TS&O COMMENTS ON MAJORS BAY DEVELOPMENT, MORTLAKE

The following are comments on the Majors Bay development, Mortlake from an engineering perspective; these are supplementary to any that may have already been provided.

Flooding

The proposed development fails to adequately address local flooding and sea level rise.

Please request a determination of the 1 in 100 year flood levels inclusive of all flood factors required by the NSW Floodplain manual inclusive of oceanographic and wave affects.

The Probable Maximum Flood (PMF) level shall be identified on the Flood extent map for the proposal area and comments and planning for such an event, be considered in the proposal. (Need to plan for such an event even if the likelihood is low).

Access/egress from basement is restricted. As shown on the flood extent plan - Figure 4 in the Stormwater Management Report, the 2100 FPL is above the entry levels to car parks.

Suggested planning controls in regards to car parking and driveway access:

- Crest level for basement driveways shall be a minimum of 500mm above the 1 in 100 year rough water level for the Parramatta River (wave heights and sea level rise)
- *Enclosed car parking* and car parking areas shall have *adequate warning systems, signage and exits.*
- The driveway providing access between the road and parking space shall be as high as practical and generally rising in the egress direction.

All basement areas need to be fully waterproofed for consideration of high water table and future sea level rise
It is indicated that the FFL of basements around -0.5 AHD. Therefore, basement areas should be water proofed to prevent flooding as a result of groundwater transmission to basements that are below the 1 in 100 year rough water level.

Planning considerations in respect to flooding should include as a minimum:

1. Floor levels
2. Building components
3. Structural soundness
4. Flood effects
5. Car parking and driveway access [as suggested above]
6. Evacuation (i.e assessment and planning for PMF)
7. Management and design

Shared Zone

The proposed Shared zone is not compliant with RTA standards. Any shared zones shall achieve the design requirements of the RTA.

Public Open Space

The proposed Public Open Space is not suitable for transfer to community ownership as the general community would not be able to well utilise these lands. It appears the developer wishes to have the community pay for the maintenance of lands that would largely be enjoyed by the private residents only.

Public Roads

The Street cross sections show that the Traffic, parking and thresholds have widths that are not in accordance with the RTA and Ausroads requirements. Council requires 3 metre lanes for trafficable lanes and 3.25 metres wide for trafficable lanes that carry bus traffic.

Parking lanes shall be 2.3 metres wide with a 0.5 metre clearance width to adjoining trafficable lanes. This is to permit drivers to open their doors and get out without stepping into the travelling lane.

Stormwater Drainage

The stormwater drainage system shall be designed in accordance with Council's Stormwater Policy. This includes both internal and external drainage infrastructure. The internal drainage system shall be designed to ensure that there is no detrimental affect to the receiving Waterway and adjoining properties both in quality (pollutant loads) and quantity (increased runoff). The external drainage system need to be upgraded to meet the demand of the proposed development to minimise nuisance flooding and upgrade to current standards. The proposal does not meet Council's design parameters.

Utilities

All utility pillars and kiosks shall be recessed within the private property. No pillars or kiosks shall be installed within the streetscape. These pillars and kiosks form pedestrian obstruction and trip hazards.

Ownership and Long Term Management of the Foreshore Accessway

The Developer shall either:

Wholly reconstruct the seawall to achieve a 100 year design life in accordance with the marine structures code and to a height not less than 0.5m above the 1 in 100 year rough water level. The developer shall then fill to achieve this level behind the sea wall. The design level was chosen in acknowledgement that the erosive effects of wave action upon the land could cause a failure of the adjoining developments foundations. The foreshore land would be then acceptable for the transfer of the asset for council's ownership and management.

Alternatively,

An easement for public access is provided to the community for the foreshore land. Ownership for the land remains with the developer. The developer shall then ensure the development is safe should the seawall overtop and threaten the building.

Public Infrastructure

All public infrastructures shall be designed and constructed to Council's satisfaction. Plans, specifications supporting information shall be submitted for Council acceptance prior to the commencement of any work which is intended to be transferred to Council. The developer is required to achieve a Council approval in accordance with Section 138 of the Roads Act 1993 prior to the commencement of any works occurring within the road reserve.