

4 December 2023

Paul O'Connor
6 Nield Avenue
Balgowlah NSW

c/o sean@smythdesign.com.au

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</i>
<i>DR-001</i>	<i>Revision 2</i>	<i>Pipe Layouts</i>	<i>DR-004</i>	<i>Revision 2</i>	<i>Site Areas</i>
<i>DR-002</i>	<i>Revision 2</i>	<i>Roof Layout</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 split system is proposed:

- roof area is charged to a boundary pit which then discharges to the kerb on Nield Avenue by gravity.*
- Surface areas and a small roof area that cannot physically be charged to the boundary pit discharge to the rear via a level spreader.*

The proposed system reduces the stormwater discharge to the rear by directing 260m² of impervious areas to the kerb. Impervious area discharging to the rear between the pre and post development scenarios is reduced from 462.8m² to 107.6m² (refer to DR-004) as the architectural design also reduces the sites impervious area

The following options were sequentially considered:

- Stage 1 - Drainage Easement - Downstream properties declined to give an easement.*
- Stage 2 - Onsite Absorption - the site has shallow depth rock (refer to Geotechnical Report)*
- Stage 3 - Level Spreader – Adopted for discharge that cannot be charged to the street without provision of an OSD. The site topography makes it impossible to have an OSD tank that can collect surface flows and still be able to discharge to a level spreader.*
- Stage 4 – A split system has been provided with part of the site charged to the kerb and remaining areas discharging to the rear via a level spreader. (Adopted Approach)***

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

Kind regards,



Engineer

Stellen Consulting
Level 1, 27 Belgrave Street, Manly, NSW 2095
T. 0478 135 600
E. freedom.mawoyo@stellenconsulting.com.au