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NSW Department of Planning, Industry and Environment
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Dear Mr Grenadier,

Re: Response to Northside Private Hospital, West Gosford (SSD-10159) – Review of Environmental Impact Statement, 24th March 2020

The letter of 24th March 2020 raises a number of issues pertaining to flooding, in particular point 5 and 9 (see below).

5. Flood impacts have not been adequately assessed

The EIS has not considered the Gosford CBD Local Overland Flow Flood Study (Sept 2018) prepared by Cardno Lawson Trelaor.

An overland flow of up to 500mm through the site is identified in that study. The proponent has not considered how this flooding will affect the proposed development or how the development could change flooding patterns and affect adjoining areas. The flood impact assessment should also address how flooding to the proposed below ground carpark will be managed.

The site's 149 certificate also indicates that the site is affected by flood related development controls. The EIS simply states that this is incorrect, which conflicts with the current flooding study.

Recommendation 5

The impact of overland flows shown in the Gosford CBD Local Overland Flow Study should be assessed to determine how the development needs to be protected from surface water ingress. The impact of the development on flooding of adjacent properties or public areas should also be assessed. Diversion of overland flows is likely to be required to protect the development.

9. Existing stormwater system does not have capacity to receive flows from the site

The stormwater management plan proposes to reduce post development stormwater flow rates from the site to predevelopment levels in accordance with Central Coast Councils requirements. This is proposed to be achieved by piping all stormwater via a large on-site detention tank towards the Racecourse Road boundary of the site and piping the outflow from the tank to Council's stormwater inlet pit in the kerb of Racecourse road. Figure 66 of the EIS shows existing pits and pipes are only 375mm diameter and 450mm diameter in the Council roadway.

The proposed onsite detention discharges via a 450mm diameter pipe. The receiving system does not have the capacity to receive this concentrated flow. Upgrading of Council's existing drainage system will be required if this arrangement is used.

Recommendation 9

The proponent should investigate the capacity of Council's existing stormwater system to receive discharge from the on-site detention system. Alternatively, use of several, smaller on-site detention devices may result in the proposed system being more compatible with the receiving drainage system, and be useful for mitigating overland flow of larger storm events.

Firstly we want to clear up what seems to be a misunderstanding. The letter refers to a 2018 flood study. The pertinent flood studies are:

- Gosford CBD Local Overland Flow Flood Study (18 September 2013)
- Brisbane Water Estuary Catchment Overland Flood Study (2019)

The 2019 study does not address our study area (see figure below).

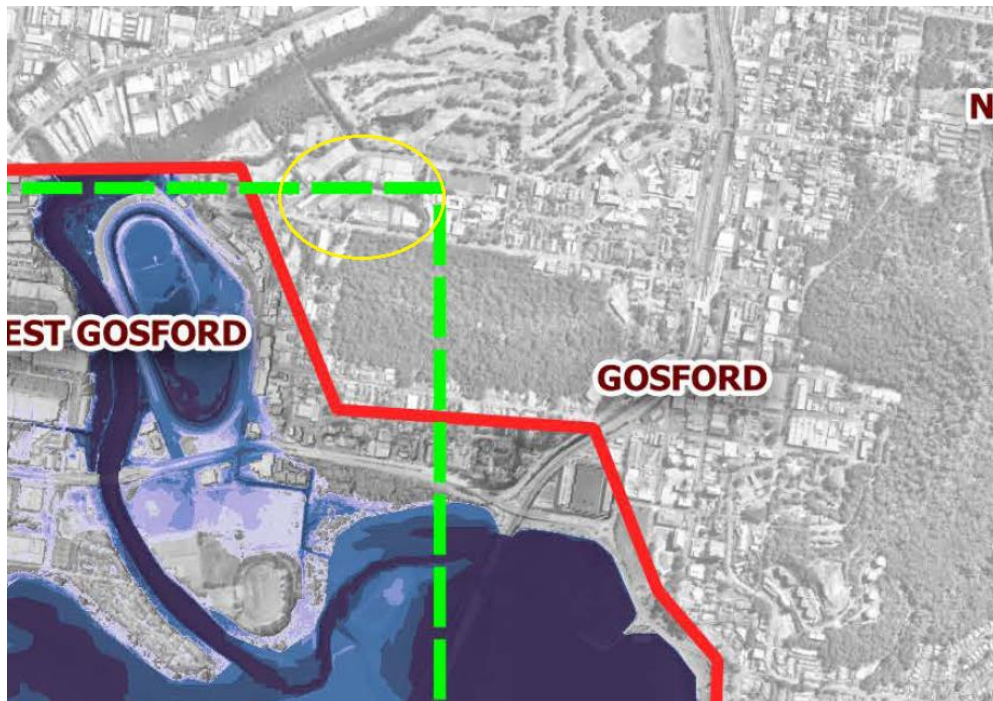


Figure 1: Extract flood map 2019 flood study, yellow circle = subject site location

As such the applicable study is the 2013 flood study, we used in our work dated 29th March 2019. As per that report the flood extent shown indicates a minor amount of ponding in areas away from areas of actual works. Hence our indication in our report from 29th March 2019 that no impacts are expected.

Your letter from 24th March 2020 indicates that you want further information referring to the 2018 study. As per above there is no such other study. We have used the best available information. Based on this a minor amount of ponding occurs and this will not be impacted by the development.

The stormwater study by Warren Smith & Partners (31st July 2020) effectively demonstrates this. The storm water study indicates that the pre-development flow off-site exceeds post-development low off-site for all scenarios examined (see table below).

Table 1: Development area's site discharge results, Storm water study by Warren Smith & Partners, 31st July 2020

Scenario	20% AEP Storm Event (L/s)	10% AEP Storm Event (L/s)	5% AEP Storm Event (L/s)	2% AEP Storm Event (L/s)	1% AEP Storm Event (L/s)
Pre-Development	266	340	434	569	687
Post Development	217	289	330	385	438

With less water leaving the site post development impact off-site is a non-issue (only expected impacts would be reductions in flood behaviour externally). As such both points 5 and 9 are addressed via the stormwater study, which indicates less flow from the site post-development than pre-development.

Yours Sincerely



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