

5 December 2014

Statewide Planning
Level 2, 7 Charles Street
Parramatta NSW 2150

Attention: Matt Daniel

Dear Sir

**PLANNING PROPOSAL – RESIDENTIAL ZONING
181 JAMES RUSE DRIVE, CAMELLIA
FLOOD RELATED ISSUES**

Further to Parramatta City Council's letter dated 18 November 2014, requesting a response to the Bewsher review of our flood assessment report dated September 2014, a meeting with Council was held on the 4th December 2014 to discuss the issues. Following the meeting, Council requested a letter response outlining our justification for the development in terms of flooding aspects.

1. Context of Flood Justification

The NSW government Floodplain Development Manual 2005 (FDM) requires a merits based approach to the management of development on the floodplain so that land is not unnecessarily sterilised from development. The merits based assessment has to be based on achieving the following objectives:-

- no significant adverse flooding impacts on other properties; and
- acceptable levels of risk to personal safety and property damage.

The Council's flood policy is stated as conforming to the FDM.

The flood standard recommended in the FDM and adopted by Council is the 100yr flood and the flood planning level is the 100yr flood level plus 0.5m freeboard.

For this site the respective flood levels are:-

- | | |
|------------------------------|--------------|
| • 100 yr flood level | RL 4.75m AHD |
| • PMF flood level | RL 8.99m AHD |
| • flood planning level (FPL) | RL 5.25m AHD |

The flood planning level has been adopted as the NSW acceptable level of risk in terms of property damage and personal safety. In terms of personal safety, it is also recommended that residents with dwellings below the PMF level have ready access to areas above this level.

The Council has prepared guidelines in its DCP which recommend suggested landuses within the flood hazard categories nominated as Low, Medium and High. Residential uses are allowable in low and medium hazard categories.

The subject site has all three flood hazard categories with the high hazard closest to the river. The basement and podium infrastructure being provided to support the residential development in the low and medium hazard areas make it possible to support residential development in the high hazard area and still achieve the merit based flood objectives. In this merit based assessment, it is not necessary to sterilize the high hazard area from residential development because it can be achieved without significant adverse impacts on flood behaviour and provide more than adequate protection to the risk of property damage and personal safety. No access will be required to the development through areas of high risk hazard.

2. Proposed Development

The proposed basement carpark and podium would form the new landbase for the roads and apartment buildings. The podium level and roads would be at a level of RL 6.5m AHD approximately 1.75m and 1.25m above the 100yr flood level and flood planning level respectively.

Retail and commercial uses would be located at the podium level and the lowest residential floor would be at RL 8m which is 3.25m above the flood planning level. In the PMF, only one level of residences would be affected.

The development will be designed and certified as being structurally sound in a PMF flood.

A Flood Emergency Response Plan would be formulated in the development application and it would involve a combination of audible and visual alarms, signs, dedicated wardens and regular drills for emergency procedures. Evacuation options would be via external roads such as James Ruse Drive via River Road East or Grand Ave North and if these are already flooded, then vertical evacuation of the one level of residents to higher floors.

These arrangements far exceed the acceptable standards set by the FDM because:-

- the minimum residential floor level is 3.25m above the FPL;
- the minimum retail/commercial floor level is 1.25m above the FPL;
- emergency response plans will be in place to assist people in a flood – this assistance is unlikely to be available to many residents elsewhere in the floodplain;
- the building will be structurally sound in a PMF flood which will not be the case for many detached residences in the floodplain with over 3.7m of inundation.

3. Basement Carpark Entry Crest Level

The basement carpark would have an entry crest at the flood planning level. This is the acceptable level of risk adopted by the government. The evacuation of the basement areas will be included in the flood emergency response plan.

In a severe flood beyond the 100yr flood, all residences in the floodplain will be similarly affected by floodwaters including damage to vehicles and the need to clean out homes and garages. As the PMF flood is nearly 4m higher than the flood planning level, there will be extensive damage to detached residences potentially inundated up and over ceiling levels. This is the acceptable level of risk as defined by the government so the need for pumpout and cleaning of the proposed basement carpark in the subject development in a PMF flood should not be a reasonable argument for requiring the basement carpark entry to be set at the PMF level.

4. No Significant Impact on Flood Behaviour

The flood modelling undertaken by Mott MacDonald incorporated the basement and podium design incorporated within the Planning Proposal. The form of the apartments above the podium has changed but these are supported on the podium above the 100yr flood level and hence have no impact on the 100yr flood behaviour.

Mott MacDonald has confirmed that the flood modelling incorporated the flows from the Clay Cliff Creek tributary.

The significance of the predicted range of 100yr flood increases between 0 to 0.04m downstream of the site by Mott MacDonald was assessed on the extent of floodwaters pre and post the development. These plots verified no significant additional incursion of floodwaters into the downstream sites. From this it was concluded that these impacts would not be significant for downstream properties.

5. Section 117 Ministerial Direction

Direction 15 – Flood Prone Land applies to rezoning of land for development on flood prone land. It is aimed at achieving appropriate development in floodprone land which meets the merits based objectives as defined in the FDM. Bewsher requested further information to address the requirement to not permit significant increase in the development of the land.

Direction 15 permits inconsistencies with the direction if it is in accordance with a floodplain risk management plan prepared in accordance with the principles and guidelines of the FDM. The other reason allowed for an inconsistency is if it is of minor significance.

Parramatta City Council has prepared a floodplain risk management plan which permits residential developments over two of the three hazard zones on the site. The inclusion of residential over the high hazard area can be justified on a merits based approach as recommended by the FDM. This extra residential development in the high hazard area has been designed to exceed the objective requirements for flood planning management as setout in the FDM. As such, it is considered of minor significance in terms of appropriate management of development on flood prone land.

Yours faithfully

A handwritten signature in blue ink, appearing to read 'Mark Tooker', is written over a horizontal line.

MARK TOOKER