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Redlands School, Cremorne
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REDLANDS SENIOR CAMPUS STAGE 1 DESIGN STATEMENT

for



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Rev B

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Introduction

Stage 1 of the Master Plan Development is the proposed New Learning Hub (NLH).

The proposed NLH generally consists of:

- > A 4 storey Learning Hub building accommodating teaching spaces for Design & Technology, Visual Arts, English, Mathematics, Science and Social Science with a landscaped rooftop teaching area. Supporting facilities include teaching breakout areas, staff facilities, ancillary spaces such as store rooms, amenities, a passenger lift linking the 4 levels and plant rooms
- > A large landscaped Green Space (over the Basement Car Park)
- > An Entry Forecourt
- > Below ground interim educational space accommodating Music, General Teaching space and Pastoral care, adjacent to car parking and below the landscaped green space. Associated facilities include breakout courtyard, staff facilities, receptions, foyer, ancillary spaces as store rooms, amenities, a passenger lift linking the above ground entry level to the new building and plant rooms.

The construction of the NLH will include the demolition of the Mowll building which is a General Purpose teaching building and Nos 7 and 8 Monford Place which are 2 storey apartment buildings constructed c 1940. The existing cottages fronting Gerard Street, which are used by the school for teaching and administration, and the adjacent landscape area will also be demolished.

Interim Sequencing Works

The construction of the NLH is to be sequenced to allow the school to operate on the campus during the construction works. It will ensure the safety of staff and students during the works and minimise the impact of the construction activities on the school's operations. The sequencing works will include the provision of temporary demountable classrooms, required to accommodate classes while the building work is being carried out, and the construction of temporary teaching and administration facilities within the carpark as an interim stage.

Nos 7 and 8 Monford Place will also be used as temporary teaching and administration facilities for an early part of the construction period. Minor modifications will be carried out to these buildings to meet building code requirements.

Existing Facilities

The Mowll Building

The Mowll Building was constructed c 1955. It currently occupies the part of site for the NLH and is proposed to be demolished. The building includes 18 general purpose learning spaces and staff facilities which will be generally replaced by the NLH. The size of the existing classroom spaces in the Mowll Building are not adequate, do not accommodate Redlands class sizes and do not meet with current Schools Facility Standard Guidelines (EFSG). The building does not meet with current building code standards for thermal performance resulting in unacceptable comfort levels for significant parts of the school year and therefore it provides an unsuitable learning environment.

Design & Technology, Music & Visual Arts facilities

The NLH will replace existing Design & Technology facilities, Visual Arts facilities and general purpose learning spaces.

The current Design & Technology facilities were constructed in c 1920's buildings on the west side of the campus and the Visual Arts and Music facilities are currently housed within 4 cottages which have been adapted by the school for teaching purposes (and are to be demolished under stage 1 as noted above). These facilities are outmoded, they were not purpose made teaching facilities, they do not meet with curriculum standards and they do not meet with current building standards.

The school proposes that these facilities to be replaced with contemporary structures which are specifically designed to meet the current curriculum standards and comply with current building standards for thermal performance and fire and safety standards.

NLH Design Concept

Teaching Facilities

The design concept for the proposed NLH is to provide the school with state-of-the-art facilities incorporating leading edge concepts for learning and education.

- > The NLH has been designed with large span flexible floor plates providing maximum internal flexibility.
- > The design consists of large teaching spaces either side of a central breakout area. The design provides flexibility to create a range of spaces for teaching and learning by connecting large spaces via operable walls associated with flexible breakout areas.
- > The NLH will incorporate advanced technology to allow the students to be connected to external resources.
- > Learning areas are designed to be provided with natural light and cross ventilation.
- > Landscaped areas are designed to integrate outdoor space as part of the learning area.
- > The Music area is integrated with the school entry to provide flexible learning space for purpose-made teaching and general classrooms / performance space. The design incorporates a break-out space between classrooms, operable walls, clear visibility from the main entrance to the music reception and full students' supervision from the central staff room. It also provides a front entry facility for the pastoral care and school administration.

The School Facility Standards have been used as a reference document to inform the design. They will continue to guide the next stages of the design development of the project.

Building Form

One of the aims of the proposed Master Plan is provide a new presentation of the school. The Master Plan relocates the main campus entry to the northern end of the Campus at Gerard Street. The new orientation will be initiated with the proposed new Entry Forecourt to be constructed in Stage 1 which will result in the NLH being in a prominent and highly visible location. In this important location and as the first stage of the Master Plan, the NLH will provide the precedence for the future stages in terms of architectural expression massing and form, and the general principles for detailing and materials.

The plan of the NLH is generally rectangular and is aligned in the east west direction, setback approximately 50 metres from Gerard Street. The building is designed as a 4 storey structure in scale with the existing and future major teaching buildings on the school campus.

Ultimately the NLH will align with the Master Plan Stage 4 Learning Hub to provide a line of buildings extending in an arc generally from east towards the north west across the site with the Library/Resource building as a juxtaposed form providing the central focus and a separating element to the stages. The orientation of the stage 4 building is generally established by the angle of the existing Humphery Building and Lang Gymnasium and therefore after the first stage the NLH will also integrate with the scale, form and orientation of the existing buildings. The facade of the NLH, towards the eastern end of the building, is angled to initiate the curvature the angle of the arc which is reflected in the design of the landscape at the level of the forecourt. The aim is to create a 'backdrop of buildings' which are slightly elevated and provide a sense of enclosure to the landscaped forecourt and green space in the entry foreground and work with the existing public presence given by the prominent blue tiled wall of the Lang Gymnasium.

The Music area and car park will be built partially below ground with an extensive landscape green roof area. Natural light and ventilation in the teaching spaces are provided through the integration of skylights and sunken courtyard towards the northern edge along Gerard Street to maximise sun orientation.

Facade Concept

The design concept for the facade is based on the brief to provide a building which:

- > Enhances the presentation of the school and provides a distinctive character to the school.
- > Provides a high degree of thermal performance.
- > Is made of high quality materials which, do not deteriorate over time and are easy to maintain.

The proposed NLH facade has 3 main components which respond to the differing aspects and boundary conditions of the site. The north and south facades are designed to maximize light, air and views and for solar protection. The eastern facade has been designed with consideration of fire rating, thermal protection and privacy in relation to neighbouring properties.

The proposed NLH facade is designed to be fabricated from a proprietary terra-cotta facade system fabricated from high quality low maintenance and long lasting components. The north and south facades are detailed utilizing vertical blade elements supported outside of horizontal metal grilles located at each floor level. The vertical blades are positioned to screen the facade from low angled sun while maintaining views and allowing natural light and facade ventilation. The horizontal grilles facilitate safe access for facade maintenance and screen the building from high sun angles. The varied distribution and shape of the terra-cotta blades which are offset from the glazing by the catwalk grilles provide the facade with a depth and texture and a high degree of visual interest. The orange terra-cotta facade material relates to the dominant use of terra-cotta roofing materials used in the area and its 'warm and earthy' qualities will provide the school with a building which is timeless, unique and recognizable and which reflects the school's high standing as an educational institution.

The facade screen protects a system of proprietary aluminum framed and glazed windows which are low maintenance operable and allow maximum light, cross ventilation and views.

The eastern facade to the proposed NLH utilizes a proprietary prefinished coloured cladding and is designed with expressed structure and limited fenestration responding to the requirements for fire protection and privacy in relation to adjacent properties. The cladding and expressed structure will provide a high quality and modelled finish with visual interest and low reflectivity facing the eastern boundary.

The Interim Music/ Pastoral Care/ Car park building only façade will be facing Gerard Street. It is designed with a feature palisade fence that is integrated with the building envelope and gradually leads to the main entry gate on the Gerard Street / Waters Road corner. The palisade fence allows for an easy to maintain surface and aligns with CPTED principles.

Building Height and Scale

Height and Scale

The proposed NLH is to be a 4 storey building consistent with the scale of the existing buildings on the site. The building has been designed so that each floor level of the building will align with the corresponding floor level of the Roseby building and the existing walkways connecting the Humphery building. A proposed new lift within the NLH will facilitate compliant access to all of the connecting buildings. This concept is to be maintained over the subsequent phases of the development.

Accessibility

A proposed new lift within the NLH will facilitate compliant access throughout the NLH and to all of the connecting buildings. This concept is to be maintained over the subsequent phases of the development. Accessible amenities are provided at each level of the building.

The integrated Music / Pastoral Care / Car Park building will be accessed near the main entry on Gerard Street with stairs and a lift. Compliant access to the main school campus will be given with the integration of ramps that will guide the students to the other educational facilities and the landscaped green area.

Materials and Structure

The proposed Stage 1 works including the NLH have been designed as a reinforced concrete framed structure with aluminum framed and glazed windows. Ceilings are proposed as plasterboard and veneered plywood. Areas of concrete will be left exposed to provide the thermal mass assisting with the night purging process. External materials include face brickwork at Ground Level, proprietary Terra-cotta façade systems and proprietary prefinished fibre cement cladding. The NLH roof deck and the landscaped area above the carpark will consist of paved areas, areas of decking and planters as described below. These areas will be provided with high quality proprietary waterproof membrane systems.

Services and Sustainability

Sustainability

The proposed NLH will incorporate environmentally sustainable design. Sustainable initiatives have been selected which are appropriate to the use of the building providing a real benefit to the school community.

The proposed NLH incorporates the following ESD initiatives;

- > Rainwater reuse for landscape irrigation
- > Natural cross ventilation
- > Natural lighting (where possible)
- > Mixed mode ventilation
- > Night time purging
- > Energy efficient lighting
- > Water efficient fitting and fixtures
- > Environmentally Preferable Materials (where possible)

ESD initiatives are also integrated with the proposed building as an educational tool. Display panels will provide the students and staff with information on the energy usage of the building. The rooftop area will also include educational tools associated with natural sciences.

Mixed Mode Ventilation

The NLH is designed to be naturally ventilated through a cross ventilation system facilitated by the building facades and assisted by internal acoustic baffles. When external temperatures rise above a preset limit visual indication in each of the teaching spaces will inform the users to close large windows. Once the windows are closed an air cooling system will automatically activate to provide cooler air to the space. This will not provide full air conditioning but reduce peak temperatures in each space to within acceptable comfort levels.

Mechanical Ventilation

Mechanical Ventilation will be provided to:

- > Amenities areas
- > Specialist teaching areas such as dark rooms and design technology equipment.
- > Computer server rooms will be air conditioned
- > Music rooms

Carparking

The proposed Stage 1 includes underground carparking for 68 cars, including 2 accessible spaces and spaces for visitors.

The carpark is to be used for staff and visitor parking. The carpark will also be used on the weekends and during holiday periods in relation to sporting and other recreational activities.

Entry and exit to the carpark will be via Gerard Street. The entry driveway will be secured with a roller shutter and gates.

The carpark has been designed to be accessible and includes lift access and accessible parking spaces.

Carpark exhaust and intake are integrated with the building and landscaped space above and are located away from neighbouring property boundaries and designed in accordance with Australian Standards.

Landscaping

Large Landscaped Green Space

The Redlands campus is constrained and has limited open space. The NLH will provide the school with a significantly improved landscape outcome at the completion of Stage 1.

Landscaped areas under stage 1 will provide;

- > Play space during school breaks
- > Space for physical education activities
- > Learning activities
- > Outdoor chess
- > Astronomy (Rooftop terrace)
- > Science experiments
- > Teaching spaces (classes in outdoor areas)
- > Hard surfaces and soft surfaces
- > School entry presentation
- > Shaded areas
- > Spaces for noisy/physical activities vrs spaces for quiet play/chat
- > Spaces to eat lunch
- > Soft landscaping and landscape furniture
- > Lighting
- > Shelter from the weather
- > Performances
- > Working on artworks/TAS projects

- Northern green space above the Carpark
 - > The northern green space above the carpark will be the main open green space on the campus. This space will provide predominantly soft landscaped areas with some paved areas. The space is designed to allow for some active play although it will not be used for formal ball games.
 - > Planting will be a mixture of low shrubs and smaller trees. A deep soil plating zone to eastern boundary will provide a landscaped buffer to neighbouring properties.
 - > Low scale shade structures will be incorporated in the landscape
- Landscaped Roof Terrace
 - > The rooftop terrace of the NLH has been designed to include a mixture of green roof and hard paved surfaces. This space will be used predominantly as an outdoor learning area. Planter boxes will facilitate Science and Geology experiments. Paved areas will be used for astronomy during the evenings.
- The Entry Forecourt
 - > The proposed Entry Forecourt has been designed as the new main pedestrian entry to the school.
 - > Stairs and accessible ramps will lead the students, school staff and visitors to the elevated NLH and school main campus through a ceremonial entry space including an iconic tree / sculpture.
 - > The entry forecourt will also integrate branding initiatives, with a signature Redlands sign at the entry.