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REF: 10MB4282.LO2

October 6, 2011

Ashfield Council

**Property: 46-56 Liverpool Road, Summer Hill –**

**DA Number: 10.2011.66.1**

**Re: Stormwater drainage**

I refer to the “draft Deferred Commencement” conditions prepared for the JRCC and my previous letter of August 10, 2011 relating to the “Stormwater Drainage Design”.

In reply to the development assessment report, the following items have been addressed or will be addressed accordingly as listed below;

1. OSD calculations as requested are attached again. The calculations previously provided prove the proposed storage volume is adequate. Total site discharge is also shown in the calculations. The calculations consider the “entire built upon site” approx 5800m<sup>2</sup>. The remaining site area (approx 6000m<sup>2</sup>) is listed as “landscape heritage significant” and not built on. This area is simply landscaped and beautified and this area should not be subject to on-site detention as there is not increase in impervious area.
2. The development partly drains to the 300 x 250 box culvert in Liverpool Road via the existing kerb inlet pit. A preliminary investigation of the pit and pipe has revealed the pipe to discharge back into the gutter across the road from Gower St. Our client has accepted the pipe needs to be extended to the nearest under ground pipe system at the corner of Parramatta Road. A full long-section of the proposed pipe will be designed and detailed prior to CC. We trust this can be conditioned accordingly.
3. Separate calculations for the areas bypassing the OSD are shown in the DRAINS calculations. A very small landscaped area at the North-Eastern corner of the property is lower than the OSD system and therefore bypasses. This small area drains to Gower Street and the flows are minimal (less than 20 l/s). We predict a minimum net reduction of 150 l/s to Gower St.
4. The stormwater discharge rate from the existing dwelling to Grosvenor Cr is approx 50 l/s. The house is heritage listed and there will not be any additions or external modifications. This catchment apart from the unchanged building is mainly landscaped.
5. The sump and pump design can be found on page 4 of 4 of the drainage plans. The design specified pump rate, pump type, pump line and sump size. The pump well holding pit has been designed for 1:100 ARI.
6. Council have requested proof of all internal drainage lines being designed for 1:100 ARI. As per the general requirements of AS3500 all internal drainage pipes are to be designed for 1:20 ARI. All overland flow paths are designed for 1:100 ARI flow. Council need to be more specific in this regard. The author has attempted to contact Council’s drainage Engineer for clarification with no success.
7. The pump well bypasses the OSD system as stated in Council’s letter. I confirm the on-site detention system has allowed for the bypassing flows of approx 28 l/s in total.

All other issues unrelated to drainage are being addressed by the consulting team separately.

Should you have any further queries do not hesitate to contact the undersigned.

Yours faithfully,

Mark Anthony Boudib  
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Director