Capital Engineering Consultants

22nd November, 2021
REF: SW21079.L01

RE: RESPONSE TO COUNCIL – 142 Ocean Street, Narrabeen

Dear Sir/Madam,

Capital Engineering Consultants (CEC) has been appointed to carry out the Stormwater Management Plan for the above-mentioned development and feel it is needed to outline and justify why certain design principles have been adopted. Below is an outline of the design decisions addressing each of the relevant comments raised by in Council's email dated 27th October 2021 which are detailed below:

Development Engineering

"The Stormwater Management Plan has been reviewed and, whilst on site absorption is supported given the underlying geology, the following additional information is required in accordance with Appendix 3 of Councils Water Management Policy for Development."

A Geotechnical report was conducted on April, 2021 by Crozier Geotechnical Consultants outlining the following details including the depth to rock, depth to the water table, measured infiltration rate and any seepage problems that can occur to the structure or adjoining properties from the implementation of an absorption trench on-site. Plans have been amended in the latest revision prepared by CEC submitted to Council to include calculations obtained by Mass Curve Analysis to determine whether any absorption is permitted for the site. All relevant calculations from Council's DCP have been accounted for in the calculations.

"*An overflow mechanism in the form of a level spreader must be provided for all storms greater than the 2% AEP storm, up to and including the 1% AEP storm. The overflow mechanism is required to minimise overland impacts on adjoining properties."*

The Absorption System provided in the attached Stormwater Plans was designed for the 1% AEP storm, hence an overflow mechanism has not been provided as the proposed system already minimises overland impacts on adjoining properties.

"The roof guttering and downpipe system should be designed to collect the 2% AEP design rainfall and pipe it to the absorption system, or alternatively provide for surface collection of guttering overflows into the absorption system. Drainage calculations must be submitted with the plans. Where a high water table is encountered and a gravel filled trench design is proposed, the base of the trench should be at least 500mm above the water table to accommodate fluctuations of the groundwater. When considering available storage volumes for the storage design methods, a maximum of 20% voids in the base aggregate may be used. The absorption pit should not be located within three metres of the side or rear boundary, or three metres from any on-site building or neighbouring buildings."

The proposed roof gutter drainage submitted to Council in the latest Stormwater Plans prepared by CEC have been designed for the 1% AEP Storm.

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Hence, the latest Plans submitted by Capital Engineering Consultants PTY Ltd Revision D have addressed all Council's comments and concerns. I hope this outlines our position on the above matters, if you have any further queries, please do not hesitate to contact the undersigned on 02 9630 0121,

Yours faithfully,

CAPITAL ENGINEERING CONSULTANTS

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