2023 JAMES D. MACCONNELL AWARD

BRISBANE SOUTH STATE SECONDARY COLLEGE

ASSOCIATION FOR LEARNING ENVIRONMENTS

09.06.2023

Our response has been designed as an interactive PDF which will guide you through our broad experience, deep expertise and passion for this project.

You will be able to navigate through the document using the permanent home button positioned in the top left hand corner of each page and on the bottom of each page using the back and forth arrows.

→
We acknowledge the Turrbal and Yuggera elders and people, traditional owners of the Country on which Brisbane South State Secondary College is built.

Acknowledgment of Country

Brisbane South State Secondary College is a new public high school located within the Brisbane Knowledge Corridor and is an integral part of this leading education, health, and research network. Within this context, the project has explored innovation across 5 key themes.

ENGAGED WITH COMMUNITY AND PARTNERS
School campus arranged to encourage participation of public and partners onto the school grounds as well as student access to off-campus facilities.

VERTICAL CAMPUS MODEL
All school buildings connected at elevated levels to provide equity and ease of movement as well as enable student interactions with learning activities.

INNOVATIVE LEARNING HUBS
Diverse learning facilities collocated within open learning hubs to empower students to select and control their individual learning pathway.

CONNECTED WITH COUNTRY
An architecture explicitly derived from the Turrbal and Yuggera cultural use of the site to inspire and motivate community embracing our indigenous heritage.

CELEBRATES NATURE
An environment where built form is secondary, conceived as a setting to enjoy the native landscaped gardens, parklands and distant mountain views.

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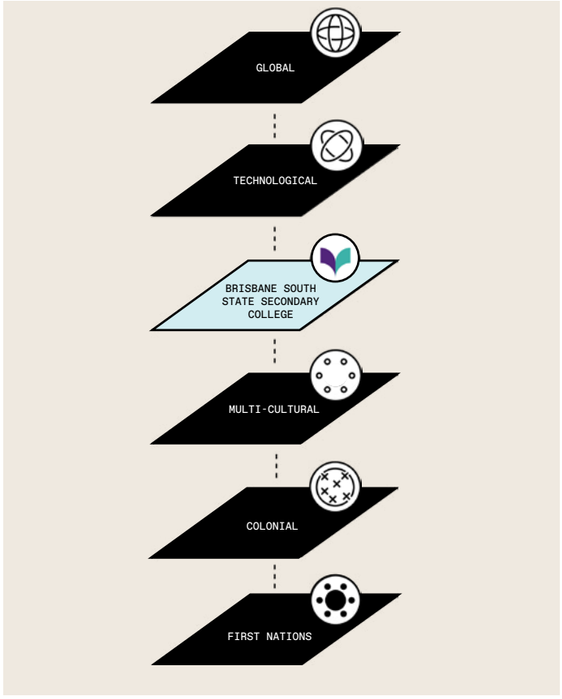
Designing With Country

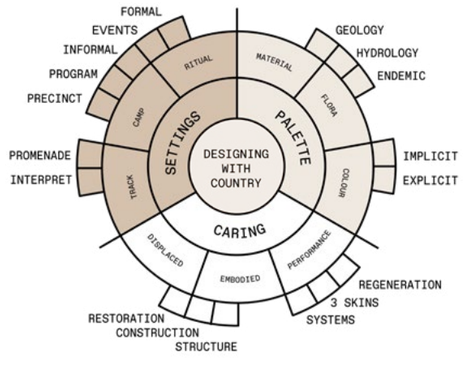
Our Designing with Country approach seeks to connect with First Nations cultural heritage and guides the way we think about projects that engage with Indigenous communities and contexts. This approach underpins and binds each stage of the Methodology. It places Indigenous culture at the centre of focus and guides outcomes.

WHY WE NEED THIS
Why would we make buildings, modern precincts, and communities connect to Country and what makes this important? Our underlying belief is that it is the first point of connection to culture, creativity and science, and an awareness that it has existed in Australia for over 50,000 years.



DESIGNING WITH COUNTRY LAYERS OF INFLUENCE DIAGRAM

Our approach to Designing with Country is grounded in an understanding that there are many layers of influence that can affect the outcome of a project. It is through the consultation and exploration of these layers and their interaction that the design evolves. The ambition of the Designing with Country Framework is to enable a greater relationship between people, knowledge and environment and work towards a non-conflicted future. This ambition can be realised by acknowledging the significance of First Nations culture in the re-consideration and development of the built environment.

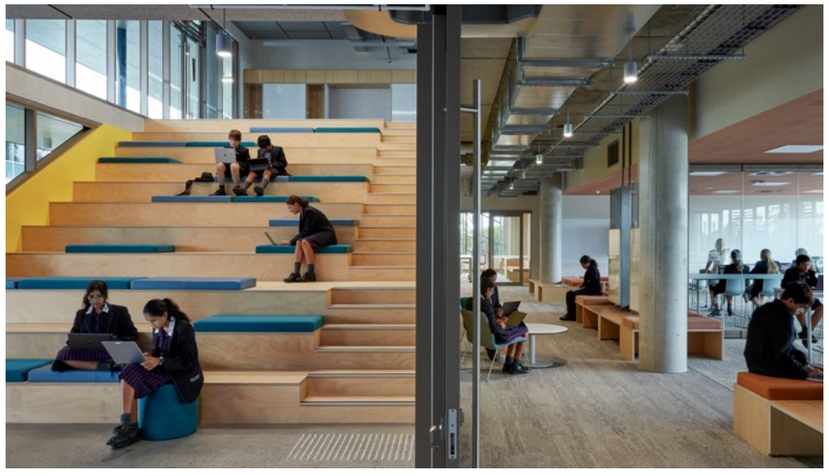


DESIGNING WITH COUNTRY AGENCY OPPORTUNITY LENS DIAGRAM

LEARNING OASIS

- New build public secondary school (grades 7-12) for 1,650 students
- Seven storey campus with five buildings
- 27,600m² gross floor area on a 2-hectare inner-city site
- Project costs $124M Australian dollars
- Project commenced master planning December 2018, completed construction November 2021
- School opened February 2021 (partial for grade 7 only)

ARRIVAL COURT



LEARNING HUB

SPORTS HUB

3a) Describe the community

Brisbane is the capital of Queensland, a sub-tropical city of 2.8 million residents, the fastest growing city in Australia.

Brisbane South State Secondary College (Brisbane South) is a new public secondary school opened in 2021 for all students aged 12-18 living within the inner-city catchment 3 km south of the city central business district.

According to census data, the local community is predominantly younger, highly university educated, more diverse (over 40% born outside Australia) and living in apartments in greater numbers than the average across Australia.

The school community comprises the people living in and around the catchment area of the school. This includes the families and school aged children who may attend the school now or in future, as well as the broader public who may interact, participate and/or connect with the school.

The community is further extended by the school staff, as well as partner organisations nearby.

3b) Identify stakeholders

As the project entailed the creation of a new vertical school within an already dense urban area, the range of stakeholders was extensive and diverse.

The first group includes the circa 45,000 residents living within the suburbs of the new school catchment (2021 census data). This comprises both as potential families who may enrol students in the school, as well as the broader community.

This population can be broken down by suburb:

- Dutton Park (2,134)
- Greenslopes (10,524)
- Highgate Hill (6,229)
- South Brisbane (14,292)
- Woolloongabba (8,687)
- Fairfield (3,106)

Second are the range of groups and organisations that have partnerships and relationships with the school to extend learning opportunities:

- Catchment state primary schools – Dutton Park (DPSS), Fairfield (FSS), West End (WESS), Buranda (BSS), Greenslopes (GSS), East Brisbane (EBSS) and Yeronga (YSS)
- Precinct state secondary schools – Brisbane (BSHS), Coorparoo (CSSC) and Yeronga (YSHS)
- University of Queensland (UQ)
- Eco-sciences precinct (ESP)
- Prince Alfred Hospital and research precinct (PAH)
- Boggo Road Urban Village (BRUV)
- Brisbane Australian Football League (AFL) Brisbane Lions

Third are the government departments and agencies that participated and directed the planning the project:

- Queensland Department of Infrastructure, Local Government and Planning (DILGP)
- Queensland Department of State Development (DSD)
- Queensland Department of Education (DoE) - educators, policy makers and infrastructure services
- Brisbane City Council (BCC) – Urban Planning, Parks, Active Transport, Public Transport
- Queensland Department of Transport and Main Roads (DTMR)
- Queensland Department of Housing and Public Works (DHPW)
- Office of Queensland Government Architect (OQGA)
- Australian Department of Environmental Sciences (DES)
- Australian Heritage Council (HC)
- Queensland Urban Utilities (QUU)
- Energex, energy provider (ENX)

KEY STAKEHOLDERS

TRANSLATIONAL RESEARCH ECOSCIENCES

UNIVERSITY OF QUEENSLAND

BRISBANE LIONS

DUTTON PARK STATE SCHOOL

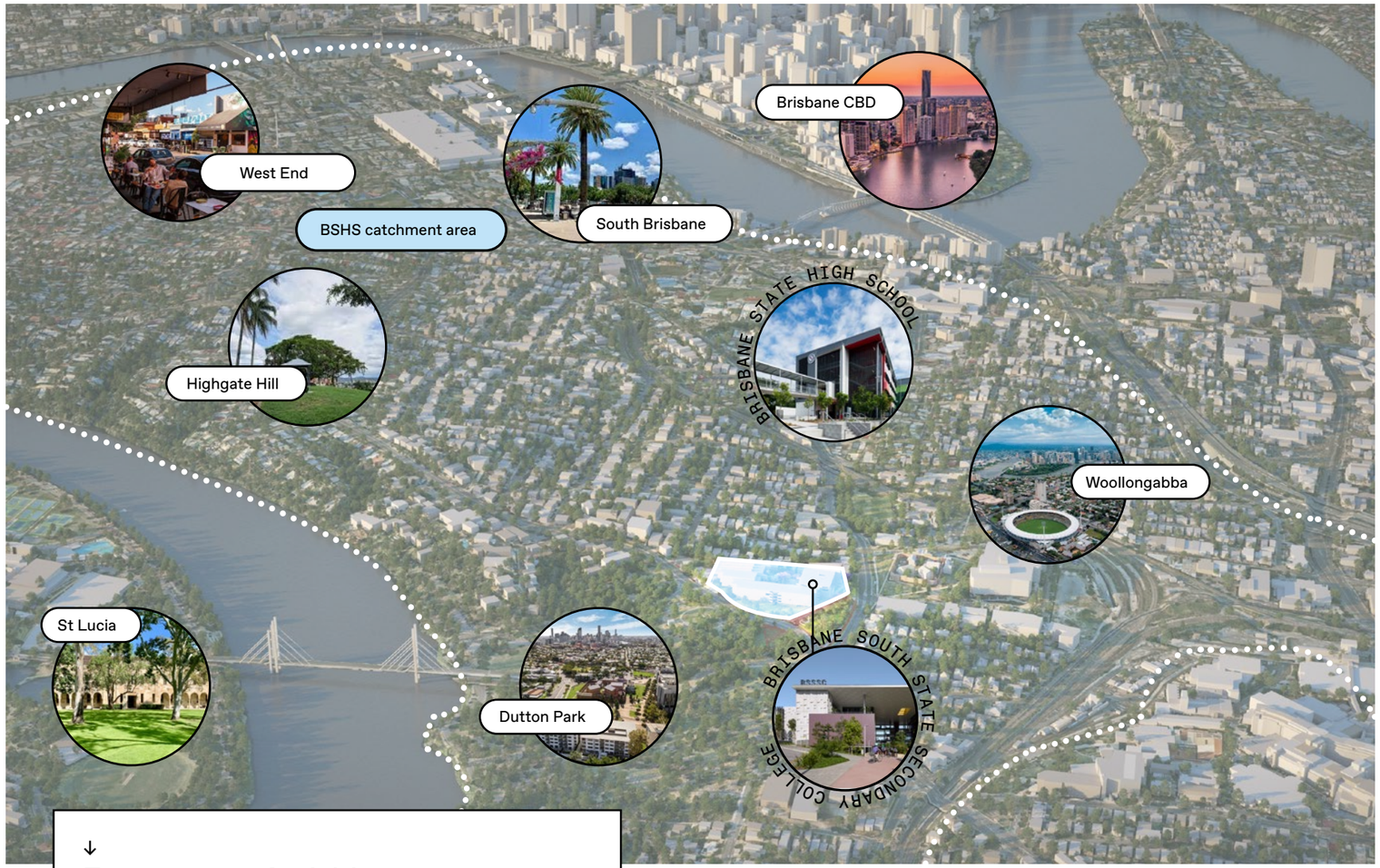
3b) Stakeholder engagement

Commencing in 2016, DoE undertook extensive engagement with the public to investigate options and potential sites that could accommodate the escalating secondary school demand within the inner city. After obtaining multiple rounds of feedback from the local community, DoE selected the current location as appropriate for the new school.

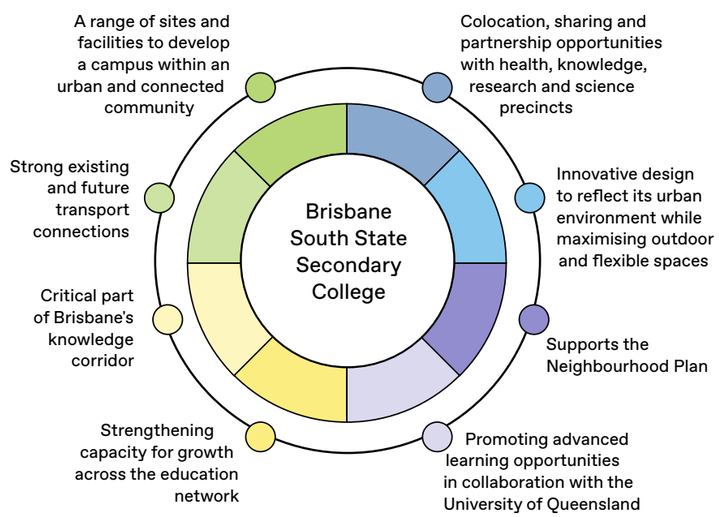
Following this decision, we were commissioned to undertake detailed stakeholder engagement and master planning for development of the brief and design on the selected site.

At commencement of our services, we led a two-day enquiry by design workshop, with the involvement of 70 stakeholders from the parties listed above. This process enabled the education brief and project aspirations to be rapidly explored with the participation of all parties.

Twelve architects facilitated the workshop and assisted with illustration of ideas. This process directly informed the preferred master plan and distilled shared vision and values for the project (outlined in subsequent educational vision section).



Brisbane South State Secondary College Values



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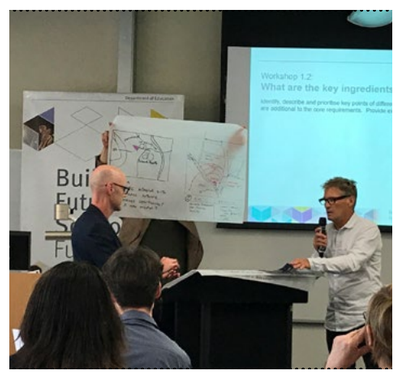
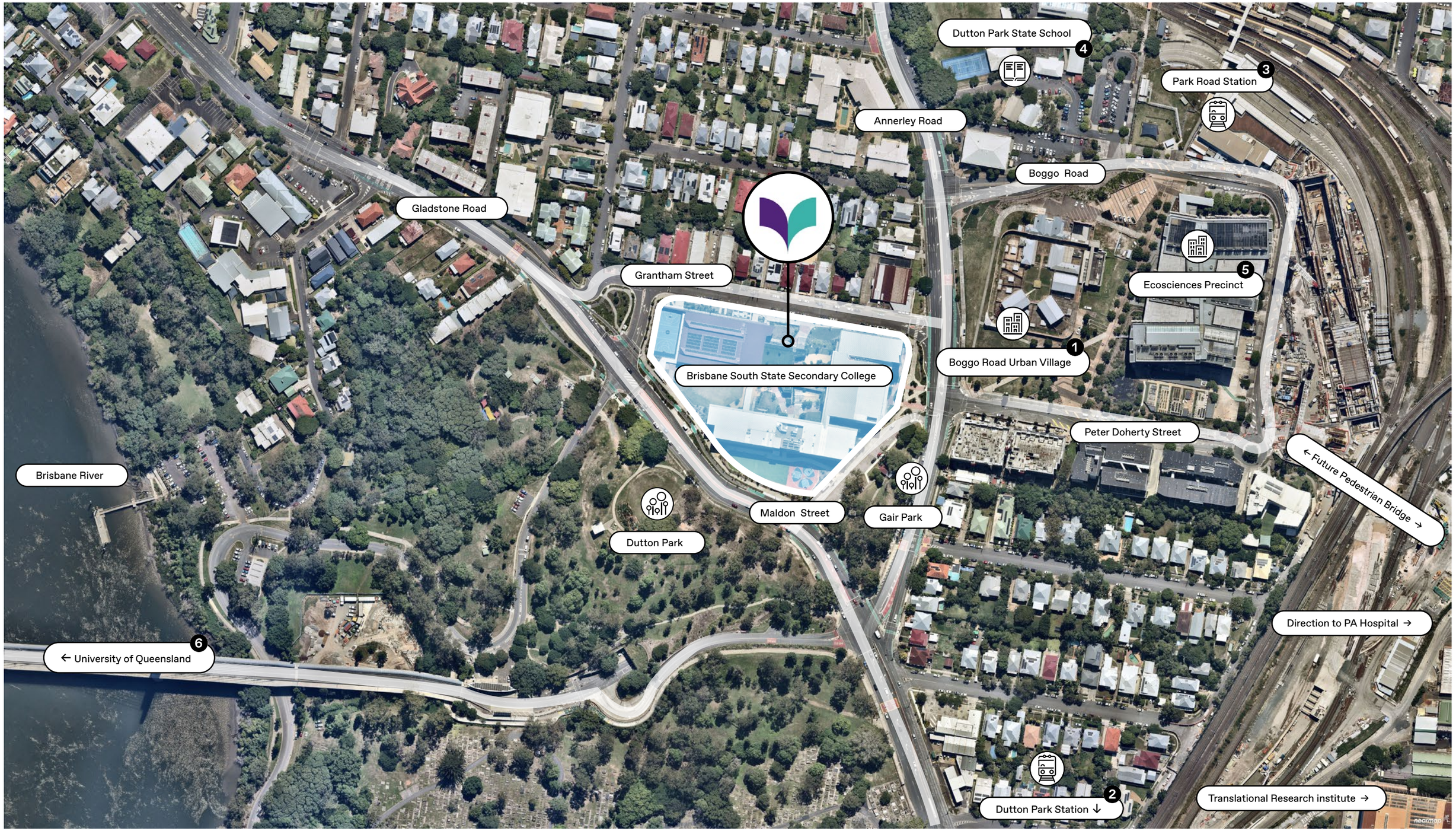
Engagement Activities

During the next six months we led and participated in a range of engagement activities, including:

- Public pop-up information days
- Evening public engagement workshops
- Public surveys
- Website information and question/answer portals
- Letter drops
- Workshops engaging multiple authority organisations
- School participation days
- Strategic partner workshops

All these activities empowered public participation, inviting direct feedback and suggestions to be provided on the evolving master plan and design, a number of which were adopted into the final design.





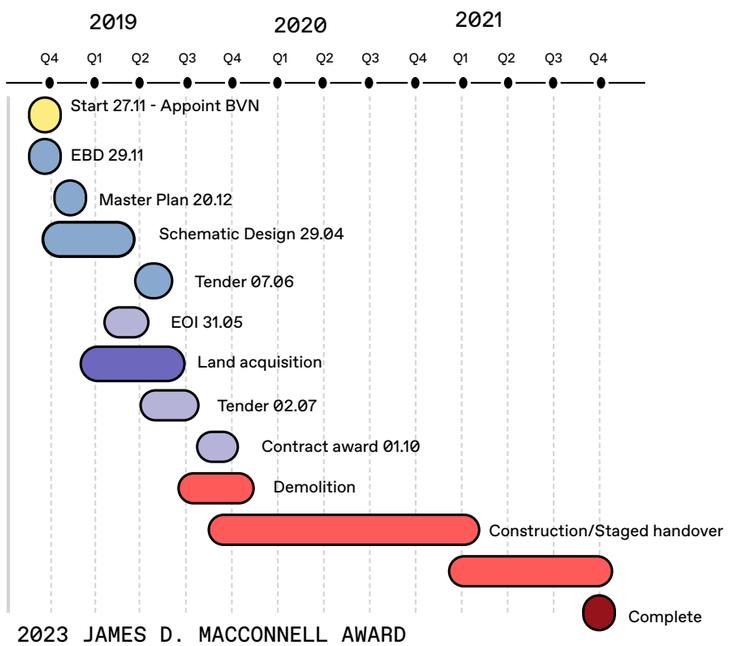
1. BOGGO ROAD URBAN VILLAGE - 350M
2. DUTTON PARK STATION - 550M
3. PARK ROAD STATION - 600M
4. DUTTON PARK STATE SCHOOL - 400M
5. ECOSCIENCES PRECINCT - 400M
6. UNIVERSITY OF QUEENSLAND - 1KM

3c) Process challenges

Whilst public participation in the process of site selection, master plan and design resulted in a solution tailored for the community needs – this led to several technical and program challenges to deliver upon these ambitions within a very short time frame. Delays to public consultation impacted the process as follows:

- Unresolved site extents – the site selection occurred one year later than planned and required the acquisition of 15 properties and 2 roads to amalgamate the new school site. This process occurred in parallel with the master planning and early design of the school, resulting in late changes to documentation.
- Program pressure – the process was accelerated to open the school within 26 months from commission. We completed master planning to tender documentation in 6 months. After tendering, the contractor completed partial handover 15 months later, whilst construction continued throughout the remainder of the site.
- Late inclusion of community needs - many great suggestions including dedicated bicycle lanes, community garden and active park were raised during community consultation, resulting in changes to site planning to occur during the tender documentation phase.
- Cost pressure – it was necessary to balance project ambitions for high-quality learning environments (similar to university level) within the available public school budget.

Program



Design challenges

The site of two hectares within an inner-city location presented several challenges that needed to be addressed in the design.

- **Fitting onto a small site** – the briefed facilities exceeded the available land, necessitating a vertical solution. This resulted in five to seven storey facilities with elevated open spaces, connected with open galleries to achieve amenity and connectivity across the campus (a vertical campus).
  Providing diverse open space in a vertical campus - Across all levels of the campus, covered elevated and undercroft open spaces are collocated with learning facilities to enable outdoor learning and socialisation. Multi-purpose sports facilities are included on site, and larger events (sports fields and pools) are accessed off-site.
- **Steep topography** – the site has a 12-metre fall from south to north across the site. The planning response leveraged this to provide four “ground levels” with learning spaces at grade. Furthermore, a level contour east-west across the site enabled the primary street entries to be connected at the same arrival grade, simplifying wayfinding across the campus. Noise impacts from roads and school – loud noise from major road traffic and noise generated by the students was mitigated by locating buildings to the perimeter to protect open space and adjoining properties.
- **Student security and community access** – DoE requires all schools to be locked during and after school hours. Community access is provided via dual access arrangements to key facilities on the site perimeter (hall, creative hub, performing arts centre, library, active park, and community garden).
- **Safe student access to school** – new traffic lights and signalised intersections connect the school across busy roads to public transport and parklands. Dedicated bicycle paths have been extended along the school frontages to reduce on road cycling.
- **Promoting educational excellence within a constrained budget** – was achieved through restrained use of materials. The palette included concrete, glass, aluminium, and cement boarding, designed to maximise visibility into learning spaces to showcase education.
- **Attracting students to a new school with no academic history** – an absolute priority for DoE was for the project to succeed in attracting students from the outset, to alleviate pressure on surrounding secondary schools. This was achieved through leveraging the natural assets of the site and striving for excellence in landscape, and architectural design to create a compelling environment to attract both students and quality teachers to the school.

Site constraints

NOISE POLLUTION

DEMOLISHED PROPERTY

POTENTIAL GREEN SPACE

PROPERTY TO RELOCATE

AREAS ADDED LATER IN THE PROJECT

3d) Describe available assets/site characteristics

The site selected has a range of extraordinary assets that optimise the opportunity of the school to leverage this location:

Each of these elements deeply informed the master plan response to optimise the opportunities for the school to be a connected and calming environment for learning as follows:

- All buildings located with north aspect and open galleries to capture favourable sun and breezes
- Central garden orientated north with aspect to the city centre
- Key circulation pathway located across the site to connect with closest learning partners (UQ and Eco-sciences)
- Circulation galleries open at ends to frame key views to mountains
- Learning spaces glazed on south elevations to maximise views to surrounding parklands
- Highest building located on prominent corner for maximum identity and visibility to Brisbane city
- Large bicycle parking and change facilities
- No parking for parents, restricted parking for staff
- Range of facilities opened up and tailored to suit community needs

ELEVATION AND ASPECT
The site is located at the crest of a hill, facing northwards across the river towards the city skyline 3 km away. Further views are available in all directions to surrounding mountains, connecting the school to the city and the country as an outward looking community.

ORIENTATION AND COMFORT
In Brisbane, favourable solar orientation is north, prevailing cool breezes come from the north-east and cold winter winds from the west. The site offers optimum solar orientation on this north facing site, whilst sheltered from unfavourable south and westerly aspects.

VISIBILITY AND ADDRESS
Located on the intersection of two major roads, the site is highly visible to passing traffic as well as from distant views across the city.

PROXIMITY TO POTENTIAL PARTNER ORGANISATIONS
The site is located on the “Knowledge Corridor” - a collection of important education, research, and health facilities across Brisbane. Immediately adjacent this site is the University of Queensland, the Eco-sciences research facility, the Prince Alfred Hospital, the Translational Research Institute, and the Pharmacy Australia Centre of Excellence.

BOGGO ROAD URBAN VILLAGE
Previously a jail, this heritage precinct is an emerging urban centre south of the city, with contemporary medium density living and working developments under construction.

PARKLAND SETTING
Immediately adjacent to the site are Dutton Park and Gair Park, two city council parklands with extensive natural landscaping, playground, sports, and recreational facilities. Gair Park also hosts a heritage war memorial, used for national war remembrance events every year.

PUBLIC TRANSPORT
Within 5 minutes’ walk is a major bus and train transit centre with connections across the city and the school catchment. Bus stations are also located immediately adjacent the school on the two adjoining road frontages.

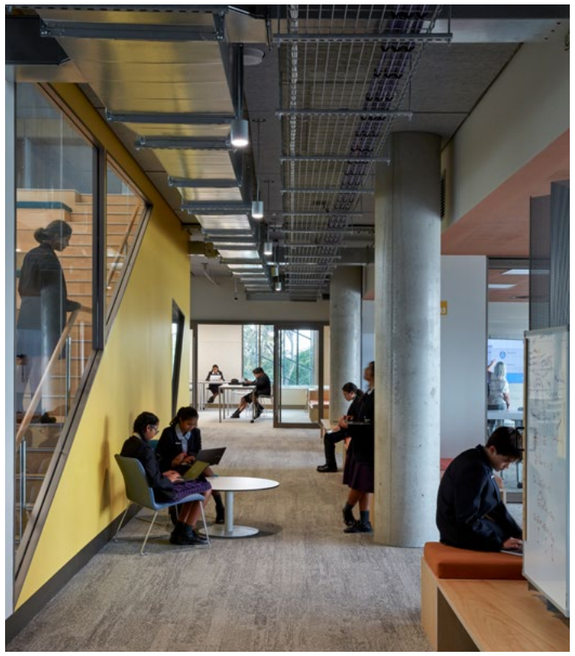
WALK AND BICYCLE FACILITIES
Located within a built-up area, much of the school catchment is within an 800-metre distance from the school. Major dedicated bicycle routes are available to serve the predominant extended catchment area to the south-east of the school.

THE LOCAL COMMUNITY
Lastly but not least, the inner city community within the suburbs surrounding the school are well educated, informed and strongly motivated to contribute to the school. They embraced and actively participated within the community consultation process for the benefit of the project.

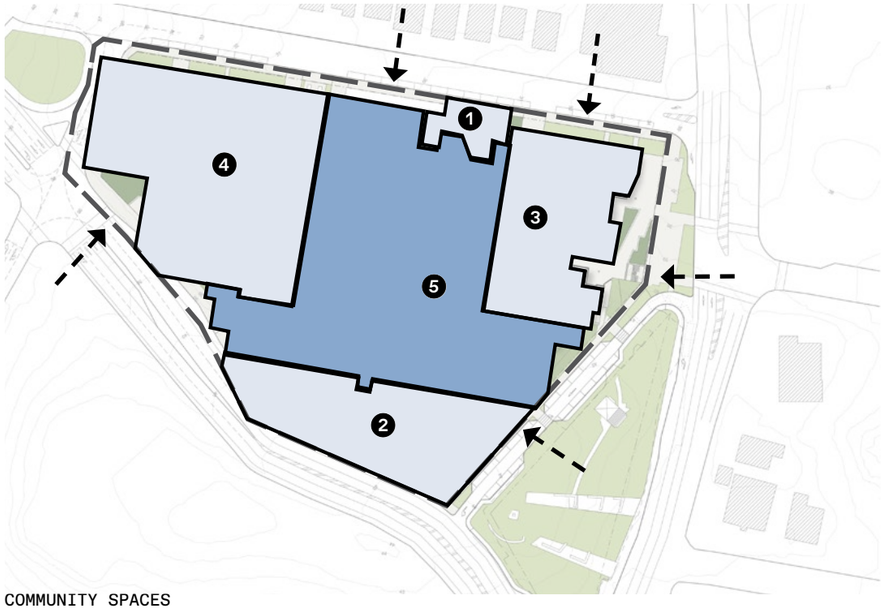
3e) Describe value of process & project to community at large

As the community was engaged throughout the process on key attributes of the decision making and design, this has enabled greater understanding and appreciation of the need for the project, positive acceptance of the location chosen as well as a sense of belonging and of ownership to evolve for the new school. Key moments in the engagement process occurred as follows:

- Wider community understanding of the need for the project, including appreciation that the existing schools were over capacity and did not have space to grow
- Active participation in the process of the new school site selection, including informed involvement and openly publicised commentary and statistics
- Public majority preference for location of new school adopted
- Public contribution into the characteristics and benefits of school for the community
- Direct contribution into the brief for design of school and spaces to be accessible and serve the community (including the creative hub, hall, active park and community park) during and after school hours
- Direct contribution and voting for the name of the school



LEARNING HUB



COMMUNITY SPACES

1. COMMUNITY PARK
2. ACTIVE PARK
3. CREATIVE HUB, LIBRARY, PERFORMING ARTS CENTRE, LECTURE THEATRE
4. SPORT HUB
5. SCHOOL CAMPUS (SECURE ACCESS)

= SITE ENTRY POINT

3f) Describe how the engagement fostered Justice, Equity Diversity & Inclusion

Several specific characteristics of the project brief and design evolved from JEDI inputs from the wider community, including:

- Non-binary toilets
- Inclusive design for all levels of abilities
- Horizontal connectivity across all upper levels of campus buildings
- Natural ventilation and light to all learning spaces
- Recycling and plastic free policies
- Cafe for social enterprise
- Community gardens
- Global citizenship
- Connecting with Country
- Sustainable Design

4a) Explain the educational vision & goals of the school

As a new public high school – the project commenced without the benefit of an established school leadership team to develop and define a specific educational vision at the project outset. Instead, our client – the Department of Education (DoE) in partnership with the University of Queensland (UQ) provided a high-level educational brief that outlines the project direction whilst providing flexibility in future for how educational goals could be achieved at the school as leadership teams change. This document is outlined below.

DOE EDUCATIONAL BRIEF
"A highly responsive educational community embracing the opportunities of a rapidly changing world"

This document sets out to engage 21st century future learners in partnership with institutions and community by re-thinking structure, pedagogies, and spaces – an innovative school aimed at tailored learning for every student to develop literacy learning and life skills.

This partnership with UQ will create a future-focused, dynamic school where the national and state curricula, underpinned by research-based pedagogies and an international perspective, will develop capable, globally minded students who will embrace and lead change. The school's strong focus in science, technology, engineering, and mathematics (STEM) will be enhanced through students' access to research facilities across UQ and resources from UQ's faculties.

This future-focused learning and teaching aspired to be at the forefront of a learning revolution and offer innovative learning environments to inspire students to be leaders of their own learning, enable students to collaborate and learn with and from each other, provide opportunities for students to use critical and creative thinking, identify world problems, develop solutions and become mindful global citizens.

This brief and vision are further elaborated upon across the following four sections:

- **Empowering students**
- **High-quality teaching**
- **Engaging community**
- **Innovative learning spaces**

Project education values

Through enquiry by design workshops, we fleshed out the directives of the DoE vision and co-developed the endorsed six project values of:

❶ **NETWORK OF LEARNING**: Connected with Brisbane's knowledge corridor and partners

❷ **MEMORABLE AND VIBRANT CENTRAL GARDEN:** A magnet for teaching and learning

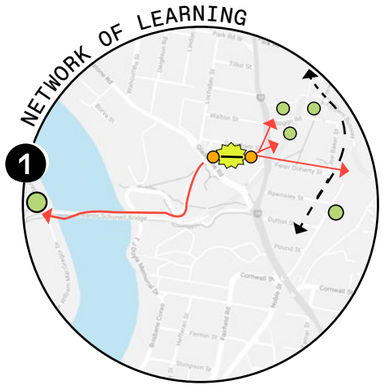
❸ **INNOVATIVE LEARNING ENVIRONMENTS**: To manifest and share the benefits of education

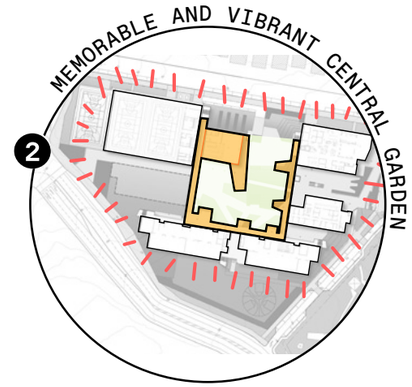
❹ **WELCOME AND ENERGIZED PUBLIC REALM:** To maximise community learning interactions

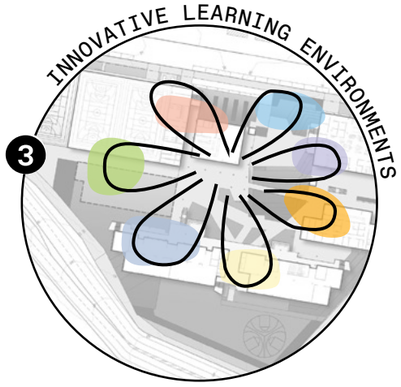
❺ **DEMONSTRATIVE CAMPUS REFLECTIVE OF:** Contemporary and indigenous values

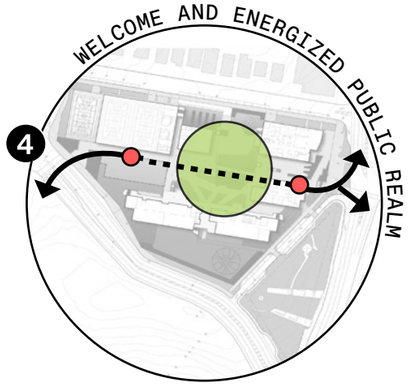
❻ **FLEXIBLE AND RESILIENT BUILDINGS**: Able to adapt to changing pedagogies over time

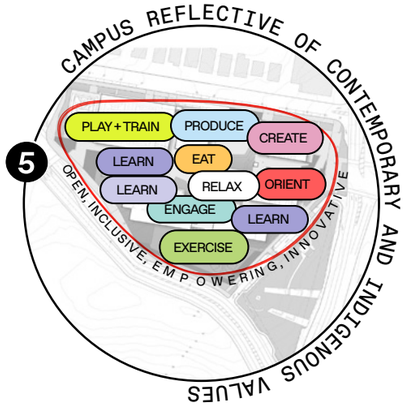
Each of these values sought to establish an outward looking school - engaged and connected to partners, welcoming of all members of community, demonstrating pride as global citizens within an environment where students can interact, critically explore, and find creative solutions to the future problems of the world.

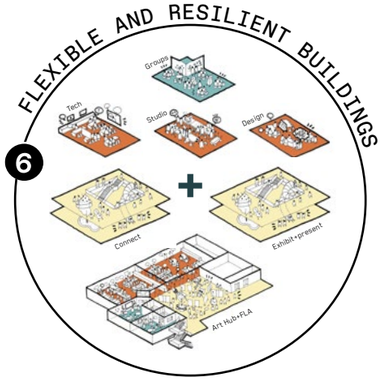












4b) Describe & illustrate how the environment supports the curriculum

The Australian government describes the Australian curriculum as 3-dimensional – it includes learning areas (subjects), general capabilities (resources, numeracy and literacy) and cross curriculum priorities (indigenous, Asia and sustainability) to support students in becoming successful learners, confident and creative individuals, and active and informed citizens.

Within this project, the briefed learning spaces are arranged across a vertical campus around a central native garden. Learning facilities are mixed across disciplines into three holistic learning hubs of STEM (M), creativity and health-wellbeing to support an innovative pedagogy. Within each learning hub, layouts arrange diverse facilities around collaborative ideation, gathering and making spaces to facilitate interactions and project-based learning.

CREATIVE HUB
The creative hub includes a future-focused research and innovation centre, a modern library, virtual reality and green screen labs, collaboration cubes, dedicated makerspace, performing arts centre with latest technologies for creating music, digital compilation, communication, and creative art.

LEARNING HUB
Learning hubs offer next-level learning characterised by open and adaptable spaces around double height presentation settings, with integrated science laboratories, digital centres, engineering and makerspaces, shared meeting, and collaboration zones.

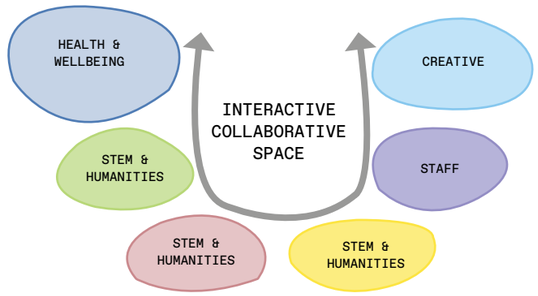
These hubs house the school Biomedical Science STEM(M-medical) Academy co-designed with the University of Queensland, to embed new ways of learning and research that integrates the STEM(M) disciplines in more authentic and meaningful ways.

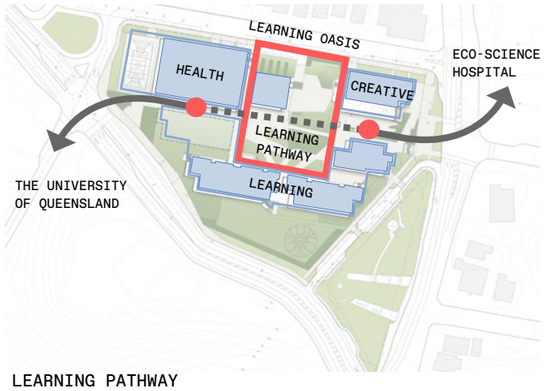
HEALTH & WELLBEING HUB
Health and wellbeing hub houses nutritional, sports and health science studies within specialised facilities including learning and professional kitchens, vegetable gardens, café, sports hall centre, gymnasium, and event spaces. The school has co-developed with Australian Football League (AFL) Queensland and the Brisbane Lions an AFL Academy, to provide students with high-quality training by leading experts and participation in AFL Queensland competitions.

Further curriculum is provided off site within the University of Queensland campus, including use of research laboratories and sports facilities to enable core curriculum activities to occur within a tertiary education environment.

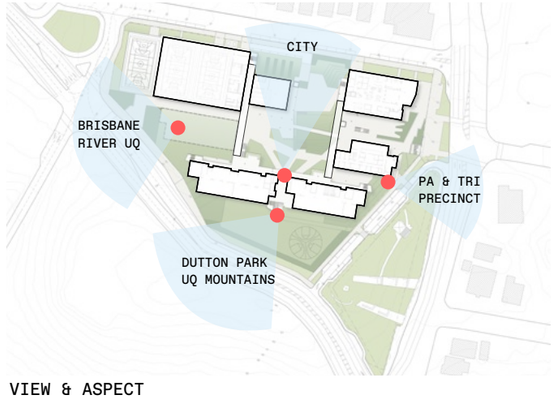
STAFF HUB
Finally, the staff hub is amalgamated over two interconnected levels and located centrally between the key creative and learning hubs. This enables teachers of all disciplines and levels of seniority to be co-located within an open contemporary workplace setting, to optimise collaboration, shared lesson planning and support to occur across all areas of the curriculum.

SITE PLAN





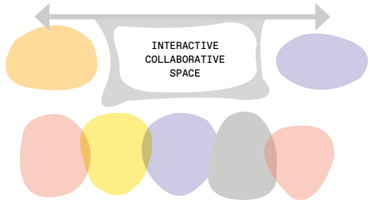
LEARNING PATHWAY



VIEW & ASPECT

4c) Describe & illustrate how the environment supports a variety of learning & teaching styles

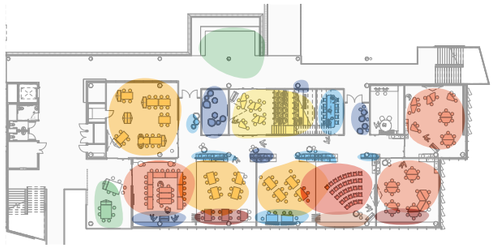
All four hubs (creative, learning, health and wellbeing, staff) are arranged with the same premise – to locate diverse facilities around collaborative ideation, gathering and making spaces to facilitate cross curriculum interactions and project-based learning. We have used the learning hub to demonstrate these ideas as follows:



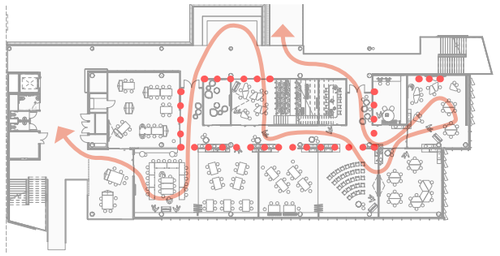
LEARNING HUB
A typical learning hub has two levels of open and adaptable spaces around a double height presentation setting. The illustrated learning spaces accommodates the following activities:

- Upper level includes science, robotics and digital laboratories, open collaborative breakout, outdoor and general learning
- Lower level includes open general learning, enclosed language spaces, maker space, meeting rooms, open collaborative and outdoor learning

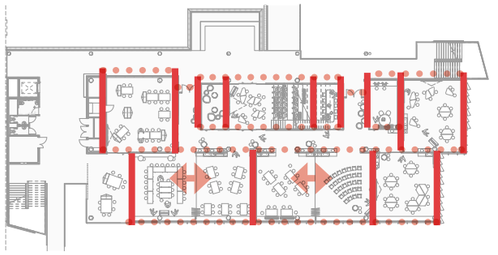
Both levels are visually and physically connected by the open double height presentation setting, the external circulation balconies, and internal circulation zones – all predominantly open to the actual learning spaces.



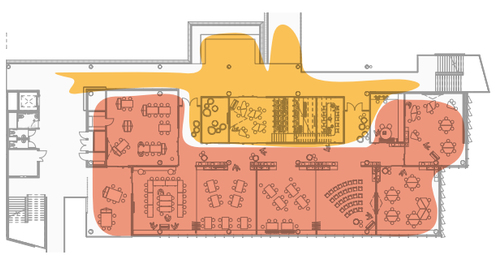
DIVERSE LEARNING OPPORTUNITIES
Distribution across the learning hub of all types of learning settings of various scale, privacy, openness, activity and facility - enables students to explore learning projects with access a diverse range of environments and support facilities. Some learning spaces can be acoustically enclosed, enabling the delivery of languages and/or audio-visual media to be undertaken without disturbing others. Maker spaces are located adjacent to general learning areas to enable students to explore making activities in parallel with other curriculum.



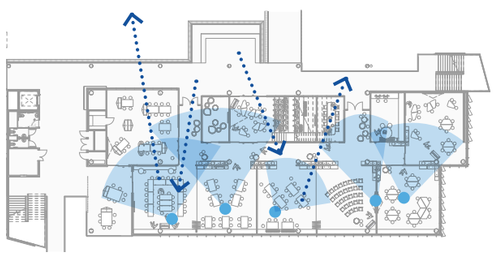
PERMEABLE EDGES
Through the arrangement of smaller learning spaces around a central double height presentation volume, students and staff can equally access shared support facilities (meeting rooms, presentation, maker space and informal collaboration areas) to encourage collaboration, cross discipline interactions and project-based learning. Individual learning spaces are typically paired together with a flexible glazed operable wall between, enabling staff to co-teach, with access to adjoining collaboration or small group spaces.



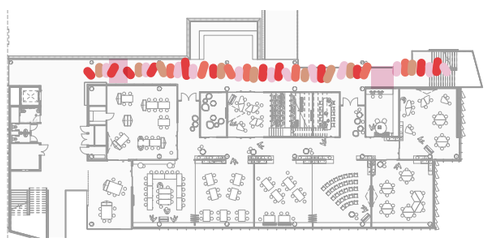
SPATIAL CHARACTERISTICS
The learning hub locates fixed working walls to maximise visual connection across the plan and offer flexible rectangular spaces. Operable glass walls connect two spaces together to enable larger spaces to be available for co-teaching activities.



COLLABORATIVE HUB TYPOLOGY
Many of the learning spaces are completely open, enabling students to easily spill out to informal collaborative settings along circulation zones, to easily use adjoining spaces as they undertake self or small group learning activities. Visitors or other students can readily participate or join in student classes, to encourage the learning from others.



VIEWS & CONNECTIONS
The high transparency of the building continues across the plan and extends out to the south elevation, connecting students across learning spaces to the surrounding parkland view.



SHOPFRONT EDGE
The frontage of the learning hub is fully glazed and incorporates display cabinets to enable students and staff to see and learn from the activities and outputs of others.

4d) Describe & illustrate how the environment is adaptable and flexible

At project conception, the brief defined the need for the project to be able to serve the community over future generations and be able to be flexible and easily adaptable to suit changing leadership needs. This flexibility and adaptability have been explored across the project design as follows:

SITE
Buildings are located to enable all hubs – creative, learning, health and wellbeing – to be extended at all levels. This allows all facilities to expand in response to future enrolment demand (up to 2300 students) or changes in curriculum focus as follows:

- Health & wellbeing, the hall can extend to include the external court, enabling a larger hall to cater for all 2300 students during assembly
- Creative, expansion of all seven levels to cater for growth across all learning areas (music, visual arts, multi-media, performing arts, resource centre) as well as support facilities (bicycle and back of house)
- Learning, additional new multi-storey learning hubs connected at all levels to existing to enable co-located facilities for similar or yet to be defined learning uses

BUILDINGS
All buildings are robustly planned - rectangular, north orientated, 4 metres floor heights, lift/stair locations consolidated into perimeter zones, clear span foot plate and 9 metres square column grid. This maximises the opportunity for adaptation and refurbishment to suit future needs.

HUBS
By collocating groups of learning activities into hubs that share common support and collaborative facilities, individual spaces can flexibly support a wider range of activities and be more highly utilised.

GENERAL SPACES
Many learning space types share common features that can support different learning areas and activities. By minimising fixed elements within a space, using mobile digital technology and furniture, connecting to other spaces with operable walls and removing the front wall - these spaces are easily adaptable for alternative uses:

- Small group learning (within the space)
- Co-teaching (across two spaces)
- Cross discipline project-based activities (collaboration and breakout zones)
- Breakout to adjoining collaborative spaces (open or enclosed settings)
- Breakout from adjoining specialist spaces (digital or science)
- Extended maker space / research zone (digital or science)
- Technology learning (mobile devices)
- Presentations

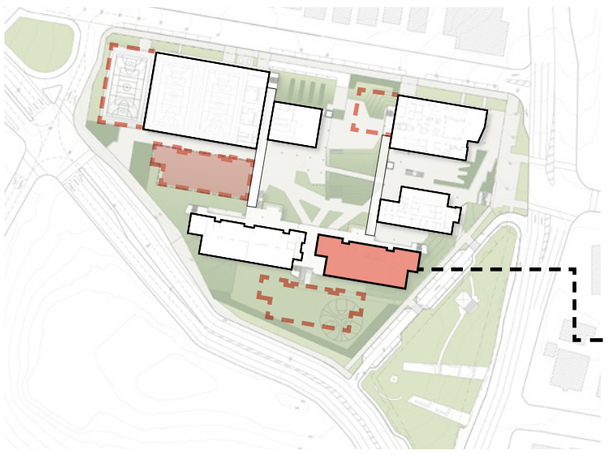
The generalist spaces are distributed across the school, to enable curriculum learning to occur within all settings as may best suit the needs of students. Maths for example can easily occur anywhere within the school, integrated with project activities in nutrition studies, multi-media or technology for example, optimising flexibility for teachers in how and where they can teach.

SPECIALIST SPACES
Are designed to optimise flexibility by limiting fixed joinery to perimeter locations only to enable rooms to be used for uses other than the specified brief, examples as follows:

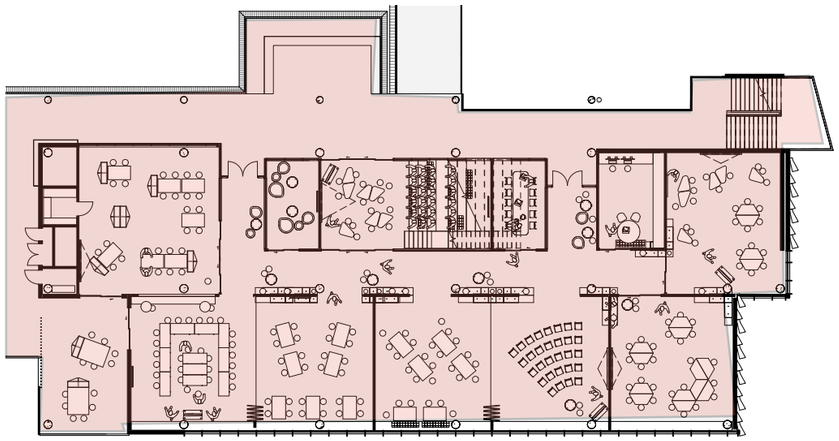
SPECIALIST LABORATORIES
Laboratory fixed benches are allocated to the perimeter only and the spaces include glazed operable walls to adjoining spaces. This allows lessons to move mobile furniture for group work and/or breakout to adjoining spaces as needed.

PERFORMING ARTS CENTRE
A flat floor facility with a raised stage and retractable seating. Within this space three double height operable walls can be closed across the space to provide four separate dance and drama studios for use when the arts centre is not setup for performances. A retractable tiered seating is provided at the rear of the space for 400 seat performances.

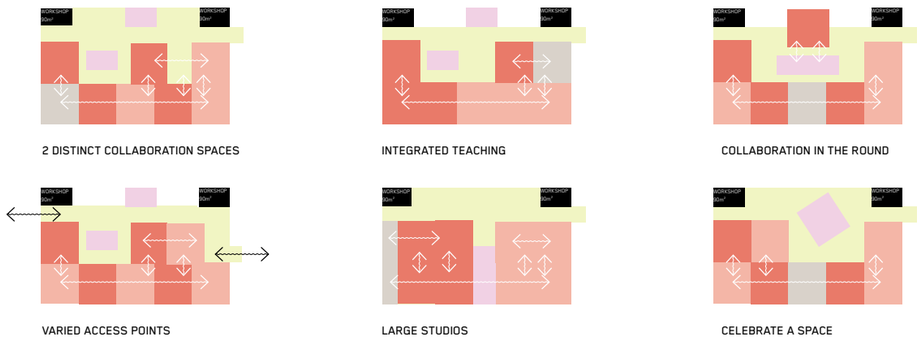
SITE EXPANSION



LEARNING HUB FLOOR PLAN



ADAPTABLE HUBS



4e) Describe innovative aspects of the educational environment

The key innovation within educational environments is the exploration of the Learning Hub.

LEARNING HUBS
Each building is arranged around double storey volumes, that are characterised by open, adaptable, and shared presentation spaces for collaboration. Learning facilities are mixed across disciplines into three holistic centres for STEM (M), Creativity and Health-Wellbeing to support an innovative pedagogy. Within learning hubs, gathering and making spaces are arranged to foster collaborative ideation, facilitating interactions and project-based learning.

As identified within section 4c) the learning hubs adopt the following key strategies to empower students to select and control their individual learning pathway:

- Central gathering & presentation volume
- Perimeter open collaborative learning spaces
- Diverse learning opportunities
- Transparent visibility and connections
- Open and permeable edges
- Shopfront display

Beyond these strategies, the design adopts a flexible approach to spatial, technology and furniture arrangements to enable adaptation to changing learning pedagogies over time.

SPATIAL CHARACTERISTICS
The learning hub locates fixed working walls to maximise visual connection across the plan and offer flexible rectangular spaces. Operable glass walls connect two spaces together to enable larger spaces to be available for co-teaching activities. Key spaces are open to internal circulation zones to allow ease of interactions and access to shared facilities. Alternate learning spaces offer closable glazed doors for languages and presentations acoustic privacy.

TECHNOLOGY & FURNITURE
Digital screens are provided on mobile stands, together with mobile furniture (chairs and tables) to enable spaces to be easily tailored during each session to suit each student's lesson plan.

FINISHES, LIGHTING & MATERIALS
Careful attention to use acoustic absorptive material (carpet, perforated ceiling, acoustic wall linings), subdued colours (ochre ceiling paint, warmer tones) and calming environments (no direct sunlight, generous outlook to parklands) combine to create a sophisticated setting where student behaviour can focus and enjoy learning, without disturbing others.

INNOVATIVE LEARNING SETTINGS

LEARNING HUB AXONOMETRIC SKETCH

LEARNING HUB INTERNAL SKETCH

5a) Explain how the project achieves educational goals & objectives

In preparation for the school opening in 2021, DoE built a school leadership team around inaugural Principal Kirsten Ferdinands. Her dedicated team engaged with the project values and refined the school vision as quoted from the school website as follows:

> *'Novo Discere Mundo' — Learning for a New World*
>
> *"At Brisbane South State Secondary College, our vision is to set the new standard for education. With leading edge learning and expert teams steering us, we are readying our students for a new world where they feel confident to create positive change. We will fulfil our vision by:*
>
> - *Recognising every future is different and requires a level of flexibility and adaptability*
> - *Building pride, enthusiasm and professionalism across the whole College team*
> - *Reshaping the traditional classroom setting to encourage independent thought*
> - *Collaborating with The University of Queensland to set the new benchmark for synergetic learning*
> - *Working with leaders in science, technology, engineering, mathematics, medicine – STEM(M) and the arts and research to open new pathways and learning opportunities for our students."*
>
> Brisbane South State Secondary College Website

Project achieving educational goals

We illustrate each of the 6 original educational goals against both the realised project and the school vision as follows:

NETWORKED LEARNING ENVIRONMENT

Require both digital and physical connections. Site and building planning facilitate both school and extended network connections.

The school has extended connections to all parts of the community network, but has explicitly formed key partnerships with three organisations:

- University of Queensland Biomedical Sciences Academy to set "...the new benchmark for synergetic learning"
- Brisbane Lions Sports Academy for "holistic, adaptable and strategic training and competition opportunities"
- Eco–sciences Precinct to "work with leaders in science, technology, engineering, mathematics, medicine – STEM(M) to open new pathways and learning opportunities for our students"

The project site planning contributes significantly to leveraging these opportunities. The alignment of the entry and arrival pathway connect major research partners through the school. Its relationship with sporting partners has enabled students to access major facilities without them being duplicated on site.

A PERMEABLE AND ENERGIZED PUBLIC REALM

Maximises learning opportunities. A managed pathway connects school and community activities as an integrated learning environment.

The school's engagement with key education partners has also opened active relationships for access onto the school grounds for other groups.

- Local State Schools (i.e., Dutton Park State School) engage and access Brisbane South to use facilities such as the Performing Arts Centre, to experience future secondary learning and utilise facilities which are not available within their own schools
- University of Queensland research and training educators are able to access Brisbane South to observe and research new teaching methods.
- School and local community – Brisbane South is welcoming and engaged with all from the local community inviting others to participate with the many facets of learning. Prominent, welcoming and fully accessible arrival spaces encourage public use

AN IDENTIFIABLE AND VIBRANT PLACE

A magnet for teaching and learning colleagues. Characteristic places and facilities underpin reputation from the first day.

With no prior academic performance, the new school could not rely upon a proven track record. It was essential to build pride, enthusiasm, and professionalism across the academic staff, students, and the community from the outset.

DoE and the design team focused significant energy on ensuring that the quality of the physical environment reflected contemporary, ethical and professional values and was a vibrant place of learning. Combined with the progressive vision outlined by the school leadership, the school has become a magnet for high quality teaching staff and students.

A DEMONSTRATIVE CAMPUS

Will present its values to the broader community. Identity and reputation can be enhanced by a design derived from a strategic approach to form and experience.

The school's vision is to set the new standard for education, where students create positive change in the new world, based upon core values of commitment (understanding self and contributing to learning), inclusivity (welcome to all and accepting differences), respect (for us and our community) and integrity (genuinely displaying ethical behaviour).

This vision and values derive from and align well with the project ambitions to set a new benchmark for education and create a campus that can proudly demonstrate these values to the wider community. These values guided us to design an environment which can display the student activities and behaviours to each other and the surrounding community. This has been achieved through:

- Valuing and showcasing innovative education (high visibility of learning activities around the site) as a place for individual growth, sharing with others and contribute to the community
- Being inclusive and welcoming to students and the community with facilities to support all aspects of diversity, interests, and accessibility across the campus
- Respect for the indigenous heritage of the place, manifested within the landscape, architecture and artwork across the school
- Integrity based upon sustainable design, frugal use of materials, natural ventilation, and native landscaping to model a regenerative aspiration for the future

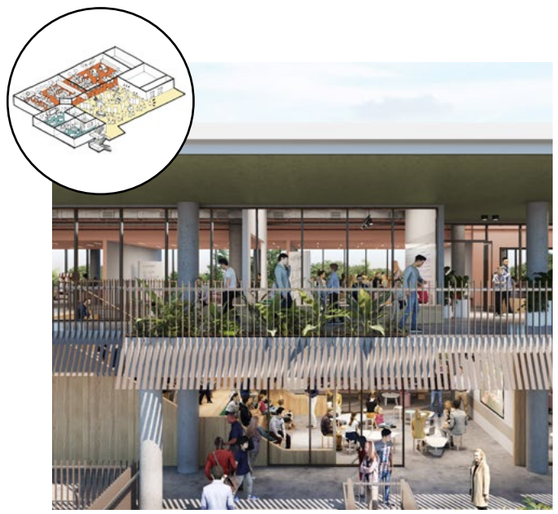
INNOVATIVE LEARNING SETTINGS

To reveal and manifest the benefits of education. All school activity is visible to the city, across the learning oasis and throughout the campus.

The school has embraced non-traditional learning settings as an integral part of its exploration in tailored learning, critical thinking, and independent thought. The project has explored these ideas at three scales:

- City scale, the arrangement of the school and surrounding centres of learning, connected and visible to the public as they move around the city
- Campus scale, the arrangement of diverse learning hubs, connected and visible to learners as they move along the galleries and central learning oasis
- Learning Hub scale, the arrangement of diverse learning spaces and facilities, connected and visible to students as their daily learning activities progress across the day

Within this context, the school in collaboration with the University of Queensland has developed a collective approach to learning, with access to the diverse range of knowledge and facilities (across the three scales) as their own form of "Synergetic Learning".



FLEXIBLE AND RESILIENT BUILDINGS

To support the full spectrum of learning pedagogies. Building systems maximise long term adaptability to respond to advancements in learning spaces.

The school recognises every student's future is different and pedagogy requires a level of flexibility and adaptability. For learning to be tailored to individual student needs, the facilities need to enable daily adaptation to support diverse learning activities.

The Learning Hub model is underpinned by open and adaptable space enclosures, mobile furniture, and network of spaces that enable flexibility in how learning can occur. Furthermore, the flexible base building offers ease of adaptation, enabling modification to suit future learning needs.

"Aligning with our vision for the College, our core values are:

- *Commitment, we value understanding ourselves as learners and we are always contributing to the learning environment.*
- *Inclusivity, we are welcoming towards all others and accepting of individual differences.*
- *Respect, we value ourselves, others and our community.*
- *Integrity, we value being genuine and displaying moral and ethical behaviour."*

Brisbane South State Secondary College Website

5b) Department of education goals

DoE is a government department, chartered with the provision of free public education to all school aged children. Within Australia, children living within a school catchment zone have the right to attend the local public school, resulting in massive pressure on the capacity of inner-city schools to meet escalating demographic growth. As more families embrace apartment living closer to the city, inner-city schools are subject to massive enrolment demand.

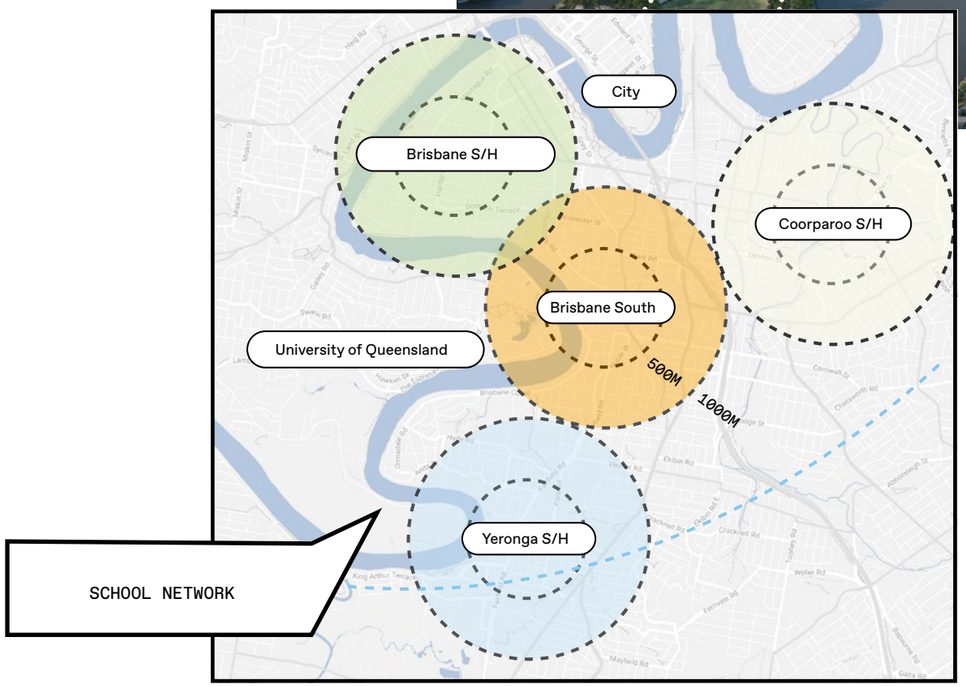
Within Brisbane city, Brisbane State High School (BSHS) is a centrally located, academically high achieving and desirable high school, where enrolment now exceeds 4000 plus students. This is the result of families moving into the city centre to take advantage of the lifestyle, employment and education opportunities offered in the area. Continuing to meet this growth on its constrained site is not sustainable for BSHS, as its enrolment would exceed 8,000 students within 20 years.

The core purpose of the new school is to provide an attractive alternative that can reduce student enrolments at BSHS, cater for precinct demand, elevate the local network of high schools, and become a benchmark for inner-city vertical schools for Brisbane. This has been achieved through:

STRENGTHEN THE SCHOOL NETWORK
Strategically locating Brisbane South within the centre point of the existing high school network of BSHS, Coorparoo State Secondary College (CSSC) & Yenronga State High School (YSHS), has enabled an equal distribution and sharing of student enrolments as well as the capacity for the new school to support neighbouring schools. These ambitions are further enhanced by colocation of the school with strong network partners and public transport linkages.

CREATING PARTNERS FOR LEARNING
Brisbane South has formed strong learning partnerships with University of Queensland, Eco-sciences & Brisbane Lions, that form academies for specialist learning to make state school education high quality and attract enrolments.

CONTEMPORARY EDUCATION DESIGN
The vertical campus environment and innovative learning spaces offer a contemporary environment for teachers and students to optimise and achieve excellence in learning.



LECTORIAL LOOKING OUT TO ARRIVAL COURT

5c) Explain how the project achieves community goals

Key objectives of the project have been to enable the school to encourage public access, contribute to neighbourhood open space, connect to the transport network and partner with local organisations to enrich the learning opportunities for the wider community.

PUBLIC ACCESS & ENGAGEMENT

Cognisant of the briefing requirement to enable full security of the school to be provided, careful zoning and layered control strategies were implemented public access onto four zones of the campus, accessible both during and outside school hours without disturbing the remainder of the school. These four zones are:

- Creative precinct – public access for events (performing arts, music, and visual arts), after-hours access to the library and a pop-up event space
- Health precinct – public access to the multi-purpose hall for sport, gathering or other community activities
- Nutrition and wellbeing precinct – a 24/7 open neighbourhood park for the local community, public access to vegetable garden and kitchen/dining facilities for community events (including city fireworks celebrations)
- Active-park – open access after-hours for public use of basketball and active play spaces as extensions to the adjoining parklands

All these facilities are frequently used by the community.

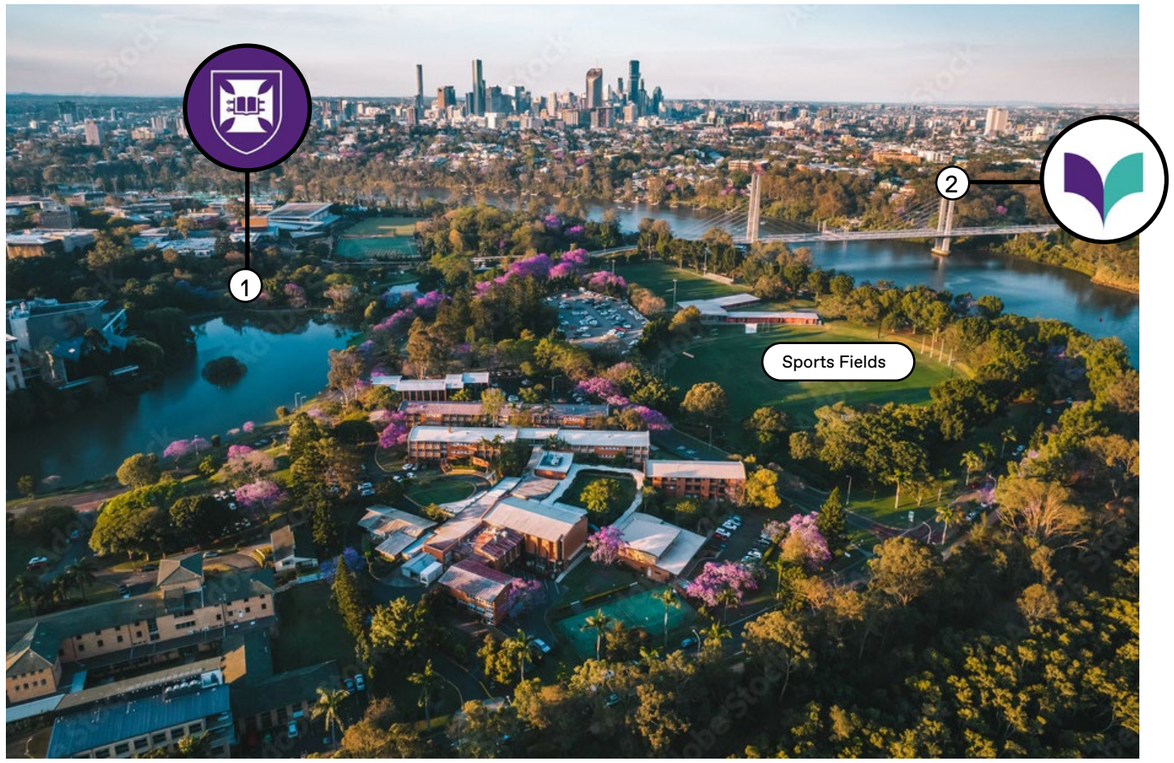
CONTRIBUTION TO NEIGHBOURHOOD

The project has contributed to the local neighbourhood by providing the following:

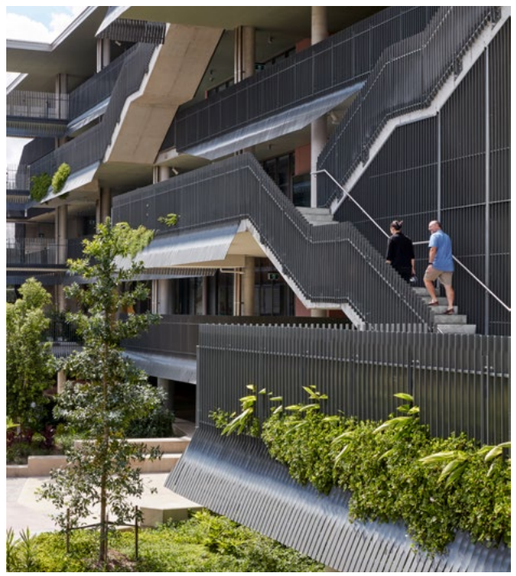
- An upgraded dedicated bicycle pathways along major road frontages and opposite along Dutton Park, connecting to the larger Brisbane cycle network, thereby improving road safety for general cyclists
- Two new covered public bus stations on Gladstone Road
- Two new signalised intersections and new road to improve safe crossings and vehicle turns in the area
- A new community park
- A new community vegetable garden
- An upgrade to Gair Park and it's war memorial
- Enhanced landscaping to the perimeter streets

COMMUNITY NETWORK CONNECTIONS

Beyond the key partner connections identified previously, the school has formed strong community network connections, including primary and secondary schools, local businesses, sports and arts organisations, and local residents across the neighbourhood.



PARTNERSHIP WITH UNIVERSITY OF QUEENSLAND AND SHARING OF FACILITIES AND SPORTS FIELDS
1. UNIVERSITY OF QUEENSLAND, 2. BRISBANE SOUTH STATE SECONDARY COLLEGE



CIRCULATION STAIRS THROUGHOUT THE SCHOOL ENCOURAGE WALKING

MULTI-PURPOSE HALL FOR COMMUNITY USE

5d) Explain any unintended results & achievements of the process & project

SPORTS PARTNERSHIPS
Due to the site constraints, it was determined at the beginning of the project that a sports field and associated facilities would not be provided on school grounds. DoE purchased a large site 11km away with the intent of developing a central sports facility to service the new school and other existing schools in the area.

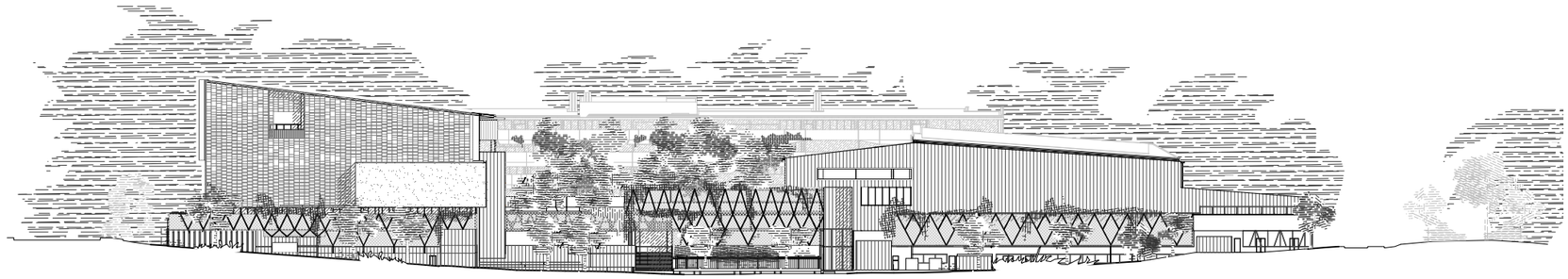
Investigations into the proposed site identified that it was both flood prone and contaminated, making it expensive to build sports field and facilities. This information combined with the need to transport students via coaches to and from the site made this solution undesirable – challenging the project status.

From this situation arose unexpected solutions from the school partners:

UNIVERSITY OF QUEENSLAND
Located 15 minutes' walk from the school, UQ offered BSSSC students use of its sports fields and facilities on the university campus. This has strengthened the partnership between the two organisations beyond the research academy originally envisaged. School students access the university weekly, gaining the benefit of 30 minutes of walking into their weekly program.

BRISBANE LIONS
Approached the school (without a sports field) to form an AFL academy. Regular ball training activities occur on campus, with competition games and events occurring offsite at Brisbane Lions facilitiess.

Both solutions were not envisaged at the start of the project, and arose from the unexpected scenario of a school without a sports field on site.



GRANTHAM STREET ELEVATION

WALKING FITNESS
Further to the item above, the vertical campus design has improved student and staff fitness. Early in the design process, DoE instructed the design team to provide one lift per building to enable accessibility across facilities for those unable to use stairs. The school has embraced this, with all able-bodied users encouraged to use stairs. Many of the students live in apartments, live technology centred lives and do not typically use stairs of participate in sports. Fitness device data recorded by the school has demonstrated that the students benefit from daily stair climbing at the school.

DESIGN WITH COUNTRY
The design was heavily influenced by Indigenous values and the cultural heritage of the site. The school has also responded by making these a school learning focus. An Indigenous artist in residence program has been established, and the artwork produced is proudly displayed in the creative hub and reception.

5e) Explain how the project provides value & good stewardship of financial resources

VALUE FOR MONEY
The project achieved an ambitious level of quality on an extremely tight to meet DoE budget constraints for a public-school infrastructure project. At the time of construction (2020-2021), market competitive rates in Brisbane for comparable sectors in midrise construction including fit-out as follows:

- Schools – $7,000/m²
- Universities – $10,000/m²
- Commercial – $6,000/m²

This project realised 27,600m² of school facilities, including demolition, amalgamation, and landscaping of a 2-hectare site, plus new street frontages, bikeways and two new signalised intersections for a total of $124million AUD, or $4,500/m².

This was achieved through rigorous design focused on:

- Highly efficient grid-based planning
- Omission of materials and finishes where not needed
- A restrained durable palette of concrete, glass, aluminium, and fibre cement
- Economies through the use of repetition across spaces and systems

This was underpinned by vigorous value management undertaken at all phases of a design and procurement.

6a) Describe & illustrate physical attributes of the environment

Brisbane South State Secondary College is located within the Brisbane Knowledge Corridor and is an integral part of this leading education, health, and research network.

A permeable and energised public realm organised around a memorable and vibrant central native garden maximises learning interactions. The campus consists of flexible and resilient buildings, designed to adapt to changing learning pedagogies over time. Each building is arranged around double storey learning hubs, that are characterised by open, adaptable, and shared presentation spaces for collaboration across multiple disciplines.

The vertical campus is connected across five new buildings lined by open galleries that formally frame views of landscape features significant to Country. The historical use of the site for camping, weaving and the making of tools by the local First Nations inspired the screens, scored details of the concrete panels, and the incorporation of a palette of endemic flora, colours, and materials.

ARRIVAL COURT
Key arrival spaces are sheltered and celebrated to invite participation with the school and public access to the facilities. A generous undercover front arrival court welcomes visitors into the school. Within this sheltered place, clear views are provided into the learning spaces adjoining, and the central campus garden beyond.

LEARNING OASIS
Positioned high on the hill surrounded by Dutton Park and Gair Park, the new campus is orientated towards the city view around a central garden. Named the “learning oasis”, this garden setting takes advantage of the northerly aspect and city views. It is terraced across three levels, offering numerous social and seating areas. A native rainforest garden shades an outdoor dining and pizza oven, while the café and elevated sports terraces are enclosed with verdant trellis and vines. The landscape extends vertically onto upper-level outdoor learning balconies, where plants spill through the balustrades.

VERTICAL LEARNING CAMPUS
The school is arranged across seven horizontally connected levels, clustered vertically in five learning hubs. Open galleries and stairs connect across the campus to encourage interactions. This results in a vertical and horizontal network of learning – or a “vertical learning campus”. This model allows students and teachers to easily navigate the school and connect with integrated cross discipline learning in an easy and accessible manner.

LEARNING HUBS
Learning facilities are mixed across disciplines into three holistic learning hubs of STEM (M), Creativity and Health-Wellbeing to support an innovative pedagogy. Within learning hubs, gathering and making spaces are arranged to foster collaborative ideation, facilitating interactions and project-based learning.

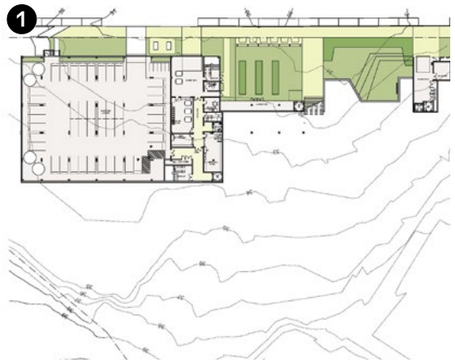
CHARACTER & IDENTITY
Are detailed in section 6c below.

SITE PLAN

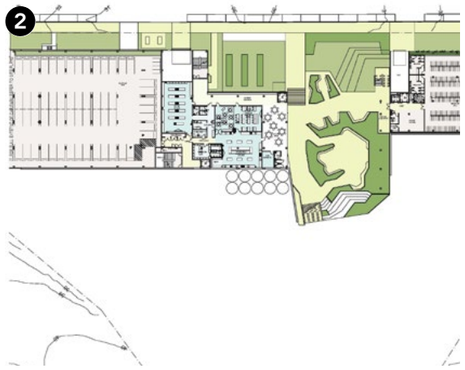
1. LEARNING “OASIS”
2. CREATIVE HUB
3. ANNERLEY ROAD ENTRY
4. ADMINISTRATION HUB
5. LEARNING HUB
6. ACTIVE PARK
7. LEARNING HUB
8. FUTURE EXPANSION
9. GLADSTONE ROAD ENTRY
10. OUTDOOR COURT
11. MULTI-PURPOSE HALL
12. HEALTH & WELLBEING HUB
13. PRODUCTIVE GARDEN
14. GRANTHAN STREET ENTRY
15. POCKET PARK

6a) Describe & illustrate physical attributes of the environment

The completed high school provides space for 1,650 students, including 74 learning spaces across 7 levels as follows:

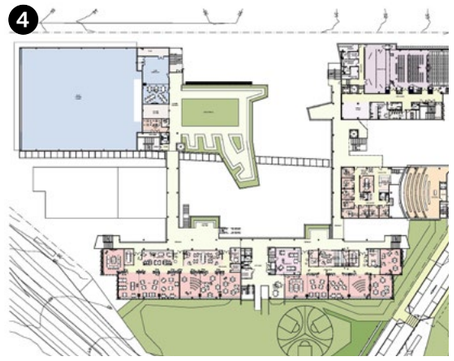


LEVEL 1 - GRANTHHAM STREET
- Staff car park
- Operational & recycle centre
- Community garden
- Grantham street drop-off entry
- Pocket park



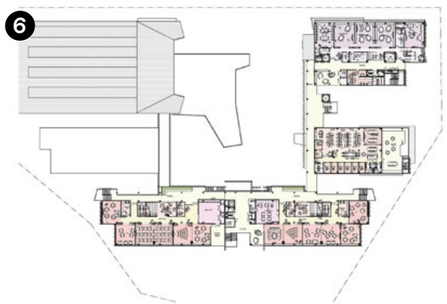
LEVEL 2 - RAINFOREST RETREAT
- Visitor car park
- Nutrional studies centre
- Rainforest & dining garden
- Bicycle centre

LEVEL 3 - ARRIVAL
- Gladstone road entry
- Multi-purpose hall & outdoor court
- Cafe, undercover social areas
- Resource centre
- Pop-up event space
- Student services
- Reception & uniform store
- Arrival court
- Annerley road entry

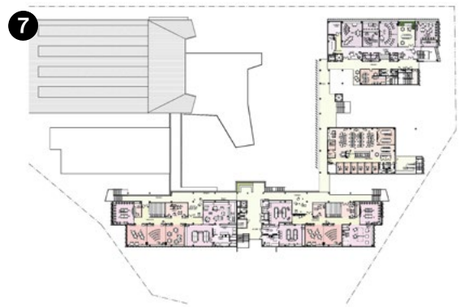


LEVEL 4 - ACTIVE PARK/MALDON ST ENTRY FITNESS CENTRE
- Fitness centre
- Senior learning centre
- Junior learning centre
- Active park
- Executive centre
- Performing arts
- Maldon street entry

LEVEL 5
- Social enterprise/event spaces
- Senior stem centre
- Junior stem centre
- Lectorial
- Multi-media centre



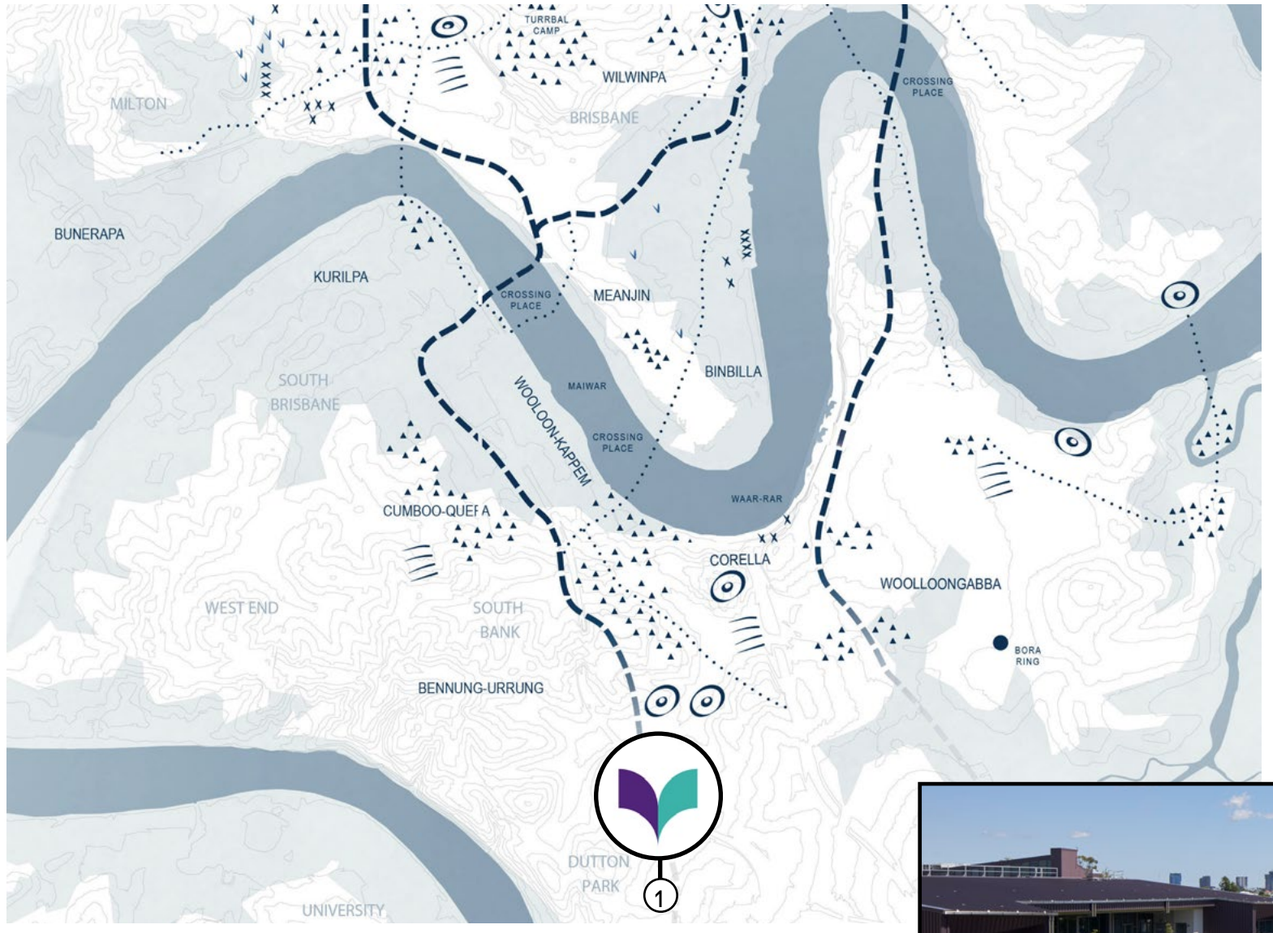
LEVEL 6
- Senior Learning Centre
- Junior Learning Centre
- Staff Centre
- Visual Arts



LEVEL 7
- Senior Stem Centre
- Junior Stem Centre
- Staff Centre
- Music

OPEN LANDSCAPE AREAS

The school site includes extensive new landscaped environments including:
- Undercover arrival court
- Native gardens
- Play space and hand ball courts
- Flexible undercover areas
- Outdoor multi-purpose and three-way basketball court
- Active play spaces
- Outdoor cooking and pizza oven
- Rainforest retreat
- Outdoor learning terraces (all upper levels)



BRISBANE COUNTRY FRAMEWORK MAP, 1. BRISBANE SOUTH STATE SECONDARY COLLEGE

LEGEND

- CAMP SITE
- PULLEN PULLEN/CONTEST GROUND
- BURIAL SITE
- WALKING TRACK

6b) Describe & illustrate how the facility fits within the larger context of the community

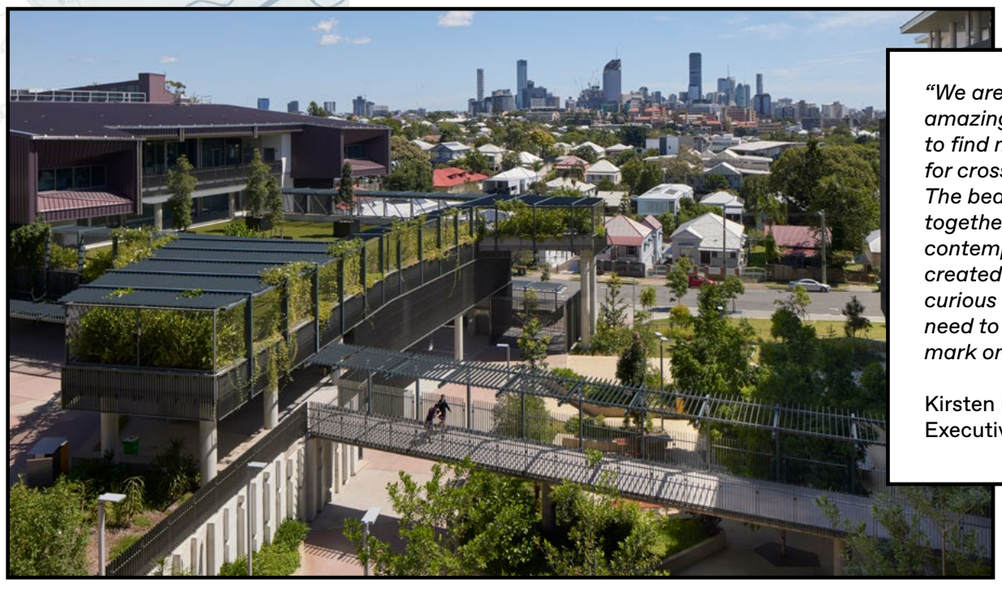
INCLUSIVE WITH COMMUNITY
Brisbane South was designed in extensive consultation with hundreds of public stakeholders. This resulted in an urban response to community needs, with generous arrival spaces, providing public access into shared creative and sports facilities, as well as the community garden and park.

The campus seeks to provide benefits beyond the school with:

- Connections to learning partners (University of Queensland, Ecosciences precinct, Translational Research Institute and Princess Alexandra Hospital)
- Public access for community use of school facilities and park edges (Creative hub, sports hall, community garden, pocket park and active park)
- Inviting arrival court from Annerley Road energized by open and visible school activities
- Bicycle and pedestrian pathways around the school

RESPECTFUL LANDSCAPE
Surrounded by the beautiful Dutton and Gair parks, the school landscape extends the existing native planting around and throughout the school grounds. This includes native mature trees, extensive planted setbacks, street forecourt and visible central garden, enhancing the surrounding streetscape and aspect from adjoining properties. Particular attention was paid to the outlook of the residential neighbourhood along Grantham Street to ensure the houses opposite enjoyed a green outlook to the school and community gardens, pocket park, and learning oasis.

CONNECTED WITH COUNTRY
The new school sits upon an old ridge historically used for camping, weaving and the making of tools and implements by the local First Nations. The architectural language is derived from the First Nations heritage of the site as a place of making, informing the scored details within the concrete facade, as well as harnessing a local palette of colours and materials. The campus is accessed via open gallery settings that formally frame views of nearby and distant landscapes and amplifies opportunities to connect to Country.



"We are extremely happy to be at this amazing school and every day we continue to find new ways to use the innovative spaces for cross discipline project-based learning. The beautiful architecture and gardens together with the diverse range of open and contemporary learning environments has created endless opportunities to inspire curious minds with flexibility and agility they need to connect, contribute and leave their mark on the world."

Kirsten Ferdinands, inaugural school Executive Principal

6c) Describe & illustrate how the project inspires and motivates

INSPIRATION FOR LEARNERS
Connected with indigenous Country, local community and global thinkers, the project seeks to "...empower students to be leaders of their own learning, to use critical and creative thinking, identify world problems, develop solutions, and become mindful global citizens."

The framework of project values contributes directly to this ambition, aiming to motivate and inspire students, teachers, and community to be:

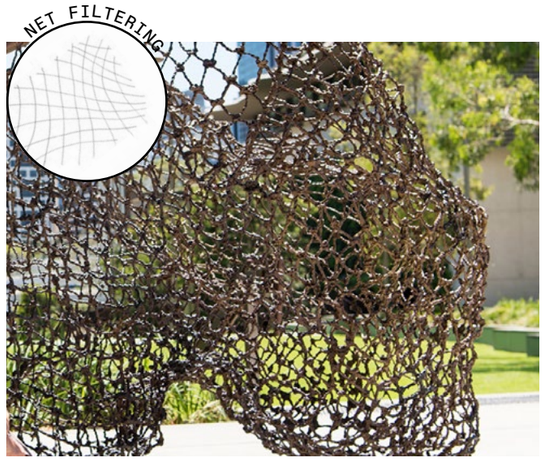
- Connected learners
- Welcoming and energized
- Memorable and vibrant
- Demonstrate ethical values
- Innovative and sharing
- Flexible and resilient

INSPIRATION FROM COUNTRY
Principally, the project aspires to rekindle a connection with Country, the indigenous heritage of this place, to enhance student, staff and community awareness of our history, indigenous culture and the Turrbal people. Working within our Designing with Country framework this was achieved through undertaking research into the indigenous heritage, then using these findings to directly inform the project design.

COUNTRY RESEARCH
Like many of the roads around Brisbane, Annerley Road follows an Aboriginal pathway. Traditionally these often-followed ridgelines provided easier access through undulating country, as well as views of the surrounding areas. The Dutton Park precinct would have been ideally placed for subsistence, settlement and cultural activities given its elevation, access to terrestrial and riparian resources, and proximity to the bora ground at Woolloongabba.

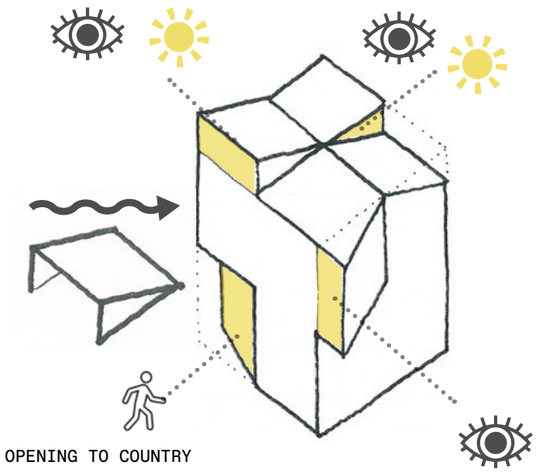
A HERITAGE OF MAKING
Thomas Petrie – one of the early English settlers to Brisbane in 1837, described in his records of the Turrbal indigenous people that they fashioned a range of tools and implements through weaving and carving. These included boomerangs, spears, 'waddies', digging sticks, shields, coolamons, nets and canoes
Source: Queensland Museum

TWO MEN USING A TOW-ROW (FISHING NET, QUEENSLAND MUSEUM

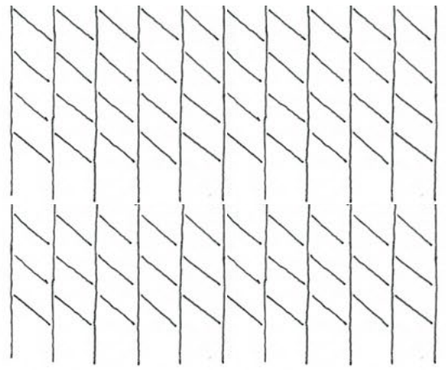


TOW ROW, JENNY WATSON

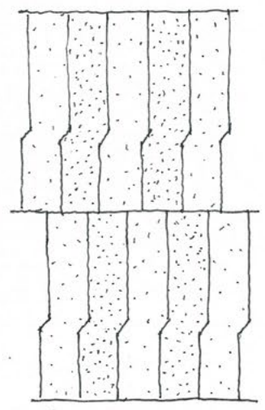
AN AXE SHARPENING STONE AT FAIRFIELD, MAPPING BRISBANE HISTORY PROJECT



OPENING TO COUNTRY



WOVEN METAL SUN-SHADING



PROFILED CONCRETE

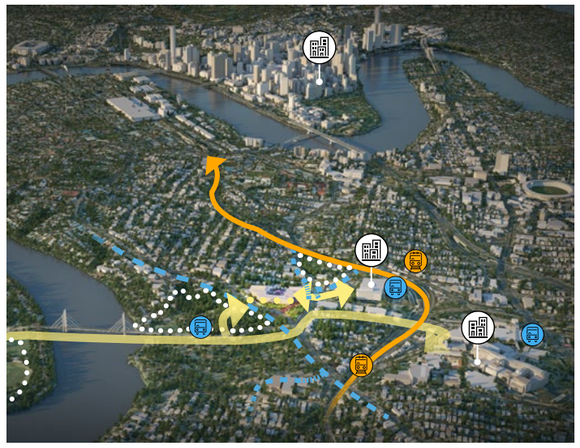
STONE UTENSILS & SPEARS
For Aboriginal people, the southside was a great resource zone (towrie) for ironbark and many other valued timbers such as bloodwood, forest oak, stringybark and blue gum. Stringybark was used to fashion canoes and huts, whereas ironbark was important for utensils such as spears and clubs, as well as the best-burning firewood. Spears, clubs, and hut sheets are mentioned being traded or sold by Aboriginal people to settlers and other Indigenous groups. There are thirteen ceremonial and hunting spears collected from this vicinity in the University of Queensland Anthropology Museum. Four stone artefacts were recovered close to T J Doyle Memorial Drive during Aboriginal cultural heritage assessment prior to the construction of the Eleanor Schonell Bridge.

DILLY BAGS & FISHING NETS
Indigenous women from south-east Queensland once produced a distinctive style of dilly bag from fibres extracted from the bark of hibiscus or Moreton Bay Fig, they used a coiled technique incorporating an ornamented diagonal pattern of knots, which crossed at forty-five degree angles.Fishing nets were manufactured from vine fibres. The mesh of the nets varied between small for fish and birds to heavier, more open weave for dugong and kangaroo. Other fibres employed for various tasks included treated sinews and tendons, kangaroo fur, and human hair.

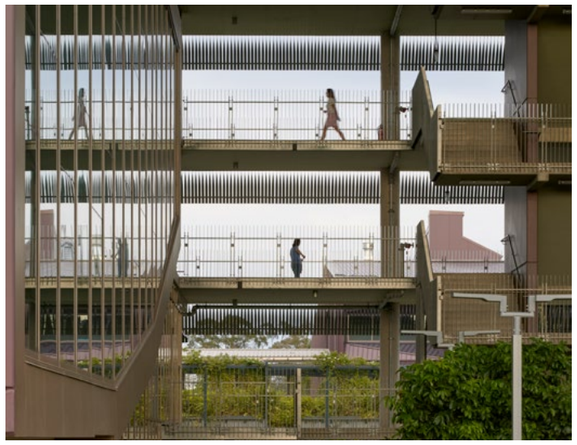
A PLACE OF MAKING
The site has a rich association with the making of implements and tools. The new school sits upon an old ridge historically used for camping, weaving and the making of tools and implements by the local First Nations. The architectural language is derived from the First Nations heritage of the site as a place of making, informing the scored details within the concrete facade, as well as harnessing a local palette of colours and materials. The campus is accessed via open gallery settings that formally frame views of nearby and distant landscapes and amplifies opportunities to connect to Country. This connection to the indigenous heritage of Country directly informs the architecture of the school. Through this proud display, the school seeks to inspire and motivate students and the community to embrace and reconcile our indigenous history of Australia.

6d) Describe innovative aspects of the physical environment

The project has explored innovation across five key themes. The following highlights how these innovations were achieved within the physical environment of the school.

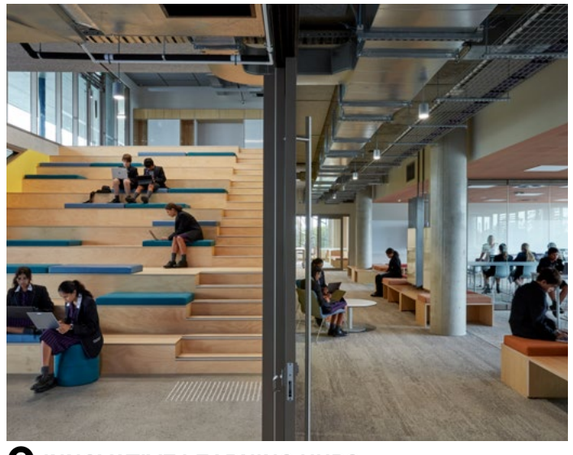


1 ENGAGED WITH COMMUNITY AND PARTNERS
School campus arranged to encourage participation of public and partners onto the school grounds as well as student access to off-campus facilities.



2 VERTICAL CAMPUS MODEL
All school buildings connected at elevated levels to provide equity and ease of movement as well as enable student interactions with learning activities.

5 CELEBRATES NATURE
An environment where built form is secondary, conceived as a setting to enjoy the native landscaped gardens, parklands and distant mountain views.



3 INNOVATIVE LEARNING HUBS
Diverse learning facilities collocated within open learning hubs to empower students to select and control their individual learning pathway.

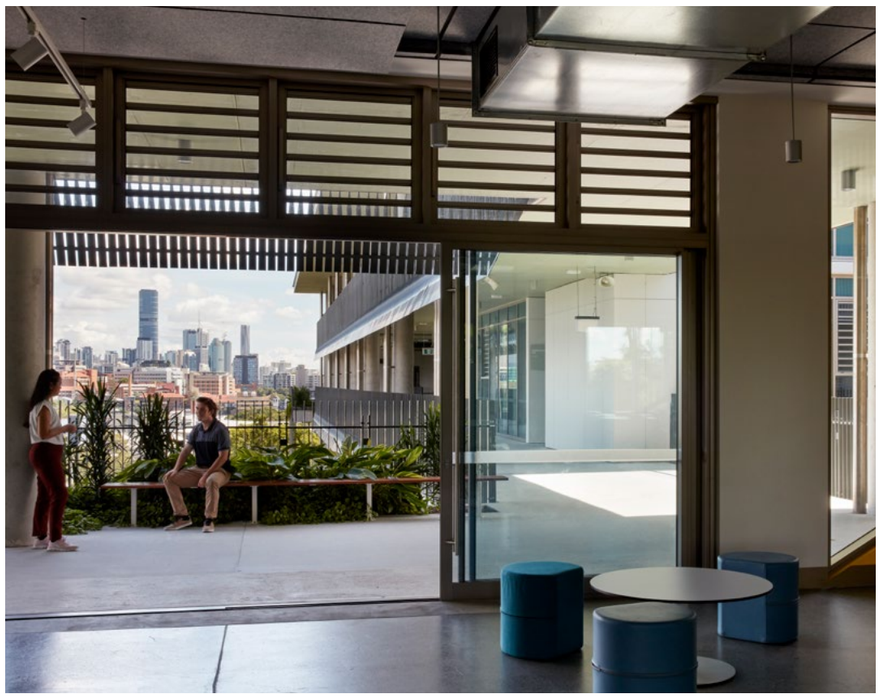
4 CONNECTED WITH COUNTRY
An architecture explicitly derived from the Turrbal and Yuggera cultural use of the site to inspire and motivate community embracing our indigenous heritage

6e) Describe how the physical environment fosters justice, equity, diversity & inclusion

AN ETHICAL COMMUNITY
The physical environment fosters JEDI principles through a publicly accessible school, including key indigenous cultural values, being gender inclusive, connecting to active transport and providing universal accessibility.

Several features of the project brief and design evolved from JEDI inputs from the wider community, including:

- Non-binary toilets
- Inclusive design for neuro-diverse students
- Well-being centre with student support/community counselling
- Prayer room
- Horizontal connectivity across all upper levels
- Recycling and plastic free policies
- Natural ventilation and light to all learning spaces
- Community garden
- Organic waste composting
- Cafe for social enterprise training



JUSTICE
The key aspiration of the project was to raise the profile of indigenous culture and heritage. This was achieved by undertaking research into the Turrbal historic use of the site as inspiration for the architecture and landscape. The explicit referencing of indigenous tool making has informed the characteristic appearance of the school – physically manifesting this history to students, teachers and the wider public.

This has successfully contributed to the public discussion of indigenous issues – recorded in publications, the school website and ongoing curriculum planning at the school.

EQUITY
The school is a public institution, tax payer funded with a constrained budget, and open for enrolment for all secondary school children living in the catchment area – free of charge. Its aspiration is to elevate the quality of public education to enable any child to receive innovative learning often only seen as available at private schools.

The school has been able to leverage the natural assets of the site (the city view and parkland outlook), the transport infrastructure, the educational partners, and the contemporary architecture to offer a high quality educational experience to families in the catchment area.

DIVERSITY
To embed different thinking, the school leadership team of Kirsten, Tamara, Kristen, and Sanja are all women from diverse cultural backgrounds. The project sought to promote and instil diversity, reflective of the multi-cultural background of the local community (more than 60% have a parent born outside Australia). The engagement with community through the design processes led to numerous additional diversity inclusions within the physical environment:

- Non–binary toilets
- Non-denominational prayer room
- Indigenous inspired architecture
- Fully accessible adult change facility
- Fully accessible buildings and grounds

INCLUSION
All public schools are required to provide accessible facilities in accordance with the Australian Disability Discrimination Act. For this project, DoE stipulated additional requirements beyond that mandated for this type of project, including:

- Fully accessible toilet every level of every building
- Fully accessible adult change facility
- Elevated walkways between buildings
- Finishes and lighting selections to create calming learning environments for neuro-diverse students
- Student retreat lounge
- Pastoral and support centres

7a) Describe & illustrate the energy-efficiency within the solution

GENERAL DESCRIPTION
The aspiration for this inner-city vertical school is to create a sustainable, comfortable, and naturally inspired learning environment where students can meaningfully connect with community, landscape, and Country.

ENERGY EFFICIENCY
Carbon (or energy) usage is minimised largely by the adoption of mixed mode ventilation throughout, effective solar orientation, sun shading and extensive landscaping.

PASSIVE DESIGN
As Brisbane is located in a sub-tropical climate, effective control of solar heat and natural ventilation is critical to providing comfort without resorting to air conditioning.

All buildings are orientated north, with glazing restricted to north and south elevations only. Unwelcome low-level east and west heat and sunlight is excluded through solid flank walls. All north elevation glazing is designed with effective external sun shading to exclude sunlight during school hours. As south facing glazing does not require sun shading, this elevation is fully open to maximise public visibility into the learning activities of the school.

All buildings are designed for natural ventilation. The learning and creative hubs are designed with automated louvres to allow cross ventilation of the open learning spaces to occur when climatic conditions are appropriate. The sports hall is permanently naturally ventilated, with low-level intake grilles to the perimeter of the hall, large fans, and clerestory louvres to enable the effective circulation of air and discharge of heat at high level.

These features take advantage of the elevated school position, the cooler microclimate afforded by the surrounding parkland setting and the generously landscaped school grounds.

ENERGY EFFICIENT FEATURES
The project embodies environmentally sustainable principles:

- Optimal north oreintation with effective sun shading systems
- Mixed mode and natural ventilation
- Open circulation galleries (non-air conditioned)
- 100kwH solar array (designed to expand to 300kwH in future)
- Over 400,000L of rainwater collection tanks
- 330 secure bicycle parks and end of trip facilities
- Excellent public and active transport connections
- Abudant natural landscaping
- Durable and robust material selections

7b) Describe & illustrate durable and green materials relating to maintenance

DURABLE MATERIALS
The campus consists of flexible and resilient buildings, designed with robust and durable materials, able to adapt to changing learning pedagogies over time to maximise lifespan functionality of the school.

Primary materials are selected from a limited palette, extremely durable, fit for long term use with minimum ongoing maintenance and repair as follows:

- Insitu concrete, exposed to all gallery, pathway and internal circulation zones (floors and ceilings)
- Precast concrete, exposed to perimeter facades
- Prefinished fibre cement boarding, all gallery facades and soffits
- Aluminium framed glazing and sun shading
- Plywood, tiered seating and joinery
- Recycled carpet and floor vinyl

There is no use of timber, tiling, stone, veneer or other high maintenance materials in the project. Furthermore, linings or finishes were omitted wherever they were not required for specific performance needs.

7c) Describe & illustrate the healthy environmental aspects

WELLBEING & HEALTH
Situated on a ridge, open galleries and learning spaces orientate towards parkland views and cooling breezes, enhancing aspect to extensive surrounding and campus native landscaping irrigated by a 400kL rainwater storage system.

The design focused at leveraging the natural assets of the site and enhancing this further with extensive native landscaping across the site. Every space offers aspect to nature, daylight, and breezes, to ensure students remain connected at all times.

Thank You