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Stormwater design in support of the proposed dual dwellings at 6 Nield Avenue, Balgowlah

Dear Paul

Please find attached the drawings describing the stormwater management plan for the proposed dwellings at 6 Nield Avenue, Balgowlah.

The stormwater management plan is described in the following Stellen Consulting drawings:

<i>DR-000</i>	<i>Revision 2</i>	<i>Legend</i>	<i>DR-003</i>	<i>Revision 2</i>	<i>Details Sheet 1</i>
<i>DR-001</i>	<i>Revision 4</i>	<i>Pipe Layouts</i>	<i>DR-004</i>	<i>Revision 0</i>	<i>Details Sheet 2</i>
<i>DR-002</i>	<i>Revision 3</i>	<i>Roof Layout</i>	<i>DR-005</i>	<i>Revision 3</i>	<i>Site Areas</i>

The stormwater management plan generally conforms to the relevant requirements of the following:

- *Australian Standard AS3500.3 – Plumbing and Drainage: Part 3 Stormwater Drainage*
- *Northern Beaches Council - Water Management for Development Policy (2021)*

Description of the proposed system

The proposed stormwater discharge for the site is in accordance with section 5.5 (Stormwater Drainage from Low Level Properties) of the policy. For each lot a OSD system with level spreader is proposed:

1. *OSD System Description:*
 - *The OSD system comprises two components: an above-ground OSD in the landscaping area and a cast in place concrete OSD tank beneath the rear deck area with an inspection and maintenance access.*
 2. *Pre-development Scenario Analysis:*
 - *A Pre-development Stormwater Discharge (PSD) of 7l/s has been determined for the 0.2 year event.*
 3. *OSD Sizing:*
 - *An OSD size of 9,500L is required to maintain the PSD of 7l/s for a 1% Annual Exceedance Probability (AEP).*
 4. *Compliance with Storage Requirements:*
 - *As per section 9.10.5 of the Northern Beach Council guidelines, an allowance of 20% volume is provided for loss compensation in landscaping areas.*
 - *A tolerable frequently wettable zone of 33% is required.*
- 4a. *The proposed OSD system includes:*
- I. *Tolerable frequently wettable zone of 3,200L storage under the deck of the modular OSD system.*
 - II. *Storage volume required in the landscaped area: 6,300L + (20% * 6,300L) = 7,560L.*
 - III. *Storage volume provided in the landscaped area = 7,570L*
 - IV. *Total storage volume provided: 3,200L + 7,570L = 10,770L.*

We recommend the stormwater design (as described in the drawings) as a safe and practical solution to support the development.

Kind regards,



Engineer
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