

SYDNEY GRAMMAR SCHOOL WEIGALL SPORTS COMPLEX SSDA STRUCTURAL REPORT



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Revision: Final

September 2020

SYDNEY GRAMMAR SCHOOL WEIGALL SPORTS COMPLEX

STRUCTURAL REPORT

ISSUE AUTHORISATION

PROJECT: Sydney Grammar School Weigall Fields Sports Complex

Project No: 6011

Rev	Date	Purpose of Issue / Nature of Revision	Prepared by	Reviewed by	Issue Authorised by
Draft 01	02/07/2020	Draft	AM	CM	CM
02	08/09/2020	Final	MD	CM	CM



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Executive Summary

This report has been prepared to support the SSDA of a proposed multi-use indoor sports facility for Sydney Grammar School at Weigall Fields. It responds to the Planning Secretary's Environmental Assessment Requirements (SEARS) (SSD-10421) which outlines the requirements for protection of neighbouring properties from damage due to the excavation and construction of the proposed multi-use indoor sports facility. Due to the proposed buildings being setback from the boundary the construction is not in the influence zone of the neighbouring buildings and therefore will have no adverse impacts on those buildings.

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1 Project Description

1.1 The scope of the project is as follows:

1. **Demolition** of the following existing structures and buildings (which are not heritage significant) at the southern edge of the SGS Weigall Sports Ground:
 - (a) Multipurpose/tennis courts and associated fencing;
 - (b) Barry Pavilion;
 - (c) The existing cricket nets off Alma Street; and
 - (d) Paved car park near Neild Avenue.

2. **Construction** of the SGS Weigall Sports Complex comprising the following:
 - (a) Building 1 - Sports facilities building accommodating the following facilities:
 - (i) Ground floor: Main pool, programme pool, terrace/assembly facing Weigall, entry foyer, offices, change rooms, back of house, services and external car parking (5 spaces) and loading
 - (ii) Mezzanine floor: spectator terrace and services
 - (iii) First floor: Multipurpose sports hall 01 – basketball and volleyball, Multipurpose sports hall 02 –cardio, weights, taekwondo, fencing, PDHPE, change rooms, storage and services
 - (iv) Level 2: Multipurpose room 04; Multipurpose sports hall 03 –cardio, weights, taekwondo, fencing, PDHPE, storage and services
 - (v) Driveway entry from Neild Avenue (comprising relocation of the existing driveway southwards with existing driveway potential retained for maintenance access)
 - (b) Building 2 – Car park comprising an ancillary car park of one/two split levels accommodating 93 spaces with an additional 4 spaces on grade, accessed from an existing entry from Alma Street (located on the existing cricket nets site). The lower ground level includes the flexibility to be used as an extension of the existing playing fields
 - (c) Parking for a total of 102 cars comprising:
 - (i) Building 1: 5 spaces
 - (ii) Building 2: 97 car spaces (93 within the building and four at grade)
 - (d) Landscaping of the site including tree removal/retention/replacement, paths, fencing and lighting

(e) Building identification signage

(f) New kiosk substation.

3. **Use** of the completed building as an educational establishment with external/community use of the proposed facilities that coordinates with the programming of the SGS.

The proposal does not include any of the following:

- General learning areas (**GLA**)
- An increase in the existing student or staff population.

1.2 **Site Description**

1.2.1 **Overview**

The key characteristics are summarised below:

1.2.1.1 **Location**

The State Significant Development Application (**SSDA**) site is part of the Weigall Playing Fields located on Neild Avenue at Rushcutters Bay.

Weigall is bordered by (see **Figure 1**):

- Neild Avenue to the west (Neild Avenue is classified as a collector road and also forms part of the State Road MR625 managed by Roads and Maritime Services)
- State Rail land and the Eastern Suburbs Railway viaduct to the north
- White City (Hakoah Club and Maccabi Tennis Club), SGS Edgecliff Preparatory School, Vialoux Avenue, Alma Street and residential development to the south
- Residential development to the south and north-east
- A Sydney Water stormwater channel which traverses the site
- A right of way from Alma Street, benefiting the site, which crosses the site formerly known as White City.



Figure 1 Site Plan - Alan Jack and Cottier Architects

1.2.2 Use of Weigall

Weigall accommodate SGS's sports facilities (cricket, rugby, football, tennis and basketball), pavilion buildings, various grandstands and amenities.

- Weigall 1-3: Rugby fields, cricket, football
- Weigall 4: New soccer fields, car parking
- Weigall 5: Tennis courts, car parking
- Weigall 6: Basketball courts
- Weigall Pavilion: Change rooms, storage, function area, kitchen
- Across the site: Grandstands, amenities.

The SSDA site comprises part of Weigall 3 and all of Weigall 5 (See **Figure 2**).

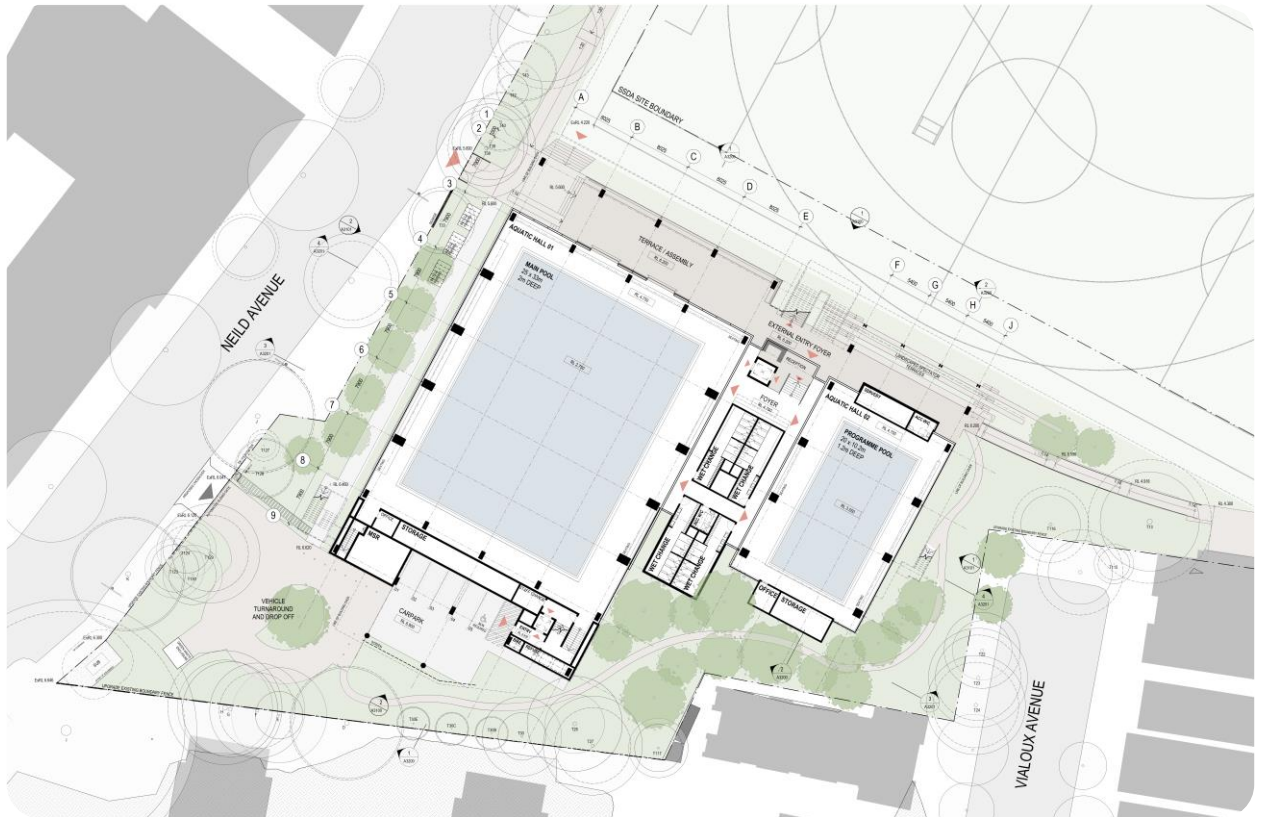


Figure 2 Ground Floor General Arrangement - Alan Jack and Cottier Architects

Lots/DPs

Weigall comprises the following allotments (lots to be included in the SSDA are underlined):

Lot 1 DP 633259

Lot 2 DP 547260

Lot 1 DP 311460

Lot 1 DP 1114604

Lot 2 DP 1114604

A number of additional lots are leased by SGS (owned by State Rail and others).

2 Structural Design

enstruct group has been involved in the structural concept design and preparation of the State Significant Development Application documentation for all permanent structural elements for this project. This is inclusive of all in-ground and above ground permanent structures.

We confirm that the buildings structural design can be completed without significant impact on the proposed building envelopes.

2.1 Design Criteria

The Design shall comply with:

- The BCA;
- The Project Brief
- Relevant Australian Standards, including:
 - AS3600 Concrete Structures Code
 - AS4100 Steel structures Code
 - AS3700 Masonry Structures
 - AS1720 Timber Structures
 - AS1170.0 Structural Design Action Effects
 - AS1170.1 Loading Code
 - AS1170.2 Wind Loads
 - AS1170.4 Earthquake Loads
 - AS2159 Piling Code
- Local Authority development controls & design codes;
- Major Development SEPP;
- The requirements of the DA conditions;
- Disability Discrimination Act (DDA) and Access to Premises Standards;

The design will also meet the following additional criteria;

- Project Sustainability targets; and
- Existing easements, covenants and restrictions that both burden and benefit the land.

3 Response to SEARs

This report responds to the Planning Secretary's Environmental Assessment Requirements (SEARS) which outlines the following requirements :

Demonstrate that the proposed excavation will have no adverse impacts on any surrounding property and infrastructure including any existing boundary wall.

Should underpinning works to be determined to be carried out to the footing of any neighbouring structures including any boundary wall, details and procedures of such underpinning works shall be included in the report.

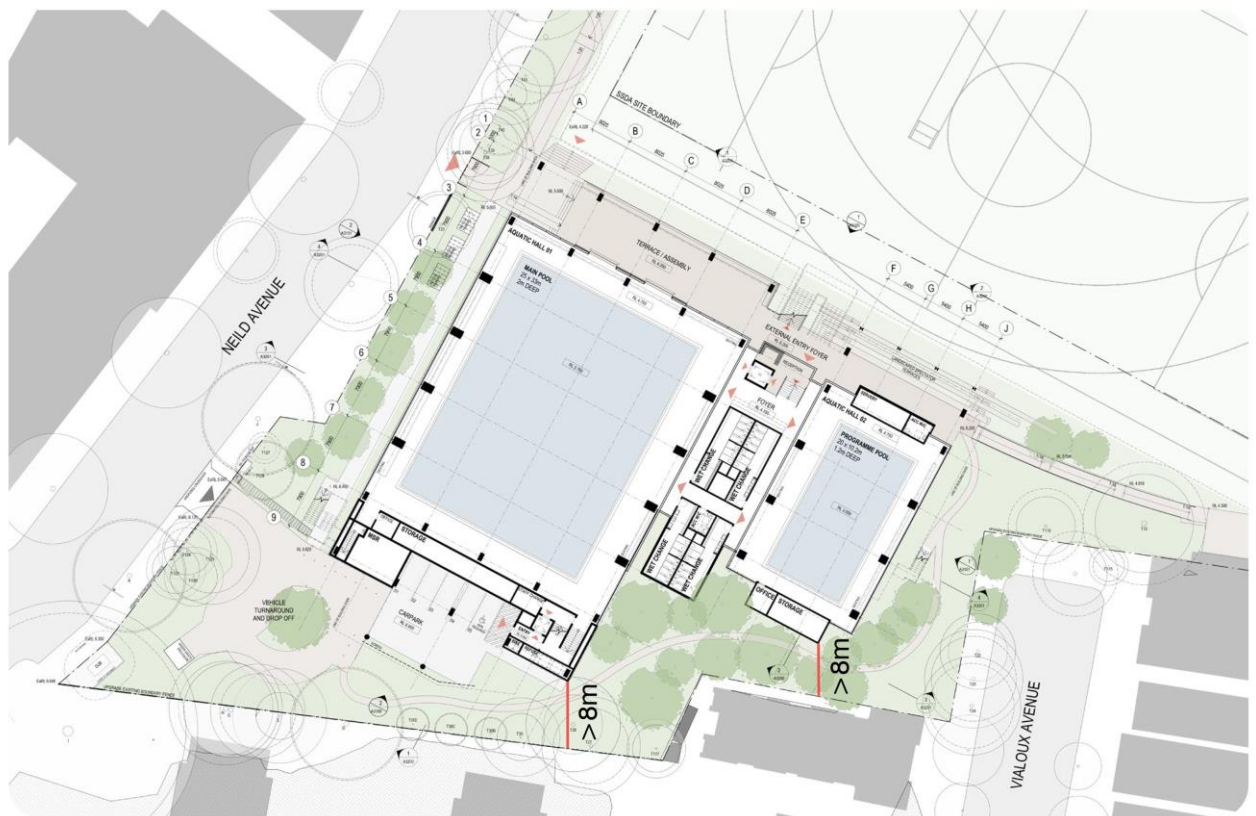


Figure 3 Approximate building boundary setbacks

The buildings have been set back from the neighbouring boundaries by a significant amount (over 8 metres) limited excavation proposed for Building 1 and almost no excavation for building 2. This will ensure the foundations of the neighbouring buildings will be unaffected by the construction of the facility as any excavation required to construct the facility will be well beyond the zone of influence of the neighbouring properties foundations. Therefore, no underpinning of neighbouring foundations will be required and the structural integrity of all adjoining buildings including any boundary walls will not be adversely affected or compromised in any way.

4 Conclusion

This report demonstrates that the structural design will comply with relevant codes and Australian Standards and its construction will not impact on the stability of any neighbouring buildings due to the limited excavation and proposed new building setbacks from the property boundary.