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MR MARK TOOKER
35 - 39 FOAMCREST AVE
NEWPORT NSW 2106
tookermark@hotmail.com

RE: DA2020/1756 - 353 Barrenjoey Road NEWPORT NSW 2106

Mark Tooker
Newport Anglican Church
tookermark@hotmail.com

DA2020/1756 - 353 Barrenjoey Road Newport NSW 2106
New DA

The new DA revised plans and documents do not address any of my issues as submitted on 21 May 2020 and 12 Nov 2019.

The amended details provided are not adequate to address the impacts of the development on our legal right to drain to Robertson Lane, flooding on the church site and impacts on the foundations of the heritage item along the western boundary of the proposed development.

1. Flooding

The Flood Management Report by Demlakian dated March 2020 provides detailed flood information from Council which is helpful to understand the flood impacts on the church site. In the 100 yr ARI flood, there is overland flow from the church site to the subject property with existing land levels dropping from RL 6.6m in the south eastern corner of the church site to RL 5.5m in the open central courtyard on the subject site. This water flows from the church site through a 5.5m wide opening between two buildings on the subject site.

It then ponds in this central courtyard until it can flow out the existing 3.6 m wide driveway to Robertson Lane which has a crest level at about RL 6.3m. The predicted 100 yr ARI flood level at the south western corner of the subject site is RL 6.99m. The Council data shows flood levels and velocities for the open areas of the site. It is evident that flood storage does occur on the site and the development will remove this flood storage and relocate it onto the church site thereby increasing flood levels on the church site.

The flood study proposes a 0.3m wide overland flow channel along the western boundary to mitigate any adverse impact on flood levels on the church site. There two problems with this channel. Firstly, if at present flood waters flow onto the subject site through a 5.5m wide corridor and then off the subject site through a 3.6m wide driveway, how is a 0.3m wide channel going to mitigate adverse impacts on the church site. The channel cannot match the existing flow capacity.

Secondly, the proposed mitigation channel is located in a different location to that of the existing overland flow path and has no ground slope (extending from RL 6.6 on the church site to RL 6.6m at the existing footpath level at Robertson Lane). The mitigation measure needs to be a 3m wide drainage easement along the western boundary which is subject to a positive covenant and restriction on the land title and provides for the inherent right to be able to drain the church site without adverse flooding impacts.

2. Geotechnical and Groundwater

There is no geotechnical or groundwater data or assessment provided to support the adequacy or not of a 1.5m setback provided to the deep excavation either during construction or over the long term. The various drawings are inconsistent as to the depth of this proposed setback. I would hope that this setback extends from ground level to the full depth of the basements.

The proposed setback is completely inadequate given that a heritage item on shallow footings is located less than 1m from the western boundary of the subject site. The basement will extend significantly below groundwater levels requiring continuous dewatering during construction (RL 0m AHD is mean tide level in the ocean) and lowering of groundwater levels. This combined with construction vibrations could cause significant damage to shallow footings and damage to the heritage building.

The natural flow of groundwater will be towards the ocean in the east. Following completion of the basement, groundwater will be prevented from flowing to the east by the basement wall and will be accumulated on the western side of the building thereby raising groundwater levels under the heritage building on the church site. This could lead to damage to foundations and the heritage building.

There is no data or detailed assessment of these important matters which should be undertaken at the DA stage given the likely potential for impacts especially on the heritage building. In summary, further detailed data collection and assessment as detailed above is required prior to any final decision on this DA. If this data or assessment is not provided, then the building, including all the basements and at ground level, should be setback a minimum 3m from the western boundary.

Our position in summary is as follows.

1. Flood Impacts - Issues not addressed

a. Loss of flood storage

- i. The 100 yr flood storage is shown on the Council's Flood Information Request info on pages 4 and 5 for Lot 65 351 Barrenjoey Rd and Lot 66 353 Barrenjoey Rd - there is no quantification of the storage lost and the increased flood levels on the church site;
- ii. The flood storage lost and increased flood levels on the Church site will be greater for floods more severe than the 100yr flood but there is no quantification of this impact;
- iii. Council's flood policy at A3 requires that any loss of flood storage be replaced with compensatory works - this is not done although there is a loss of flood storage.

b. Flood flow path proposed

- i. The drainage path from the church site is through the subject site and then out to Robertson Lane. The drainage flow path proposed is only 0.3m wide at the northern end then appears to reduce to zero width at the southern end. Detailed cross sections should be provided to verify the proposed width at ground level for this drainage flow path. As proposed, it can not provide the same flow path as existing which varies from 3.6m to 5.5m wide. This will result in closing off the church's legal right for a drainage path and will result in higher flood levels on the church site. These issues have not been addressed, quantified or shown adequately on the plans.
- ii. The proposed flood overland flow path provides a proposed outlet to Robertson Lane which has a natural ground level higher than the existing outlet to Robertson Lane. This will also result in higher flood levels on the church site as this flow capacity will be less than at present.
- iii. Flood Mitigation Measures - the overland flow path proposed has to have a flow width of at least 3m to mitigate any adverse flood storage and flow path impacts on the church property and the heritage building.

2. Geotechnical and Groundwater Impacts on Heritage Building

a. Damage to Heritage building

- i. There is no geotechnical data or quantification of impact on the shallow foundations of the

heritage building shallow foundations due to the basement construction. An allowance of a 1.5m setback is not considered sufficient and this should be increased to 3m.

ii. The basement will block the flow of groundwater and cause increased groundwater levels resulting in impacts on the shallow foundations of the heritage building. There is no groundwater data, quantification of this impact or proposed mitigation measures. A 3m setback of the basement is required to provide an alternative flow path for groundwater around the basement without adverse impacts on the church site.