

22nd September 2021

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**DA2020/1761 Application for Sect.4.55 Amendment - Stormwater Discharge Outlet
287 Hudson Parade, Clareville
NBCE Job No 130101**

This is a submission for a Section 4.55 Amendment application, to DA2020/1761, on behalf of our client and property owner Ms Jill Morrison.

This letter responds to point 10. *On-site Stormwater* discharge outlet in council's *Notice of Determination*, dated 26 May 2021. Which has been derived from council's *Engineering Referral Response* dated 14 April 2021.

Based on the background and technical issues presented below, this letter supports stormwater discharge into the natural watercourse/creek.

The report should be read in conjunction with the attached NBCE Stormwater Management Plan NBCE drawings 130101 – D101 to 104 – Rev D.

Background

The existing stormwater system and property runoff currently discharges towards the watercourse. Therefore, as OSD is proposed, there will be no increase to peak-flows into the watercourse as a result of the development.

The current requirement from Council (under DA2020-1761, Condition 10 ii) is to discharge stormwater from the development to the kerb on Hudson Parade.

We consider this technically inappropriate.

Since any new pipeline through to Hudson Parade will need to be trenched below ground, disturbing a number of existing trees and associated root systems, on the steeply sloping site.

Additionally:

- Excavation of bedrock within the property and across council nature strip, would be required, further impacting on the surrounding trees and ecology,
- it is unclear whether Council's arborist and geotechnical teams have assessed whether they would be happy to support such an undertaking,
- considering the steep grade of the land, constructing a trench through this area may result in a redistribution of ground-water flows, possibly affecting future slope stability, and
- that this was a concern of the geotechnical engineer, identified in the DA stage report.

On the 7th September 2021, Michael Wachjo & Chris Mclean of Northern Beaches Consulting Engineers P/L attended the site to assess the adjacent creek/watercourse to confirm its adequacy as a feasible stormwater discharge outlet for the property. This inspection was carried out after the surveyor pegging out of the site boundary and subsequent clearing of vegetation around the identified boundary line.

- The site inspection identified an appropriate location to discharge onto the creek bed extent directly from the property.
- The location is approximately 7.68m northwest from the northeastern boundary corner; Refer photo 1 . The outlet location and method of discharge to the watercourse is similar to existing outlets discharging from neighboring properties; Refer photo 2.
- As this proposed outlet to the creek is located within the property, an easement is not required.
- This is shown on NBCE Stormwater Discharge Outlet drawing 130101 – D102 – Rev D, included below for convenience.

Recommendation

In our considered opinion, based on the above, the adjacent watercourse/creek is the most feasible stormwater discharge outlet for the property, provided that the stormwater system is constructed in accordance with Stormwater Management Plan NBCE 130101 – D01D-D04D, dated 20/09/2021.

This letter was prepared to support the Sect.4.55 amendment application.

Please contact the author if further clarification is required.

NORTHERN BEACHES CONSULTING ENGINEERS P/L



Michael Wachjo

Senior Engineer | B.E. (Civil) MIEAust Director

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Site Photos

(taken by NBCE Stormwater Engineers, 7 September 2021)



Photo 1: Approximate location of proposed outlet.

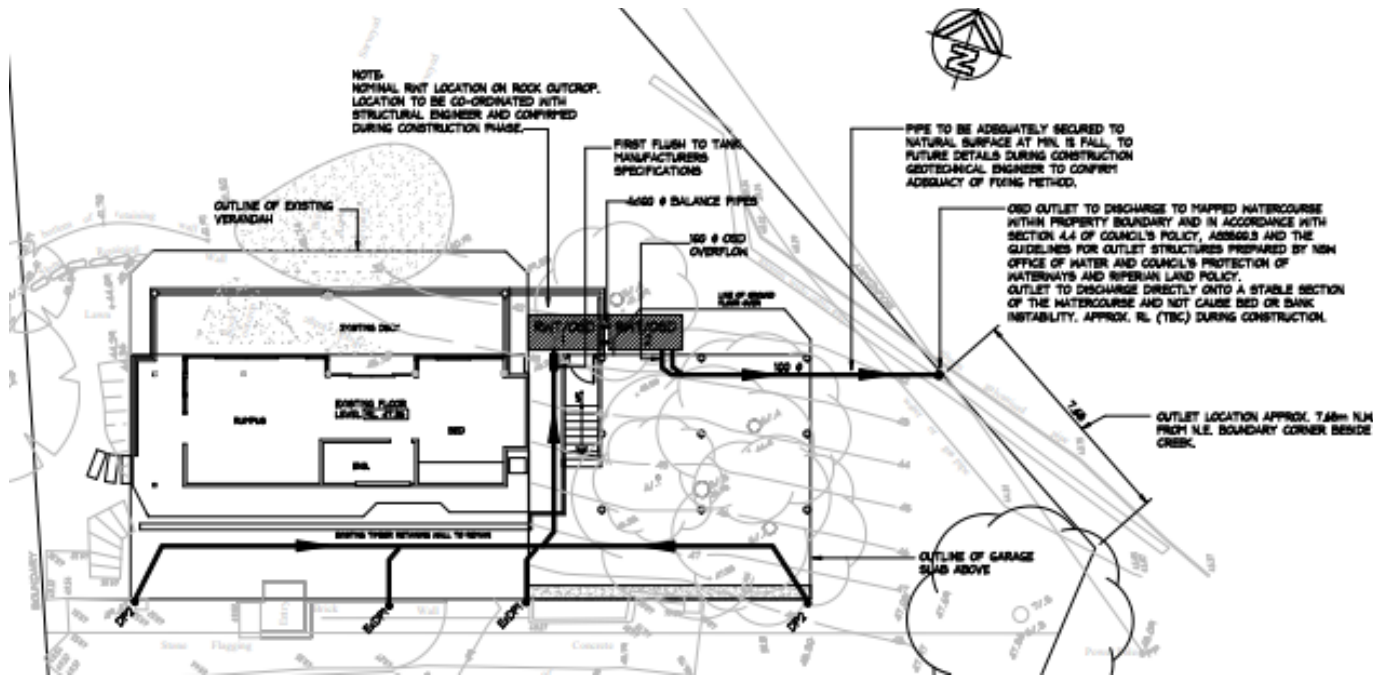


Photo 2: Existing outlet from neighboring property.



NBCE Stormwater Discharge Outlet drawing

130101 D102 – Rev D - 20 September 2021 – Drawing excerpt



LOWER GROUND LEVEL - DRAINAGE PLAN
SCALE = 1 : 100

ISSUED FOR
SECTION 4.55
SUBMISSION
IF IN DOUBT ASK

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|----------------|------------------------------------------------------------|----------|-----------|--------------|------|--------|----|
| Project: | ALTERATIONS AND ADDITIONS 287 HUDSON PARADE, CLAREVILLE | Date: | DEC. 2020 | Design: | CM&L | Drawn: | MC |
| Drawing Title: | STORMWATER MANAGEMENT DRAINAGE PLAN AND DETAILS | Job No.: | 130101 | Drawing No.: | D102 | Issue: | D |

NB Consulting Engineers