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**Attention: Jester Magpayo**

**RE: Coffs Harbour Hospital Expansion SEAR's – Water Sources**

Bonacci Group (NSW) have been engaged by Health Infrastructure NSW to provide Civil and Structural Engineering services for the above project. We make the following comments with regard to "Water Sources" to address the Secretary's Environmental Assessment Requirements (SSD 8981 dated 10 January 2018):

- The proposed new building is located over an existing carpark. A new carpark is proposed to the west, where an existing helipad and grass area are located. A MUSIC water quality model has been run to check the water quality impacts of the proposed development. It was determined that the proposed building generates a lesser pollutant load compared to the existing carpark, whilst the increased pollutants from the new western carpark are to be treated through bio-retention before entering downstream bushland area. The overall impact is an improvement to the water quality compared to the existing condition. Water quality measures proposed include directing stormwater runoff from building surfaces to a vegetated bio-retention swale to allow infiltration. A Purceptor (or similar) will be provided to treat helipad roof runoff from the new building. The MUSIC model demonstrates that the proposed water quality treatment measures incorporated in the development treat stormwater runoff such that the "Neutral or Beneficial Effect" standard is met for the overall site (proposed building and western carpark).
- A MUSIC model has been run, specifically for the western carpark, to determine the water quality impacts to the downstream bushland area. It has been demonstrated that, through treatment using bioretention, the residual pollutant from the proposed carpark is less than the existing helipad & adjacent vegetated area. The "Neutral or Beneficial Effect" standard is met for the carpark on its own.
- In regards to the quantity of the stormwater generated from the new carpark, run off quantity from the new western carpark will, in general, not cause an appreciable increase in flow as some storage is provided in the detention basins. There will not be an increase in flows due to the carpark development for the 9hr catchment wide critical storm duration. Additionally, run-off will have an opportunity to infiltrate into pervious areas such as the southern bushland area (where runoff is directed in both

the existing and design scenario) and vegetated bioretention areas. It is not anticipated that the development will have an impact on groundwater (no basements are proposed, with excavation limited to the lift core – approximately 2.5m below existing surface). The groundwater level was noted as approximately 5.5m below the existing surface in the geotechnical report (Coffey, 26 October 2017).

As the development does not encroach on Waterfront Land, it is not proposed to provide water monitoring for the project, other than that required as part of soil and water management measures during construction (as identified in Bonacci Civil Drawings 1006401C-SD-CV-00031, 1006401C-SD-CV-00032 and 1006401C-SD-CV-00035).

- The proposed new building is located approximately 85 metres (minimum) from the surveyed top of bank location of Newports Creek. By definition, Waterfront Land is "any land within 40 metres of the river banks". As such, the building and associated external paving does not encroach on waterfront land.

Yours Sincerely

**BONACCI GROUP (NSW) PTY LTD**



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