Engineering Referral Response

Application Number:	DA2023/1015
Proposed Development:	Demolition works and construction of a dual occupancy (attached) and subdivision of existing allotment into two (2) Torrens title allotments
Date:	17/01/2024
To:	Stephanie Gelder
Land to be developed (Address):	Lot A DP 339924 , 6 Nield Avenue BALGOWLAH NSW 2093

Reasons for referral

This application seeks consent for the following:

- New Dwellings or
- Applications that require OSD where additional impervious area exceeds 50m2 or
- Alterations to existing or new driveways or
- Where proposals affect or are adjacent to Council drainage infrastructure incl. watercourses and drainage channels or
- Torrens, Stratum and Community Title Subdivisions or
- All new Commercial and Industrial and RFB Development with the exception of signage or
- Works/uses in flood affected areas

And as such, Council's development engineers are required to consider the likely impacts on drainage regimes.

Officer comments

Assessment 1 - 14/08/23:
The applicant proposes to "demolish the existing dwelling house and associated structures and construct a new pair of semi-detached dwellings with Torrens Title subdivision."

Access:
Impact on street parking
There is an existing driveway at the northern end of the property.
The proposed driveway width is 6m at the boundary and 6.7m at the back of layback.
The street benefits from on street parking bays at 60 degrees along the frontage.
As a result of the proposal, 2-3 on street parking spaces will be lost which is not supported.
Consider removing the landscape between the proposed driveways and designing a splayed driveway closer to the existing opening.
The proposed layback shall be located and have its width reduced to maintain on street parking.
Swept paths are required to demonstrate that the B85 vehicle can safely maneuver (entry and exit) into both parking facilities.

Levels
The proposed garage level is 35.4 as shown in section 4.
The proposal indicates 2 side by side single garages with tandem parking located in the middle of the

subdivision.
Should the space in front of the garages be used as undercover parking, it shall adhere to the minimum dimensions and section 2.4.6 gradients within parking modules of AS2890.1 Parking Facilities.
Requesting longitudinal plans on both edges of the 2 driveways, commencing from the centreline of the road to the parking facility.
The levels should comply with AS2890.1 Parking Facilities.
The boundary levels shall generally be maintained.

Stormwater:
The site falls to the rear and is located in Region 3, Zone 1 of Councils Water Management for Development Policy.
The OSD checklist in the stormwater report prepared by Stellen Civil and Structural Engineering dated 16.06.22 does not accurately report the post development impervious area.
A post-development impervious area of 102.9m2 is stated whereas plans and statement of environment effects indicate a pervious area of 92.2m2, hence impervious area per lot of 219.8m2 (approximately 70%).
In accordance with Part 4.3.2.1 of the checklist, calculation 2, 159.3 < 219.8 (a < b). Hence OSD is required for both lots.
Provide a design in accordance with the section 9.3.3.2 of Council's Water Management for Development Policy.

The applicant proposed to charge the on site stormwater to Council's kerb and gutter on Nield Avenue.
Stormwater drainage for all properties must be by gravity means.
Council requires the on site stormwater to be discharged via an easement in accordance with section 5.5 of Council's Water Management For Development Policy.
The applicant shall try to seek a drainage easement from the downstream property as the above policy.
Council is to be satisfied that all avenues of Stage 1 (Section 5.5.1.1 and 5.5.1.2) have been exhaustively investigated and these avenues considered impractical or unviable, prior to Council consenting to the property owner or developer progressing to the next stage.

Geotech:
A geotechnical report has been prepared and submitted by White Geotechnical Group dated 6.02.23.
Sections 3 and 4 propose excavation of 1.2m below the existing ground level in close proximity to the neighbouring property at no. 8 Nield Ave.
There is also a proposed 1.5m of excavation below NGL for the basement/storage.
Hazards 2, 3 and 4 in Section 8 of the report indicates an unacceptable risk to life and property.
Geotechnical requirements are satisfied subject to conditions and recommendations in section 12, 13 and 14 of the report to move risk to an acceptable level.

Note to planner: The geotechnical report is to be included as part of the approved documents.

As such, Development Engineering cannot support the application due to insufficient evidence to address clauses 3.7 and 4.1.6 of the DCP

Engineering Comments 19.12.23
1. The easement letters sent out to neighbouring properties state that Council recommends a "pump out" system to the front kerb. This is not correct. Such advice was not provided by Council's Development Engineers.
2. Discharge of stormwater from part of the site via a charged system to the front kerb is not supported. This information was previously provided to the applicant.

3. The entire site must be drained by gravity to the rear.
4. As noted above the drainage easement letter sent to 139A erroneously states that Council recommends a pump out system for stormwater.
5. A drainage easement request needs to be made to 139A Woodland Street, Balgowlah using the Appendix 2 form from the Water Management for Development Policy. If there is no response a Statutory Declaration needs to be provided stating the attempt made to obtain the drainage easement.
6. A drainage easement request needs to be made to 141 and 143A Woodland Street, Balgowlah using the Appendix 2 form from the Water Management for Development Policy. If there is no response a Statutory Declaration needs to be provided stating the attempt made to obtain the drainage easement.
7. A drainage easement request needs to be made to 143A Woodland Street, Balgowlah using the Appendix 2 form from the Water Management for Development Policy. If there is no response a Statutory Declaration needs to be provided stating the attempt made to obtain the drainage easement. This route involves a "dog leg" through the subject property only.
8. A sketch needs to be provided for the proposed easement routes for Steps 5,6 & 7.
9. If a drainage easement cannot be obtained from a downstream property, the applicant is asked to investigate the suitability of an absorption pit design in accordance with Appendix 3 of the Water Management for Development Policy. A geotechnical engineer shall determine whether an absorption system is suitable. Provide design or evidence of unsuitability to Council with amended plans.
10. If an absorption system is not suitable the applicant is asked to proceed to an on-site detention and level spreader system as per Appendix 4 of the Water Management for Development Policy. Provide DRAINS model to Council for perusal.
11. Provide individual absorption or on-site detention/ level spreader system for each lot.
12. The vehicle crossing is to be narrowed to 4 metres on the kerb line, up to 5.5 metres on the boundary.

Engineering Comments 17.01.24
1. It is noted that evidence of drainage easement refusal has been provided from downstream properties.
2. Discharge of stormwater from part of the site via a charged system to the front kerb is not supported. This information was previously provided to the applicant. It is noted that the verge area at the front of the site is flat or has reverse cross-fall and hence draining water from the site to Nield Avenue is not viable.
3. The entire site must be drained by gravity to the rear.
4 . The applicant is advised to provide a stormwater management design in accordance with Section 5.5 of the Water Management for Development Policy. This will include designing an on-site detention system that attenuates flows from each lot back to the 20% AEP State of Nature event for all storm up to the 1% AEP storm. Refer to Appendix 4 of the Water Management for Development Policy. Provide DRAINS model of the proposed design to Council for perusal.
5. The applicant has the option of pursuing a drainage easement through rear properties using Section 88K of the Conveyancing Act.
6. The vehicle crossing is to be narrowed to 4 metres on the kerb line, up to 5.5 metres on the boundary.

The proposal is therefore unsupported.

Note: Should you have any concerns with the referral comments above, please discuss these with the Responsible Officer.

Recommended Engineering Conditions:

Nil.