TAYLOR
CONSULTING
CIVIL & STRUCTURAL ENGINEERS

5 July 2023

Michael French
Planner - Development Assessment
Northern Beaches Council
725 Pittwater Road
Dee Why NSW 2099

Dear Michael French

Re: Development Application - 16 Gertrude Avenue, Newport

With reference to the Development Application DA2023/0509 of the above property and Council's correspondence dated 9 June 2023, please see attached:

Plans by Taylor Consulting: STORM-1/B and STORM-2:

The plans show the proposed engineering elements to be constructed as part of the proposed staged development and response as follows to the Council's correspondence:

1. The plans show the flows from the site are attenuated via the CDC Stage 1 "existing" on-site detention system to be at or below the permissible site discharge rate for all storms up to the 1% AEP. DRAINS modelling software was utilised to undertake the analysis, see attached DRAINS file (refer to Appendix A). The arrangement of the site drainage system achieves the intention of Northern Beaches Council's Water Management for Development Policy for the controlled discharge of stormwater from a site. This is due to the size of the CDC on-site detention system's design, the design provided adequate storage volume to accommodate the additional flows from the Stage 2 works and does not require 80% of the site to be directed to the system to achieve the permissible site discharge. The plans show the site is to be connected via the existing inter-allotment drainage system to the Council network in Walworth Avenue refer to Appendix B for site photos and Appendix C STORM-1/B;

2. The DRAINS model has been revised to utilise the Initial Loss/Continuous Loss model rather than the previous ILSAX model,

refer to STORM-1/B, refer to Appendix C; and

3. The STORM-1/B shows that the site is to be connected to the Council's drainage infrastructure in Walworth Avenue via the Ø300 P.V.C. inter-allotment drainage line.

As outlined above the revised plan and DRAINS model demonstrate that the existing CDC and the proposed Stage 2 DA site stormwater system comply with the intent of the Council's Stormwater for Development Policy.

Should you require additional detail please feel free to contact me directly.

Yours faithfully
TAYLOR CONSULTING

J P LEIGH – Principal Consulting Engineer
B.E. (Civil) M.I.E. Aust. C.P. Eng N.E.R.
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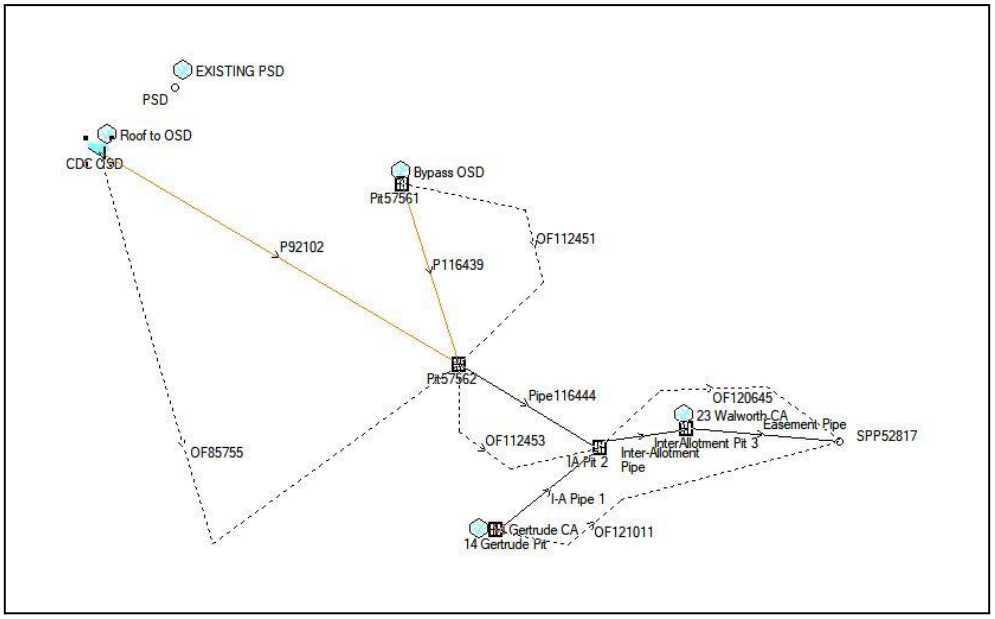
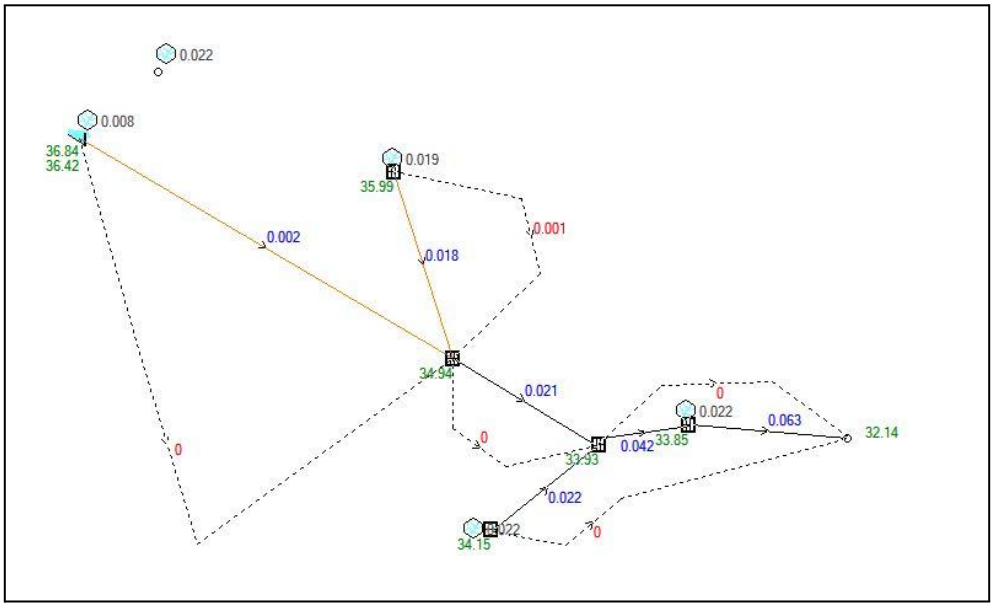
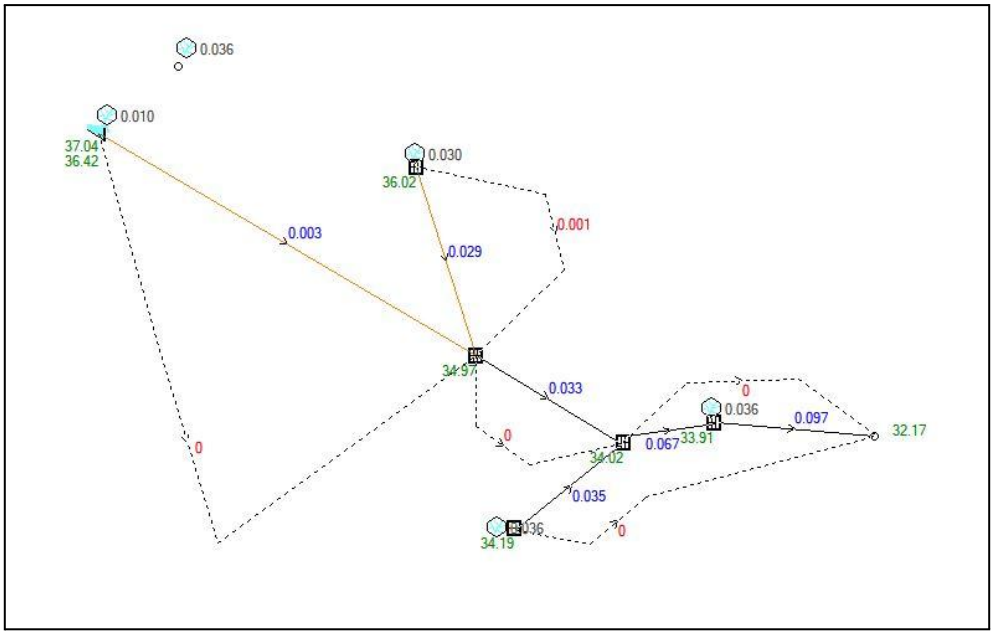
Appendix A



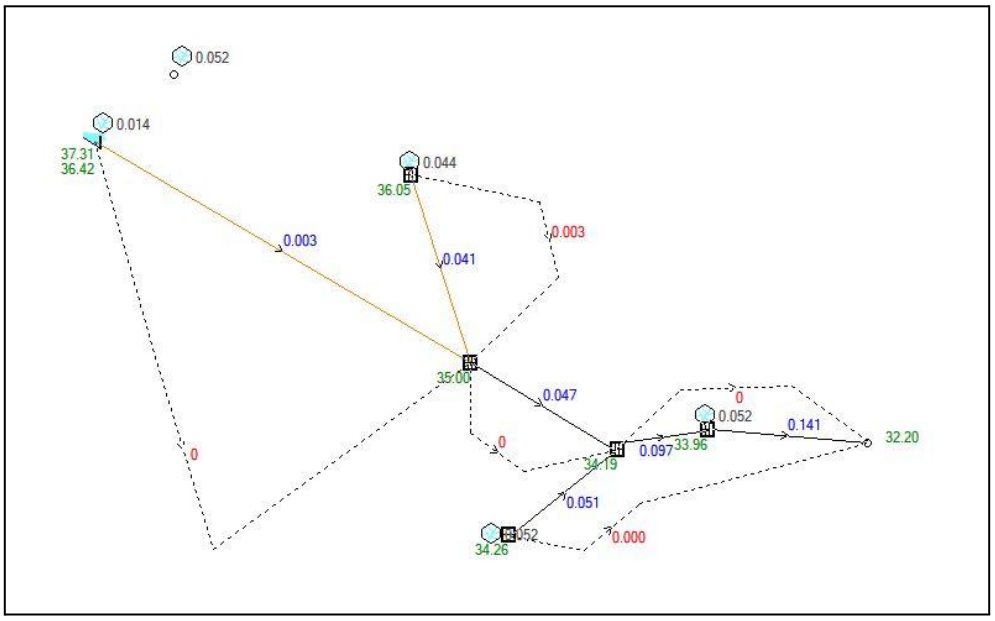
A1: DRAINS Model for Development



A2: DRAINS 20% AEP for Development



A3: DRAINS 5% AEP for the Development



A4: DRAINS 1% AEP for the Development

Appendix B

B1: Image of connection location within Walworth Avenue, SPP52817

B1: Image showing the depth of SPP52817 to invert of SPI58511

B3: Image of existing inter-allotment drainage pit within 16 Gertrude Avenue

B4: Image of existing inter-allotment drainage pit within 16 Gertrude Avenue showing Ø300 P.V.C.

Appendix C