



St Joseph's College
Physical Education and Sports Precinct Project

Architectural Design Report

Prepared for



ST JOSEPH'S
COLLEGE
HUNTERS HILL

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Issue	Date	Status	Author	Approved
A	15/05/18	Design Review Panel	IB	RD
B	06/07/18	Issue for SDS	IB	RD
C	13/07/18	Issue for SDS	IB	RD

1 **Introduction**

1.1 **Introduction**

This Architectural Design Report has been prepared for St Joseph’s College, Hunters Hill, by Tanner Kibble Denton Architects.

The design proposal for the Physical Education and Sports Precinct Project (PESPP) is a building comprising 3/no. Indoor Sports Courts, Spectator Seating, Change Rooms, Kitchen, Storage, Staff Room, 2/no. General Learning Areas, Basement Carparking, Maintenance Workshop, Waste / Recycling Enclosure, Driveway Entry and associated Landscape Works.

A separate building will accommodate the College’s Healy Gymnasium.

This Design Report has been developed to clarify the design intent of the proposal and demonstrate how design quality will be achieved in accordance with the Design Guide for Schools and the Design Quality Principles outlined in Schedule 4 of the Education SEPP:

- Principle 1 Context, Built Form and Landscape*
- Principle 2 Sustainable, Efficient and Durable*
- Principle 3 Accessible and Inclusive*
- Principle 4 Health and Safety*
- Principle 5 Amenity*
- Principle 6 Whole of Life, Flexible and Adaptive*
- Principle 7 Aesthetics*

A response to the Government Architects comments on the project at a GANSW Pre-Lodgement Meeting held 5 June 2018 is provided in Section 12.

1.2 **About SJC**

St Joseph’s College (SJC) was founded by the Marist Brothers in 1881 and is one of Australia’s leading independent Catholic schools.

The College has approximately 1,100 students, with approximately half of these living on the campus as boarding students.

St Joseph’s College prides itself on providing students with a well-rounded, balanced education, focusing on boys’ academic, physical, social, spiritual and recreation needs.

Participation in co-curricular activities and sport is compulsory. There is a wide range of co-curricular activities on offer (e.g. music, debating, public speaking, chess) and students select a winter and a summer sport.

The College was a founding member of the Athletic Association of Great Public Schools (AAGPS) and participates in the AAGPS sporting competitions of NSW. Most sports are contested among the nine member schools and boys have the opportunity to represent the College at their own level of expertise.

St Joseph’s offers a variety of sports and sporting competitions throughout the year. All students participate in a summer sport and a winter sport of their choice and benefit from working with the College’s experienced coaches as well as a comprehensive strength and conditioning program.

St Joseph’s has a proud reputation of sporting excellence and has produced many great state and national representative sportsmen. Much of the College’s success is due to the strong team spirit that is fostered by the unique, tight-knit community, as well access to first-rate facilities and training opportunities.

The College’s highly acclaimed sporting facilities include eight rugby fields, two football fields, eight high-quality tennis courts, indoor and outdoor basketball courts and cricket nets, five turf and six artificial cricket wickets, a swimming pool, a fully drained 400 metre running track, a well-equipped rowing shed located on Tarban Creek and weights and cardio gymnasiums.

Some of these facilities are located at the College’s off campus fields located on Augustine Street, approximately 500m to the north west of the main campus.

2 Site Location

2.1 Site Location

The St Joseph's College Hunters Hill main campus is located approximately 5km to the north west of the Sydney CBD and at the head of the peninsula separating the Lane Cove and Parramatta Rivers.

The campus is bounded by frontages to Mark Street (Principal Address), Mary Street, Gladesville Road, Luke Street and Ryde Road. The campus covers an area of approximately 69,500m² and is comprised of the following Lot and DPs:

- > Lot 1 DP 527024
- > Lot 2 DP 527024

The campus is largely surrounded by 1 – 2 storey residential development and Villa Maria Catholic Primary School to the north on Mark Street.

Development of the site is controlled by Hunters Hill Council LEP 2012 and is zoned SP2 Infrastructure (Educational Establishment). There are no FSR, setback or height controls that apply to the site.

Refer to Figure 2 for a plan of the St Joseph's College main campus.

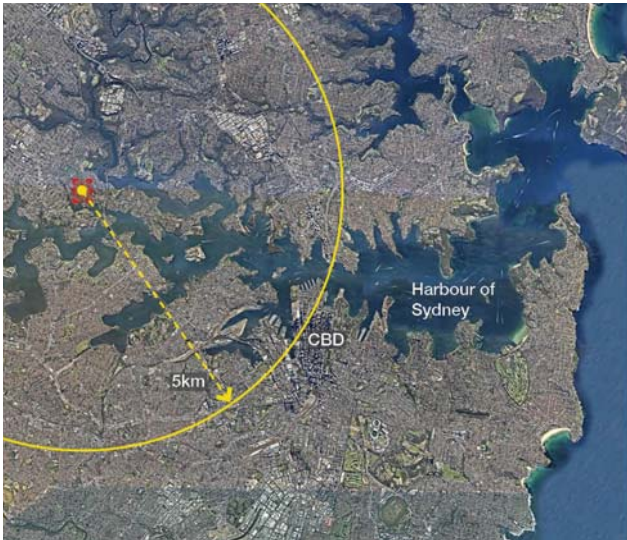
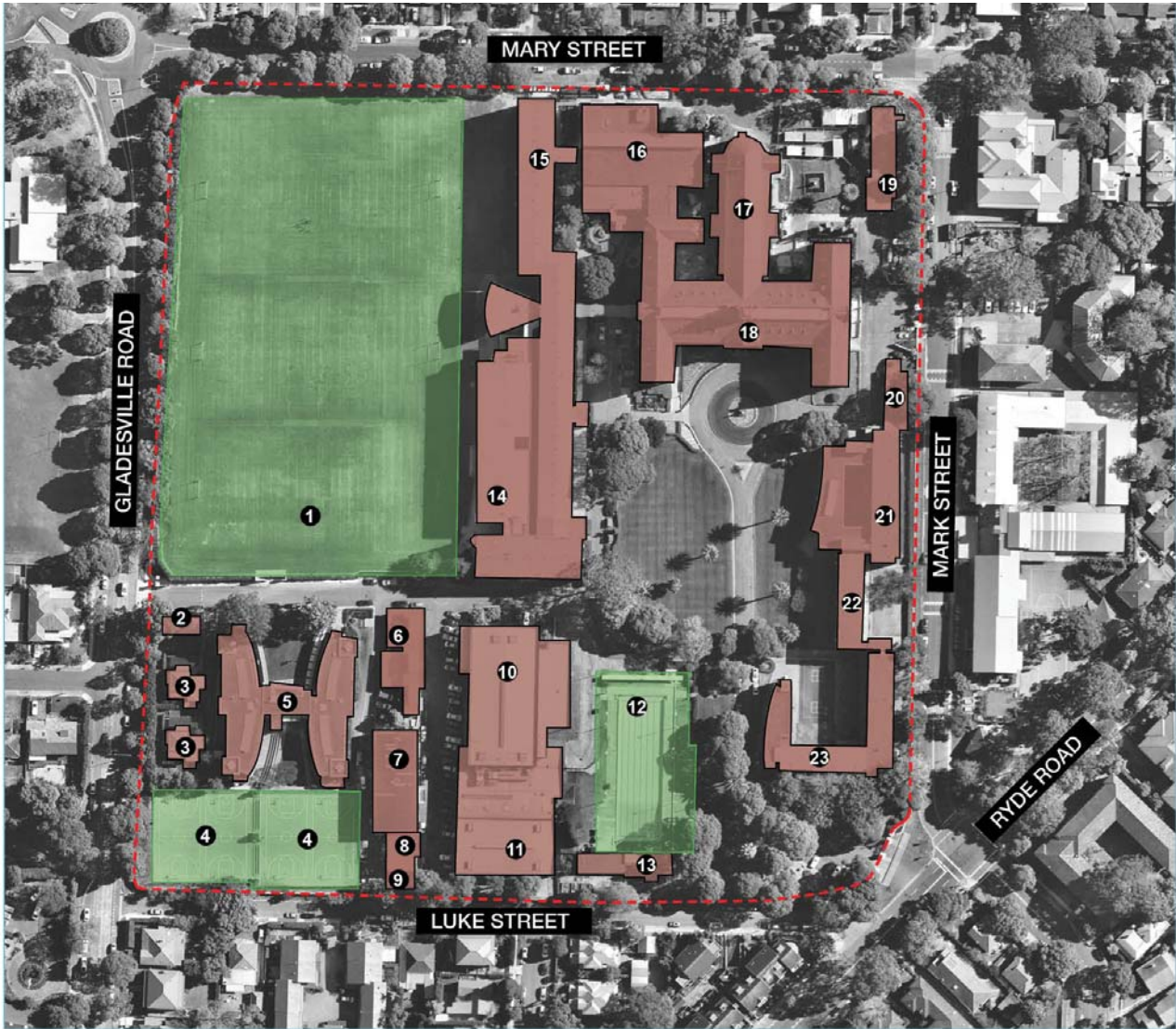


Figure 1 | Site Location



- | | |
|----------------------------|---------------------------------------|
| 1. GRASS SPORTS FIELDS | 12. SWIMMING POOL |
| 2. OLD SANDSTONE SHED | 13. POOL FACILITIES / PLANT |
| 3. TEACHERS RESIDENCES | 14. CLASS ROOMS |
| 4. OUTDOOR SPORTS COURTS | 15. 4 STOREY BRICK BUILDING |
| 5. YR 10 DORMITORY | 16. 2 STOREY LIBRARY / ADMIN BUILDING |
| 6. VISUAL ARTS CENTRE | 17. STONE CHAPEL |
| 7. HEALY GYM / MAINTENANCE | 18. MAIN BUILDING |
| 8. WORKSHOP STORAGE | 19. BROTHERS RESIDENCE |
| 9. SHED | 20. OLD TOILET BLOCK |
| 10. BR. EMILIAN HALL | 21. YR 11 RESIDENCE WING |
| 11. SPORTS HALL | 22. YR 12 RESIDENCE WING |
| | 23. YR 12 RESIDENCE WING - EAST |

LEGEND

- Existing Outdoor Facilities
- Boundary
- Existing Building

Figure 2 | Site Plan: St Joseph's Main Campus

3 Project Description & Requirements

3.1 Required Facilities

The primary spaces required by SJC for the Physical Education and Sports Precinct Project (PESPP) include:

- > 3/no. Indoor Sports Courts
- > Foyers
- > Spectator Seating (148 seats approximately)
- > Change Rooms
- > Kitchen
- > Storage
- > Staff Room
- > 2/no. General Learning Areas
- > Basement Carparking (85 spaces approximately)
- > Maintenance Workshop
- > Waste / Recycling Enclosure
- > Driveway Entry
- > Associated Landscape Works and making good.

The Healy Gymnasium is to be provided as a separate building.

The dimensional requirements for these facilities are shown in Figure 3 & 4.

3.2 Hours of Usage

The proposed PESPP will be used from 6am to 10pm (with occasional later events), 7 days a week, primarily for the College’s use. The building will also be available for community users when not being used by the College.

3.3 Indoor Sports Courts

The College currently have 6/no. outdoor basketball courts and 1/no. indoor basketball court.

The College are proposing to provide 3/no. new indoor basketball courts to replace 4/no. existing outdoor courts, which are required for the following reasons:

- > The current indoor basketball court does not meet current competition playing standards.
- > The current provision of 1/no. indoor basketball court is insufficient to meet the demand on court usage for teaching PE, particularly during wet weather.
- > The current provision of 1/no. indoor basketball court is insufficient to meet the College’s ability to host the Athletic Association of Great Public Schools (AAGPS) basketball competition.
- > The existing outdoor basketball courts are in poor condition. These courts have no acoustic screening and are exposed to the weather.

To meet competition requirements the basketball courts are required to be 28m x 15m (inside edge of 5cm wide boundary line) with 2m minimum clear overrun all around

plus seated team bench and scorer’s area. The minimum clear internal height is 7m.

The PESPP has been designed for basketball, indoor sports and PE. As a large indoor space, the sports halls may also be used for College assemblies and gatherings.

Facilities associated with the indoors sports courts include spectator seating, change rooms, staff rooms and storage. A retractable / portable stage is to be provided 18m x 6m (108m²).

3.4 Kitchen

A servery kitchen will be provided on the ground floor adjacent to the Entry Foyer. The kitchen will be for the serving of food and drinks that is prepared elsewhere on campus and will not be used for cooking.

The kitchen will also include basic food and snacks for sale during weekend sport and a servery facing the Entry Foyer.

3.5 Basement Car Parking

To better serve the building and reduce reliance on off-street car parking, the College is proposing to provide 85 basement car parking spaces, including 2 accessible carparking spaces.

The proposal requires the demolition of 30 external carparking spaces, resulting in a net increase of 55 onsite carparking spaces.

The car park will be primarily used by staff during the school hours. After hours and on weekends it will be used by users of the facility.

The basement car park will incorporate a waste / recycling enclosure. The car park also allows for the delivery of goods into the building via the lift.

3.6 Maintenance Workshop

The College’s Maintenance Workshop is located at the southern end of the basement carpark and generally replaces the existing Maintenance Workshop areas to be demolished. The new facility is approximately the same size as the existing.

3.7 Healy Gymnasium

A new Healy Gymnasium is a weights gymnasium required to replace the existing facility demolished. The new facility is approximately the same size as the existing facility in order to accommodate the College’s existing equipment. A clear height of 3.5m minimum is required to allow for use of weights equipment.

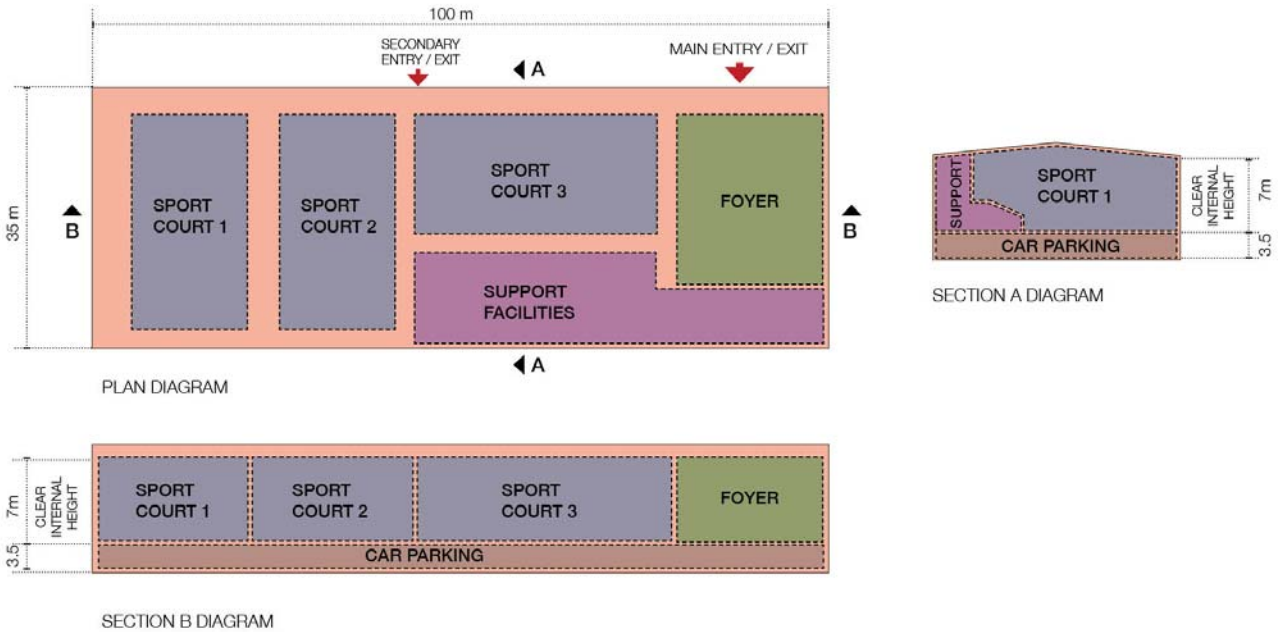


Figure 3 | SJC Physical Education and Sports Precinct Project Facility Requirements

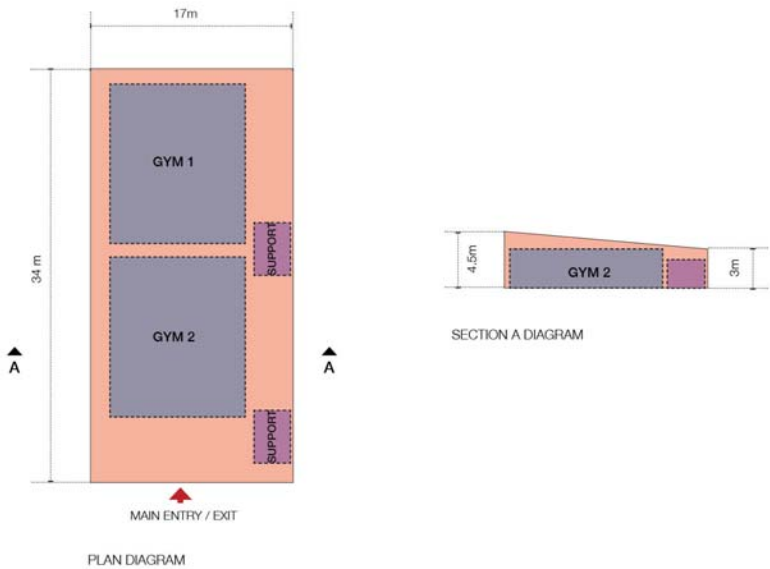


Figure 4 | SJC Healy Gymnasium Facility Requirements

4 Site Selection

4.1 Site Selection

The existing St Joseph's College campus is largely developed and fully utilised by the College to deliver its curriculum and meet student needs.

The majority of College buildings and facilities are fully utilised and there are a limited number of areas left for development.

Refer to Figure 5 showing the development across the campus and a summary of site options considered.

4.2 Site Options

Site Option A: Main Building Foreground

The Main Building is the principal heritage item on the campus. The landscape setting and views to the front of the Main Building need to be maintained and any development adjacent to this area needs to be complementary. The campus main entry and landscaped approach up to the Main Building should be retained.

This option has been dismissed based on heritage impacts to the Main Building.

Site Option B: SJC Rugby Fields

The 3/no. rugby fields are fully utilised by the College to deliver the curriculum, meet competition sport requirements and meet the recreational needs of the students on campus.

Fields are used 7 days a week as follows:

- > During school hours the fields are used to deliver the PHDPE curriculum requirements of the College.
- > After school hours the fields are used for training.
- > On weekends the fields are used for competitive sport.
- > During recess, lunch and at all other times the fields are used by the school boarders for recreation.

This option has been dismissed due to the high utilisation of Rugby Fields which are required by the College to deliver the curriculum and meet the requirements of students.

Site Options C: SJC Swimming Pool

The swimming pool is fully utilised by the College to deliver the curriculum, meet competition sport requirements and meet the recreational needs of the students on campus.

The pool is used 7 days a week as follows:

- > During school hours the pool is used to deliver the PHDPE curriculum requirements of the College each day both in Summer and Winter.
- > After school hours the pool is used for training (water polo and swim team use the facility in Term 1 and Term 4).
- > After school hours and on weekends the pool is used by the school boarders for recreation.

This option has been dismissed due to the high utilisation of Swimming Pool which is required by the College to deliver the curriculum and meet the requirements of students.

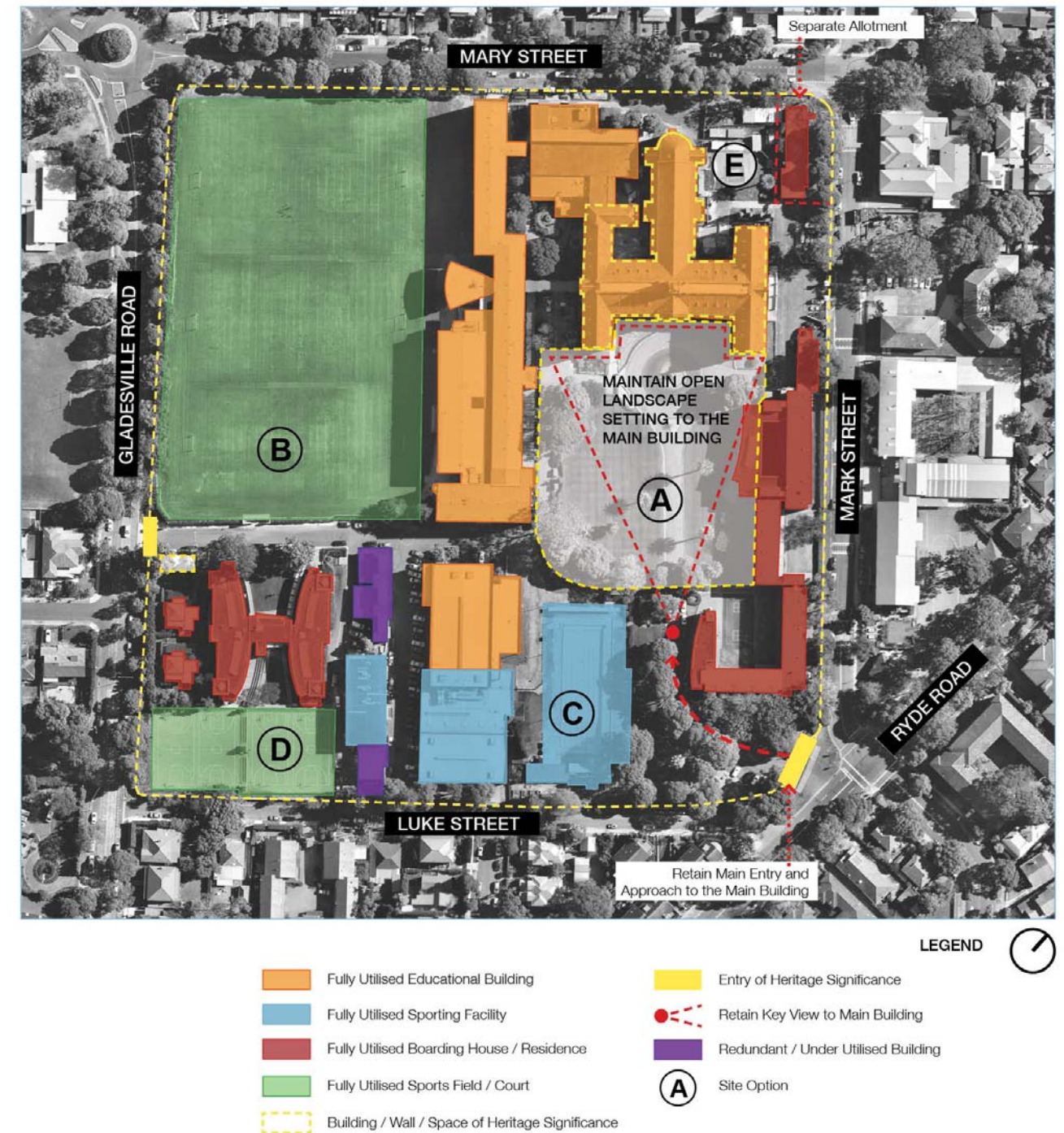


Figure 5 | Summary of Site Options and Site Constraints

4.3 The Preferred Site Option

Site Option D and E: Existing Basketball Courts

Based on the Site Options and Constraints there are only a limited number of options for locating the new buildings on the College campus.

The preferred site for the Physical Education and Sports Precinct Project (PESPP) is to the south east of the campus near the intersection of Luke Street and Gladesville Road.

The proposed building will be located on the site of the existing 4/no. outdoor sports courts.

The site is preferred as it can accommodate the size of the facility and replaces outdoor basketball courts with new indoor basketball courts - like-for-like facilities. It is proximate to the College's existing sporting facilities and has minimal heritage impacts.

The site for the PESPP currently includes the following existing buildings to be demolished:

- > 4/no. Outdoor Sports Courts
- > College Uniform Shop (including second hand clothing pool)
- > Healy Gymnasium
- > Maintenance Workshop
- > Workshop Storage
- > Old Boys Union (UBN)
- > Ladies Arts and Craft
- > P&F Association

The Healy Gymnasium is to be located in the north west corner of the site to the north of the Stone Chapel near the intersection of Mark Street and Mary Street. It is a single storey building with good setbacks and has minimal impact to adjacent buildings or adjacent neighbours.

The new Healy Gymnasium location is an interim location until the long-term renewal of the pool precinct occurs. At this stage, the time frame is not defined.

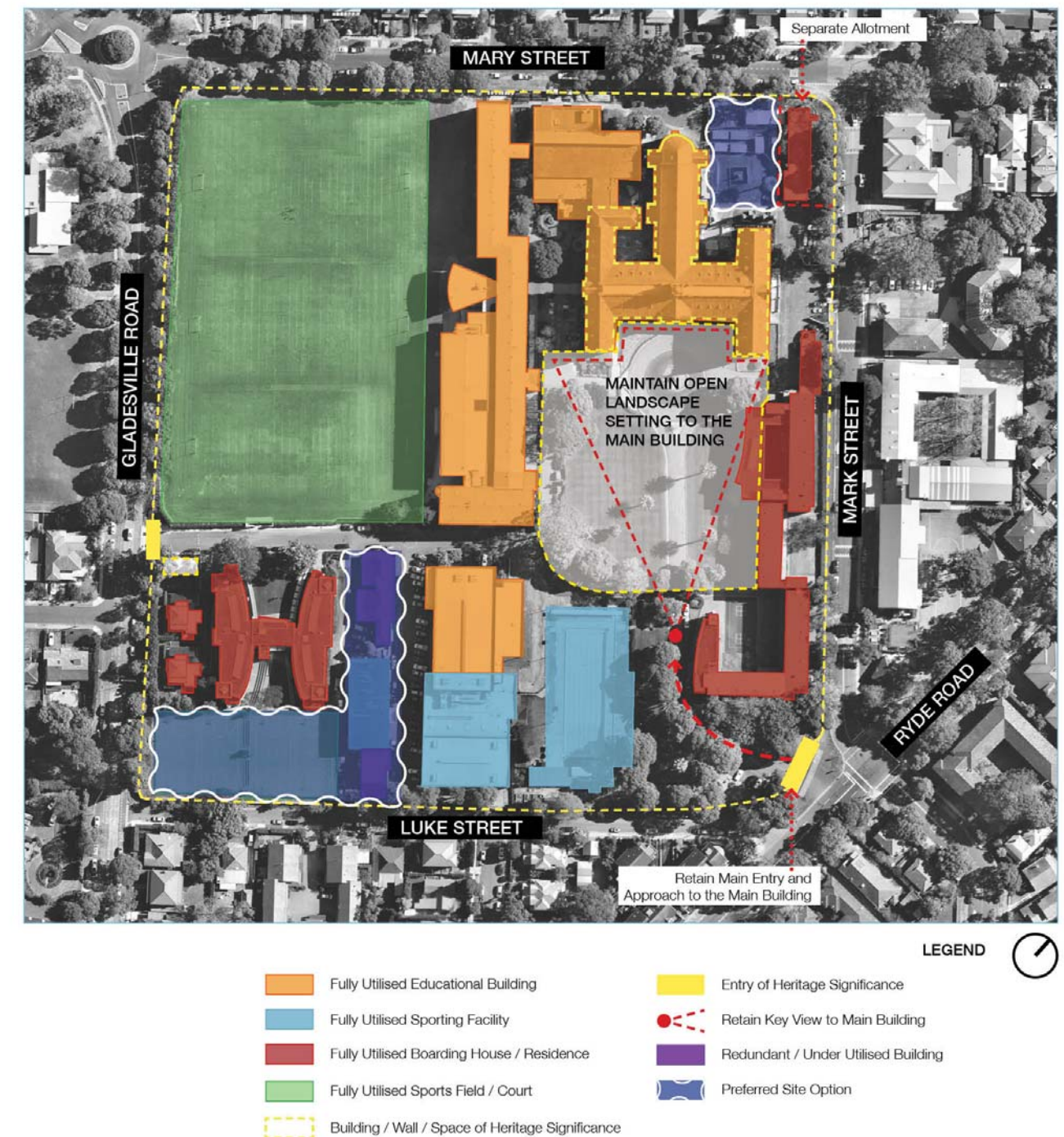


Figure 6 | The Preferred Site Option

5 Context, Built Form and Landscape

Schools should be designed to respond to and enhance the positive qualities of their setting, landscape and heritage, including Aboriginal cultural heritage.

The design and spatial organisation of buildings and the spaces between them should be informed by site conditions such as topography, orientation and climate.

Landscape should be integrated into the design of school developments to enhance on-site amenity, contribute to the streetscape and mitigate negative impacts on neighbouring sites.

School buildings and their grounds on land that is identified in or under a local environmental plan as a scenic protection area should be designed to recognise and protect the special visual qualities and natural environment of the area, and located and designed to minimise the development's visual impact on those qualities and that natural environment.

Design Quality Principle 1, Schedule 4, Education SEPP

5.1 Campus Context

The St Joseph's College campus is characterised by 3-4 storey masonry buildings set within landscaped grounds and lawns. The campus is dominated by the 4 storey sandstone Main Building and Stone Chapel, which sits at the high point of the site.

A sandstone boundary wall is located around the entire perimeter of the campus.

The existing buildings on the campus feature a predominance of sandstone and golden coloured face brickwork.



View looking west towards the Main Building and campus landscape setting



View looking east along Gladesville Road towards PESPP site and Luke Street intersection, which is screened by existing trees



View looking south over the PESPP site and existing outdoor basketball courts



View looking north from Gladesville Road along Luke Street intersection with PESPP site on the left



View looking east with Brother Emilian Hall on the right and underutilised buildings on the left to be demolished



View looking north across the Healy Gym site towards the Brothers Residence

Figure 7 | Existing Campus Context

5.2 Street Context

The existing streetscape around the St Joseph's College campus is characterised by the perimeter sandstone wall which is punctuated by the existing College buildings in close proximity to the wall and rising 3-4 storeys above.

The opposite side of the street is largely characterised by 1-2 storey residential properties. The street around the College provides a setback to the residential properties, which look towards the institutional buildings and 3-4 storey development of the College.



View looking south from Mary Street towards the 4 storey classroom building



View looking south east from Mary Street towards the Stone Chapel



View looking west from Mark Street towards the Boarding House Residence



View looking south from Mark Street towards the Boarding House Residence



View looking west from Luke Street towards the Sports Hall



View looking north from Luke Street towards the Brother Emilian Hall and Sports Hall

Figure 8 | Existing Street Context

5.3 Building Height Context

The main buildings of the St Joseph's Campus are characterised by buildings with a predominate height of 12m – 15m, with the Main Building rising to a height of 21m.

The proposed maximum building height of 14.1m of the PESPP fits within the height range and scale of buildings across the campus.

The adjacent plan shows the height of buildings across the campus.

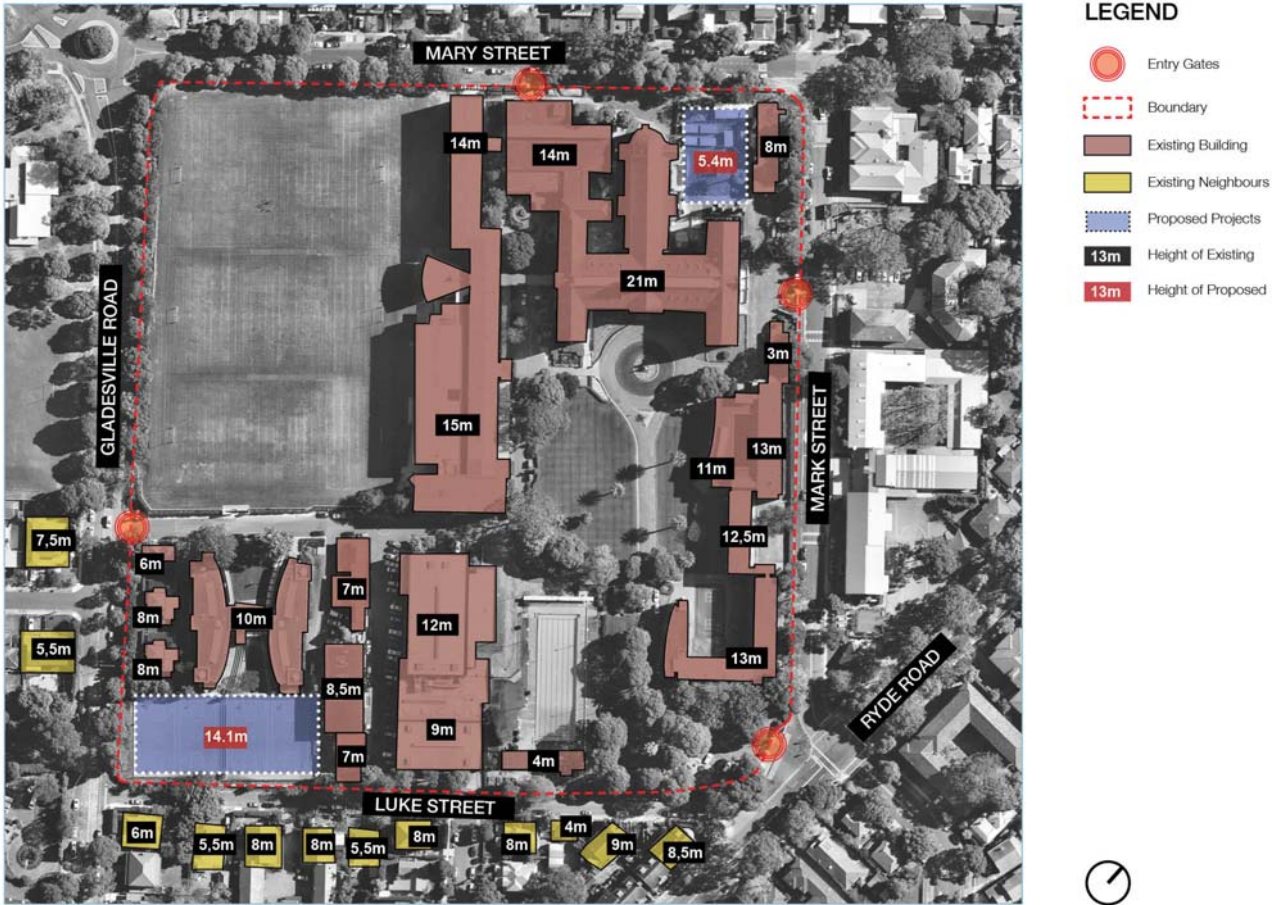


Figure 9 | Existing and Proposed Building Heights

5.4 Built Form

The proposed PESPP is simply arranged with the 3/no. basketball courts located over a basement car park.

The basement of the building is located at RL 32.50, which is below existing ground levels. The site slopes up towards the north resulting in excavation of the building at the northern end of approx. 5.5m.

The overall height of the building at the parapet level ranges from 14.1m at the southern end (Gladesville Road) to 8.5m at the northern end, due to the slope of the site. The height of the building is driven by the minimum 7m clear height required over the basketball courts below the depth of the roof structure.

Due to the constraints of the existing Year 10 Boarding House building and the required dimensions of the PESPP, the building is setback from Luke Street by approximately 1m.

The building bulk is modulated through the facade treatment and articulation. The scale and height of the building is visually reduced through the use different materials and vertical blades (rather than large blank walls). Materials and blades are arranged horizontally, to reduce the vertical scale of the building. The upper band of the facade is neutral in colour which is visually recessive and further reduces the height impact.

A rooftop mechanical plant area has been sunken into the roof (between the roof trusses) to minimise the height of the plant area above the parapet level and reduce bulk and scale.

The PESPP is located at the corner of Gladesville Road and Luke Street. The existing sandstone boundary wall curves at the corner. The new building form responds to this by similarly curving at the corner.

5.5 Heritage

The PESPP is located within the grounds of St Joseph's College. The buildings to be demolished do not represent significant heritage items. The proposed PESPP is located away from the Main Building and Stone Chapel and will not cause any impact to these. The proposed PESPP responds appropriately to the existing sandstone perimeter wall.

Refer to the Heritage Impact Statement for further information.



Figure 10 | Built Form and Facade Treatment at the intersection of Gladesville Road and Luke Street

5.6 Landscape

Existing Landscape

The College has been established since 1881 and features an extensive campus. The grounds consist of a range of formal landscape areas that cater for the school's needs. The grounds incorporate a diverse range of cultural and historic values and mature trees, palms, shrubs and ground covers interspersed with broad grassed areas that provide a developed and mature curtilage to the buildings across the site. The landscape areas form a number of functions, including informal and formal recreation, including 3 grassed playing fields used for school sport, in particular rugby union and cricket.

There are extensive water tanks and a landscape maintenance program and strategy that ensures a level of presentation of the grounds.

Luke Street is characterised by a sandstone boundary wall and a variety of established trees and shrubs that form an informal landscape character to the street and its surrounds.

The landscape design proposal is primarily focused on:

- > Landscaping around the PESPP, particularly the approach from within the College Campus; and
- > the enhancement of Luke Street.

PESPP Landscape

Landscaping around the PESPP integrates with the existing campus and introduces a new avenue planting that reinforces the pedestrian approach to the building from within the campus. The landscape design strengthens the existing cultural landscape of the St Joseph's College grounds, reinforces the pedestrian environment, assists in the comprehension and legibility of the site by building on the existing landscape patterns and integrating those patterns into the overall framework of the proposal.

Planting will include a mixture of low height plants for greening and to maintain adequate surveillance, combined with higher trees for shade protection. Tree species include Lemon Scented Myrtle, Buckinghamia Celsimmia, Crepe Myrtle and Jacaranda trees that acknowledge the existing landscape patterns of the College's grounds and the general environment around the College.

Shade, texture, protection from the sun and an integration with the existing and proposed built form are critical to create sustainable environments that enhance play and learning opportunities. The landscape design provides opportunities through the creation of sheltered and canopied areas that acknowledge the seasonal needs of shade in summer and warm, sheltered areas in winter. Further, the provision of low sitting walls and tiered concrete steps adjacent to the main walkway provide opportunities for informal seating and outdoor learning opportunities.

The main avenue of planting to the PESPP replaces a substantial built form to be demolished and as such increases the landscape open space of the College.

Luke Street Landscape

The amenity of Luke Street, adjacent to the PESPP, is to be greatly enhanced by the retention of the sandstone boundary wall and the replacement of the disparate street planting with tree planting that forms an appropriate scale and character to the street, whilst acknowledging the scale and height of the proposed built form. New tree planting using the east coast Australian native plantings of Lemon Scented Myrtle provide a mature form and shape that complements the restricted scale and width of Luke Street, while mitigating the scale of the proposal. The street verge below the new trees will be planted with low planting.



Figure 11 | PESPP Landscape Design

6 Sustainable, Efficient and Durable

Good design combines positive environmental, social and economic outcomes. Schools and school buildings should be designed to minimise the consumption of energy, water and natural resources and reduce waste and encourage recycling.

Schools should be designed to be durable, resilient and adaptable, enabling them to evolve over time to meet future requirements.

Design Quality Principle 2, Schedule 4, Education SEPP

6.1 Ecologically Sustainable Development (ESD)

The proposed PESPP has been developed using the principles of ESD and has been assessed against a suitable accredited rating framework - Greenstar. The project is expected to achieve a high level of environmental sustainability and has been benchmarked as Best Practice.

Refer to the ESD Report for further information.

6.2 Passive Design

The proposed PESPP incorporates the following passive design principles:

- > Natural ventilation of the sports halls through low level glazed louvres and high-level roof vents.
- > High levels of daylight through skylights and windows.
- > High levels of thermal insulation.
- > Vertical sunshade blades.
- > External materials that are robust, durable and low maintenance.
- > All paints, sealants, adhesives, floor coverings and composite timbers used internally will be low VOC.
- > Acoustic separation between different spaces.

6.3 Energy Efficiency

The proposed PESPP incorporates the following energy efficient initiatives:

- > Energy modelling demonstrating a reduction in energy consumption of the proposed building compared to a reference building.
- > Mixed mode ventilation: The sports halls will utilise natural ventilation in sports mode for most of the time with energy efficient mechanical air conditioning used for larger functions. The mechanical system incorporates heat recovery.
- > Incorporation of PV panels on the roof to supplement energy consumption.
- > Energy efficient lighting and smart control systems.
- > Energy efficient hot water system.
- > Metering and monitoring of all services so that they can be managed efficiently.

6.4 Water Efficiency

The proposed PESPP incorporates the following water efficient initiatives:

- > Water efficient fittings and fixtures.
- > Rainwater harvesting: A 220,000L tank has been provided below the basement level for the dual purpose of storm water detention and rainwater harvesting which feeds this into the schools existing campus irrigation system.
- > Water Sensitive Urban Design (WSUD) through rainwater harvesting and reuse. All garden beds are irrigated with sub surface emitters thus ensuring minimal evaporation and deep watering. Appropriate mulches, soil mixes and ground preparation assist with this strategy through matching the needs of the proposed landscape.

6.5 Waste and Recycling

- > The project will target reductions in waste generation during construction and operation.
- > The project will target increased recycling.
- > The building will incorporate separate bins for waste and recycling for separation of waste streams.

6.6 Transport

The College Campus is well serviced by the existing public bus network, providing access to nearby public facilities and local centres.

The College currently includes bicycle parking facilities and end of trip facilities.

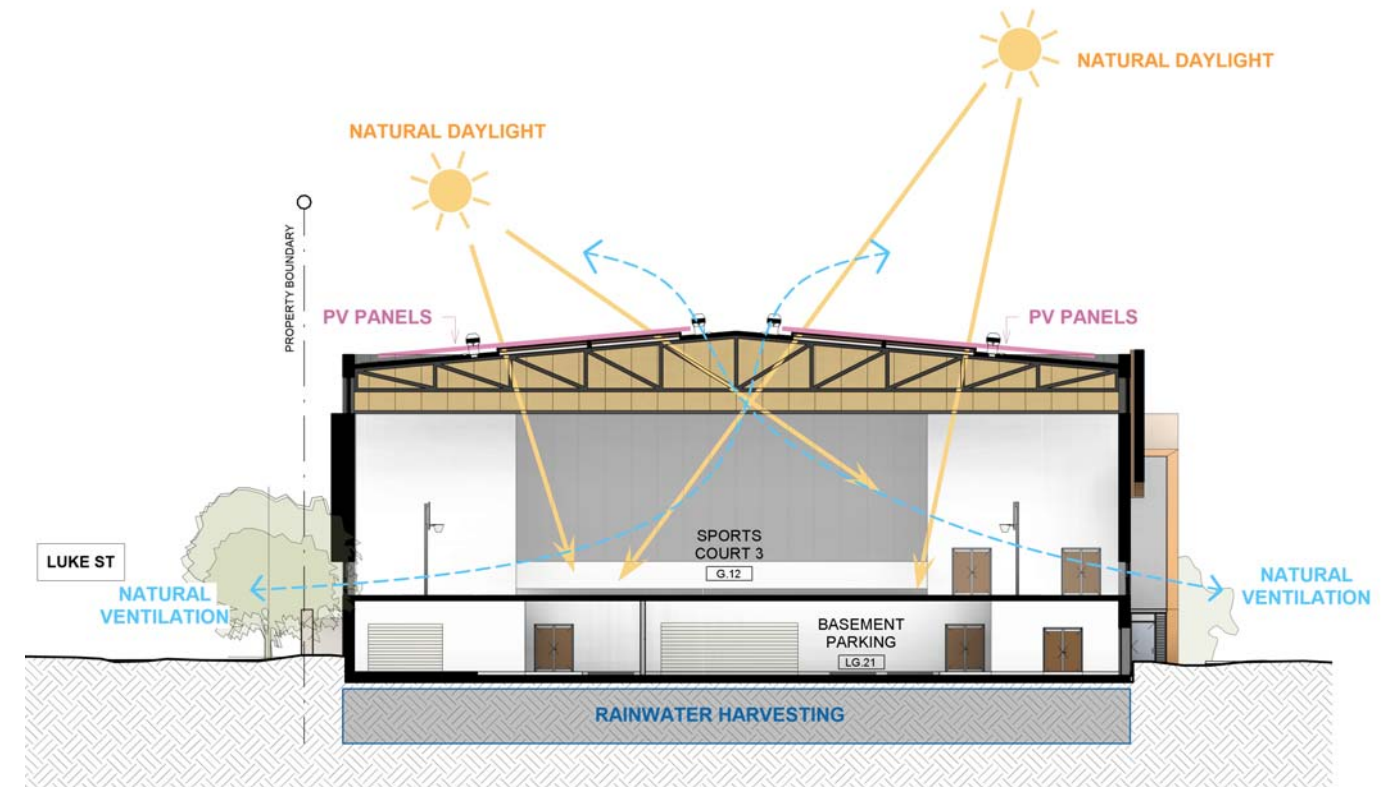


Figure 12 | Building cross section identifying ESD initiatives

7 Accessible and Inclusive

School buildings and their grounds should provide good wayfinding and be welcoming, accessible and inclusive to people with differing needs and capabilities.

(Note. Wayfinding refers to information systems that guide people through a physical environment and enhance their understanding and experience of the space.)

Schools should actively seek opportunities for their facilities to be shared with the community and cater for activities outside of school hours.

Design Quality Principle 3, Schedule 4, Education SEPP

7.1 Accessible Campus

The proposed PESPP is located within the established grounds of St Joseph's College. Existing buildings are set within welcoming landscaped grounds and lawns. The campus is easily navigated and wayfinding is relatively straight forward.

A sandstone wall is located around the entire perimeter of the campus, which is approximately 2m high, and provides a physical security barrier. There are 3 main entry points into the College with open metalwork gates. These are generally left open during the day and the grounds are accessible to visitors. These existing entries are to be retained.

7.2 Community Engagement and Use

The design process has included engaging with neighbours and the school community to develop the brief and vision for the project.

The project will serve the needs of the College whilst also providing a facility that will serve the needs of the larger community, where there is an increasing need and demand for indoor sporting facilities. The College already invites community use of their facilities. Regular community users of the new building include the local basketball club and local wheelchair basketball group.

Refer to the Indicative Usage Profile for the expected usage of the building.

7.3 Accessible Building

The PESPP will provide access for people with a disability and provide a continuous accessible path of travel, clear way finding guidance and the equitable provision of accessible facilities.

The new building work will be designed in accordance with the Building Code of Australia (BCA), the relevant Australian Standards (AS 1428, AS 2890.6, AS 1735.12) and the Disability Discrimination Act's obligation of equitable and dignified access. This project will be designed to AS 1428.1 – 2009.

Hearing augmentation will be required in spaces provided with an inbuilt amplification system.

Wheelchair seating spaces will be required within the Spectator Seating.

Access provisions that will be provided in the PESPP include:

- > Walkways and ramps provided in accordance with AS 1428.1.
- > Stairs provided in accordance with AS 1428.1, including contrasting slip resistant nosings, tactile ground surface indicators and handrails both sides of stairs.
- > Minimum clearances provided through doors of 850mm.
- > Minimum circulation widths and clearances at doors provided in accordance with AS 1428.1.
- > New doors must have a luminance contrast of 30% provided around doorways in accordance with AS 1428.1.
- > All new door hardware is to be lever action.
- > Visual indicators provided on full height glass windows and doors.
- > Switches and controls located between 900mm and 1100mm and no closer than 500mm from internal corners.
- > Accessible toilets and ambulant facilities provided in accordance with AS 1428.1.
- > Signage in accordance with AS 1428.1.
- > A clear height of 2.5m is required to be maintained from the entry to the accessible car parking spaces.

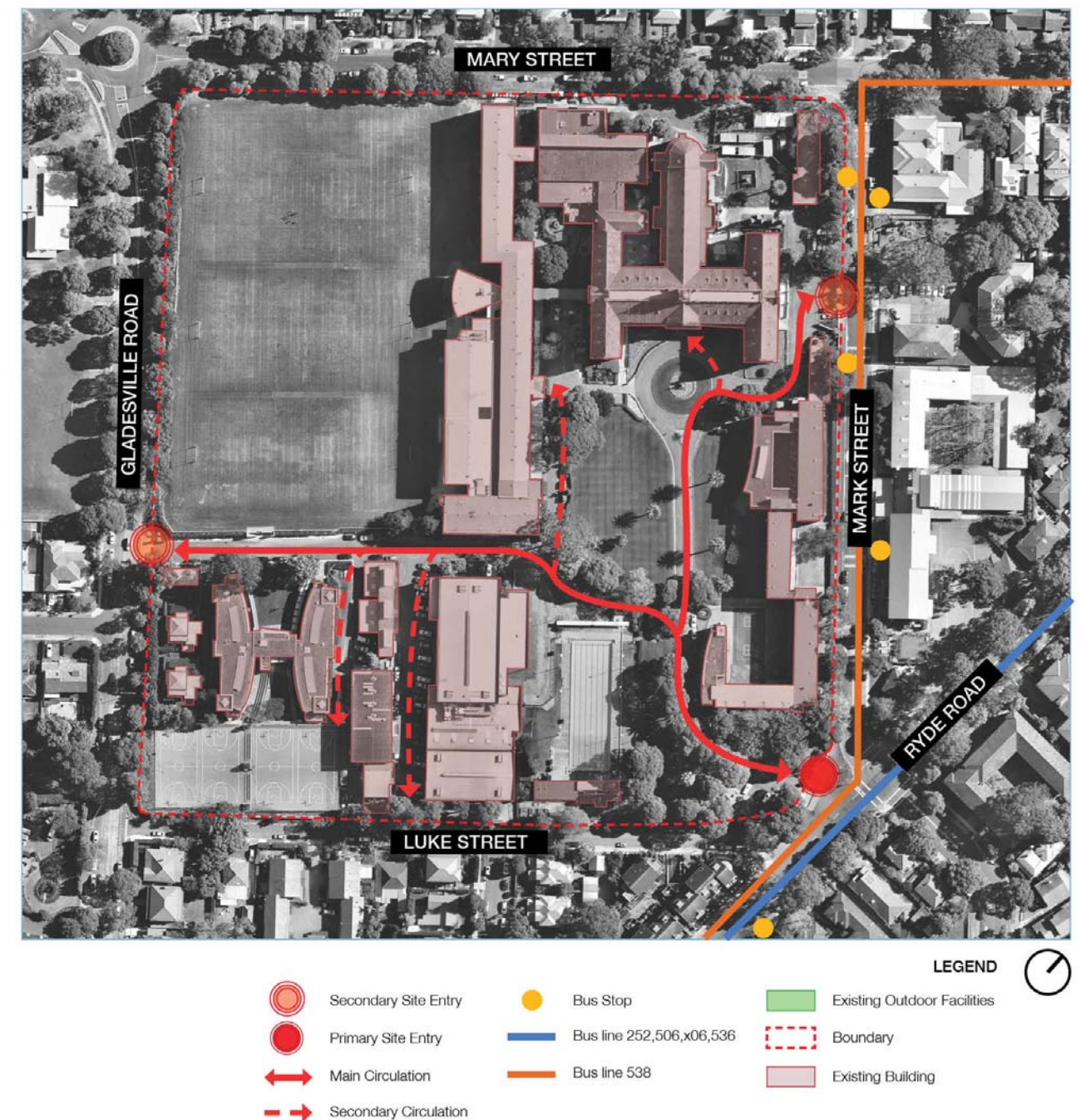


Figure 13 | Pedestrian and Public Transport Access

8 Health and Safety

Good school development optimises health, safety and security within its boundaries and the surrounding public domain, and balances this with the need to create a welcoming and accessible environment.

Design Quality Principle 4, Schedule 4, Education SEPP

8.1 Healthy Building

The PESPP maximises natural ventilation and natural light to benefit the health and well being of building occupants. The sports halls incorporate high and low level windows and skylights for excellent natural light. Operable low and high level glazed louvres provide good natural ventilation.

The PESPP uses robust and durable materials that have low VOC.

8.2 Pedestrian Amenity

The St Joseph's College Campus is a pedestrian friendly campus and priority is given to pedestrians. A clear hierarchy has been established across the campus to minimise potential conflicts.

The generous pedestrian entry into the proposed PESPP links with the College Campus pedestrian network and terminates at a new Entry Forecourt. This new landscaped space, defined by avenue planting, prioritises the pedestrian approach to the building and incorporates low height walls for informal seating, vegetated garden beds and shade trees.

A separate driveway entry into the car park is located parallel to the pedestrian entry and ramps down to the basement level below the Entry Forecourt. A palisade fence and balustrading within a landscaped garden bed provides clear separation of cars and pedestrians around the front entry of the building and fall protection to the ramping driveway.

The Entry Forecourt is covered by an awning roof which also extends to the secondary Entry Vestibule (accessing Sports Court 2 and 3) providing protection from sun and rain to pedestrians.

The College also currently provides bike parking and end of journey facilities within the College Campus.

8.3 Crime Prevention Through Environmental Design (CPTED)

The proposed PESPP incorporates Crime Prevention Through Environmental Design (CPTED) to create a safe and secure environment that encourage activity, vitality and viability, enabling a greater level of security. The design incorporates the four main principles of natural surveillance, access control, territorial reinforcement and space management:

- > The building is located within secure private grounds and protected by a sandstone wall (approximately 2m high) and gates to its entire perimeter.
- > The building is naturally surveilled from within the College Campus by students and staff who will be using the facility at all times when the building is open.
- > The College Campus is occupied at all times, incorporating a number of boarding houses. The existing Year 10 Dormitory is located adjacent to the building to the west and will provide natural surveillance of the facility.
- > The College Maintenance Department will be located within the Lower Ground Floor, providing additional surveillance of the car parking area.
- > Within the building, all spaces will be supervised by the College staff at all times when being used. The staff office is located at the first-floor level and located so that it can look over all sports court areas.
- > An external corridor space is created at ground level to the east and south of the proposed building, between the sandstone perimeter wall and building, which is difficult to surveil. This space will be gated off to prevent access into this area.
- > External lighting will be provided to illuminate external spaces and avoid dark shadows.
- > Clear sightlines of the building have been maximised and landscaping designed so as to not obstruct surveillance.
- > Ongoing maintenance strategies will ensure the shaping of trees for clear stems under canopies, the trimming of shrubs and integration with lighting design so to minimise dark areas and shadows in low light conditions.
- > The building will be well maintained and will be highly used.

8.4 Toilets and Changerooms

The internal changerrooms will have signage to indicate gender usage. During school times and as an all-boys College, the changerrooms will be designated for male student use, whilst at other times one will be designated female. A separate unisex accessible toilet and shower is also provided. Staff changerrooms and toilets are separate and located on the First Floor.

8.5 After School Hours Access

After school hours the PESPP can be used by external community groups for training. The lower ground car park will be made available to external groups using the facility.



Figure 14 | Pedestrian Entry to the PESPP

9 Amenity

Schools should provide pleasant and engaging spaces that are accessible for a wide range of educational, informal and community activities, while also considering the amenity of adjacent development and the local neighbourhood.

Schools located near busy roads or near rail corridors should incorporate appropriate noise mitigation measures to ensure a high level of amenity for occupants.

Schools should include appropriate, efficient, stage and age appropriate indoor and outdoor learning and play spaces, access to sunlight, natural ventilation, outlook, visual and acoustic privacy, storage and service areas.

Design Quality Principle 5, Schedule 4, Education SEPP

9.1 Indoor Flexible Space

The proposed PESPP will provide a flexible learning and multi-purpose space that is able to cater for a much wider range of activities than the College can currently provide on their external basketball courts. The proposed sports hall will allow for all weather use for basketball, sport and PE and is able to accommodate College’s assemblies and gatherings.

The sports courts are arranged so that they can be used as one large space or divided into individual courts. The building incorporates 2/no. x General Learning Areas (GLA) for focused learning and sport theory. 2/no. large foyer areas at Ground and First Floor are multi-purpose and will cater for a range of learning styles and group sizes.

The proposed PESPP will complement the College’s existing outdoor sports fields, remaining sports courts and swimming pool to provide a diversity of indoor and outdoor spaces and facilitate informal and formal uses.

9.2 Landscape Amenity

The proposed landscaping will greatly enhance the amenity around the proposed works. The College also aim to greatly enhance the amenity of Luke Street through carefully considered landscape to replace the existing disparate street planting.

Refer to Section 5.5 Landscape for a detailed description.

9.3 Amenity to Neighbours

The proposal aims to minimise any impacts to neighbours, particularly those adjacent to the development on Luke Street.

The overall height of the building is governed by minimum internal height requirements for basketball. At the parapet level the building is approximately 14m at the southern end (Gladesville Road) and 8.5m at the northern end, due to the slope of the site.

To minimise the height of the building it has been sunken into the ground by 5.5m at the northern end. The mechanical plant room located on the roof has been further sunken into the roof.

Whilst the building has limited setbacks to the site boundaries, the width of Gladesville Road and Luke Street provides a suitable setback and separation between the proposed development and 1-2 storey residential neighbours.

These street setbacks ensure that the effects of shadowing are minimal. The enclosing of the outdoor basketball courts will improve acoustic amenity.

The building has been articulated and modelled to reduce its perceived scale and volume. Emphasis has been made on improving the landscape setting in Luke Street with a considered landscape proposal that improves the amenity of this street and mitigates the height and scale of the building.

9.4 Shadowing

Shadow diagrams have been prepared for the proposed development. These diagrams largely demonstrate that the shadow impacts of the proposed development to neighbours is not adverse and has minimal impact for most of the year.

Shadows generally only impact the front yards of the adjacent neighbours and solar access is maintained for a minimum of 3 hours to shadowed spaces during the worst period of winter.

Summer Solstice 22 December

The shadow diagrams show that the proposed PESPP has no shadow impacts to neighbours.

Autumn and Spring Equinox 21 March / 23 September

The shadow diagrams show that proposed PESPP creates shadows to the front garden areas to properties on **1 -9 Luke Street** and the side garden on **30 Gladesville Road** for 1 hour only between 2pm and 3pm at the Autumn and Spring Equinox.

Winter Solstice 21 June

The shadow diagrams show that the proposed PESPP creates shadows to the side yard and northern elevation of **2 Rocher Avenue** for 1.5 hour between 9am and 10.30am in

winter. This same area has solar access for 4.5 hours between 10.30am and 3pm in winter.

The shadow diagrams show that the proposed PESPP creates shadows to the front yards and western elevations **1-7 Luke Street and 30 Gladesville Road** for 1.5 hours between 1.30pm and 3pm in winter. This same area has solar access for 3 hours between 10.30am and 1.30pm in winter.

Refer to the Shadow Diagrams for further information.

9.5 Acoustic Amenity

The proposed PESPP will not reduce the acoustic amenity to neighbours compared to the noise produced from the existing outdoor basketball courts. The enclosing building will provide acoustic separation of the sports courts to neighbours.

The mechanical plant area has been located on the roof within a space sunken into the roof with solid enclosing walls. This physical separation will ensure that noise levels are kept within acceptable noise limits to neighbours.

Refer to the Acoustic Report for further information.



Figure 15 | Short building section showing relationship of the building to Luke Street, with setbacks to adjacent neighbours

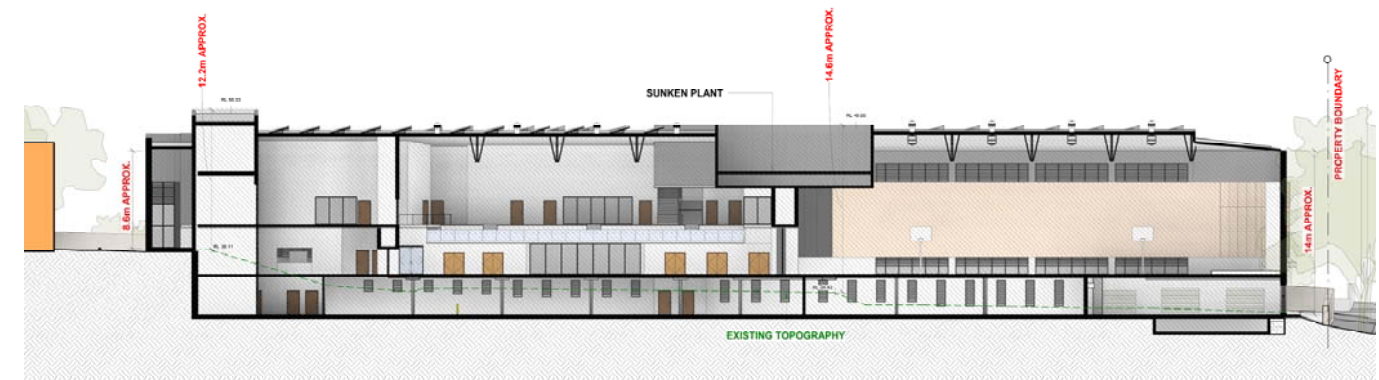


Figure 16 | Long building section showing how the building has been sunken into the ground (5.5m) and the roof plant sunken into the roof to reduce the overall height

10 Whole of Life, Flexible and Adaptive

School design should consider future needs and take a whole-of-life-cycle approach underpinned by site wide strategic and spatial planning. Good design for schools should deliver high environmental performance, ease of adaptation and maximise multi-use facilities.

Design Quality Principle 6, Schedule 4, Education SEPP

10.1 Flexibility and Adaptation

The proposed PESPP is highly flexible and adaptable. The large open sports halls are able to accommodate a wide range of sporting activities, functions and activities and can be reconfigured to future and changing needs.

The proposed PESPP provides facilities to meet the College’s sporting needs, whilst serving the needs of the larger community at times, where there is need for indoor sporting facilities.

10.2 Whole of Lifecycle

The proposed PESPP has been designed to consider a whole-of-lifecycle approach in consideration of a wider public and environmental benefit over time. Whole-of-lifecycle initiatives include:

- > External materials that are robust, durable and low maintenance.
- > Incorporation of PV panels on the roof to supplement energy consumption.
- > Rainwater harvesting: A 220,000L tank has been provided below the basement level for the dual purpose of storm water detention and rainwater harvesting which feeds this into the schools existing campus irrigation system.

10.3 Future Development

St Joseph’s College have a long-term association with the site and have gradually developed the College Campus over many years to meet the College’s requirements. Given the limited land remaining for development, the College believe that the long-term future development of the site will include the renewal of the pool and existing indoor sports courts. At this stage, the time frame is not defined.

The new Healy Gymnasium location is an interim location until the long-term renewal of the pool precinct occurs and this facility can be integrated.

11 Aesthetics

School buildings and their landscape setting should be aesthetically pleasing by achieving a built form that has good proportions and a balanced composition of elements. Schools should respond to positive elements from the site and surrounding neighbourhood and have a positive impact on the quality and character of a neighbourhood.

The built form should respond to the existing or desired future context, particularly, positive elements from the site and surrounding neighbourhood, and have a positive impact on the quality and sense of identity of the neighbourhood.

Design Quality Principle 7, Schedule 4, Education SEPP

11.1 Design Excellence

The design for the PESPP has undergone a rigorous design process and St Joseph's College are committed to a quality outcome.

11.2 Facade Composition

The articulation of the proposed facade has been purposely considered so as to reduce the expanse of walls and perceived height by articulating the facade horizontally.

The articulation of the facade includes the use of different high-quality materials, window fenestration and vertical blades. The upper band of the facade is neutral in colour which is visually recessive and further reduces the perceived height.

A rooftop mechanical plant area has been sunken into the roof (between the roof trusses) to minimise the height of the plant area above the parapet level and reduce bulk and scale.

The PESPP is located at the corner of Gladesville Road and Luke Street. The existing sandstone boundary wall curves at the corner. The new building form responds to this by similarly curving at the corner.



Figure 17 | View towards main entry



Figure 18 | View towards Gladesville Road and Luke Street intersection

11.3 Materials and Finishes

The PESPP has been designed with low maintenance and durable external materials that will complement the character of the College campus.

External materials consist of face brickwork to the lower levels of the building providing a robust and grounding material. Existing buildings on the campus feature a dominance of golden coloured face brickwork and this has been utilised for the lower levels of the building.

Light weight cladding – consisting of integrally coloured fibre cement and timber grained laminated panels – have been selected for the upper levels providing a lighter and more expressive language appropriate to a contemporary sporting facility.

Vertical blades and entry awning soffits are proposed to be finished in a timber grained laminated panel, giving a warm contrast to the wall cladding elements.

Refer to the Schedule of Materials & Finishes for further information.

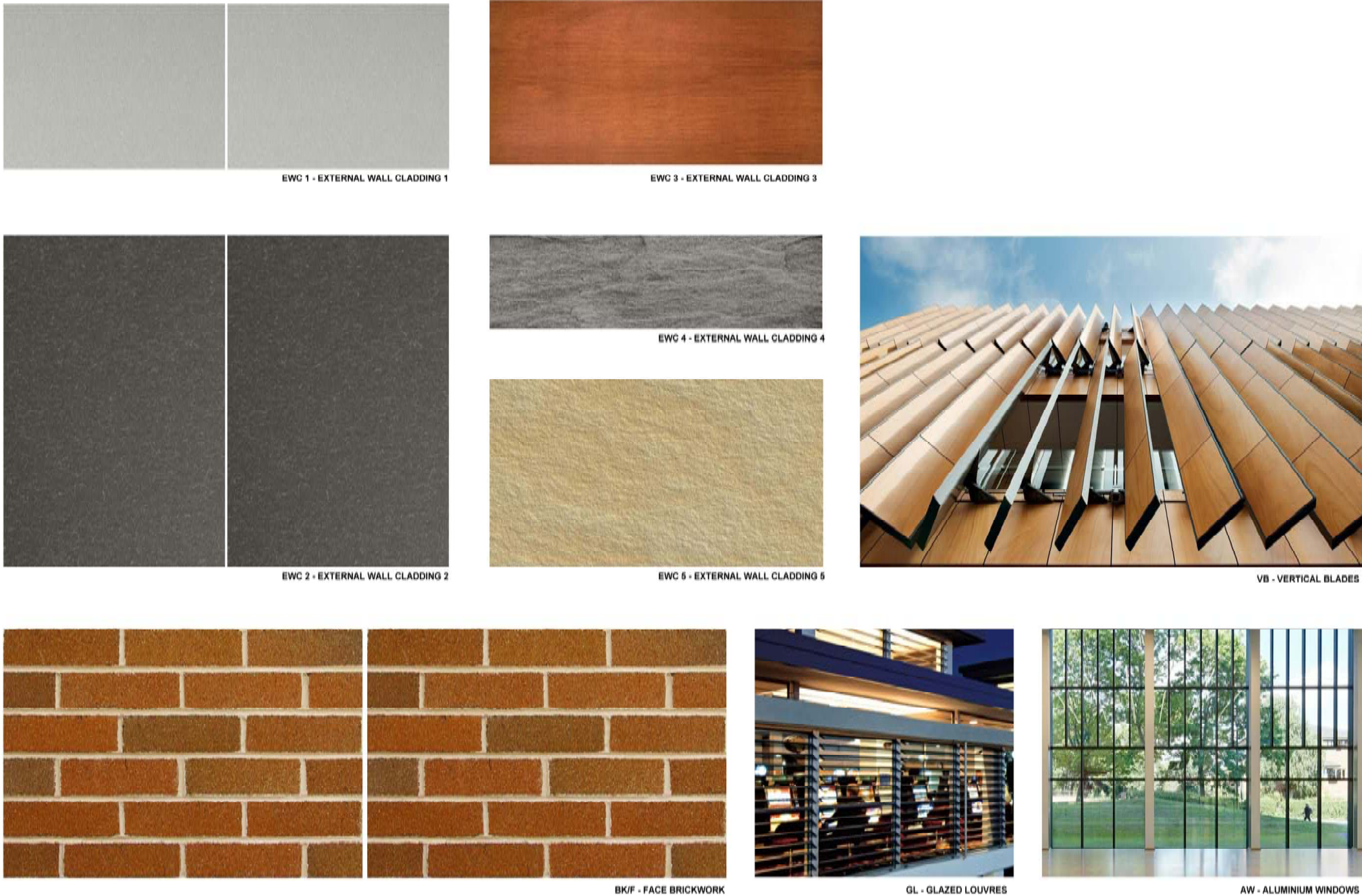


Figure 19 | Proposed Materials & Finishes

12 Response to GANSW Discussion and Comments

12.1 Response to GANSW Discussion and Comments

The following table is provided in response to the Government Architects comments on the project at a GANSW Pre-Lodgement Meeting held 5 June 2018.

Issue Raised by GANSW	Response
1 – Site Strategy Generally GANSW generally supports the locational strategy for a new physical education and sports precinct at the Southern corner of the site, acknowledging the constraints of the site including heritage structures, existing boarding houses and education buildings.	The site location for the new buildings within the St Joseph’s College Campus is agreed as the preferred location within the constraints of the site.
2 – Setbacks GANSW raised concerns regarding proposed minimal setbacks to site boundaries including curtilage to existing sandstone walls. Impacts of the development on the residential character of Luke Street was also of concern. Further consideration should be given to both the site and internal planning principles that are driving these minimal setbacks in order to increase the buffer zone between new buildings, existing structures and street frontages.	The College’s requires 3/no. new indoor sports courts to meet their requirements with the appropriate support facilities (refer to cl. 3.3). The internal planning principles and arrangement of spaces have been tested with the College to arrive at the proposed design. The competition requirements for basketball determine the minimum internal dimensional requirements for the building, which includes requirements for the court sizes, overruns around the courts and seated bench and scorer’s area. The set back to the existing sandstone perimeter wall and residential neighbours is seen as appropriate and in character with the established relationship of other buildings around the campus and adjacent residential areas. Numerous College buildings have been located in proximity to the sandstone wall and rise 3-4 storeys above the wall (refer to cl. 5.2). Visually the building will read as a separate element and setting the proposed building back further will not change this relationship measurably. Setbacks to neighboring residential properties are significant and are created by the perimeter road around the College. On Luke Street the building is setback 10.8m to the boundary of residential neighbours. The building is setback approximately 13.5m to the building face on No. 30 Gladesville Road and 17.4m to the building face of No. 3 Luke Street. The character of Luke street has been maintained, whereby the eastern side is residential and the western side maintains the character of the College’s institutional buildings.

Issue Raised by GANSW	Response
3 – Massing & Building Articulation Generally, the form of the new sports building presents an extensive blank frontage to Luke Street and Gladesville Road. GANSW recommends consideration be given to further breaking down the massing of the new building including minimizing external wall heights and possible increases to glazing. Whilst the sunken roof top plant was commended, consider minimizing the roof structure to limit the impact of the building when viewed from the public domain. Diagrams should be developed to demonstrate contextual appropriateness of all new work. Alternative site planning options that have been considered should also be included to demonstrate that this is the optimal solution for the site.	The building bulk is modulated through the facade treatment and articulation. The scale and height of the building is visually reduced through the use of different materials and vertical blades (rather than large blank walls). Materials and blades are arranged horizontally, to reduce the vertical scale of the building. The upper band of the facade is neutral in colour which is visually recessive and further reduces the height impact. In response to the GANSW comments additional treatment of the facade has been developed to break down the overall mass: - The sandstone facade incorporates dark stone elements that will slightly project to create a patterning and interest. - Two full height windows have been introduced into the southern elevation. - The College emblem and cross are proposed to be located on the corner of the building at Gladesville Road and Luke Street. The overall height of the building at the parapet level ranges from 14m at the southern end (Gladesville Road) to 8.5m at the northern end, due to the slope of the site. The height of the building is driven by the minimum 7m clear height required over the basketball courts below the depth of the roof structure and minimum heights required for the car park. The roof has been designed to limit its impact when viewed from the public domain. The roof falls to the outside to ensure that the height of the roof at the perimeter is at its lowest height. The context of the new building in relation to neighbours is shown in Figure 15. This drawing shows that the setback of the building to residential properties is proportionate to the building height and is appropriate. The Heritage Impact Statement also includes an assessment of heritage site constraints, including curtilage and views. Refer to cl. 4.3, which discusses options for locating the building. Other options for locating the building include the rugby fields, swimming pool and open area in front of the main building. Due to the high utilisation of these facilities or adverse heritage impacts, these sites are not feasible and the selected site is the optimal solution.

Issue Raised by GANSW	Response
4 – Carpark Access GANSW raised concerns regarding the impact of carpark ramps and service roads on the external circulation spaces adjacent to the sports precinct. Further consideration should be given to relocating or simplifying these ramps and roads to provide more generous and welcoming open spaces approaching the facility.	The carpark has two points of access to the north and south of the existing Dormitory. The access road to the south is largely existing and has been extended to access the carpark space at existing levels. This road is only suitable for one-way traffic flow, due to the narrowness between buildings, so an additional access road has been provided to the north of the dormitory. The access road to the north of the existing dormitory ramps below the existing ground levels and ground floor of the building. All options have been considered to access the carpark and the proposal is the simplest workable solution. A significant landscaped zone has been created to the north of this northern access road, which will form a generous and welcoming open space approach the facility. This space features a wide pedestrian access path with landscaped garden beds on either side. The access road will be largely screen from view.
5 – Gymnasium Pavilion GANSW noted that whilst the gymnasium is a temporary use, the proposed structure is permanent, but with a temporary appearance that is unsuited to its location within the curtilage of the College chapel. Further consideration should be given to making the external form appear less temporary and more in keeping with the character of the adjacent chapel building.	In response to the GANSW comments the external form of the Healy Gymnasium (Pavilion) has been modified to appear less temporary and more sympathetic to the adjacent Chapel: - Wide eaves have been provided that give the appearance of a ‘pavilion’. - The roof form has been lowered adjacent to the Chapel and perimeter sandstone wall. - High-grade external cladding in neutral grey colours have been provided that complement the richness of the Chapel sandstone. - Glazed areas have been increased.
6 – Materiality GANSW generally supports the material strategy presented for the new sports building. Further consideration should be given to articulation of external facades to ensure the appropriateness of the new building within its context. The temporary look to the gymnasium should be reviewed through choices of materials and construction methods. A physical material samples board (no larger than A3) with correct proportional representation of internal and external materials and more information on the material intent across the project should be submitted with the SSDA.	Refer to cl.11.3 for a description of the external materials. The proposed external materials are far from ‘temporary’ in nature and include high grade sandstone cladding to a significant portion of the buildings public face, face brickwork at low levels and integrally coloured high-grade fibre cement cladding. Large areas of the facade are broken up by vertical blade elements. These materials are distributed across the building to break down the perceived building mass and provide a considered and developed building design of permanent appearance. A samples board has been included with the submission.

Issue Raised by GANSW	Response
7 – Indigenous Acknowledgement In consultation with the local Aboriginal community, identify and incorporate opportunities for integrating Aboriginal culture and heritage into the design of the built environment including wayfinding, signage or room naming, materials and colour selection, public art, placemaking, and ‘welcome to country’ at the entry. Indigenous landscaping should also be incorporated to promote better understanding of Bush tucker, Aboriginal seasonal changes, and the interdependencies of flora and fauna with a responsibility/duty of care for the environment.	Opportunities for integrating Aboriginal culture and heritage will be identified and incorporated into the new building, including wayfinding, signage or room naming, materials and colour selection, public art, placemaking, and ‘welcome to country’. The landscape design provides opportunities to provide bush tucker plants both around the new facility and the front entry to the building.
8 – Integrated Landscape Strategy An integrated landscape strategy should be further developed including for setback zones. All significant trees on site should be identified and protected. Tree canopy targets should be in accordance with NSW Urban Tree Canopy Targets (for further guidance see: GANSW’s <i>Greener Places</i>)	The proposal provides a continuation of the campus wide integrated landscape strategy of the college. This strategy acknowledges the heritage form and character of the grounds as the overall guiding framework while accommodating contemporary needs in relation to evolving educational policy. The outcome is of an integrated and considered landscape design that will enhance the existing and proposed environment. While some significant trees have been affected by the proposal, the overall landscape character of the campus is retained through the retention of key landscape precincts through the core of the school campus. New tree planting reinforces both the campus wide strategy and the streetscape of Luke Street where consistent planting of an appropriately scaled street tree, retention of the heritage listed sandstone wall will result in an increased visual and environmental amenity. The proposal provides landscape rhythms that recognize and develop the established designed landscape patterns of the school and its surrounds. Through this strategy, there is an overall increase in the landscape area and amenity with a diverse range of horticultural expression that strengthens the rich planting palette of the school and its surrounds
9 - Community Use GANSW encourages the project team to include a clearly defined community use plan to ensure easy and controlled community use of the school facilities after hours.	Community users are able to contact the school directly to discuss any potential community use of the facility. Refer to the Indicative Usage Profile included with this application for the forecasted community use.

13 Conclusion

This Design Report has clarified the design intent of the proposal and demonstrated how design quality will be achieved in accordance with the Design Guide for Schools and the Design Quality Principles outlined in Schedule 4 of the Education SEPP.