 2015*, prevention of pollution or contamination of water in the Special Area is of paramount importance to the Corporation.

Hunter Water expects that all development in drinking water catchments will 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.

The primary ways in which this development could adversely affect water quality in the catchment are through sewage and stormwater discharge during the occupation phase, which can introduce sediment, pollutants and pathogens into water bodies.

As the development will be connected to the reticulated sewer network, it is considered to meet NorBE in terms of wastewater.

Stormwater quality for the proposed development was assessed through MUSIC modelling. A number of issues were noted with the stormwater modelling inputs, including use of a default catchment rather than the appropriate sensitive catchment, and modification of the default constant values used for the sedimentation basins without justification. Sensitivity testing undertaken by Hunter Water indicated that, when these variations were corrected, the stormwater treatment train appeared to have the ability to meet NorBE and Council's water quality stripping targets.

It was, however, noted that the proposed Gross Pollutant Traps and filters were modelled as having the ability to remove nutrients, and that this nutrient removal was necessary for the treatment train to meet NorBE for nitrogen. As the ability of these treatment devices to remove pollutants can be highly variable, Hunter Water considers that Council should determine whether the assumed nutrient removal efficiencies are acceptable.

If you require further advice or clarification regarding the submission, or questions regarding the application of NorBE, please contact me on (02) 4979 9582.

Yours sincerely

**Matthew Russell**  
**Account Manager Major Development**