

SITE COMPATIBILITY CERTIFICATE - STORMWATER DRAINAGE ASSESSMENT

Concord RSL

Nirranda St, Concord West, NSW 2138

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Prepared for: Tom Zarimis
Philon Pty Ltd

Client Details: Email: tom.zarimis@philon.com.au

Phone: 9251 5771

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Document Control

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1. INTRODUCTION

Sparks & Partners have been engaged by Philon Pty Ltd to provide civil engineering design services to support the Site Compatibility Certificate Application for the proposed re-development of Concord RSL into a seniors housing facility. As part of the State Environmental Planning Policy (SEPP) 'Housing for Seniors or People with a Disability', the site must first be approved by the NSW Department of Planning to ensure the development is broadly compatible with the surrounding land uses before a Development Application (DA) can be submitted to the consent authority. This report reviews the constraints that will influence the stormwater drainage of the site in relation to the surrounding land and the relevant guidelines given by the consent authority.

1.1 Consent Authority

The site is located within the Local Government Area (LGA) of Canada Bay Council and as such they would be the consent authority for this development.

The guidelines given by Canada Bay Council for the purpose of stormwater management are:

- Canada Bay Development Control Plan 2017;
- Canada Bay Local Environmental Plan 2013.

1.2 Existing Site

The existing site currently occupies the Concord RSL club, consisting of the club building, a bowling green on the northern side of the property and a carpark on the southern part of the property. The site is located at the Northern end of Nirranda St, West Concord. The site is surrounded by Majors Bay Reserve to the East & South, Arthur Walker Reserve on the West, and by a public carpark to the North. The site falls towards the North to Majors Bay.

1.3 Proposed Development

The preferred masterplan as outlined in the '*Urban Design Study and Built Form Layout*' provided by GMU Urban Design & Architecture consists of 3 new buildings, one of which is a rebuilt 2 storey club building, with an additional 2 storeys of residential use. The remaining two buildings are to be used purely as residential buildings of 5 and 8 storeys. The development will have 1.5 levels of below ground carparking beneath building C. A pedestrian pathway cuts through the centre of the site, leading from the existing hardstand area of the communal carpark down to the proposed club drop off area to the south and toward Nirranda St.

2. Stormwater Drainage Assessment

2.1 General

The objective of this assessment is to determine the potential sites stormwater drainage requirements and the compatibility of this with regard to the surrounding land. This includes the requirements of the consent authority in relation to:

- On-Site Detention,
- Stormwater runoff quality,
- Rainwater re-use, and
- Stormwater Drainage Design

Along with this, the assessment also outlines the constraints that may exist due to the location of the site.

The table under Control SWM5 of Canada Bay Council's DCP provides the various 'Development Types' that indicate the various Control systems that influence the stormwater drainage design. As the site is to be a development under SEPP 'Housing for Seniors or People with a Disability', the site is considered a Development Type 6.

To demonstrate the compatibility of the site, the following requirements have been noted, and a concept stormwater drainage scheme (refer Appendix A) has been prepared

2.2 On-Site Detention

Canada Bay Council DCP requires the use of On-Site Detention to control the rate of stormwater runoff from the site, as per control OSD1 in Canada Bay DCP Appendix 2 – Engineering Specifications, which states "On-site Stormwater Detention (OSD) systems are to be implemented to control the rate of runoff from development sites and subdivisions to limit or reduce the rate of runoff to existing conditions or better."

However, sites exposed to flooding are exempt from the OSD requirement, as indicated in control OSD3 which states exemption from OSD applies if "The development is located within a known flood affected area or subject to tidal influence. This does not include areas where it is affected by nuisance flooding caused by inadequate capacity of the drainage system." As the site is exposed to overland flooding from the South, as per the 'Concord RSL Redevelopment, Flood Assessment' prepared by GRC HYDRO, the site is will be exempt from OSD requirements.

2.3 Stormwater Quality

Canada Bay DCP Appendix 2 – Engineering Specifications lists the following pollutant loads to be retained as per control SC4.

	Canada Bay Council Percentage Retention of Post-Development Loads
Total Suspended Solids (TSS)	80
Total Phosphorus (TP)	45
Total Nitrogen (TN)	45
Gross Litter	All Litter – 70% Material (>50mm) – 70%

To comply with these targets and general WSUD principles, control WSUD4 lists potential measures to be incorporated into the site. Examples which may be used in the potential drainage design include but are not limited to:

- Bio-Retention Systems
- Vegetated Filter Strips, and
- Permeable Pavers

Design Principle WSUD5 states that “Water Sensitive Urban Design Modelling – Modelling of WSUD using a suitable program such as MUSIC (Model for Urban Stormwater Improvement Conceptualisation) will be acceptable to Council.”, which means that WSUD modelling is required during the detailed design stage.

2.4 Rainwater Re-use

Canada Bay Council requires the use of, at minimum, a 5,000 litre rainwater tank to be used for re-use purposes throughout sites of ‘Development Type 6’. Re-use purposes shall include watering of the garden, irrigation, and toilet flushing as per control RR1.

2.5 Stormwater Drainage Design

Canada Bay council requires the minor drainage system to be designed for the 50-year ARI storm event, as stated in control SW22 of the Canada Bay DCP Appendix 2 – Engineering Specifications. Any proposed development would need to incorporate this design standard into the design of the Stormwater drainage system.

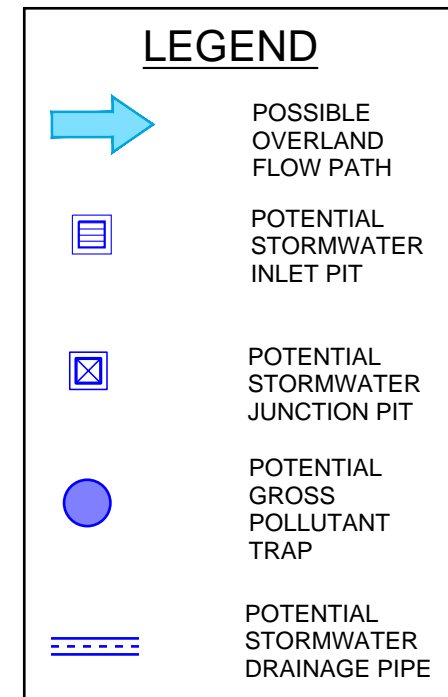
2.6 Site Constraints

Any proposed Stormwater drainage design would need to consider the detailed topography and existing services i.e. sewer, water, gas etc. when being completed. This report has not considered these items in detail.

CONCLUSION

The conditions outlined above indicate that there are no factors to restrict the proposed development from complying with Canada Bay Council's stormwater requirements. Further investigation into the site constraints will be required at the detailed design stage in order for the proposed development to be assessed by council.

APPENDIX A. CONCEPT STORMWATER DRAINAGE SCHEME



CONCEPT STORMWATER MANAGEMENT SCHEME