MARRICKVILLE council

OUR REF:
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Director-General

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Sam Haddad
Director General
NSW Department of Planning and Infrastructure
GPO Box 39
SYDNEY NSW 2001

PMU015950

Attention: Amy Watson

Dear Mr Haddad

78-90 OLD CANTERBURY ROAD, LEWISHAM (MP08_0195)
ADDITIONAL ENGINEERING COMMENTS ON PREFERRED PROJECT REPORT

Council recently made a submission on 15 September 2011 on the Preferred Project Report for a mixed use development at 78-90 Old Canterbury Road, Lewisham. Further to this submission, please find attached Council's submission on the flooding and access issues of the Concept Plan from Council's Development Engineer.

For further enquiries please contact me on 9335 2274.

Yours sincerely

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Additional Engineering Comments on the Preferred Project Report for 78-90 Old Canterbury Road, Lewisham (MP08_0195)

Flooding:

The Flood Management Report by Cardno ITC is unsatisfactory for the following reasons:

1. No independent assessment of flooding from the Hawthorne Canal Catchment was undertaken. Cardno ITC relied upon the Hawthorne Canal Flood Assessment report by Meinhardt dated 29 July 2010 submitted as part of the redevelopment of the former Allied Mills Site in Summer Hill. This report has no status and has been superseded by a Flooding Report by Civil Certification. The current Flooding Report for the Allied Mills Site includes some assessment of the potential blockages to the drainage system and climate change scenarios as required by the Department of Planning. As a result of this new study the estimated 1 in 100 year flood levels from the Hawthorne Canal have increased. For example at section 270 (which aligns approximately with the location of the underground carpark) the 1 in 100 year flood level of RL 8.76m AHD established by the Meinhardt report has increased to 10.57m AHD in the new Civil Certification report. It should be noted that this new flood level of 10.57m AHD is 870mm higher than the level of the proposed entry to the underground carpark;

2. The site survey by Stratasurv (Drawing No. 159301 Rev F) relied upon by Cardno ITC to determine flood levels and in the design of overland flow paths is not to Australian Height Datum (AHD). The survey was compared to Council's ALS data, survey from the adjacent Allied Mills Site, Council survey at Henry Street and an adjacent site survey at 73 Old Canterbury Road and it appears that Stratasurv survey levels are 400mm higher than AHD levels;

3. The Cardno ITC Flood Management report does comply with the NSW Floodplain Development Manual (2005) as required by DGR No. 15. In particular in terms of flood hazard categorisation and the assessment of flood risk for both the mainstream flooding from the Hawthorne Canal and the local overland flooding from both Old Canterbury Road and Brown Street.

4. No assessment of The Probable Maximum Flood (PMF) has been undertaken;

5. The proposed redirection of overland flows from Old Canterbury Road will result in an increased frequency of flooding of Old Canterbury Road during lower Average Recurrence Interval (ARI) storms due to the level at which ponding begins to overflow the development site has been increased from RL 12.61m to RL 12.73m;

6. Overland flows from the Old Canterbury Road low point have been redirected around the site and discharged onto railway land in the location of the future "light rail" station. This may lead to frequent flooding of the "light rail" station and will need to be approved by State Rail;

7. The overland flows from Brown Street are redirected and discharge directly at the entrance of the basement carpark which will result in the flooding of the basement carpark; and

8. The existing Council pipe from the low point in Old Canterbury Road proposed to be upgraded and relocated around the site as detailed on Cardno ITC Drawing No. N09612-DA-H02 encroaches upon State Rail Property along the western boundary. This encroachment will need to be approved by State Rail.

As a result of the above issues and deficiencies with the flood report by Cardno ITC a new flood study will need to be submitted which provides the following information:

- The study shall determine the nature and extent of the existing flooding on the site for a full range of events up to the Probable Maximum Flood (PMF) in accordance with the NSW Floodplain Development Manual (2005);
- The study shall also include the potential effects of climate change, sea level rise and an increase in rainfall fall intensity as required by the DGR;
- The study shall investigate the potential for the culvert under Longport Street being blocked during extreme storms. In investigating the potential for blockage the study shall have regard to recent studies under taken by Wollongong Council after the 1998 Floods which found that for culverts with an opening of less than 6m the degree of blockage tended to be high with 58% being totally blocked and current research being undertaken by Australian Rainfall and Runoff (AR&R-Blockage of Hydraulic Structures November 2009);
- The study shall also provide Hazard Categories for the site and the surrounding area;
- The study shall recommend suitable Flood Planning Level(s) for the site with suitable freeboard having regard to the risk management principals consistent with Floodplain Development Manual and the likelihood of the blockage of the Longport Street culvert;
- Investigate if the proposed underground carpark is compatible with the flood risk/hazard for the site and if specific flood evacuation plans/warning systems are required or to be implemented;
- Recommend where possible suitable works to reduce the flood risk to an acceptable level;
- The development should not detrimentally increase the potential flood affection on other properties either individually or in combination with the cumulative impact of the development that is likely to occur in the surrounding area; and
- Due to the complexity of the Catchment with multiple overland flow paths combining and interacting it is recommended that a flood study that utilises a fully dynamic 1D/2D computer model be used and the following information be provided and mapped (This is consistent with the requirements of Sydney Water with regard to its comments on the adjacent Allied Mills Site):
    i) water surface contours (including the 100year flood and PMF extents);
    ii) velocity vectors;
    iii) velocity and depth product contours;
    iv) delineation of flood risk precincts; and
    v) Show both existing and proposed flood profiles for the full range of events for the total development.

Access and parking:

- The development proposes the creation of a new road along western boundary of the site which is to be dedicated to Council as a public road. It is noted that the proposed underground carpark will encroach under the new public road which is unacceptable. Therefore the development shall be redesigned to remove this encroachment from under the future public road;

- All roads shall be designed to allow for 2 way vehicular traffic and allow for the provision of a parking lane on at least one side (minimum width 8.5m between kerbs). Also footpaths shall be a minimum 3.0m to provide suitable pedestrian access to residents and pedestrians, while allowing for the provision of suitable mature street trees to be planted to provide suitable amenity for residents consistent with DGR's No. 5;

- Similarly, Brown, William and Hudson Street shall be widened as above to provide 2-way traffic including a parking lane on one side and 3m footpaths on both sides;

- Minimum 3mx3m splay corners shall be provided at all intersections to improve vehicular access and to provide for adequate site distance to both vehicles and pedestrians. The splays shall be dedicated to Council as road widening.

- Vehicular access, standing areas, manoeuvring and service areas shall be designed in accordance with AS 2890.1:2004, AS2890.6:2009 and AS2890.2:2002. In relation to ramp grades it should be noted that Clause 3.3 of AS2890.1:2004 requires the first 6m into the carpark to be at a maximum grade of 1 in 20 for the first 6m.

- No loading dock or service vehicle parking has been provided to the development;

- It shall be demonstrated that a MRV can service the site adequately by the provision on the appropriate vehicle templates (including templates). The plans shall adequately show that a MRV can manoeuvre through the proposed street network and enter and leave the site in a forward direction.

- A cul-de-sac shall be provided at the end of the new public road proposed along the western boundary to allow public vehicles to safely exit the site without having to enter a private underground carpark to exit.