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CANTERBURY SOUTH PUBLIC SCHOOL

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CANTERBURY SOUTH PUBLIC SCHOOL ARCHITECTURAL DESIGN STATEMENT

INTRODUCTION

NSW is experiencing extraordinary population growth in Sydney and major regional centres. On current trends, Sydney's population will double in size in just over 40 years. We are now seeing the first major increase in the school-age population since the Baby Boom of the 1950s. There will be a massive 21% growth in student numbers by 2031 which means NSW schools will need to accommodate an extra 269,000 students, with 164,000 of these students in the public system. 80% of growth will occur in Sydney – particularly in urban growth areas as families move to regional centres and larger cities. Sydney's population projections indicate growth will continue over the next 30 years – the equivalent of 7,200 extra classrooms by 2031. To combat the growing numbers, we need to build, upgrade and maintain our school infrastructure to plan for the growing number of student places required.An interesting and challenging outdoor environment.

PROJECT BACKGROUND

Canterbury South Public School is located within the Canterbury Cluster, which makes up the larger the Canterbury-Bankstown Local Government Area. The NSW Department of Education has identified Canterbury South Public School as suitable for redevelopment to a 'Core 21 Primary School' to meet increased demand created by a number of key drivers which include but not limited to:

- Meet future projected enrolment growth to 2031
- Meet the objectives of the department of Education and school specific educational planning principles
- Improve the performance of the School assets
- Achieve the best value for money by maximising functionality of existing assets.

EXISTING SITE SUMMARY & CONTEXT

Canterbury South Public School is situated on a slight slope of approximately 4.5 metres from South to North. The site is bounded by Napier Street (South), France Street (North) and High Street (West). It is surrounded by low scale residential properties to the South and to the North and mid-scale residential to the North-East of the property. Two adjacent residential lots "intrude" into the western side of the school. In addition, the school backs onto a large open space / playing area known as Pat O'Connor Reserve which is simultaneously used as a community recreational area.

The existing school is comprised of 12 permanent homebases and 1 demountable. All buildings on site are single story buildings. The position of the buildings and the courtyards make supervision of the site difficult however, there are level open play areas around the court and COLAs. Initial borehole logs and geotechnical reports indicate that sandstone has been found throughout the site at approximately 0.4-1.4 metres.

Existing traffic and access strategy has acknowledged that the main entry is located on High Street and main drop offs on France and Napier Street. High street is a reasonably quiet local road whilst France and Napier are no-through roads with limited local traffic.

HISTORY

The Cooks River and Canterbury area has a rich history. The Aboriginal people that first inhabited this area would have made use of the woodland, animal resources and proximity to water that that was available in this area.

Above the Sandstone geology smooth-barked (Angophora costata), blackbutt (Eucalyptus pilularis), Sydney peppermint (E. piperita). red bloodwood (E.gummifera) and turpentine (Syncarpia glomulifera) with a varied understorey. Elsewhere in nearby shale geology, Turpentine-Ironbark forest would have been the most common vegetation community.

Wood was used to make canoe poles, weapons, woomeras, boomerangs and was used for firewood. Plant resins were used to fix parts of tools together. Bark was used for huts, carrying vessels, canoes, shields, fishing lines, bedding, blankets and torches, amongst other things Fibres were used to make ropes that could then be used in traps and nets for trapping animals, birds and fish. Local knowledge of medicine plants was also an important part of Aboriginal culture.

Animal resources were important to the Aboriginal people of the region, not only as afood source and for manufacturing. The use of animal skin clothing and animal bone tools has been well documented. Overall, the resources available to inhabitants of the project area region could have provided a varied and generally reliable resource to sustain the many economic and social requirements of large Aboriginal groups.

Refer to aboriginal heritage assessment CSPS Cultural Heritage Connections Pty Ltd and (Benson and Howell 1990) (Attenbrow 2002: 113)

During European settlement the Cooks river was used for animal grazing, farming, recreation, as a water source for some early industry with adjacent workers village and later sold as housing subdivision.

KEY DATES:

1770 -Captain Cook's account of the English landing at Botany Bay, he noted a 'fine freshwater stream' with 'fine meadows' along its banks.

1800s-Canterbery Vale Farm. Several acres of planting and livestock.

1840 -Canterbury Sugar Works. Georgian structure and one of the first industrial buildings in Australia. Raw sugar imported from the Philippines was processed to produce white sugar, under what was then known as the Australian Sugar Company. The site regularly churned out loaf sugar and molasses and a small village of slab huts began to populate its periphery.

1848-Act banning noxious trades from Sydney ensured that more than enough polluting industries moved to the Cooks river over time. Wool washers, tanneries and boiling down works were established from Alexandra Canal to Cup and Saucer Creek

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1894 - artist Sydney Long painted an idyllic scene of boys swimming in the Cook's River, entitled By Tranquil Waters. Popular recreation spot for, walking, swimming and boating.

1901 – Sugarworks Dam and Dennis's Tannery buildings cooks river (built at junction of cup and saucer creek and Cooks river.

1980- Increased pollution, siltation, runoff from residential development into the Cooks river

1889 -River flats land used by market gardens and some of the new estates were flooded.

1928- Government concrete relief work started to concrete Cup and Saucer Creek

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The school opened in 1937 in the current administration building before expanding into a number of out buildings before purchase of existing residential properties to the south and expansion into additional single buildings.

PROPOSED REDEVELOPMENT

The Department of Education has prepared the Project Scope requirements to outline the optimal asset strategy to meet the education infrastructure needs and to support educational outcomes of the Canterbury Cluster, within which Canterbury South Public School is located. The primary advantage of these works is that they will provide additional capacity to meet local demand and improve functionality and performance of the existing school assets.

The key objective of the school redevelopment of Canterbury South Public School is to increase the permanent facilities to ARCHITECTURAL DESIGN STATEMENT



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accommodate 690 students. This will be achieved through the following scope:

- Expansion and upgrade of the existing school through the net gain of 18 new home bases for expanded capacity and to replace demountable classroom for up to 690 students giving 30 (Total) classrooms to the EFSG requirements (DA Application)
- Demolish existing hard and soft landscape required for proposed works (DA application)
- Enhanced landscaping to improve the visual amenity of the school and provide outdoor learning and play opportunities (DA application).
- Works to Entry Areas on Napier Street and Hight Street (DA application)
- Works to on street carparking, line marking, crossovers, signage (DA application).
- Expansion of core facilities (Administration, Staff, Library, Programs, Communal Hall, Canteen & out of School Hours Care) to suit the increased student numbers (Separate planning application)
- Demolish existing buildings required for proposed works.
 (Separate planning application)
- Removal of existing 1 demountable classroom (Separate planning application)
- The school is to stay operational during construction.

CONTEXT BUILT FORM AND LANDSCAPE

'The River bank' concept. Aboriginal people and Europeans have both gathered next to the Cooks river and Cup and Saucer creek. There was a source of food, fresh water, resources for daily life and industry. The river formed a natural transportation corridor and provided a space for recreation. The concept for the school masterplan focuses on the sites link to Cup and Saucer creek and the Cooks river as a place making exercise to ensure the unique history and identity of the area is reflected in the design.



Arrival at Mana Ngurang the 'Gathering place' the existing large fig trees will be retained as an arrival point and focus for the new school reception, administration and library building addressing existing arrival points from High Street and France Avenue and establishing a reference to the first peoples of this land.

A dry creek bed will run along the main circulation spine from High street to Pat O'Connor reserve. The civic buildings of the school are located along this spine including the library, school hall, cola, canteen, drinking fountains and picnic tables. The children will come down to creek to drink, eat and gather.

The school hall has interfaces to the existing parking area that addresses visitor access from France street, to the large school quad for assemblies and to views over Pat O'Connor reserve

The learning spaces have been located in a 2-3storey building (block C) along the southern boundary of the school addressing Napier street and framing the edge of the main school guad. The building has been located to take full advantage of the northerly aspect for solar control and summer afternoon breezes. The building is cut into the site on the west with the ground sloping up to Napier street this considerably reduces the scale of the building to adjacent residential properties to the West and along Napier street. From the street the main bulk of the building to the main roof eaves line reads more like a two / two and half storey building than a three storey building. The main skillion roof also slopes down to the southern elevation reducing the façade height on the southern elevation, with roof elements including clearstory windows and plant space setback from the façade to reduce the scale of the building from the south. The Napier Street pedestrian entry point forms a natural break in the southern façade splitting the building mass into two connected forms. The Green pop out façade treatments along the southern elevation breaks up the length of the building to a scale and rhythm more in keeping with adjacent residential properties.

A series of green spaces will run through the middle of the school from High street to Pat O'Connor reserve forming a unified ribbon of landscaping and outdoor play space. One of the advantages of constructing a new 2-3storey building along the southern boundary to achieve required outdoor play space has been that there was an opportunity to open up the middle of the school and provide a ARCHITECTURAL DESIGN STATEMENT green space that can benefit the whole community. A large open green town square with seating and canopy planting around the edges will form the main outdoor space of the school. On the edges of the outdoor active green space are passive external seating areas that function as breakout spaces from learning spaces. The









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tiered seating and hard-court area adjacent to the hall will feature line markings and planting that will teach children about the moons influence on the tides, traditional methods of navigation, and the flora and fauna of the area. This space will connect to Pat O'Connor reserve with a large gate to maximize school access and connection to the reserve. Bush tucker planting, herb and vegetable gardens have also been integrated. Screen planting to adjacent neighbours and streetscape planting has also been considered to mitigate the visual impact of the development. At the new pedestrian entry point along High street, new entry gates, service enclosure and signage forms a new school arrival point leading to the school reception in Block A (which is part of a separate Application) and then onto block C via a new covered walkway.

PRINCIPLE 2 - SUSTAINABLE, EFFICIENT, DURABLE

Passive ESD principles:

- Orientation of Buildings has been considered to take advantage of Northerly aspect to reduce heat load during summer and to take advantage of winter sun. Sun shading and façade elements have been used to reduce heat gain.
- Natural light to internal spaces has been maximized with pop up roof lights, limiting the width of Homebase building to ensure good natural light penetration from facades and reduced energy consumption.
- Passive ventilation has been maximized throughout the design in the Homebase building the northerly aspect and narrow floor plate will ensure the building captures cool afternoon breezes
- Thermal heat lag of exposed concrete slabs in PAA spaces will help to stabilize extreme daytime temperatures by absorbing heat during the day and radiating this out at night.
- Well Insulated building façade will reduce heat gain and loss
- Light weight building fabric has low embodied energy and can be modified in the future more easily than traditional masonry construction ensuring a good long term environmental solution.



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- Proposed Facilities have not been placed on school land that may be subject to future development to reduce future demolition and waste.
- Water reuse through on site rainwater harvesting for irrigation is being investigated
- Waste reduction through on site composting and waste separation for recycling.
- Photovoltaic cells to offset AC power load
- Durable resilient through colour CFC panels are being proposed to most high impact areas to reduce ongoing maintenance and damage.



PRINCIPLE 3 - ACCESSIBLE AND INCLUSIVE

School grounds have been designed to physically connect to the wider community area and down to Pat O'Connor reserve with a new green spine that runs through the school. Opportunities exist for controlled shared use of the schools proposed facilities that will be managed by the school including the current ongoing shared use of the DOE land reserve to the east.

Landscape planning and building siting has been used to create a clear arrival 'Gathering place' Mana Ngurang. The main circulation spine, landscape spaces and architectural building forms have been arranged to reinforce movement and create a sense of place that speaks of the natural environment of the cooks river and the site

PRINCIPLE 4 - HEALTH AND SAFETY

School grounds have been designed to maximize passive surveillance of external areas and to minimize opportunity for children to be exposed to bullying. The existing perimeter school fence will be maintained and modified to create accessible access points and opportunities for welcoming arrival points. The proposed gate connection to Pat O'Connor reserve will open up this side of the site.

PRINCIPLE 5-AMENITY

The school grounds have been designed to be a pleasant and engaging environment that reflects the history of the site and the Cooks river to establish a clear urban identity as well as educate children about there environment. By increasing the density of some school buildings there has been a substantial gain in the quality, legibility and extent of natural space within the school grounds. This is of benefit to the whole community.

$\label{eq:principal_bound} \textbf{PRINCIPAL 6} - \textbf{WHOLE OF LIFE, FLEXIBLE AND ADAPTIVE}$

Future proofing the site for expansion through careful planning has ensure that future school buildings will have good orientation, and can tie into main circulation spines that run through the school to create a cohesive campus. Light weight building construction will allow for flexibility and adaption.

PRINCIPLE 7 – AESTHETIC

Well-proportioned building forms address the arrival plaza and village green to create an activated spaces with playful building fenestration that makes reference to the cooks river and cup and saucer creek. A combination of natural materials and bright colours will add vibrance and natural theming to the school grounds. Dry creek bed and landscape planting and themes to reflect riverbank concept.

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