



henry&hymas

10 March 2021

Our Ref: 21B75/BJ5

Phill Greenow
41 Alleyne Avenue
NORTH NARRABEEN NSW 2101

Attention: Phill Greenow

**RE: ALTERATIONS AND ADDITIONS AT 41 ALLEYNE AVENUE, NARRABEEN
STORMWATER MANAGEMENT PLAN**

The accompanying Civil Drawings (refer to drawings schedule) have been prepared in support of the Development Application (DA) for the proposed alterations and additions to the existing dwelling at 41 Alleyne Avenue, Narrabeen.

The subject site slopes steeply away from the street access to Alleyne Avenue. At present, there are a few formal drainage facilities on site, with minimal downpipes either discharging freely to the ground surface or connecting to an indeterminate subsurface dispersion system along with surface runoff from the driveway.

The preferred method for drainage of the site would be to obtain a drainage easement through the downstream property, in order to discharge to Council's trunk drainage system in Garden Street. The downstream property owners have been approached in regard to this matter by the owner of the subject development and it is understood that the neighbouring owners have rejected this option. The option of onsite stormwater absorption has been ruled out by the geotechnical investigation, which revealed that only a slim layer of sandy soil is present on site, underlined by sandy clay and rock, suggesting that stormwater absorption would not be ideal for this site. It is therefore proposed to formalise and improve the existing stormwater management system through a combination of rainwater re-use and slow-release dispersion.

A drains model has been prepared to determine the pre-development and post-development stormwater runoff. The developed stormwater runoff has been limited to the permissible site discharged indicated in Table 7 from Council Water Management for Development policy (MINIMUM SSR = 12 m³ PSD = 6 L/s).

In line with the BASIX certificate obtained for this site, a minimum Rainwater Tank of 1kL is proposed as part of the proposed total on-site volume of 12kL.

The proposed on-site detention volume has been checked to limit the site discharge for all stormwater events up to and including 1 in 100yr to the permissible site discharge in accordance with Table 7 from Council Water Management for Development policy





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I am an appropriately qualified and experienced person in this field and as such have a capacity to certify on behalf of Henry & Hymas Consulting Engineers that the design and performance of the design systems generally and in our opinion comply with the above and which are detailed on the civil drawings listed herewith.

Designer: BORO SEIZOV
Qualifications: B.E. (Civil) MIE Aust. NER
Employer: H & H Consulting Engineers Pty Ltd
Address: Suite 2.01, 828 Pacific Hwy, Gordon NSW 2072
Business Tel. No: 9417 8400
Fax No: 9417 8337

Henry & Hymas possesses indemnity insurance to the satisfaction of the Client. However, this certificate shall not be construed in any way to relieve any other party of their responsibilities.

Yours faithfully,

BORO SEIZOV
B.E. (Civil) MIE Aust. NER

For, and on behalf of,
H & H Consulting Engineers Pty Ltd

Drawing Schedule
Drawing No. [Rev.]

Drawing Title

21B75_DA_C000[01]	COVER SHEET, DRAWING SCHEDULE, NOTES AND LOCALITY SKETCH
21B75_DA_C100[02]	SITE DETAIL PLAN
21B75_DA_C201[02]	RAINWATER TANK SECTIONS AND DETAILS
21B75_DA_C250[01]	STORMWATER CATCHMENT PLAN – PRE AND POST DEVELOPMENT
21B75_DA_SE01[01]	SEDIMENT AND EROSION CONTROL PLAN
21B75_DA_SE02[01]	SEDIMENT AND EROSION CONTROL DETAILS