Australian
Consulting
Engineers Pty Ltd
ABN: 82 084 059 941 ACN: 084 059 941

General Manager
Hills Shire Council
PO BOX 7064
Baulkham Hills, BC2153

5ST June 2019

Our Reference: 180511

Site Sewage Management
RE: 1 Larapinta Place, Glenhaven
DA Application: 1867 / 2018 / JP

Dear Sir,

This correspondence is in support of a development application at the above address in compliance with Council's Local Approvals Policy (2016).

The development is to be constructed on a site area of 2.0261 Ha. A two level mosque shall be constructed including car parking facilities that are partially underground.

The site waste water shall be disposed onsite utilizing an aerated wastewater treatment system and combined above ground effluent disposal (spray irrigation) and an irrigation overflow storage tank.

An expected maximum daily number of worshippers throughout the week would be 420 on a Friday.

As outlined in Council Policy 28, an underground onsite commercial aerated wastewater treatment system shall be installed with an aboveground spray irrigation system.

Sizing of the wastewater treatment system is based on Council Policy 28, page 32 at an effluent storage rate of 12 litres/person/day : 420 X 12 = 5,040 L/P/D.

To treat the effluent, the wastewater treatment system shall be of Ultra Clear manufacture, model CT20 having the capacity of 7,100 litres per day. The unit contains five (5) chambers with the final chamber used for disinfection prior to site disposal. This plant shall be located underground.

The site soil texture description as outlined by Geotechnical Consultants Australia report dated 26.11.2018 page 8, describes the residual soils and fill as sandy loams to a site average depth of 400 millimetres. The proposed minimum soil depths for the spray irrigation system will be 600 millimetres.

Site observations and the geotechnical report outlines that rock outcrops are evident. These outcrops shall be removed to allow the minimum soil depths of 600mm to be maintained for landscaping and irrigation system installation and operation.

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The expected (Friday) discharge would be 420 (worshippers) X 5 mm/day (design irrigation rate) equals 2,100 m^2 for an effluent irrigation footprint. This is based on Council Policy 34, page 25.

The site effluent shall be primarily disposed of by an onsite spray irrigation system over a landscaping footprint of 560m^2. Excess waste water from the irrigation storage tank will overflow directed to an underground storage tank adjacent to the loading dock. This overflow waste water will be disposed of off site.

The primary effluent disposal area shall be provided with an aboveground "Rainbird" irrigation system.

This aboveground irrigation system which includes sprays on manifolded pipelines is to be designed and installed by a Licensed Contractor to comply with Council, Australian Standards and system manufacturers / suppliers requirements and specifications.

Due to the head of the creek, additional site effluent irrigation can not be provided as the creek head is within 100m of the building.

We trust this advice is of assistance.

Kind regards,

Signature:

Imran Sandhu (Head of Building Services)
Principal Electrical Engineer
HND Electrical
BEng Electrical
MIE (AUST)
NER

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