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Thursday, 5 February 2009 071558P

Denis Ghersinich
VALAD Property Group
Level 9, 1 Chifley Square
SYDNEY NSW 2000

RE: IKEA TEMPE - CIVIL STORMWATER RESPONSE
Major Project Application MP 07_0149

Attention: Denis

The following statement is a response to comments from Marrickville Council in regards to further information required for the site stormwater drainage for MP submission of the above mentioned property.

1. *The proposed development proposes alterations to the existing median islands in the Princes Highway and changes to the kerb alignment on the western side of the Highway. Additional information or investigation is required to ensure that these changes do not adversely impact on the drainage of the Princes Highway and that necessary adjustments/augmentation of the existing storm water system is undertaken. Additional kerb inlet pits (and possibly a dish drain) shall be installed at the location of the new traffic signals to ensure that storm water from the Princes Highway is not diverted into the development site.*

   Response
   TTW have included the addition of a stormwater pits in order to protect the IKEA site from accepting 100 ARI flows on existing 750 diameter drainage line, on the east side of the Princes Hwy, directly adjacent to the proposed intersection. In case of blockage we have created a crest to prevent the flow from inundating the site. Please find the preliminary concept detailed on plan C102.

2. *Insufficient detail has been provided on the design and of the OSD basin in particular on how water enters the basin. The storage basin is an above ground basin constructed from block work. As the depth of water in the basin may reach 2 metres it is anticipated that the basin will need to be fenced for safety reasons. From an aesthetic point of view the design of the basin is not very appealing and this issue is not properly resolved by the current application.*

   Response
   The current drawings show the flows from the 20yr storm event being collected in the pipe system. The invert levels and pipe grades show how this is to be discharged into the detention basin through head walls. TTW have reconfigured the pipes from an offline to a online OSD system with flow directed to a gross pollutant trap (GPT) then into a bio-retention swale and pond. We have provided addition sections and details through the landscaped OSD basin / bio-retention swale and pond. See revised drawings for this design revision.

   A 1.8m high pool fence shall guard against any persons entering the pond areas.

   We have attached a catchment plan showing what is draining to the southern OSD basin near Smith Street and also the area bypassing to directly to Bellevue Street. We have limited proposed total net flow to existing flow

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conditions as set out by Marrickville Council policy. See DRAINS file submitted with original DA and revised storm water system report.

3. *Any external catchments or sites that presently drain to the development site will need to be catered for within the design of the site drainage. The rear car park of 728 Princes highway (Pretty Girl Site) and the rear of 6 Wood Street appear to have a trapped low point adjacent to the development site. These 2 areas will need to be investigated and if required an inter-allotment drainage system (with appropriate easements) shall be provided for within the IKEA development site. The low points are identified in red on the included aerial photograph.*

   Response
   The external catchment mentioned is draining from the rear of the Pretty Girl site and carried through the easement on the northern boundary of 6 Wood Street east to the existing 750 dia pipe running through the IKEA site. The low point will be treated by providing a sump pit within the proposed development and maintaining the existing 750 diameter line heading south. See the updated plan C106 & C107 which clarifies this. The 750 dia pipe carries just over 1ha in area developing a flow of 540L/s in 100ARI storm. We have checked the existing pipe size and have found it sufficient to carry the flow.

4. *Also the applicant shall investigate the existence of any current inter-allotment drainage systems and allow for them in the design of the IKEA site drainage. Council drainage plans show that an inter-allotment drainage line from 6 Wood Street may be in existence and will need to be catered for.*

   Response
   Interallotment drainage from No.6 Wood Street is the only other coming through the site. As mentioned in point three above we will maintain this line.

5. *All stormwater from the site in particular the carpark area shall be treated to ensure the removal of oil, sediment and other pollutants. The applicant shall demonstrate how its proposed treatment measures will achieve the Current DECC environmental targets as follows:*
   - *90% reduction in the average annual grass pollutant (size>5mm) load:*
   - *85% reduction in the average annual total suspended solids load:*
   - *65% reduction in the average annual total phosphorus load:*
   - *45% reduction in the average annual total nitrogen load:*

   Response
   TTW have amended the design to include a gross pollutant trap (GPT), flowing to a landscaped bio-retention swale and pond to treat the storm water to achieve the above targets. See redesign for details.
   A water quality model has been undertaken (using MUSIC) and the stated quality targets has been used as parameters in the model. It will be forwarded to council.

Yours faithfully
TAYLOR THOMSON WHITTING PTY LTD

Anthony Lahoud
Senior Civil Engineer
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