

## Memorandum

To	Matthew Alder	Page	1
CC	William Hammond		
Subject	Woollahra council comments and actions (Rev 2)		
From	Daniel Fettell		
File/Ref No.	EPM-GCOR-000141	Date	31-Oct-2018

### 1.0 Introduction

The Cranbrook School is undertaking a redevelopment project, which involves the delivery of a new sports and fitness centre under Hordern Oval and a new integrated learning centre known as the Centenary Building (to replace the existing Mar Memorial Hall and Mansfield buildings).

A State Significant Development Application was submitted for this development and a number of comments were made by Woollahra Council including proposed conditions of consent. This memorandum provides a review of the following items:

- WSUD: Condition 5 and 6; and
- Engineering: Condition 20-51

In general the conditions of consent do not conflict with the proposed Stormwater Management Plan however further clarification will requested from council regarding a number of items and further development of the water re-use strategy undertaken.

### 2.0 WSUD Conditions

#### Condition 5 Water Sensitive Design

*The applicant is to provide integrated water sensitive design which includes the following at a minimum:*

- *A rainwater/stormwater collection tanks/s (harvest tanks) with a minimum additional capacity of 200m<sup>3</sup>*

AECOM Response: We proposed rewording this condition to the following:

"A rainwater/stormwater collection tank/s (harvest tanks) sized to accommodate the irrigation and water re-use demand of the site"

- *A stormwater diversion system that continually divers and treats water from the existing Council drainage system is to be implemented*

AECOM Response: We proposed rewording this condition to the following:

"A stormwater management system that continually manages and treats discharge offsite prior to entering the Council drainage system is implemented".

- *All new roof areas hard paved areas to be directed to the harvest tanks*

AECOM Response: We proposed rewording this condition to the following:

"Sufficient new roof and hard paved areas to be directed to the harvest tanks to meet the requirements of the proposed water re-use and where there is sufficient fall"

- *The integrated water sensitive design system is to be designed to meet or exceed Councils water treatment guidelines.*

AECOM Response: Noted, the current system is designed to meet and slightly exceed Councils water treatment guidelines

#### Condition 6 Water Quality Measures

*Water quality measures are installed that meet the following environmental targets for stormwater runoff leaving the site:*

- a) 90% removal of gross pollutants (>5mm);*
- b) 85% removal of total suspended solids;*
- c) 65% removal of total phosphorous; and*
- d) 45% removal of total nitrogen*

AECOM Response: We confirm that water quality measures have been included which meet the environmental targets for runoff leaving the site.

### **3.0 Engineering Conditions**

#### Condition 20 (A.8) Ancillary Aspects of the Development

AECOM Response: Noted, this is a construction requirement and will be included as a note with design drawings and specifications

#### Condition 21 (B.7) Public Road Assets prior to any work/demolition

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

#### Condition 22 (C.21) Provision for Energy Supplies

AECOM Response: Electrical rather than civil requirement, AECOM will coordinate with the ASP3 in regards to substation requirements

#### Condition 23 (C.25) Soil and Water Management Plan – Submissions and Approval

AECOM Response: Noted, wording will be reflected in the Erosion and Sediment Control Plan and within the Civil Specification

#### Condition 24 (C.36) Professional Engineering Details

AECOM Response: Noted, Construction Certificate plans and specifications will include professional engineering plans and specifications and will be submitted to the Certifying Authority.

#### Condition 25 (C.40) Geotechnical and Hydrological Design, Certification and Monitoring

AECOM Response: Noted, AECOM is providing civil and structural engineering details for design of foundation retaining walls for public domain works. Building design structural elements are designed by the structural consultant.

We note the requirement for a Geotechnical and Hydrogeological Monitoring Plan and assume that this will be undertaken by the geotechnical consultant, we are happy to provide input as required.

#### Condition 26 (C.41) Ground Anchors

AECOM Response: No ground anchors are proposed for public domain works, structural consultant to confirm for building items.

#### Condition 27 (C.45) Car and Commercial Parking Details

AECOM Response: Access levels and grades comply with the access levels and grade required by Council under the Roads Act 1993 and other referenced standards.

Parking spaces and layouts are designed by the traffic consultant.

#### Condition 28 (C.51) Stormwater management Plan (Site greater than 500m<sup>2</sup>)

AECOM Response: The current Stormwater Management Plan complies with the requirements of this clause, however the use of rainwater/stormwater collection tanks are being coordinated with the hydraulic and ESD team.

In particular AECOM have prepared the layout plan as required by this conditioning but are coordinating around the rainwater reuse system details.

Condition 29 (D.5) Dilapidation Reports for Public Infrastructure

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 30 (D.6) Adjoining Buildings Founded on Loose Foundation Materials

AECOM Response: This condition relates to the geotechnical and structural disciplines, no AECOM action required

Condition 31 (D.7) Piezometers for monitoring of Ground Water Levels (GWL)

AECOM Response: This condition relates to the geotechnical discipline and structural disciplines, no AECOM action required

Condition 32 (D.10) Works (Construction) Zone – Approval & Implementation

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 33 (D.14) Erosion and Sediment Controls – Installation

AECOM Response: Noted, wording will be reflected in the Erosion and Sediment Control Plan and within the Civil Specification

Condition 34 (E.3) Compliance with Construction Management Plan

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 35 (E.7) Maintenance of Vehicular and Pedestrian Safety and Access

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 36 (E.11) Maintenance of Environmental Controls

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 37 (E.12) Compliance with Geotechnical/Hydrogeological Monitoring Program

AECOM Response: This condition relates to the geotechnical discipline and structural disciplines, no AECOM action required

Condition 38 (E.13) Support of Adjoining Land Owners

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 39 (E.14) Vibration Monitoring

AECOM Response: This condition relates to the geotechnical and structural disciplines, no AECOM action required

Condition 40 (E.15) Erosion and Sediment Controls – Maintenance

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification – additionally we recommend this is added into any OEM plan or report.

Condition 41 (E.17) Disposal of Site Water during Construction

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 42 (E.19) Site Cranes

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 43 (E.20) Check Surveys – boundary location, building location, building height, stormwater drainage system and flood protection measures relative to AHD

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 44 (E.25) Replacement of Sandstone Kerb or Gutter

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 45 (E.27) Existing drainage easement, drainage reserve or stormwater drainage system benefiting Council

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification. Nominated council drainage works will be shown on the AECOM civil drawings.

Condition 46 (F.7) Commissioning and Certification of Systems and Works

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 47 (F.9) Commissioning and Certification of Public Infrastructure Works

AECOM Response: Noted, as part of the construction support phase AECOM will inspect the construction works and provide certification as a professional engineer. The requirement for CCTV of stormwater drainage and WAE designs will be included in the Civil Specification.

Condition 48 (G.4) Electricity Substations – Dedication as road and/or easements for access

AECOM Response: Noted, this will be predominately driven by the ASP3 designer and their requirements, AECOM will provide advice as required.

Condition 49 (H.13) Road Works (including footpaths)

AECOM Response: Noted, the design complies with these requirements and specific construction requirements will be added to the Civil Specification.

Condition 50 (H.14) Dilapidation Report for public infrastructure works

AECOM Response: Noted, this is a construction requirement and will be included within the Civil Specification.

Condition 51 (H.20) Positive Covenant & Works-As-Executed certification of stormwater systems

AECOM Response: Noted, as part of the construction support phase AECOM will inspect the construction works and provide certification as a professional engineer. The requirement for CCTV of stormwater drainage and WAE designs will be included in the Civil Specification.

#### **4.0 Summary of AECOM Actions**

Below is a summary of AECOM actions in relation to the above comments and proposed engineering conditions:

- Coordinate with Council regarding requirements for water re-use and treatment of upstream council stormwater;
- Add Condition 21 to the Civil Specification;
- Add Condition 23 to the Civil Specification and the erosion and sediment control plan;
- Add Condition 29 to the Civil Specification;
- Add Condition 32 to the Civil Specification;
- Add Condition 34 to the Civil Specification;

- Add Condition 35 to the Civil Specification;
- Add Condition 36 to the Civil Specification;
- Add Condition 38 to the Civil Specification;
- Add Condition 41 to the Civil Specification;
- Add Condition 42 to the Civil Specification;
- Add Condition 43 to the Civil Specification;
- Add Condition 44 to the Civil Specification;
- Add Condition 45 to the Civil Specification;
- Add Condition 46 to the Civil Specification;
- Add Condition 47 to the Civil Specification;
- Add Condition 49 to the Civil Specification;
- Add Condition 50 to the Civil Specification; and
- Add Condition 51 to the Civil Specification.

If you require any further information, please don't hesitate to contact me on the details below:

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