

21 February 2023

RE: Stormwater Design Amendments

Our ref: E220612

Dear Sir/Madam,

Regarding Council letter Ref. Mod2023/0012 dated 20 February 2023, our consultancy has addressed the following items;

Council's Development Engineer has reviewed the application and has provided the following comments:

"The proposed modification is a redesign of the stormwater system with the OSD tanks located under the patio. Based on the submitted stormwater plan by NY Civil the system has been redesigned to discharge to a level spreader with a significant reduction in OSD volume to the previously approved design. The predevelopment flows appears high. If the proposed discharge is to a level spreader, the applicant shall provide a design in accordance with Appendix 4 of Council's Water Management for Development Policy. A drains model and sufficient calculations shall be provided to demonstrate that the site flow are controlled in accordance with appendix 4 and the OSD tanks will have no overflow in the 1% AEP.

Additionally details are to be provided to demonstrate that there are no structures along the rear of the property to impede the surface flow from the level spreader."

In summary, the modification proposes to substantially reduce the storage capacity of the existing system, yet no valid documentation has been provided to ensure that Council's stormwater management policy can still be achieved. The application cannot be supported until a suitably qualified professional has demonstrated that the proposed modification will not have an adverse impact on adjoining properties.

NY Civil Engineering has under taken a revised stormwater design for S4.55 submission for amended architectural plans. A DRAINS model has been prepared, with the discharge from the post-developed site in the 1% AEP storm event limited to the un-developed 20% AEP, in accordance with Council's requirements, discharging to a level spreader identical to the previous DA Approved design.

The reduction in OSD volume has been achieved by consolidating numerous tanks in the previous configuration and providing an efficient design. The bypass of the OSD has been realistically reduced by modelling the volume of the absorption system within DRAINS with a conservative infiltration rate (2.2×10^{-5} m/s) interpolated from the possible infiltration rate of 'sandy clay' as determined by borehole testing. The DRAINS model is attached with this letter, and a summary table of the OSD discharge and storage volumes, provided on sheet D2 of the stormwater plans, is also attached below for convenience.

I trust this is sufficient information to proceed with the Stormwater engineering assessment. If you have further questions, please do not hesitate to contact the undersigned.

Full Name of Designer: Nader Zaki
Qualifications: **BE(Civil) MIEAust CPEng NER**
Name of Employer: NY CIVIL ENGINEERING PTY LTD

Signature:



0 413 9 42 613 ☎

admin@nycivilengineering.com.au ✉

www.nycivilengineering.com.au 🌐





Appendix A – OSD summary table

OSD CALCULATION SUMMARY		
STORM (AEP)	1%	20%
PRE-DEVELOPMENT STATE PSD (L/s)		15
POST DEVELOPMENT OSD DISCHARGE (L/s)	9	
POST DEVELOPMENT (L/s) (BYPASSING OSD)	6	
OSD VOLUME (m ³)	7.6	1.2
THEREFORE POST DEVELOPMENT DISCHARGE LIMITED TO UNEDEVELOPED STATE IN ANY STORM EVENT UP TO AND INCLUDING 1% AEP		

