



Sutton Building reflects school's sustainability ethos

Brisbane school enjoys being sustainably cool

Completed in time to open for Term 1 this year, the Sutton Senior School Building at Paul's School in Bald Hills, Brisbane has been designed with a strong sense of responsibility for the environment, to control maintenance cost and energy use, and to provide a safe learning environment.

The building is the main element of a master plan for the school developed by architect Rachel Towill. Two decrepit weatherboard buildings,

constructed as temporary facilities in the 1980s, both with "quite a lot of asbestos in the walls and ceilings" were demolished to make space for the new senior school and outdoors play space.

Set on a rise above the existing school buildings, excavation has been minimised by following the natural contours of the site; the building is orientated with its longest sides facing North/South to minimise heat gain.

The building houses nine classrooms, a mini

lecture theatre, breakout learning zones and three staff rooms on two levels. A hospitality-teaching classroom is connected to the ground floor coffee shop, Sippers@Sutton, which in turn opens onto an external seating area, a popular gathering place for the school community and parents.

Towill says that allowing for the school's possible future needs was a key consideration. By placing the load bearing walls around the perimeter and the central spine, internal



partitions can be taken down and repositioned swiftly and economically, should the school's needs change over time.

After holding workshops with the teachers and students early in the design process, the consensus was that the building must provide flexible learning spaces. This has been achieved through providing breakout spaces in the central corridor for smaller group study and discussion; large glass sliding doors that can extend the teaching space out into the corridor; smaller tutorial rooms for group discussions with visual connection back to the main classrooms; a selection of loose furniture to allow for flexible room layouts; operable walls to merge classrooms together for team teaching; and a mini lecture theatre to give senior students a space to present to a larger audience.

Senior school class sizes are generally around 28 students but the nine classrooms can seat up to 32 without overcrowding.

The school's school blazer inspired the strong colour theme through the building. Red, yellow and green are sprinkled through the brickwork, joinery, carpet and walls, tying the internal and external elements together.

The architects, with the students and teachers, worked with graphic designers to create a ribbon of stories of inspirational people and past students through the corridors of the building. Referred to as 'the building's own graffiti', this ribbon can be added to over time.

In keeping with the school's environmentally responsible stance, local materials have been used wherever possible. The slab has a 30 per cent fly ash content and has been sealed with a water based sealer where exposed. All joinery is E0 board (low formaldehyde) and all paints and adhesives used are low VOC.

The building's main façade is broken into three parts by recessed recycled timber cladding. The ground floor walls are glazed grey brick

enlivened by randomly inserted yellow, red and moss green bricks on either side of banks of students' lockers. The second level extends 1.2 metres to shelter the lockers.

Kingspan insulated wall and roofing panels, the wall panels finished in Mountain Blue, have been used for the roof and exterior cladding. This easily erected panelling system – craning and bolting the roof into place took just two days – is guaranteed for up to 25 years and has a life expectancy of 40 years.

The interior surface of the roof panels is finished in bright white liner to form the ceiling of the rooms on the second level. The steel waffle formwork of the second level floor has been left exposed and unpainted as the ceiling finish for the ground floor, reducing the need for additional materials.

There are no conventional ceilings; instead, cabling and other services are carried in cable trays that sit on top of suspended Queensland

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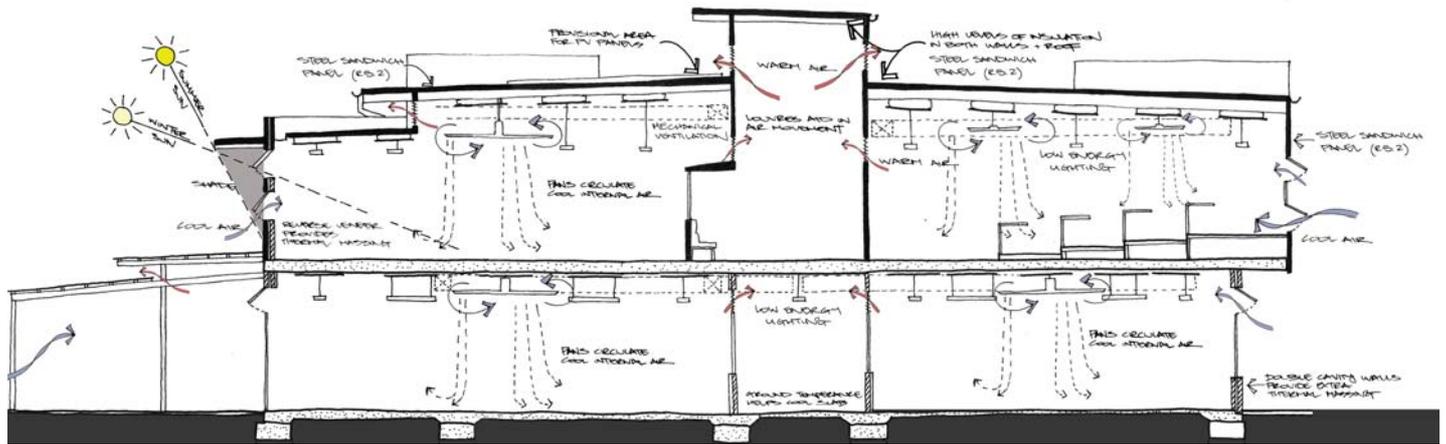
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Towill Design Group delivered the environmentally sound building design. Left Louise Booth, right Rachel Towill



Hoop Pine plywood panels, which also serve effectively to attenuate the roar of a Brisbane downpour on the roof.

In place of a conventional central air conditioning system with attendant high power bills, the internal temperature of the building is maintained at a comfortable level through

ultra efficient insulation in the roof and exterior walls, the cooling effect of the floor slab and a sophisticated building management system (BMS) which controls windows, louvers and air conditioning via a weather station.

Large, slowly turning overhead fans and open windows are generally sufficient to keep students

and teachers comfortable before the day warms up. When the BMS detects that the internal room temperature has reached 26°C, the windows close automatically and the central air conditioning system switches on. The BMS also collects data for water and energy usage and can be used as a learning tool in science and environmental studies.

St Paul's School creates its own story

St Paul's School in Bald Hills, 16 km north of Brisbane's CBD, sprawls across a 50-hectare campus bounded to the west by the South Pine River, which floods periodically to irrigate the school's sports ovals and koala habitat bushland but doesn't come close to the school buildings on the eastern side of the site,

The school's ICSEA profile – 60 per cent in the top quartile and 32 per cent in the upper middle reflect the suburb's solidly middle class 'married with kids' status (the median/average age being two years younger than the national average).

Founded as a school for boys in 1961 by the Anglican Diocese of Brisbane, the school became a co-ed in 1993. Current enrolment is 1500, including 22 three-year-olds in the early learning centre and 36 overseas students in the International Students' Program.

Headmaster Paul Browning emphasises the school's 'Create Your Own Story' philosophy, which, through the academic program and a wide range of extra curricular options, aims to encourage students "...to



explore who they are, find their strengths and overcome their weaknesses."

St Paul's is one of 14 Australian schools in the 100 + member Round Square Group, a worldwide association of schools that "share a commitment beyond academic excellence, to personal development and responsibility through service, international understanding, challenge, adventure, democracy, and environmental stewardship."

Every year Round Square organises at least 10 Round Square International Service (RSIS)

Projects. These bring students and teachers from member schools together to work as an international team, to help communities.

A school principal for 14 years, Browning was the founding principal of the Burgmann Anglican School in Canberra where he navigated the school's development from a green fields site through design and construct, fit out, and staff recruitment to student enrolment.

His project management experience gained while working and teaching in Canberra has been valuable at St Paul's too, where \$3 million in BER funding was used to extend the library and build two new classrooms, and \$5.2 million on the construction and fit out of the Sutton Senior School Building.

The Sutton Building was designed and project managed by Brisbane-based Towill Design Group. While employed in Canberra with award winning architects Collard Clarke Jackson, Principal Architect Rachel Towill worked with Paul Browning on the Burgmann Anglican School development.