14 July 2023

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Document Number S22042

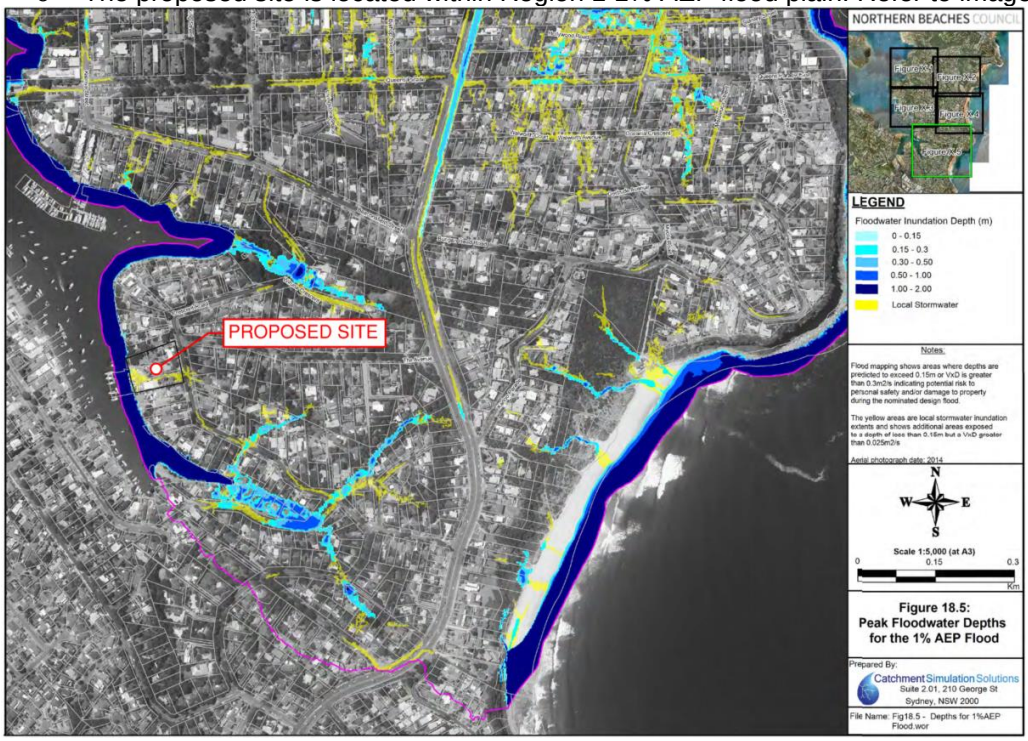
Dear Marco

Re: Newport - DA2022/2152 - 122 Crescent Road - RFI Responses

BG&E provides the following letter in response to Northern Beaches Council's comment on implementing the stormwater management with an OSD tank. The following response encompasses Northern Beaches Council's Water Management for Development Policy (2021) and Australia's best practice using the Australian Rainfall & Runoff (2019) requirements:

Northern Beaches Council Water Management for Development Policy (2021) says the following:

- The proposed site is located within Council's Region 1- Northern Stormwater Region.
    - Any sites located within region 1 which are affected by the 1% AEP flood plain do not require an OSD tank.
    - The proposed site is located within Region 1 1% AEP flood plain. Refer to image below:



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Moreover, the western side of the site is affected by coastal flood inundation per the Newport Flood Study (2019). Hence, the allocation of any OSD tank at the downstream end being the western boundary, would also be within the coastal inundation zone.

Chapter 4 of ARR2019 talks about stormwater volume management, where the aim of managing stormwater at catchment wide analysis is to think about the volume of water being moved. Figure shows the impact of implementing different stormwater volume management devices, such as OSD and retention, compared to the undeveloped and unmanaged flows.

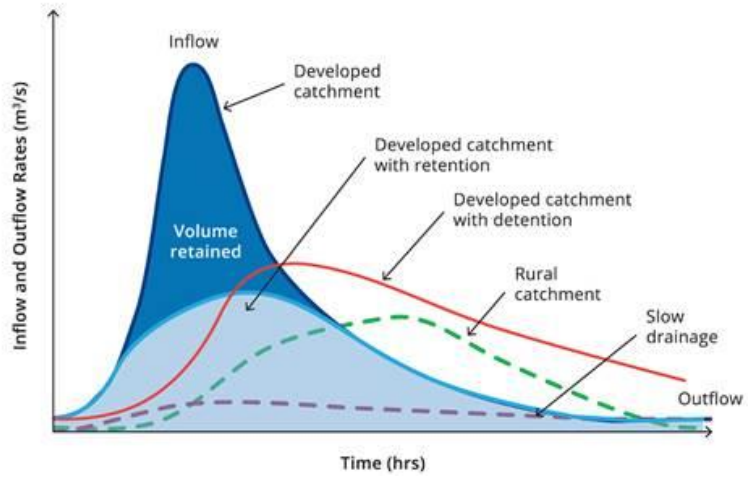

Figure: Developed Catchment with Retentions as compared to Detention and slow Drainage Strategies (From ARR2019 Figure 9.4.3)

The above figure communicates that the idea with the implementation of OSD is to help manage the volume of water in a rain event as to not overwhelm the existing network or to contribute to a larger catchment peak flow event which can lead to flooding event. The major aim is to reduce the peak flow discharge rate and to extend the period out over which stormwater is released into the network.

The main issue with our site being located at the downstream extent of the catchment is if we are required to implement an OSD tank, this would have a significant impedance on the existing council network as it would slow down the discharge rate from our site and align the stormwater discharge from upper catchment.

Thus, it would result in the headwall having to deal with both peak flow rates from the catchment at the same point in time instead of letting them be naturally staggered.

As a result of both council and ARR2019 best practise we are not proposing OSD for DA2022/2152 - 122 Crescent Road

Yours sincerely,

Stephen Hazelwood
Urban Civil Lead