



18 January 2022

220218ltr20210118_DW_On-Site Detention Design.docx

Crawford Architects
Suite 3.01, Level 3
80 Mount Street
NORTH SYDNEY NSW 2060

RE: DA 2021/1508 - ARCH DEE WHY - 882A PITTWATER ROAD DEE WHY

Further to your request, we provide the advice below in reply to the matters raised in Item 2 of the Northern Beaches Council letter dated 10 January 2022.

Regarding Item a), we note that the drawings previously submitted to Council outlined the design assumptions and calculations for the on-site detention. Due to the very small site area, these calculations were prepared in accordance with the Simplified Method (Table 2b) set out in the Northern Beaches Council On-Site Detention Design Handbook. Notwithstanding, we have prepared a DRAINS model for the specific site. This model demonstrates that the required storage volume is less than shown on our previous drawings. (Refer to accompanying model 220218_DetentionDesign.DRN.

Regarding Item b), the drawings provide the long-section of the outlet pipe, including the section through the footpath, showing services. Services depths have been based on the information obtained from site investigations by the site owner.

Regarding Item c) we consider that it would be futile to undertake a hydraulic analysis of the street pipe system. The pre DA advice provided by Council advises that the mainstream flood level in Pittwater Road in front of the site is at RL18.35. Accordingly, the on-site detention storage has been raised to a minimum level of RL18.50 (150 mm above the mainstream flooding) to ensure that the OSD outlet is not submerged.

We trust that the above information and enclosed drawings provides the responses required.

Yours Sincerely,

David Wilcox
B.E. (Hons I) FIEAust CPEng NER APEC Engineer IntPE (Aus) RPEQ
Director

DEMLAKIAN CONSULTING ENGINEERS

Encl. Demlakian Consulting Engineers Drawings – 220218 – SW-01-P2 and SW02-P2
DRAINS Model - 220218_DetentionDesign.DRN

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Demlakian Engineers Pty Limited
T/A Demlakian Consulting Engineers
ABN 27 928 564 091
Demlakian.com.au

ENGINEERING
Structural Engineers
Hydraulic Engineers
Civil Engineers

STRATA & REMEDIAL
Building Consultants
Project Managers
Expert Witnesses

Level 1, 126 Willoughby Road
Crows Nest NSW 2065
P.O. Box 207, Crows Nest NSW 2065
+ 61 (0)2 9955 4485