



Architecture
Interior Design
Landscape Architecture
Urban Design
Graphic Design

ALEX AVENUE PUBLIC SCHOOL

SSD RESPONSE TO SUBMISSIONS

Department of Education. — 8th August 2019

AIMS & OBJECTIVES

This response to submissions report has been prepared by GroupGSA to support the Richard Crookes Construction response to the SSDA submissions received for Alex Avenue Public School.

Issue	Title	Date	Prepared	Checked
1	Issued for submission	08.08.19	JS	MB
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1.1 ITEM 1 - HALL & FARMLAND DRIVE RELATIONSHIP

SUBMISSION QUERY:

The relationship between the hall and Farmland Drive is a large blank façade with only a couple of small door openings. This façade should be further articulated to create an engaging, welcoming interface with the street.

SUBMISSION RESPONSE:

The following is a series of artists impressions taken along Farmalnd Drive to aid in the understanding of the scale and materiality of the site and surroundings.

The scale and massing of the hall and school entry are developed with a conscious awareness of the scale of the surrounding double storey dwellings, as well as a consideration for the focused and intimate environment of its's inhabitants.

The articulation of the entry COLA allows for a strong visual identity for the school, whilst maximising visibility to the public domain.

The public domain to the front of the school is articulated in the landscape design and is arranged to accommodate the functional requirements surrounding the main entry.

The facade of the hall facing Farmand Drive is small in scale and is not considered a 'large blank facade'. The facade is broken up with materiality

The Framland drive curtilage to the Hall houses the site substation and Pump room for authority access. The locations of these services is limited due to the current extent of Farmland drive and minimal street frontage.

The opportunity for the hall to engage with the street has been opened up to the 'Plaza' whereby the active frontage of the school to the adjacent ommunity parklands provides an engaging and welcoming interface.





Artist Impression: View from Farmland Drive frontage looking towards Hall.



Artist Impression: View from Farmland Drive frontage looking towards Hall (left), covered entry and Administrative building (right)



Artist Impression: View from car park entry frontage looking towards Hall.



Artist Impression: View from Farmland Drive frontage looking towards Hall.

1.2 ITEM 2 - ESD

SUBMISSION QUERY:

Detail is lacking on the architectural drawings of how ESD strategies will be incorporated including 'building as a learning tool' proposals.

SUBMISSION RESPONSE:

The following diagrams showcase the ESD initiatives the Alex Avenue Public School project are undertaking in a graphic sense and is supported by the project Greenstar Pathway and ESD Report.

ESD measures undertaken to minimise consumption of resources, water and energy include:

Resources

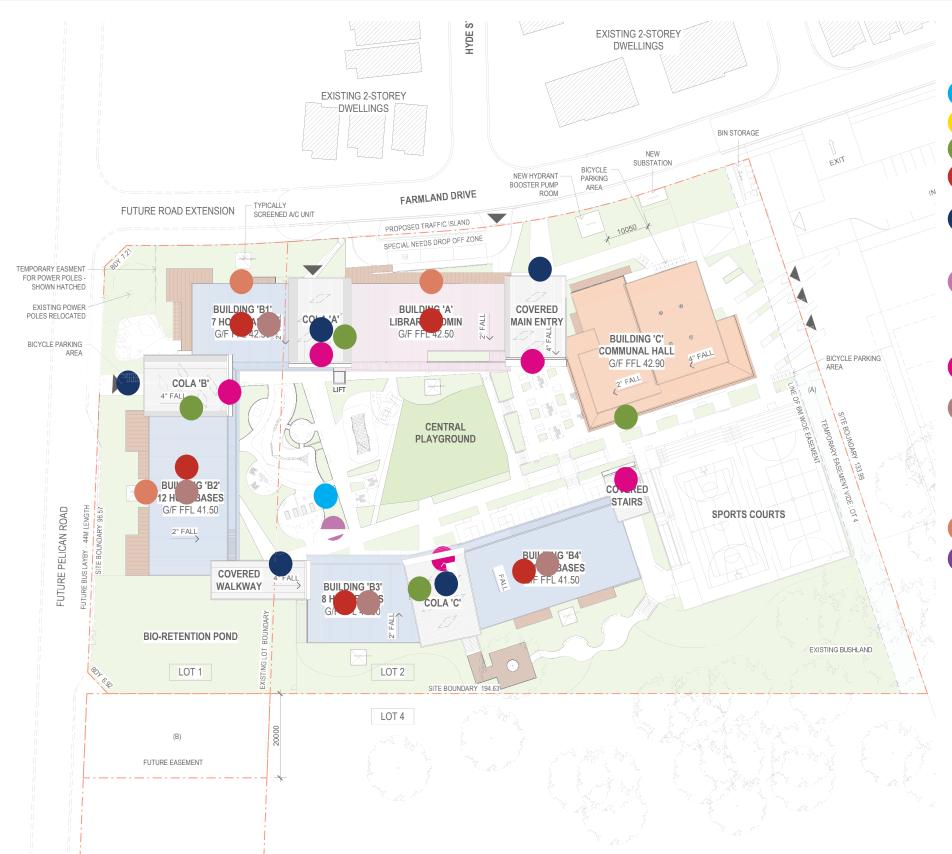
- Use of certified/best practice materials for steel, timber and permanent formwork
- Consideration of characteristics including durability, recycled content, location, embodied carbon and toxicity
 where feasible for other materials selection such as plasterboard, AFS or FSC certified timber and concrete with
 supplementary cementitious materials.

Energy

- building envelope performance efficient building fabric and glazing selection to reduce thermal comfort demands
- effective control strategies
- reduction in peak demand and grid electricity consumption through onsite renewable energy generation

Water

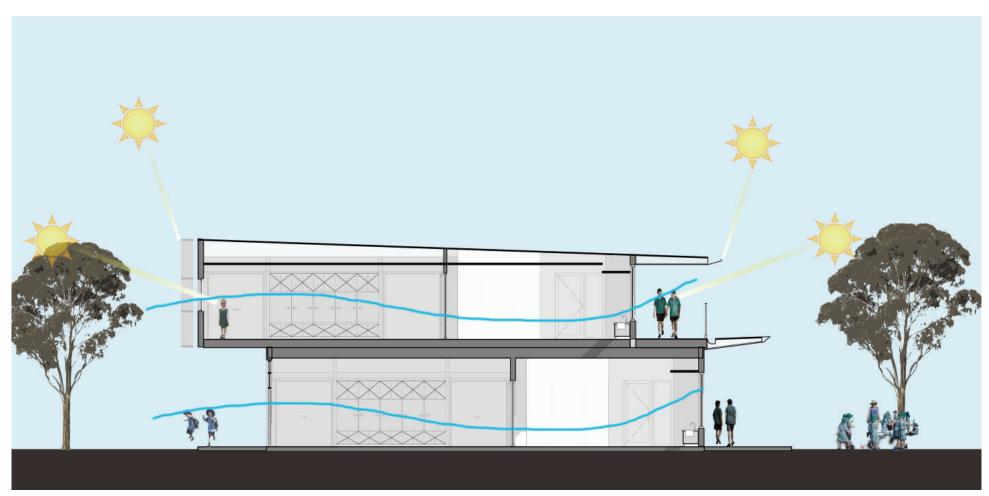
- Rainwater harvesting for use in irrigation and toilet flushing, to reduce use of drinking water in non-potable applications.
- Selection of high efficiency fittings and fixtures to reduce operational consumption of potable water.
- Air cooled heat rejection system has been designed for the new development.
- Implement water sensitive urban design (WSUD) initiatives to improve the water quality of stormwater and reduce peak flow and runoff
- Plant species selected for the site will be native or have a low irrigation demand.



SUBMISSION RESPONSE:

Response to ESD as a learning tool, Key items include:

- 1. Rainwater collection to propagation and reuse
- 2. The inclusion of a grid connected PV solar system on the roofs
- 3. Potable water use reduction through the use of efficient fixtures and fittings
- 4. Increased building fabric performance through efficient building fabric and glazing selection to reduce thermal comfort
- 5. Expressed functionality of the building through purposeful graphics e.g. length, height and shape of elements expressed in engaging and interactive ways.
- 6. Vegetable gardens and 'learn to grow' areas in the landscape will allow children to learn the importance of healthy eating and grow, harvest and cook concepts. The Landscape will also provide an opportunity to explore habitats and strategies such as composting and native plant identification.
- 7. using way-finding to tell a story whilst teaching young students to navigate a complex environment
- 8. The home base clusters are planned as pavilions around the central courtyard, allowing cross ventilation and daylighting from all sides of the learning space. Students will learn how to control their environment by understanding and manipulating the passive systems in the building fabric. Understanding how good passive design can influence their experience within these spaces will provide fundamental learning opportunities.
- 9. External shading and cooling devices
- 10. Plant species selected for the site will be native or have a low irrigation demand.



SUBMISSION RESPONSE (ESD: VENTILATION):

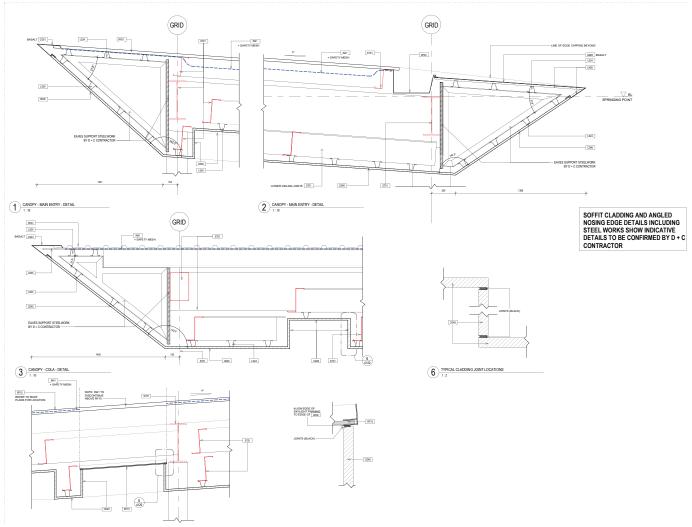
The modular design maximises cross-flow ventilation through:

- reducing building depths from 19.6m (Hayball Concept Design) to 16.0m (Current Detailed Design) hrough a layering of spaces and shading creating pressure differentials that generate natural ventilation.
- Operable windows are well placed to allow cooling breezes to flow through all elarning spaces.
- On days where minimum wind driven ventialtion is available, we have designed for a Hybrid (Mixed Mode) Ventilation whereby the airflow is provided through purposely installed openings in the building envelope supplemented, when necessary, by mechanical systems (ceiling fans and outside air intakes)
- The area of available natural ventilation openings to each habitable space exceeds the minimum requirements of the NCC-BCA (5% of floor area)

1.3 ITEM 3 - COLA CONSTRUCTION

SUBMISSION QUERY:

The COLA structures and walkway eaves as illustrated lack construction credibility. Construction details, particularly through the edge condition should be provided.



COLA edge detailed design drawings

SUBMISSION RESPONSE:

The COLA structures are reinforced concrete frames, consisting of steel screw piles founded in siltstone with reinforced concrete pile caps, reinforced concrete columns and beams with reinforced concrete first floor slabs. Lateral stability of the COLA concrete frame structure is provided by frame action.

The COLA roofs are steel framed structures, consisting of steel rafters, steel purlins and steel columns. All steel sections are 'open' sections except for the steel columns, which are "closed" SHS members. Lateral stability of the COLA steel framed roof structures is provided by steel portal frame action.

The edge condition of the COLA roofs are made up of fully welded angles at required centres, fixed back to the structural steel. The cladding and soffit lining are supported via a top hat subframe and plywood substrate.

1.4 ITEM 4 - ABORIGINAL CULTURE & HERITAGE

SUBMISSION QUERY:

The scheme does not demonstrate a response to Aboriginal culture and heritage either in the landscape or architectural approach.



Homebase interior scheme



Hall interior scheme

SUBMISSION RESPONSE:

There will be future consultation with the Aboriginal Education Consultative group (AECG) to ensure that any specific relevance or connection that the site has to the Darug People is integrated into the landscape and learning environment.

The response to aboriginal culture and heritage prior to meeting with the AECG has been explored with the PRG in great detail. Generally, the exterior building fabric is comprised of silvers, golds and greys reminiscent of the natural landscapes and caves in the area

GroupGSA has explored the use of Aboriginal Art patterns and paintings as inspiration for the landscape, play areas and interior designs of the buildings. Adjacent are samples of the finishes boards where the selection of materials and finishes internally is based around the story of the aboriginal heritage from the point of view of colour selections.

The landscape and material designs weave reference points throughout, meaning becomes deep seated, an integral part of the design language, a solution that moves beyond clichéd, stereotypical or potentially patronising references. The current landscape design allows for yarning circles and 'bush' meeting places utilising logs and rock formations

The AECG will be consulted to ensure that a tangible connection to community is at the core of the project.



Library nterior scheme



www.groupgsa.com ARN 3990

Sydney

Level 7, 80 William Street East Sydney NSW 2011 Australia T+612 9361 4144 E sydney@groupgsa.com

Melbourne

Level 1, 104 Exhibition Street Melbourne VIC 3000 Australia T +613 9416 5088 E melbourne@groupgsa.com

Brisbane

Level 14, 100 Edward Street Brisbane QLD 4000 Australia T +617 3210 2592 E brisbane@groupgsa.com

Gold Coast

Suite 30201 Southport Central Tower 3, Level 2, 9 Lawson St Southport QLD 4215 Australia T +617 3036 4200 E goldcoast@groupgsa.com

Perth

Level 2, 307 Murray Street Perth WA 6000 Australia T +618 6313 2125 E perth@groupgsa.com

Beijing

F2-S01-R09, Soho 3Q Guanghualu SOHO2 N.9 Guanghualu, Chaoyang District, Beijing PR China T +86 (0)10 5327 4697 E beijing@groupgsa.com

Shanghai

Room 407, No. 71, Xi Suzhou Road Jingan District Shanghai 200041 PR China T +86 (0)21 5213 6309 E shanghai@groupgsa.com

Ho Chi Minh City

19th Floor - Havana Tower, 132 Ham Nghi, Ben Thanh Ward, District 1, Ho Chi Minh City Vietnam T +84 8 3827 5385 E hcmc@groupgsa.com