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Software, Electronics and Mechanical Consulting Engineers

Secondary Dwelling On-site sewage management system calculations for 13 Bungendore St, Ingleside

The on-site sewage management system that was installed in 2018 was designed by **NYRANIE CONSULTING** for a flow of 1,440 l/day (this system was approved for installation by Northern Beaches Council on 8 March 2018, and approval to operate was issued by Northern Beaches Council on 30 April 2018).

The ***Ultra Clear Model 5T10 AWT5*** system that is installed to process the wastewater is designed for a maximum of 10 person.

This report calculates the total on-site wastewater load including both the principal and secondary dwellings. Design calculations are done as per the “Designing and Installing On-Site Wastewater Systems – A Sydney Catchment Authority Current Recommended Practice” published by NSW government and the Sydney Catchment Authority.

Extract from the publication:

Table 2.1 should be used to calculate the daily wastewater load for a dwelling together with any specific requirements of the relevant local council. For other developments (non-dwelling) involving wastewater, refer to the ‘Septic Tank and Collection Well Accreditation Guideline’, (NSW Health, 2001) or other reference source approved by the Sydney Catchment Authority.

Table 2.1 – Design wastewater loading calculations (for a dwelling)

Design wastewater loading for each potential bedroom	Reticulated / bore water	Tank water
1-2 potential bedrooms	600L/d	400 L/d
3 potential bedrooms	900L/d	600L/d
4 potential bedrooms	1200L/d	800L/d
More than 4 potential bedrooms	1200L/d plus 150L for each additional bedroom	800L/d plus 100L/d for each additional bedroom
Source: NorBE Assessment Guideline (Sydney Catchment Authority, 2011). Note: the Sydney Catchment Authority adopts a conservative approach for wastewater design calculations. Water saving fixtures should be standard in all new dwellings.		

Principal Dwelling:

4 bedroom house on tank water = 800l/d

Secondary Dwelling:

2 bedroom house on tank water = 400l/d

Total loading = 1,200l/day

This is below the original design capacity of 1,440 l/d, so the existing on-site wastewater system is adequate to cope with the wastewater loading of both the principal dwelling and secondary dwelling combined.

A handwritten signature in black ink, appearing to read 'John Holman', written in a cursive style.

John Holman BE(Hons)
Director