



SCHOFIELDS PUBLIC SCHOOL

St Albans Rd, Schofields
NSW 2762

Urban and
Architectural Design Report

For

NSW Department of Education

Rev D
October 2019
Project No. 160712

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*Minor modification to this document

1.0 Introduction

This Urban Report has been prepared by Tanner Kibble Denton Architects on behalf of the New South Wales Department of Education (DoE). It accompanies a Section 4.55(1A) application under the Environmental Planning and Assessment Act 1979 (the Act). This application seeks to modify Major Project SSD 8740 prepared in support of State Significant Development Application SSD 8740 for the redevelopment of 'Schofields Public School' at St Albans Road, Schofields NSW (the 'site'). It has also been updated from the previous issue for the SEARs request to include a response to the Design Guide for Schools and the Design Quality Principles outlined in Schedule 4 of the Education SEPP.

Schofields Public School is located in the Riverstone Precinct priority land release area, as part of the North West Growth Centres – a region of largely undeveloped privately-owned land that the NSW Government has identified for new development. For this specific land release area, there is a dwelling target of 8,500 new dwellings, equivalent to an additional population of 24,000. While there has been land allocated for the construction of new schools in the area, the expansion and redevelopment of the existing Schofields Public School site is intended to support the short-term population growth in Schofields and sustain the needs of the local population over the long term.

Schofields Public School is bounded by St Albans Road to the North, Junction Road to the East and Station Street to the South. Schofields Park, which is a large Council owned playing field, is adjacent to the west boundary as well as and residential dwellings, facing onto St Albans Road. Although the area is in transition the existing character and future of the area is generally low scale residential. Some semi-rural properties remain in the area but these properties are likely to become low scale residential.

The original Schofields public school supported 322 students in 7 permanent teaching spaces and 7 demountable teaching spaces. The school comprises of Kindergarten classes and classes catering for students from grades one to six. The capacity of Schofields Public School (the 'School') is approved to be increased in response to local population projections forecast by the DoE. The school's existing demountable stock, and the majority of its outmoded existing buildings are approved to be replaced by new high-quality classrooms, collaborative learning spaces, open play spaces, sports courts and associated facilities to increase the capacity of the school to 621 students.

The purpose of this Urban Design Report is to analyse the existing urban character of the school and provide a summary of the urban design response and strategies incorporated into the approved development detailed within the modification of approval.

2.0 Modification Description

2.1 General Project Modification Description

This modification includes

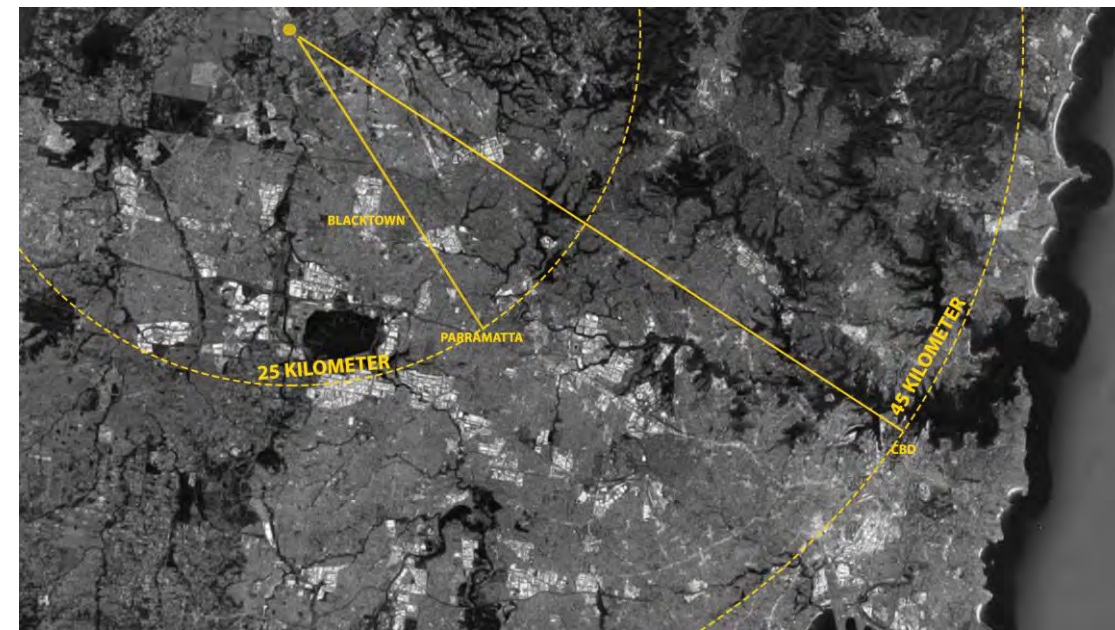
- a) Consolidation of amenities (ground floor toilets, now all included within the envelope of the new building)
- b) Adjustments to landscape (minor adjustments to landscape towards the eastern edge of the new school)
- c) Minor adjustments to the balconies on the south west corner (to avoid exiting services)
- d) Deletion of the decorative window boxes on the south west side of the building

These adjustments have negligible impact on the approved design and nil impact on any neighbors.

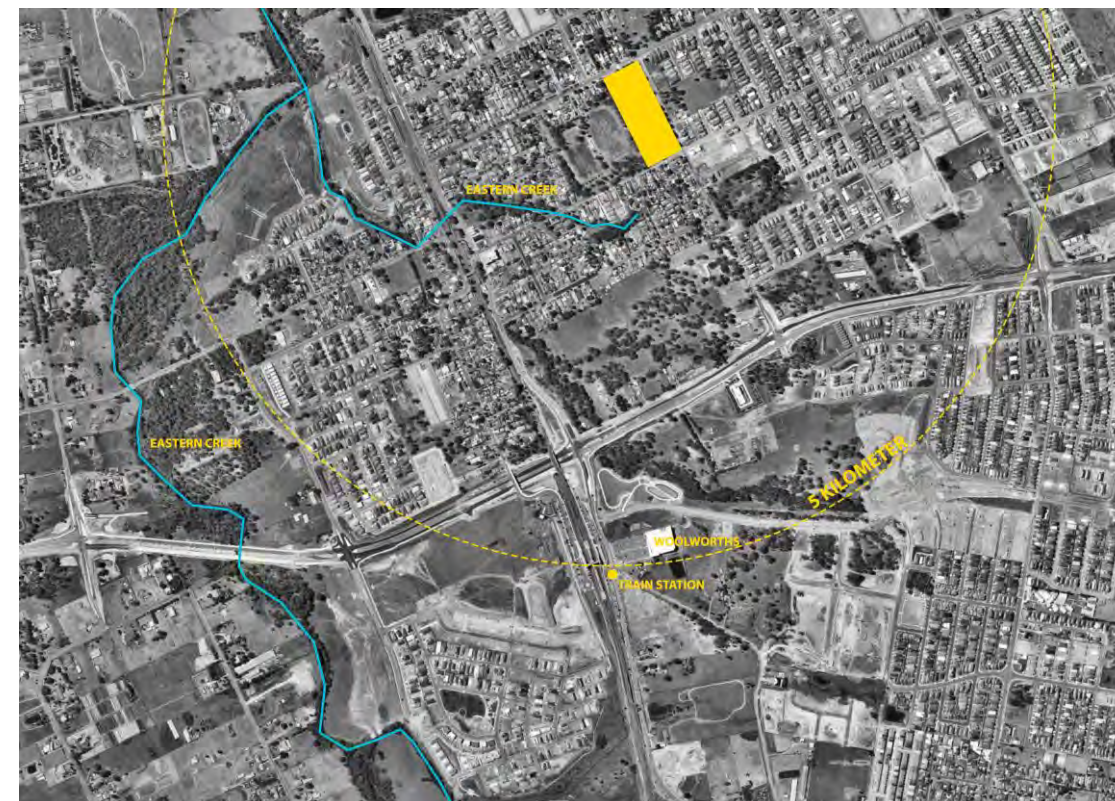
2.2 Location

The site is located at St Albans Road, Schofields, NSW 2762 and includes the following Lots:

- > Lots 20 and 21 DP 2912; 60 St Albans Road
- > Schofields is located in the Riverstone Precinct, 45km West of the Sydney central business district.



1. The school location with in the broader city context. Source: NearMap with TKD Architects overlay.



2. The school location with in the immediate city context. Source: NearMap with TKD Architects overlay.

3.0 Site Analysis

3.1 Existing Urban Character

The site is within the Blacktown Local Government Area (LGA).

The Schofields public school is currently surrounded by new low scale residential and semi-rural properties. The site is located between St Albans Road, Junction Road and Station Street and directly adjacent to the west are residential dwellings and Schofields Park which includes public sports fields and basketball courts.

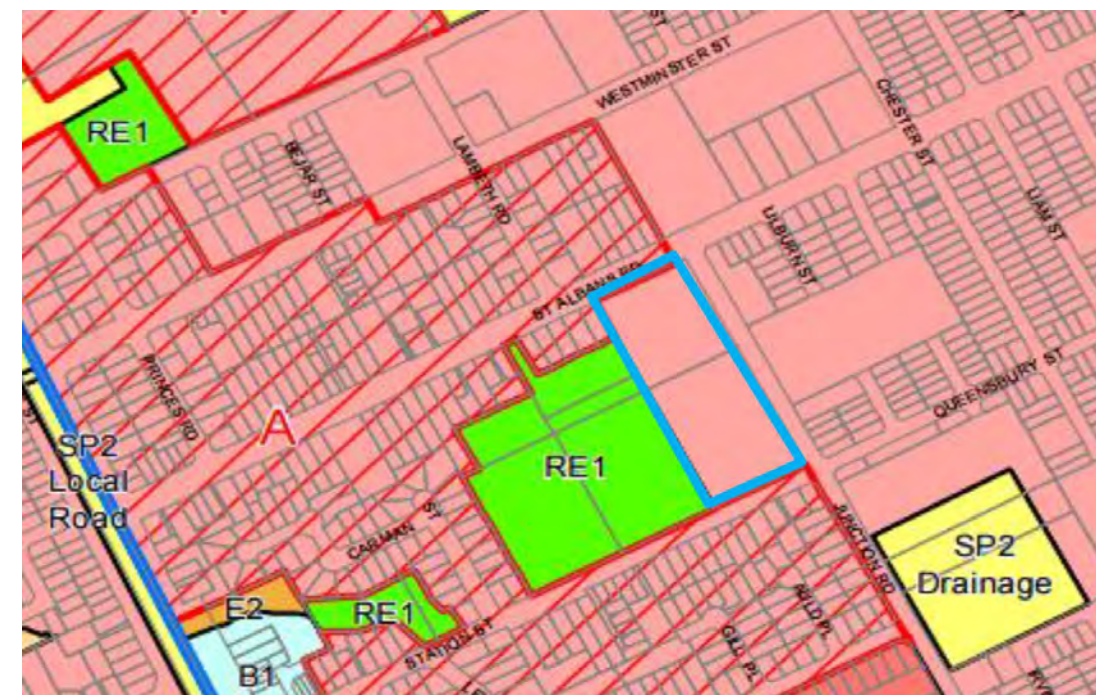
The Schofield Precinct is part of the North West Priority Land Release Area. The future planning of the area includes new homes, the delivery of local amenities, improved infrastructure and open spaces. As noted in the **1.0 Introduction**, although the area is in transition the existing the future character of the area around the school site is likely to remain low scale residential and some semi-rural properties that currently remain will likely be redeveloped as low scale residential.

Further south approximately 1.2km from the site is Schofields Station and a shopping area. The main pedestrian and vehicular access into the school grounds is from Junction Road and St Albans Road. There is a secondary pedestrian entrance via the lower part of playing fields in Junction Road.

Refer to the appendix A for photographs of the existing streetscape, surrounding built form and the line of sight from the council sports fields.



3. *The council sport fields to the west boundary and the Eastern Creek tributary.* Source: NearMap with TKD Architects overlay.



4. The area surrounding the site is low density residential(R2), with significant areas of Public recreation adjacent to the western boundary. The site is approximately 2.83ha in area. Source: Blacktown Local Environmental plan 2015



5. The surrounding area is a B2 zone, with a height limit of 9m. Source: Blacktown Local Environmental plan 2015

3.2 Existing Landform

The Subject Property is bordered by suburban roads to the north, east and south, and by Schofields Park to for most of the western boundary.

The school site is generally rectangular in shape, approximately 107 metres x 263 metres and approximately 2.8 Hectares in area.

The land that the school occupies falls generally towards a tributary to Eastern Creek which is located 130 metres to the south, and flows north west into South Creek, eventually joining the Hawkesbury River.

The fall is approximately 8m from north to south through a series of plateaus starting with the highest level at the northern end of the site containing the school buildings and stepping down towards the two playing fields to the South. The northern plateau appears to follow the natural ground level. Whereas the two playing fields on the lower plateaus appear to have been formed from cut and fill from the site with some of the fill from the cut possibly to have been used to form embankments around the fields. The soils are shallow to moderately deep (<100cm) with a hard setting mottled texture.



6. There is also a turfed embankment between the School playing field area and the Schofields Park playing field.



7. The existing site viewed from the intersection of St Albans Road and Junction Road.



8. The site falls dramatically between the northern plateau, containing the main school buildings and the middle plateau containing the middle level playing field

3.3 Existing Vegetation and Landscaping

The original site vegetation and landscape contributes significantly to the character of the original school.

There is ring of mature, large scale, indigenous trees around the School campus boundaries, including the embankments to the playing fields as well as in the north-eastern and southern portions of adjoining Schofields Park. It is likely that these trees have self-recruited or have been planted after initial clearing.

The playing fields have likely been formed through cut and fill. Apart from the trees on the embankments at the boundary (and the recent installation of temporary demountable classrooms) they are open turfed areas.

The northern plateau of the Campus has been generally landscaped for school activities and functions. It also is possible that the original topsoil in this area has been disturbed, either for agricultural/horticultural purposes, or as a result of levelling for construction of buildings and play areas throughout the history of the development of the School. Lower scale vegetation in this area is generally small shrubs of a variety of species.

One of the significant landscape features of the site is a Hoop Pine tree planted in the 1940's and dedicated to the former World War II Australian prime minister, John Curtin. The tree is located near to the northern pedestrian entry and the original building school. Nearby is a Lone Pine tree known as the Gallipoli tree which was planted from a seed brought from Gallipoli. The entry also includes the Federation Pathway, a pergola.

The original school has an active learning program related to food technology where the students are involved in producing their own produce through gardening and preparing food in a community kitchen available on the site. There are a number of small vegetable gardens located between the original buildings. A garden, known as the 'Kylie Garden', is a memorial to a former student of the school and includes a plaque and tiles.



10. Existing John Curtin Tree-Image to the Left



11. Federation pathway-Image to the right



9. The existing play fields located in south side of the site.



12. The vegetable gardens-Image to the Left



13. Kylie Garden's Plaque-Image to the right

3.4 Existing buildings and function review

Schofields Public School was first established in 1919 in a small community hall located away from the site. The school was then moved to its present site on the northern plateau of the site on the corner of St. Albans Road and Junction Road in 1923 when the original school building was constructed. The original school building is still in use today and is located generally on the central axis of the northern plateau near the St Albans Road entry.



14. The school's original building opened in 1923.

The majority of the original school group of buildings were constructed from around the 1950's and up until 1964 including the administration building and library and a number of demountables classrooms and shed structures. Other structures including the outdoor COLA were constructed later. The most recent of the original buildings include the School Hall, which was constructed under the BER program and some recently placed demountable classrooms which are located on the western side of the upper playing field, near to the Hall.

With the exception of the recent buildings most of the original school buildings were in poor conditions, were not environmentally sustainable, did not meet current building codes, were not fully accessible and did not meet the contemporary standards for teaching and learning. The facilities also, did not meet the DoE's Educational Facilities Standards and Guidelines (EFSG). The school were originally operating with permanent classrooms over capacity at 157% utilisation, with the recently placed demountable teaching spaces installed to meet the current educational demands of the community.



15. The poor quality of existing school buildings.



16. The existing building are not sustainable and requires mechanical ventilation.

3.5 Aboriginal Archaeology

An Aboriginal archaeological survey of the Schofield's Public-school site, including the area subject to this DA has found that the site contains a 'large concentration of ochre and a possible artefact'. The Aboriginal Archaeological Assessment prepared by Comber Consultants states that the site has potential to yield further information about the pre-Contact Aboriginal occupation of the area.

Further site investigation, ACHAR reported (June 2018) that there were no artefacts on site. Should objects be found then approval will be obtained from OEH to salvage any other objects uncovered during the approved excavation works associated with the project.

Consultation with the Aboriginal community has, and will continue to be, undertaken consistent with the NSW Office of Environment and Heritage's Aboriginal Cultural Heritage consultation requirements for proponents 2010 and an Aboriginal Cultural Heritage Assessment report.

The findings from the site investigations and their importance to Aboriginal people will be incorporated into interpretation opportunities throughout the school site.



17. Ochre located in the central portion of site. Source: AAA by Comber Consultants



18. Fined grained siliceous material located in the north-western section of the study. Source: AAA by Comber Consultants

3.6 Existing Street Network

St Albans road is approximately 12m wide, and carries a single lane of traffic in both directions, with unrestricted street parking on both sides. St Albans road currently accommodates vehicular access to the existing on-site car parking and waste servicing areas. There is pedestrian school access on St Albans Road via a laneway.

Junction Road carries a single lane of traffic in both directions and currently accommodates pedestrian access via two school entrances.

Both roads are currently being upgraded by Blacktown Council as a part of redevelopment of the area and Junction Road will accommodate approved special school bus services/zones approved by council. Refer to the appendix B for the bus bay and drop of location in the existing context.

3.7 Transport mode share

The site has a north-western frontage to the existing St Albans Road of approximately 107 metres, a south-eastern frontage to the existing Station Street of approximately 107 metres and a north-eastern frontage to the existing Junction Road of approximately 263 metres. The southwestern property boundary is approximately 263 metres in length and borders Schofields Park recreational grounds.

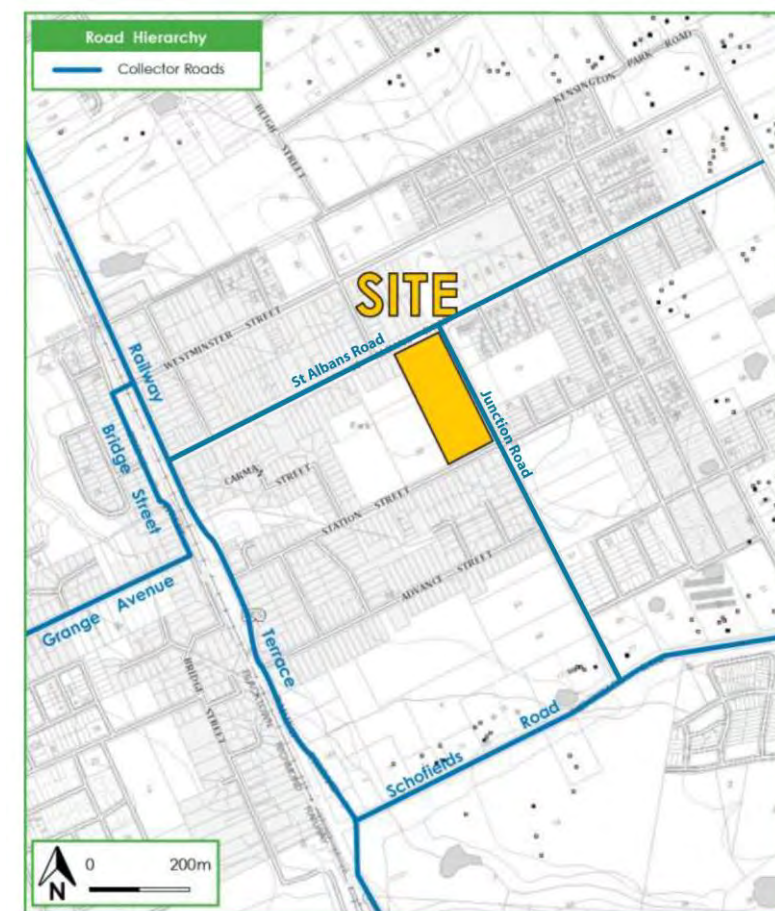
Access to the site is provided via one vehicular crossing to St Albans Road, which provides access to the on-site car parking. In addition, the site includes two vehicle accesses on Junction Road providing servicing and emergency access to the playground facilities. There is currently capacity for seventeen car parking spaces with in the existing carpark which is located at the north-western corner of the site accessed from the St Albans Road. One accessible space is currently provided on site.

The existing road hierarchy in the vicinity of the site consists of Schofields Road, Railway Terrace, St Albans Road and Junction Road. According to the RMS website, the Schofields Road upgrade and extension is currently being developed by the Roads and Maritime Services. There are a number of bus stops within 400 metres walk of the site, it is recommended by the traffic engineers that a school bus service by Busways is operated during the mornings and afternoon peaks.

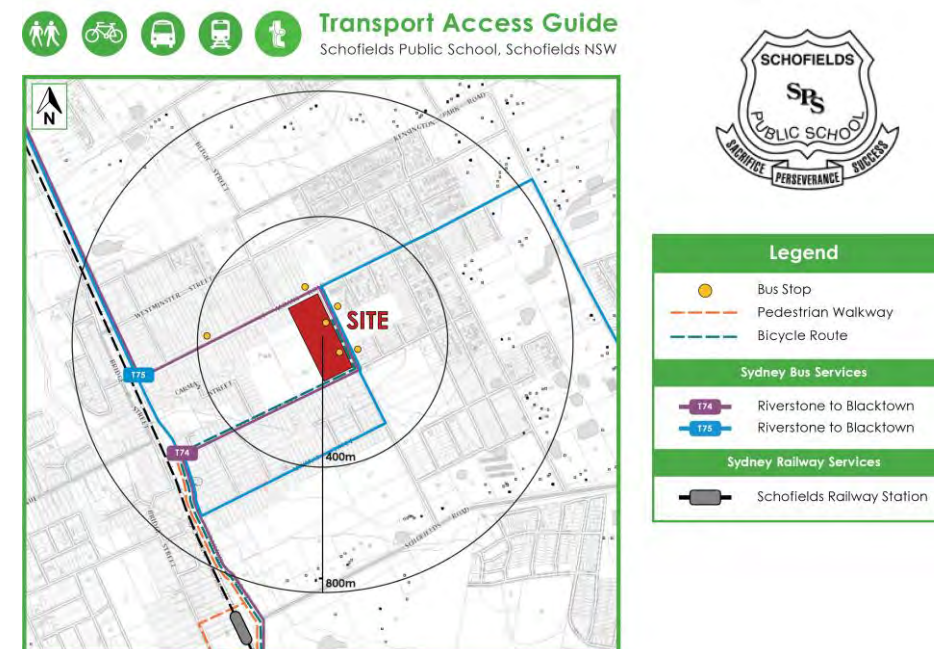
The site is approximately 1.2 kilometres away from the existing Schofields railway station to the southwest. There is a bus service available within walking distance that is linked to Schofield Station and Riverstone Station. Schofields Station lies on the T1 North Shore, Northern & Western Line and T5 Cumberland Line, which provides convenience for traveling between Sydney CBD and western suburbs.

As a means of assessing the traffic modes and traffic generation, online travel mode questionnaire surveys were prepared by the Traffic Consultant for the approved development; TRAFFIX. The results of the survey indicate that 93% of staff drive to / from the school and upon review of survey results it was evident that no staff participate in car sharing arrangements. The results also show that 84% of students are dropped-off at the school by private vehicles in the morning, with 70% of students being picked-up by private vehicles in the afternoon. Similarly, 4% of students utilise public transport in the morning, increasing to 16% in the afternoons.

Refer to the Traffic Report for further information.



19. Existing Road Hierarchy. Source: TIA report by Traffix



20. Existing Bus and Rail Network. Source: TIA report by Traffix

3.8 Existing street character:
A. St Albans Road



21. B. Junction Road



C. Council Park



4.0 MP_8740 Approval

Redevelopment of Schofields Public School including:

- demolition of existing buildings
- tree removal
- construction of a new two storey school building
- Internal refit of heritage school building and hall
- Reconfiguration of exiting car parking facilities
- Fencing, associated landscaping and infrastructure works, and
- Out of school hours uses including care facilities

4.1 Design process

The DOE requires that all projects are progressed in accordance with a prescribed framework including a series of ‘gateway’ approvals. A summary of the key steps of the process following the appointment of the Head Design Consultant and Project Manager is;

1. Formation of the Project Reference Group (PRG)
2. Development of the Educational Design Principles
3. Development of 3 Masterplan options for the site confirmed by the DOE in parallel with the preparation of the Business Case
4. Endorsement of the preferred option by the PRG which is confirmed by the DOE including internal technical stakeholders
5. Development of the design through, Schematic and detailed design with endorsement from the PRG and DOE stakeholders at each stage.

The design is progressed in parallel with review and endorsement from the DOE’s internal technical stakeholder groups at each step and the DOE’s requirements for cost planning.

4.2 Project Reference Group

The design of the approved school was developed through a consultation involving representatives of the school, representatives of the DOE, the project managers and the head design consultant. These representatives formed the Project Reference Group (PRG) and met regularly to agree on the Educational Planning Principles, endorse the preferred masterplan option and to discuss the development of the design.

4.3 Educational Planning Principles

One of the first tasks of the Project Reference Group (PRG) was the development of the Project Educational Planning Principles for the project. These principles are aligned to DOE’s future focused learning design principles.

The approved scheme was developed in reference to the Educational Planning Principles developed by the Schofields Public School PRG;

- a) Connect students to their natural environment
- b) Support a personalised learning approach
- c) Support collaboration across groups of different sizes
- d) Support a diverse curricular and extra-curricular program
- e) Providing mobile integrated technologies that support collaboration and creativity
- f) Comfort and well-being
- g) Technology rich library facility that will be a destination space
- h) Reflect the school’s, community-focused identity and preserve the school’s sense of openness
- i) Support a professional community of practise

4.4 The Development of the preferred concept design

The design process commenced with site analysis and background research allowing exploration of a number of concept masterplans. In accordance with the DOE’s design framework, described above, three final concept design options for the site were developed by the Head Design Consultant based on the above Educational Planning Principles. The PRG endorsed their preferred option which was subsequently confirmed and accepted by the DOE. This design concept was then developed in to the current design through further consultation and design workshops with the PRG. Once agreed by the PRG the design was then reviewed and endorsed by DOE internal technical stakeholders which include; safety, security, accessibility and EFSG compliance.

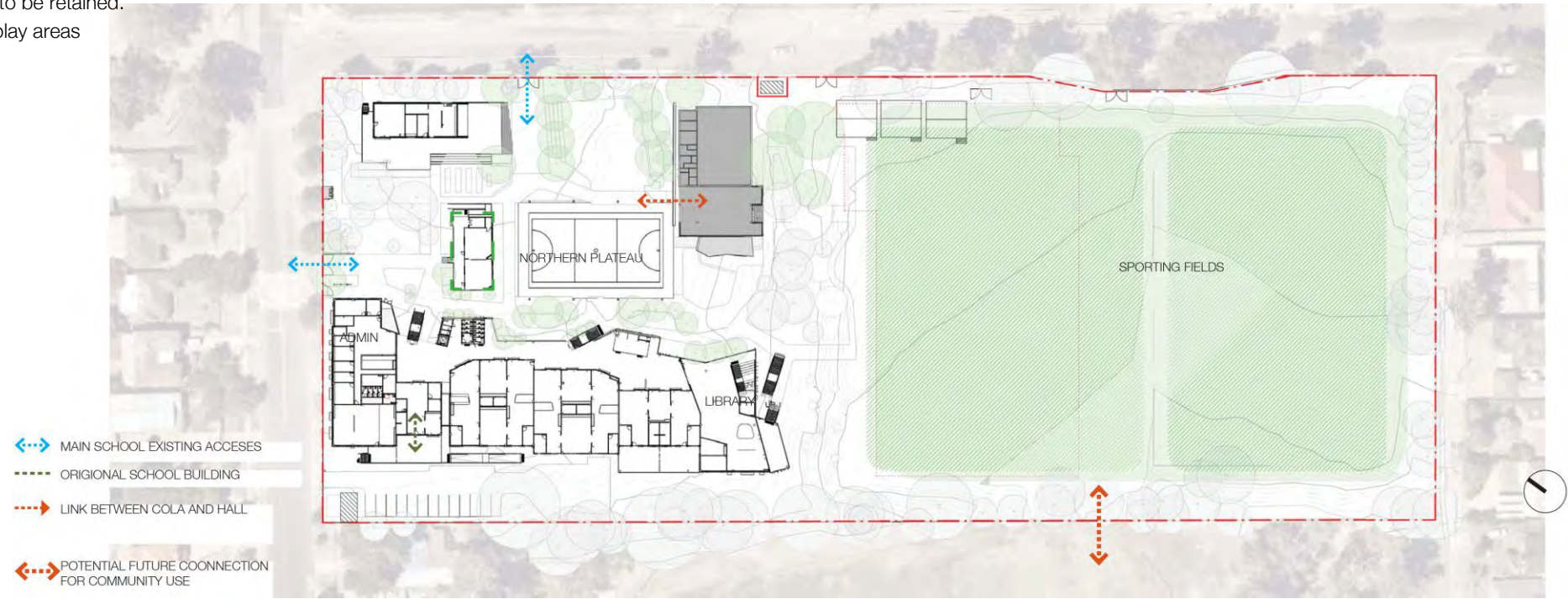
The final Concept Designs were considered with regard Educational Planning Principles and the urban design opportunities and constraints identified, by the site analysis.

5.0 Urban Design

5.1 Conceptual Urban Design Principles Incorporated into the Approved Project

The approved design included the following Design considerations:

- > The design retained the historic location of the school on northern plateau on the more prominent street corner. This allowed for the key existing assets such as the pedestrian and vehicle entries, the original school building, Federation path, the John Curtain tree and Gallipoli tree and the School Hall to be integrated in a new campus layout
- > The design retained the location of the main school buildings to be consolidated on the northern plateau allowing for playing fields to be preserved as open space.
- > The design allowed for the new school buildings to be concentrated in the north west part of the site allowing the potential future expansion in the north-east part of the site without impacting on the playing fields.
- > The design allowed for supervision of the school entry due to proximity to the boundary of the new Administration block which also integrated and retained Federation path as the main entry.
- > The design included collaborative learning spaces supporting the schools pedagogy.
- > The design included special Education Classrooms integrated with general learning areas are readily accessed and designed to allow good supervision.
- > The design included a double height library with views to the playing fields.
- > The design included a central located covered Sports Court (COLA) for outdoor sport and outdoor gatherings.
- > The design allowed for the existing School Hall COLA linked with the new covered area to approved COLA and the Sports Court.
- > The community gardens and kitchen are approved to be reinstated.
- > The existing School Hall, original school building, community kitchen, the Library and central COLA were designed to be used to support the after school care program.
- > The low two storey development was designed to be compatible with character of the area.
- > The design included wide eastern facing verandahs to provide sheltered outdoor learning areas connected to homebases.
- > The approved school building facilities are designed for good natural light and cross ventilation
- > The approved project design allowed for the majority of the significant site vegetation to be retained.
- > The approved project design includes extensive new landscaped passive and active play areas



22. Conceptual Urban Design Principles- Image to the right



A. Future expansion opportunities

The approved consolidation of the school facilities in the north west corner of the site allows for the north east corner to remain relatively undeveloped and available for future expansion should the need arise.

B. Public versus private spaces

The approved siting of new buildings in relation to existing buildings has been designed so that new buildings are generally located towards the boundaries and together with existing buildings they provide a buffer to the street for the internal play spaces, gardens and sports court COLA. The school has a culture of allowing supervised access to the school grounds, building facilities and gardens. Once in the school grounds, the orientation buildings at the site perimeter, facing into the central courtyard allows for ease of wayfinding, ready access and good overall surveillance and supervision.

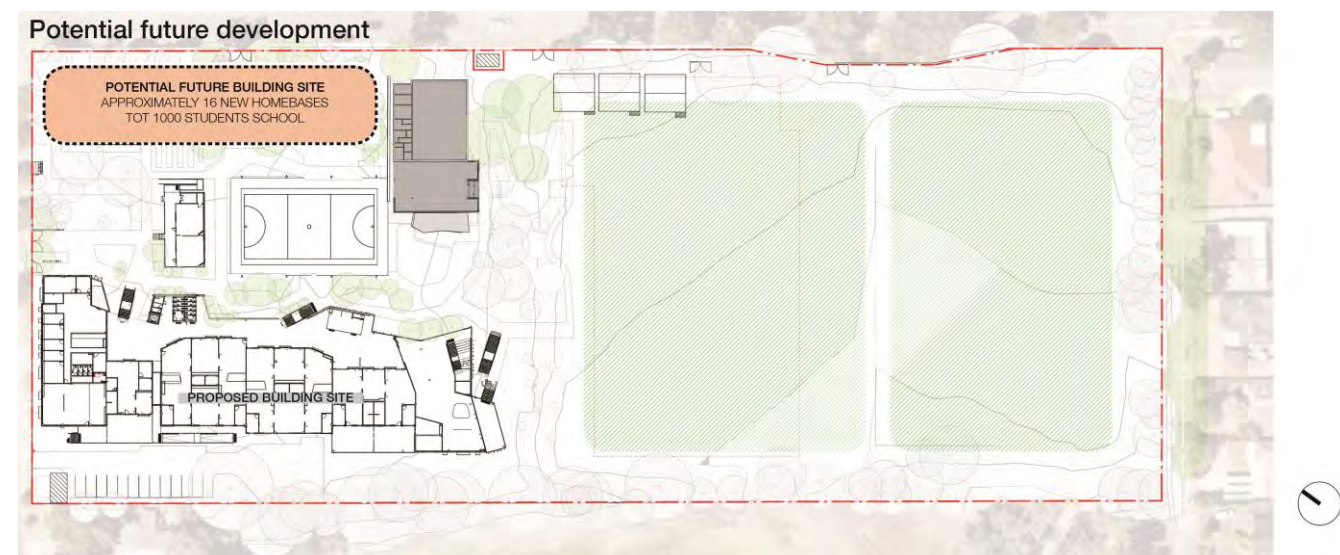
C. Access to the school for community use

The school has a long history and culture of opening its gates and allowing supervised access to the facilities, gardens and grounds for community use. While privacy and security are paramount, supervised access into the school grounds is seen as continuing to foster the strong connection with the community that the school has always enjoyed.

As noted above, the approved siting of new buildings in relation to existing buildings has been designed with consideration of privacy and security so that new buildings are generally located towards the boundaries facing into the central courtyard. The concept for the layout is that once inside the school campus there is ease of wayfinding, convenient access and good sight lines for overall surveillance and supervision of the space.

The Administration area, the Library, the School Hall, the Homebases and the Kitchen and Canteen are also designed to be independently operated and not dependant on access to other facilities for their use. There are amenities in the School Hall otherwise amenities are generally external and can also be unlocked as required for afterhours access.

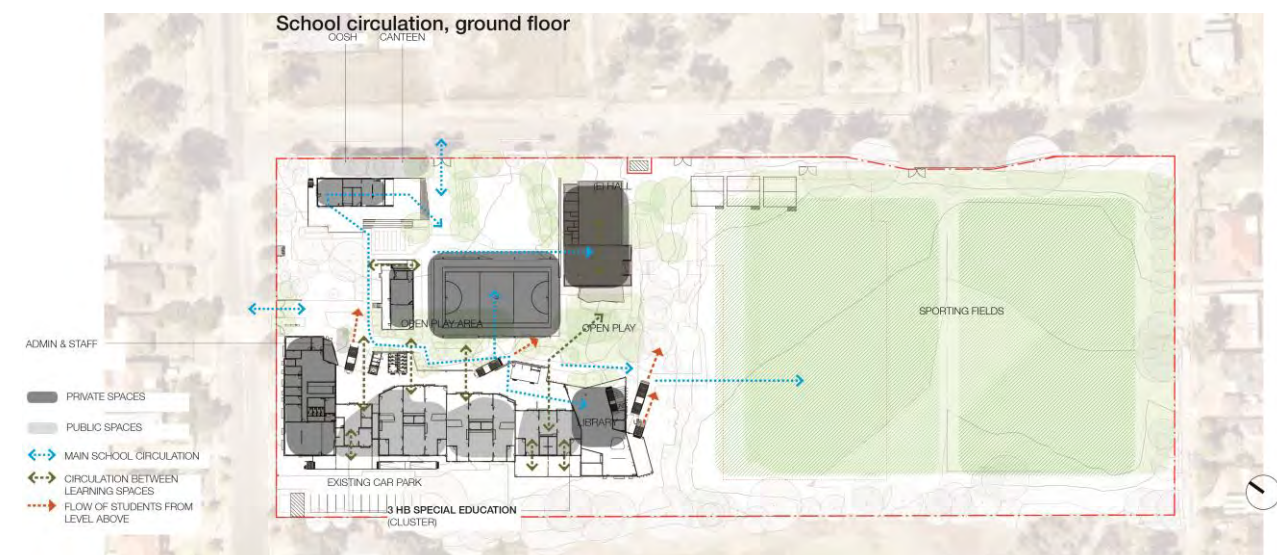
The school has an active program of after school care. The approved upgrade of the school has been designed with consideration of potential use of the School Hall, Sports Court COLA, Special Programs Rooms (in the Original School building) and the community kitchen for the after school care program.



23. Potential Future Development



24. Public and Private Spaces-Ground Floor



25. Public and Private Spaces-Ground Floor

D. Main school circulation

The approved design for the upgraded campus utilizes the existing pedestrian site entries from St Albans Road and Junction Road.

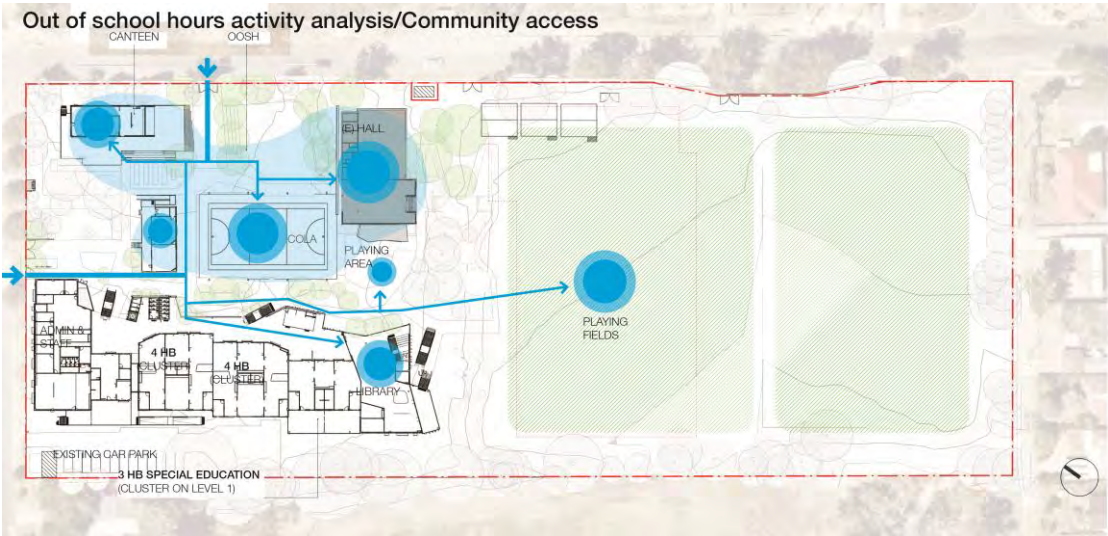
The Administration area has been designed to integrate with the St Albans Road entry and the retained Federation Path. Visitors to the school will be able to access the school reception via an external covered space inside the entry gate. The lift and stairs are located adjacent to the admin area to not only allow for a surveillance but create a central and active entry to the new approved building. The Junction Road entry has been retained for access from the approved bus stop and set-down areas. The Junction Road entry is opposite the approved canteen and adjacent to an open area for good surveillance and to allow generous spill over and milling area during peak periods.

Pathways from these entries form the main north-south axis extending through the site and meet, inside the campus, adjacent to the Administration area and near the lift. Under the landscape concept the north-south pathway is designed as a 'green spine'. These pathways link main entries to the buildings play spaces and playing fields and are designed for circulation flow with consideration of maintaining the approved informal character of the school and providing further opportunities for learning and play.

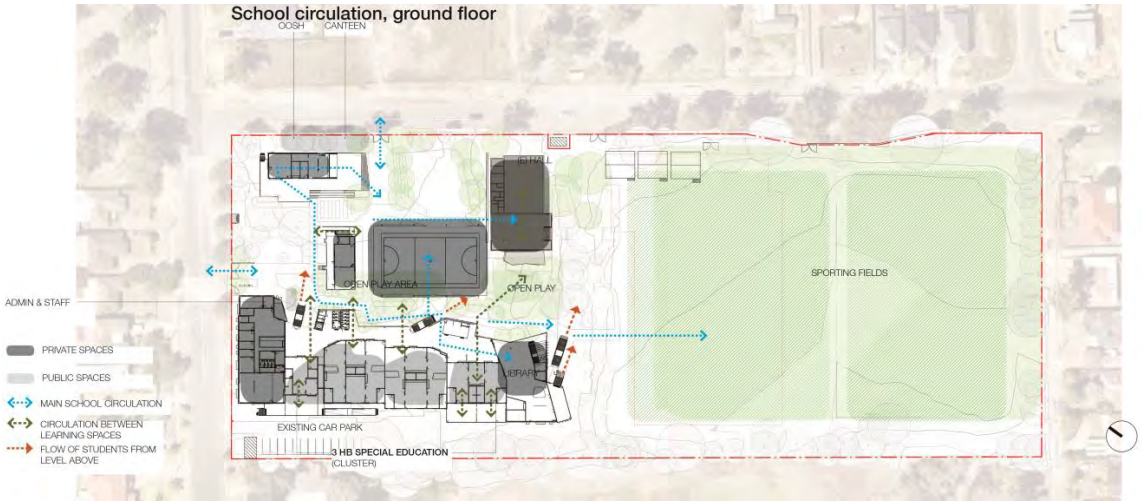
The approved new school building is designed as long two storey pavilion and comprises of the Administration facilities, home bases and the Library. All of these facilities are individually accessed from a wide, open verandah at both levels, which extend the length of the eastern side of the building, facing into the playground. The verandah is linked to external pathways and play spaces via steps and generous stair cases from the upper level. There is also lift access to the upper level via the lift adjacent the administration area.

The verandahs are also used as the outdoor learning areas associated with the homebases. Line marking, incorporated in the integrated learning design, will designate areas away from the edge of the balcony where furniture can be placed and will identify a wide unencumbered circulation width catering for peak circulation periods and the need for clear access to the stairs and balcony exits.

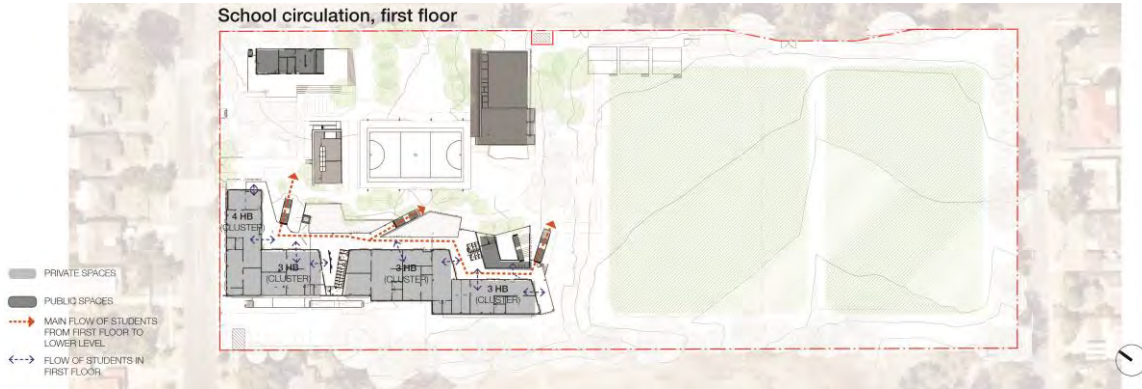
The existing carpark is to be retained and used for staff carparking facilities and as a pick-up drop-off area for special needs students. The approved design includes direct access to the staff recreation facilities within the Administration area and an access ramp provides an accessible pathway through the building to provide access to the special needs classrooms and the lift.



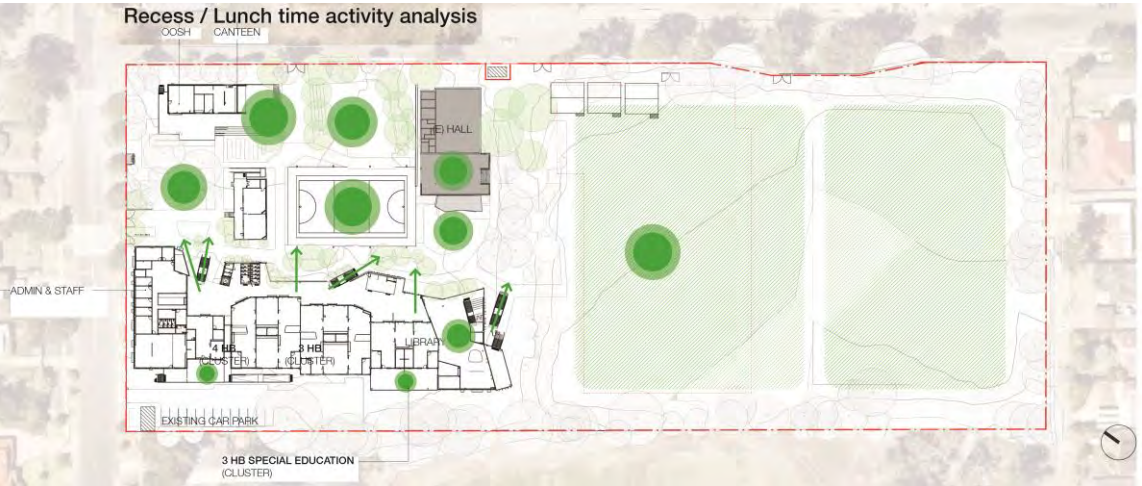
26. Out of school hours analysis/community access



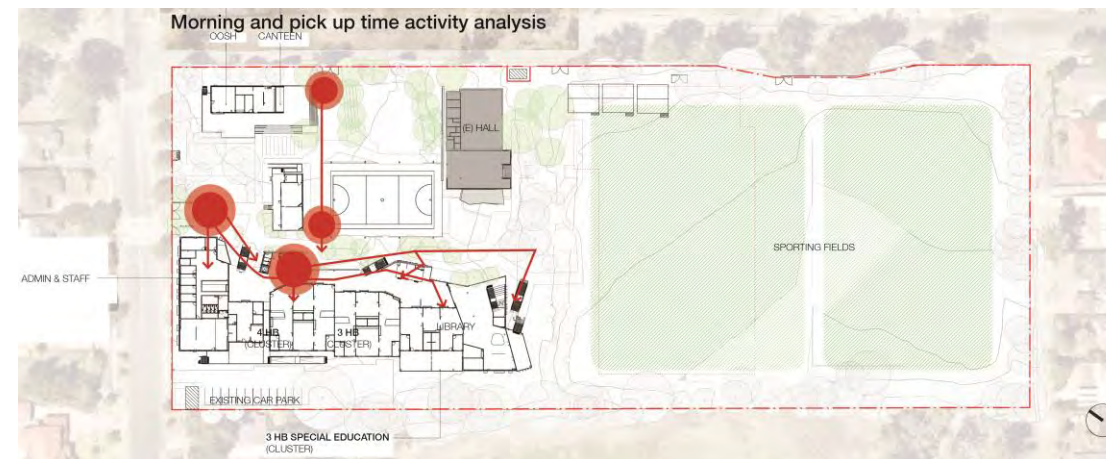
27. School circulation-Ground Floor



28. School circulation-First Floor



29. Recess/Lunch time activity analysis



30. Morning and pick up time activity analysis

5.2 Detailed Urban Design Principles Incorporated into the Approved Project

- > The building is primarily two storeys in scale, which is in keeping with the predominate scale of the surrounding development.
- > Verandah spaces provide a transition zone between indoor and outdoor spaces
- > The built form provides natural light and ventilation

5.3 Facade Design and Materials

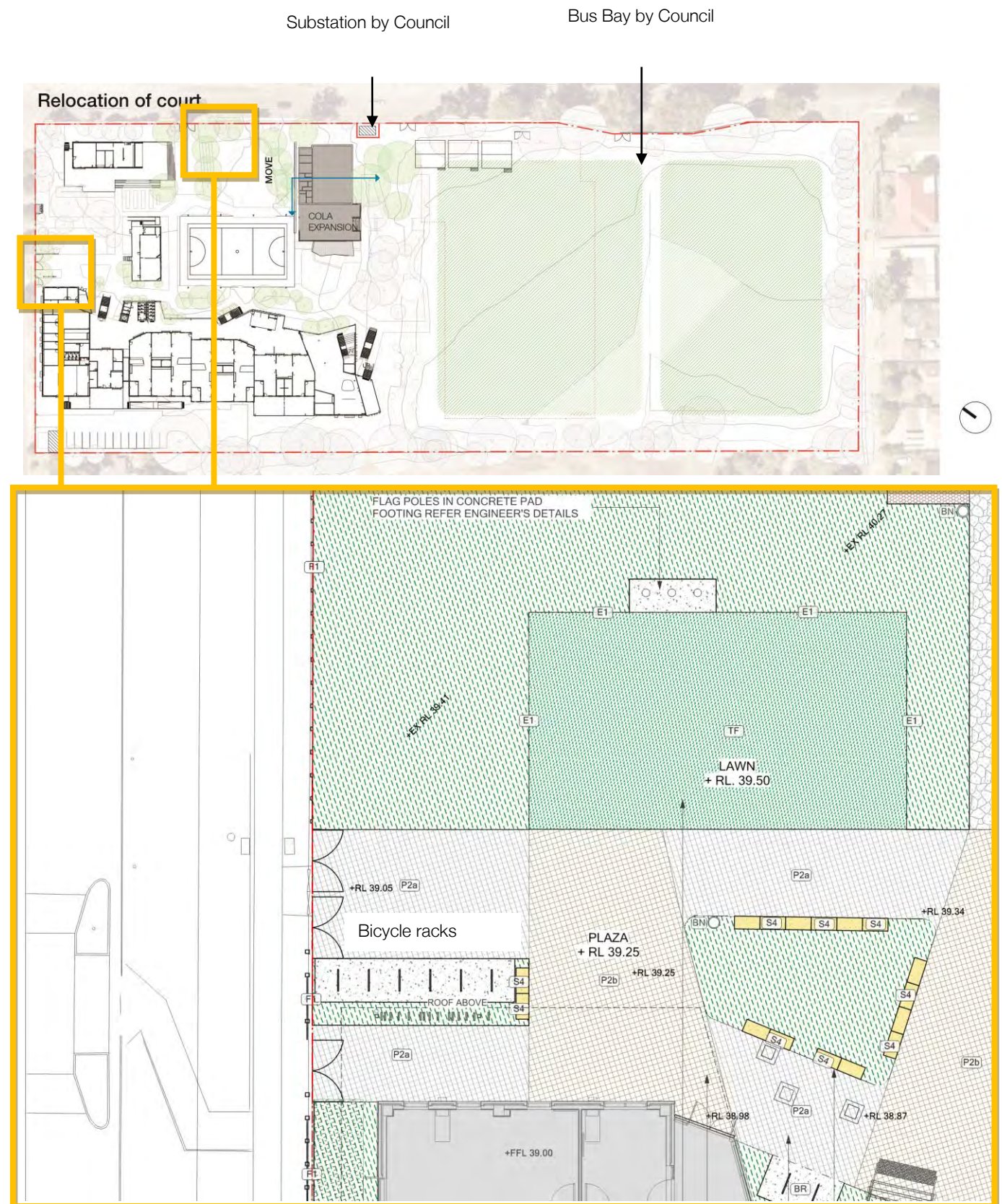
A variety of materials have been selected based on their quality and durability. The approved materials include;

- > face brick
- > featured glazed brick
- > metal wall sheeting
- > pre-coloured fibre cement sheeting

The face brickwork is approved at the external base of the building as a hardwearing durable material. A mix of fibre-cement sheeting and metal cladding is generally used at the upper storey. Aluminium blades are approved as sun shading and are expressed as feature elements complementing the more muted tones of the brickwork and cladding.

5.4 Travelling Mode Provision

The approved design will encourage the staff and students to use sustainable modes of transport to the school. The development of a travel access guide is supported by the traffic engineers including information of walking school bus, staggered pick up- drop off times, cycle initiative and events and Local cycle route maps. The approved design incorporates 48 bicycle racks that are accessible near both main entries from St Albans Road and Junction Road. The end of trip accessible showers/WC designed for both staff and students to fit within the amenities provided in admin and student areas. In addition to this, a new bus bay is located in the south-east of the site which will further promotes sustainable transport practices.



31. Provision of sustainable modes of transport. Source: Context Landscape Architect with TKD overlay

5.5 The original buildings

The approved new school retains the original school building at the centre of the school which creates the main characteristic of the school.

Refer to the images below, the existing federation pathway, the historic Anzac tree and the original building are the new hub in the approved school design.



32. Existing and approved school entrance in relation to original building



5.6 Approved materials and finishes



33. View of main entry to school from St Albans Road



34. View of Library from central court yard.

Refer to table below for schedule of external materials and finish.

Wall Materials	Face brickwork
	Glazed brickwork
	Fibre cement panels
	Metal wall sheeting
Roof Material	Metal roof sheeting



35. Approved External finishes.

5.7 Street Scape Impact

A. St Albans Road



B. Junction Road



6.0 Landscape:

6.1 Landscape concept

The approved landscape for the site has been developed by Context Landscape architects, with consideration of the existing key landscape features, the existing site topography and the orientation of the site.

The retention of the northern plateau as the approved site for the main school group allowed for the key existing landscape features such as the ring of indigenous trees at the site boundaries, the Federation path, the John Curtin tree and the Gallipoli tree are retained and integrated in the landscape design for the new campus layout. It also emphasises the existing school entrances which have been extended to provide connecting accessways through the campus.

The approved development mainly retains the existing landform of the site and there were no significant deep soil. The location of the School buildings on the northern plateau also retains the playing fields as turfed open play space.



36. *Approved Landscape Plan.* Source: Context Landscape Architect

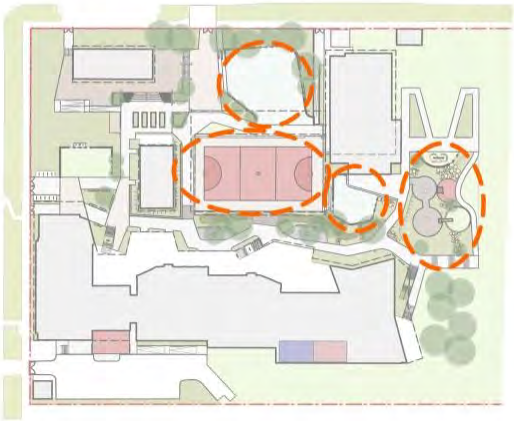
Active and passive play

The varying topography of the site provides opportunities for both active and passive play.

The steeper level change to the south edge of the northern plateau, before the playing field, has been utilized for adventure play and exploration and parts of the embankment is utilized in the design for mounding, climbing and sliding activities.

The approved central COLA and Sports Court allows students to engage in formal and informal sports as well as providing a covered outdoor area for school assemblies and gatherings. The open area adjacent to the Junction Road entry is generally a level space with a hard-wearing synthetic surface for active play and as a milling area during peak periods of drop-off and pick-up and use with the School Hall. The Playing Fields will remain as open turfed area for active play, including informal and organised sports.

The areas around the approved Canteen, the John Curtin and Gallipoli trees and the Original School Building are reserved for more passive activities. These areas include the vegetable gardens, and memorial gardens and retain the character of the existing landscape around the Federation Path.



37. *Activities and Passive Play diagram-* Source: Context Landscape Architect

EDGE DEFINITION

A perimeter fence is approved for installation at the boundary of the site in accordance with DOE security requirements and standards for fencing details. The perimeter fencing is approved visibility to site. There is an opportunity feature planting to be incorporated to inside face of fences to create a softened edge in the main entry area. Refer to the appendix C for the existing and approved St Albans Road street frontage definition.

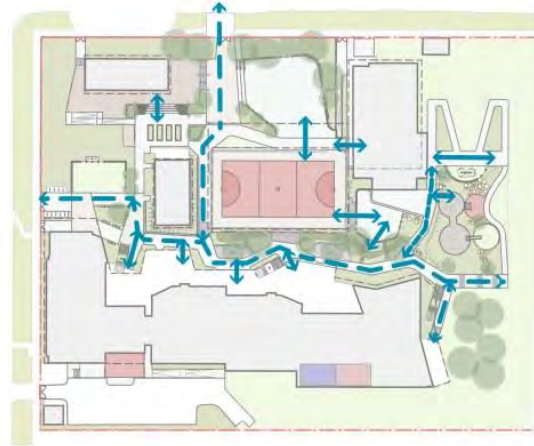
Connections

The approved landscape design utilizes the existing pedestrian entries to the school which are extended through the campus to allow ease of circulation and provide convenient connections to the school facilities.

One of the key elements of the landscape concept is the creation of a primary north-south axis or ‘green spine’ which connects the main pedestrian entry from St Albans Road, with the verandah to the new school building and extends towards the south and through to the Playing Fields. The Administration area has been designed to integrate with the St Albans Road entry and the retained Federation Path. Visitors to the school will be able to access the school reception via an external covered space inside the entry gate.

The other main accessway, extending from the Junction Road pedestrian entry, passes between the Original School Building and the approved new COLA and Sport Courts to link with the ‘green spine’ at the new school building verandah near the access lift and administration area. The Junction Road entry provides access from the approved bus stop and set-down areas and is opposite the approved canteen and adjacent to an open area for good surveillance and to allow generous circulation during peak periods.

Other secondary pathways provide further connections from the main circulation spines to play spaces and school facilities. All pathways are designed to integrate hard and soft landscaping elements and with consideration of the intended informal character of the upgraded school and to provide opportunities for learning and play.



38. Connection diagram- Source: Context Landscape Architect

GREEN SPINE + NATURAL SETTING

The approved 'green spine' has been designed to incorporate spreading canopy trees to shade to pockets of seating / outdoor learning zones. The design also, incorporates play elements within the existing trees to encourage bush / imaginative play.



39. Green Spine and Natural Setting Diagram- Source: Context Landscape Architect

LEARN + GATHER

The approved commemorative lawn is a celebration of the schools' heritage and is intended to provide a place for small class gatherings and reflection. Areas under existing trees are also provide opportunities for bush play and learning of the natural environment. Productive gardens are located adjacent the canteen to encourage practical learning through agricultural processes.

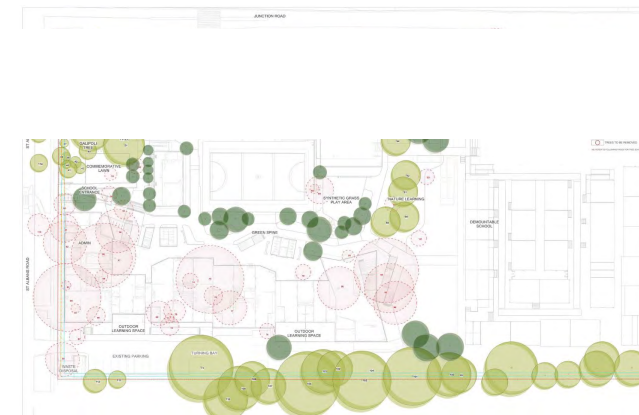


40. Learn and Gather Diagram- Source: Context Landscape Architect

Tree Canopy

The landscape concept proposes to reinforce the natural bush setting through the retention of existing trees and the introduction of new tree species which will be compatible with the existing and approved landscape context.

The trees that are approved to be removed as a result of the approved development will be replaced elsewhere on site. Replacement planting combined with approved new planting will result in an increase in tree canopy coverage across the site.



41. Tree Canopy diagram- Source: Context Landscape Architect

6.2 Approved trees

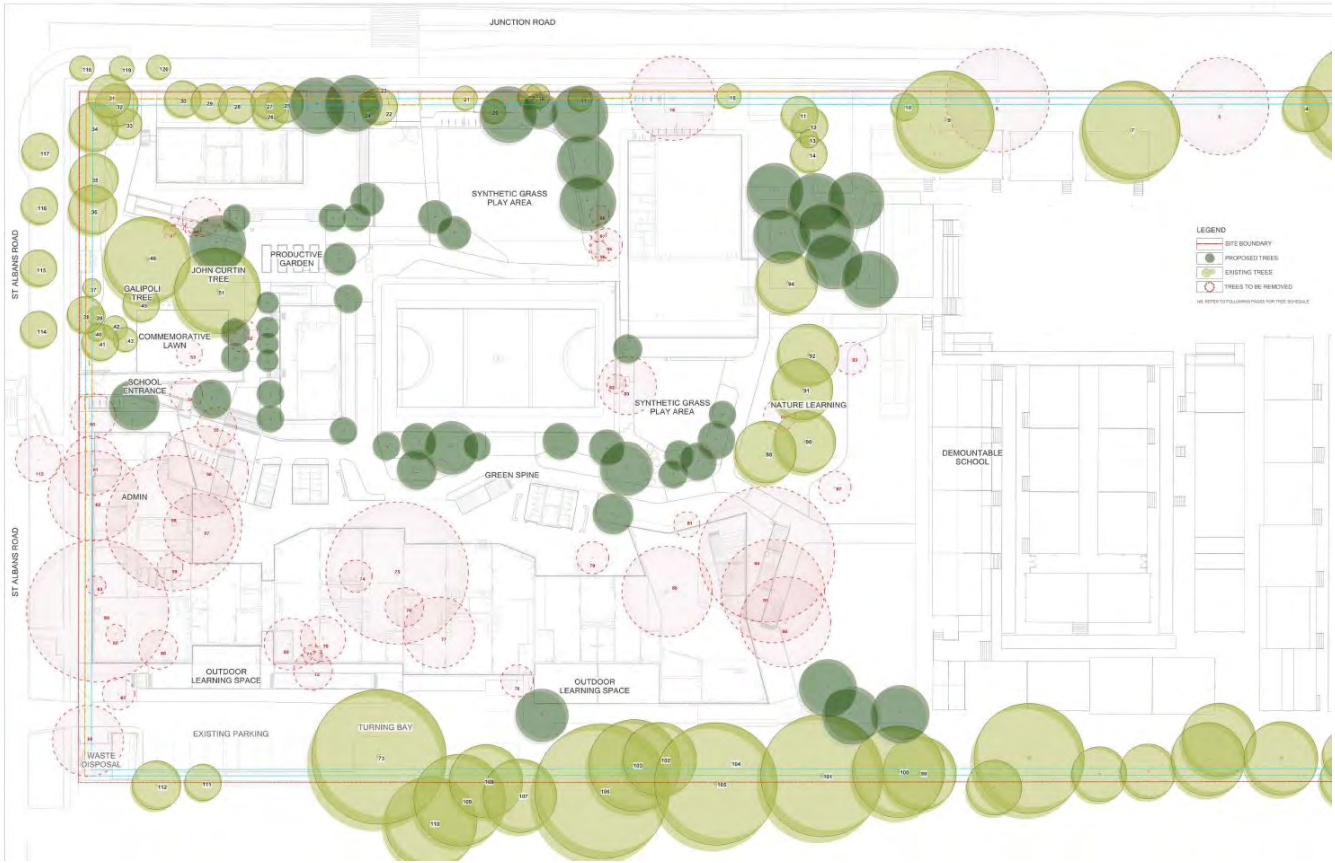
The design of the approved development allows for the building form to be consolidated to the western side of the norther plateau of the site extending the depth of the plateau. The decision for siting the building in this location retains the two playing field plateaus to the south without permanent building structures and allows for the most of the remainder of the northern plateau to be left as open space for play areas or for new buildings should the need arise in the future. The required footprint of the building therefore results in the approved removal of a number of trees which are offset with additional planting under the approved landscaping design.

The required footprint of the building therefore results in the approved removal of a number of trees. None of these trees are identified as significant trees in the Arborists Report. Further, a significant number of the existing trees are to be retained with the approved development (particularly along the northern boundary, the south-eastern and south-western corners of the site) which also includes new planting and landscaping which will more than offset the trees approved vegetation to be removed as trees to be removed will be substituted with new trees at the ratio 1:1 (plus some additional trees). All impacted areas will be planted out with new ground covers, grasses and shrubs, refer to the current softworks drawings. All new planting has been specifically selected by the Landscape Architect for suitability for a school playground environment.

All large canopy trees species are from the Cumberland Shale Plains Woodland plant community (with the exception of one Jacaranda feature tree). Furthermore, shrub, grass and groundcover species of this plant community will be planted predominantly along the boundary fences with other native and exotic species closer to the school buildings which have been proven to withstand the demanding conditions of an active school environment with many children and in accordance with the DoE's plant selection regulations. Drawings have been amended to include more Cumberland Shale Plains Woodland plant species.

The 4.551A modification proposes to remove 3 trees, which will be replaced by 6 new trees.

The trees are to be removed due to increased size of the OSD tank required to satisfy SSDA Condition B29. Condition B 29 requires that the OSD tank be designed in conjunction with and approval by Blacktown City Council.



42. New tree diagram indicates the location of approved trees. A total of 61 new trees have been approved, 26 of them are large native trees (predominantly eucalypts) and one large exotic Jacaranda tree

6.3. School Perimeter and entries

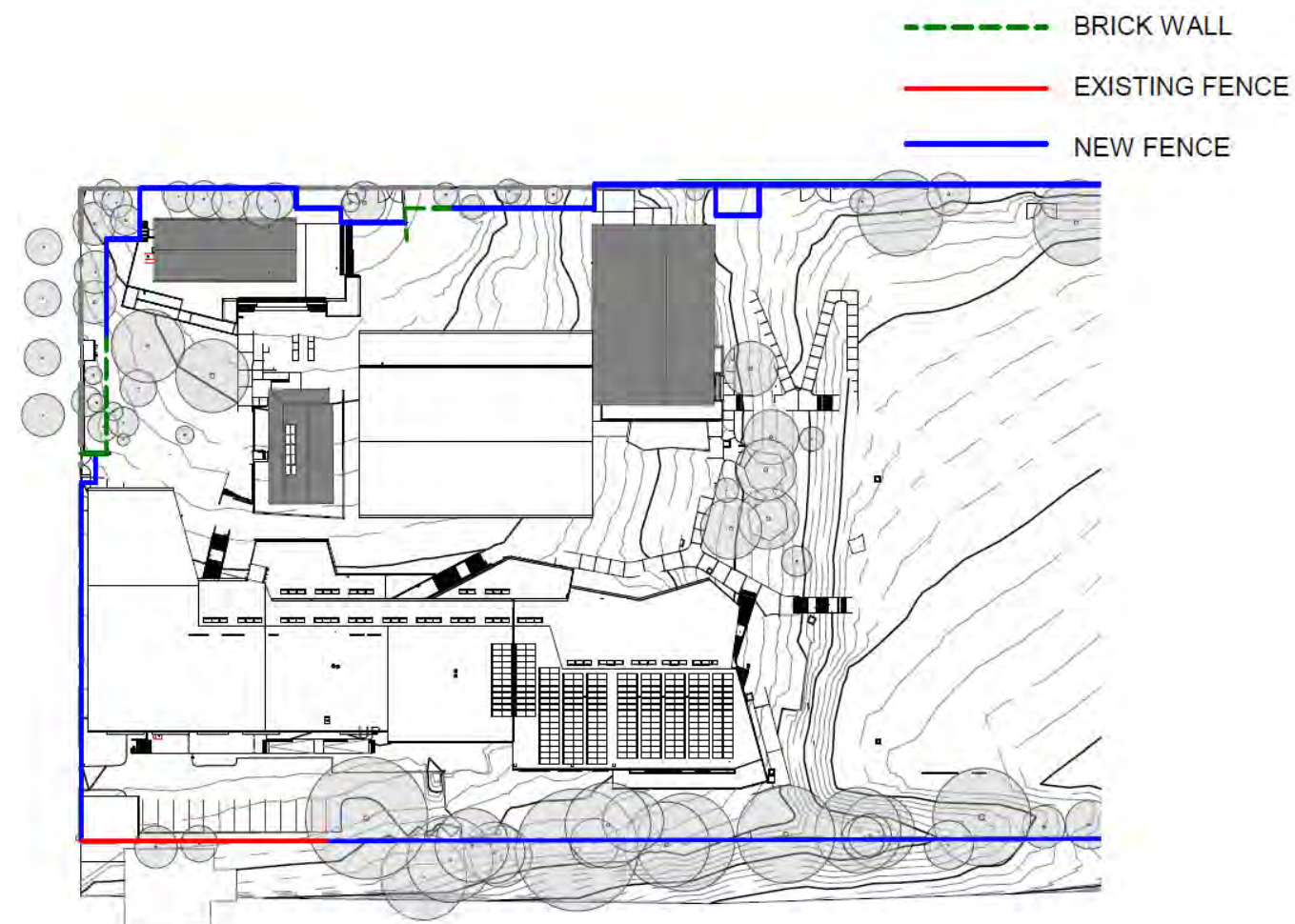
Refer to the revised landscape plans which have been amended to show approved modifications to the fence allowing modulation of the fence responding to the public domain.

Approved Fencing Product

The approved fencing product is also approved to be upgraded. Refer to the details of the fence in section 4.2.

Department of Education security department has required that the fence remains in front of the building on St Albans Road due to significant evidence of vandalism of school buildings located near boundaries without fencing protection.

The landscape design already includes a generous 'outdoor foyer' at the entry to the school off Junction Road, between the Hall and the School Canteen. This space is within the school grounds. When it is not used for gathering during pick-up and drop-off times it is part of the schools play space which must be within the secure fence under Department of Education Requirements. Excluding parents and visitors outside of the school grounds is also contrary to the school's principles of being a welcoming, inclusive school which encourages interaction with the community.



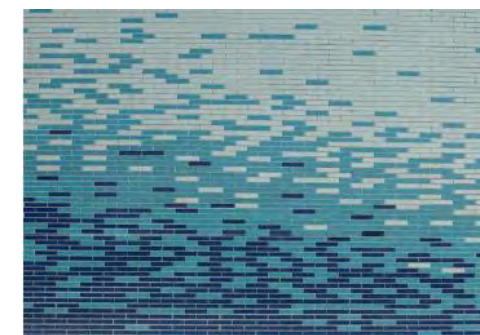
43. Fencing around the boundary diagram

6.4 Fence types

The image below shows an example for the 'Feature Fence' Type 3: It potentially could be a proprietary palisade fence, customised with coloured powder coated steel tubes added to the proprietary fence. In this way the school, the students, and the community could be involved in the design.



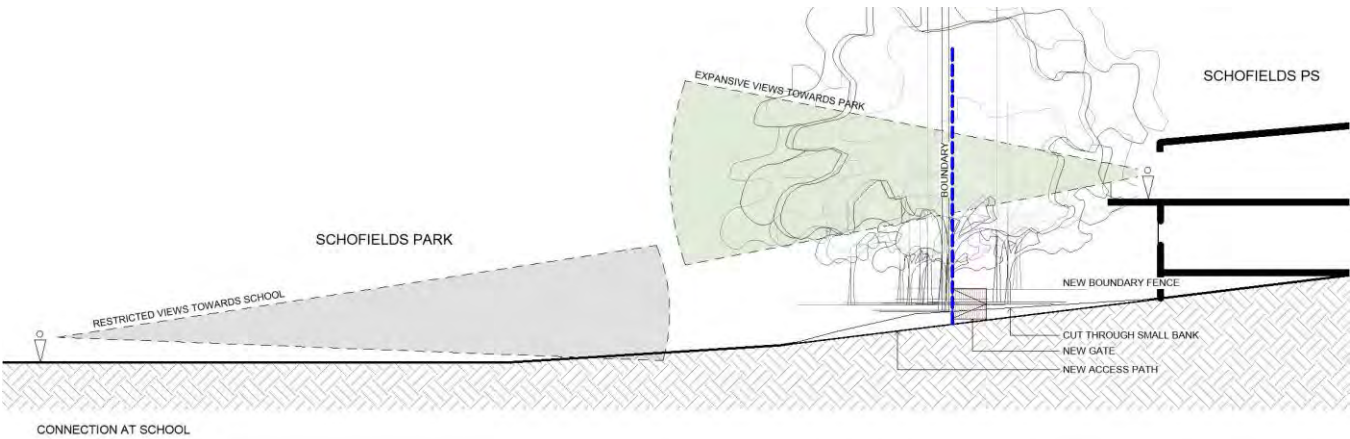
44. Precedent image of Leda security Fence.



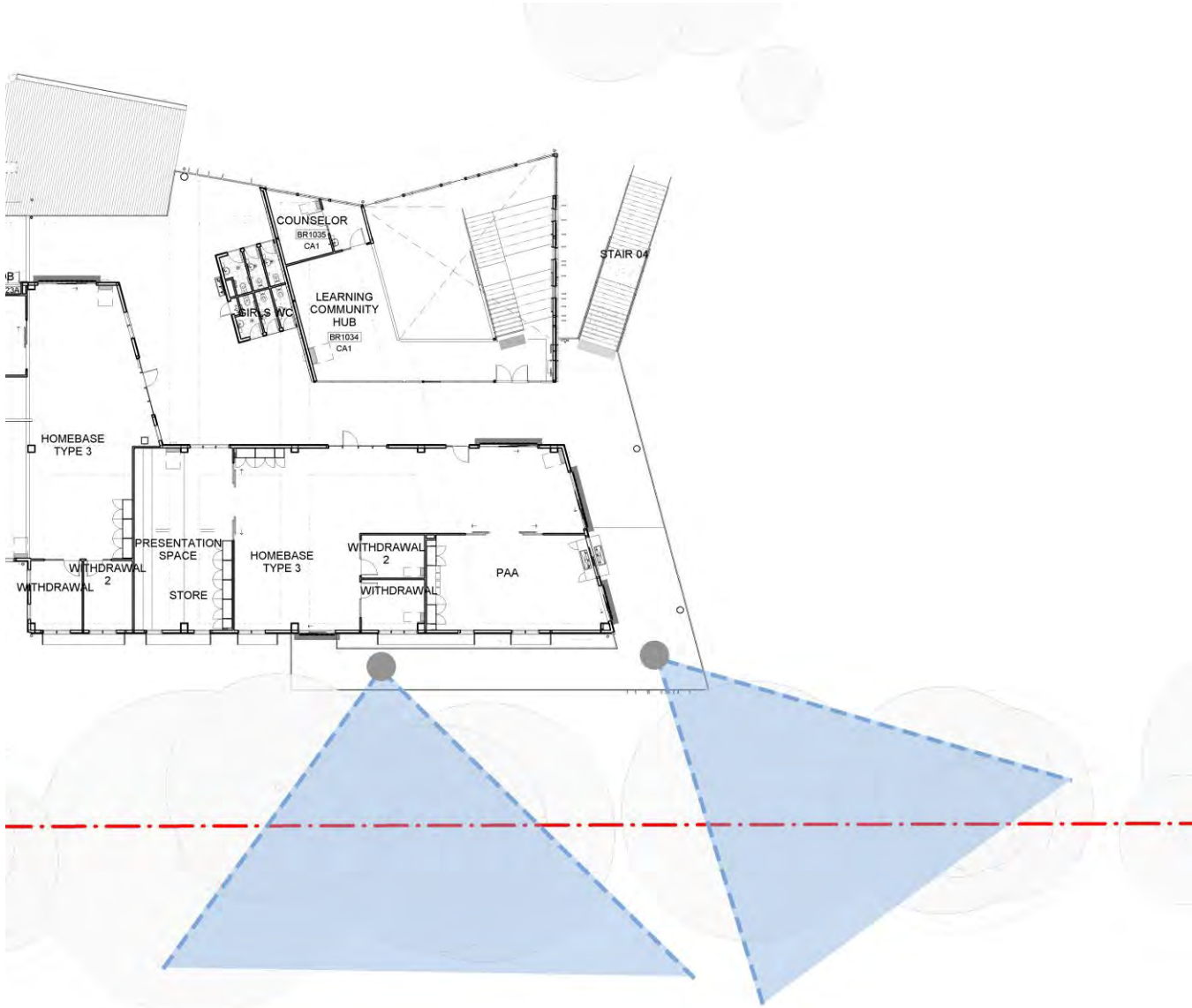
45. Precedent image of a Brick Wall

6.5 Connections to the park-Visual connection

The approved design includes a two storey balcony to the south end of the building on the western side. The balcony will provide an additional outdoor balcony area for the library and for the learning hub at first floor level. Wide, glazed sliding doors will open onto the balcony.



46. Approved balcony with a view to the council park-Section diagram



47. Approved balcony with a view to the council park-Section diagram

7.0 Future Focused Learning

7.1 Contemporary learning facilities

In accordance with Educational Planning Principles agreed by the PRG at the commencement of the project the upgraded Schofields Primary School has been designed for ‘future focused learning’.

“The nature of the 21st century world, characterised by globalisation, post-industrialisation and unpredictable economic and social events, determines that a key aspect of our educative purpose must be to prepare young people for uncertainty and changes that are yet to come, and to prepare young people for a society that is in a state of rapid transformation.”

- Atkin, J. Transforming Spaces for Learning, in Designing for Education: Compendium of Exemplary Educational Facilities 2011 OECD CELE p 26.

7.2 Educational Facilities Standards and Guidelines (EFSG)

All new public educational projects in NSW are designed in accordance with the state Department of Education (DoE) EFSG. The EFSG ensures minimum standards are met and that space allocation is equitable across different schools – all schools of a similar size and curriculum get the same range and number of spaces, and a determined area.

At the same time the DoE’s aspirations are for the delivery of facilities that are able to support ‘future focused learning’. The objective of future-focused learning is to furnish students with lifelong learning skills (e.g., creative and critical thinking, collaboration and communication, and problem solving) as well as literacy and numeracy proficiency. It recognises learning will be facilitated via a range of delivery methods, and engage students in different learning styles, each fostered by emerging technologies and social changes.

In order to guide this, the DoE developed the “7 modes of learning” in collaboration with Dr. Julia Atkin.

The expectation for design team for the expansion of Schofields Public School is to use the EFSG as an overall guide, and adhere to the suggested provision of specialist space, but otherwise organise the area allocation in a more ‘future focused’ manner. For this project this meant the organisation of space around the most innovative typology, where the areas for the equivalent of four home bases are put together to create a shared space with a diverse range of settings.

7.3 Educational Brief

The homebase planning was prepared by Tanner Kibble Denton architects (TKDA) in collaboration with education space planning consultants New Learning Environments (NLE) and the PRG.

At the commencement of the project community consultation was conducted. The consultation open to students, staff/teachers, parents, neighbours and other interested parties. After the initial consultation there was a series of workshops with school staff and the school headmaster to develop an Educational Brief for the school which aligned with the Schools pedogeological approach. This process also included a site visit to a recently constructed school designed for future focused learning. The brief was developed as a guiding document aimed at informing the home base design and distribution.

7.4 Homebase typology

One of the main components of the School is the learning areas known as ‘homebases’ and a key outcome of the brief was the concept for Homebase typologies which were to align with the principles of future focused learning facilitating a collaborative team teaching approach.

The two typologies are:

Typology A: The equivalent of two class groups (i.e. up to 60 students) on either side of a shared enclosed presentation area and practical activities area, each with its own small meeting room and range of spaces for group and independent work.

Typology B: The equivalent of 3 or 4 class groups (i.e. up to 90 or 120 students), each with its own enclosed presentation space and practical activities areas, 2 small group meeting rooms and a range of spaces for group and independent.

Generally, the typology A homebases are designed for the younger students based on the research carried out by the Educational Planning consultant that the younger student cohorts are better suited to smaller groups up to 60 students whereas older students can be accommodated within groups up to 90 or 120 students.

The approved design also includes 3 special educational needs (SPED) units located on the ground floor, two of which are designed to be co-located and connected via a shared practical activities area. Undercover outdoor learning areas with access to outdoor sinks will extend and connect the indoor learning spaces on both levels.

7.5 Site planning and layout

The planning and location of homebases, as the core learning areas is integrated with the overall site planning of the School. This includes the relationship to entries and areas beyond the site boundaries, playground areas and staff and administration areas.

Ground Floor

The approved new building contains administration and staff spaces near the street frontage. These include an entry area with service counter, a sick bay and interview rooms, as well as offices for Principal and Deputies, clerical space and meeting rooms. Teaching staff spaces are shared, but divided into two (not acoustically discrete) areas for work and social purposes. The central staff space is a shared space that will supplement workspace for each team of teachers in each learning hub as well as provide an area for lunch, socialisation, meetings and professional learning.

The ground level also provides 2xTypology A homebases (accommodating up to 120 students each). This aligns with the stage based learning approach of the school and locates the younger students on the ground floor. 3 SPED units (2 are collocated with shared areas) and the main Library area are also located on the Ground Floor. The original School Building is approved to be refurbished as Special Programs rooms.

First Floor

The first floor level of the approved new building includes 5xTypology B Hombebases. The second level of the library provides a small meeting room suited to learning support or counselling with an associated informal learning area.

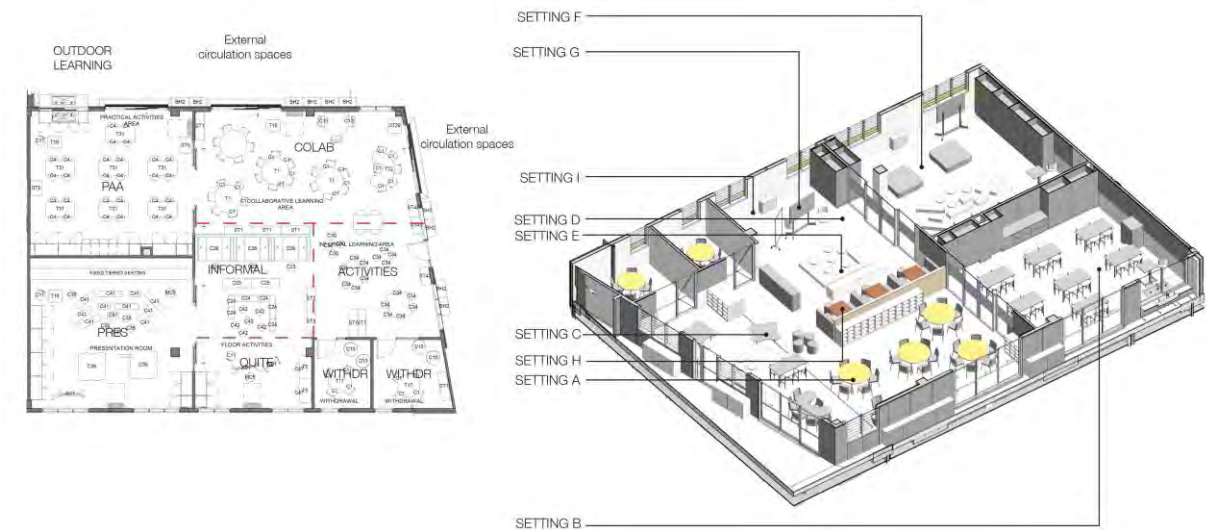
7.6 Homebase planning

The homebase planning follows the EFSG guidelines for space allocation but combines facilities for greater efficiency and to provide purpose designed facilities in support of the learning modes. For example the typology A Homebases are the equivalent of 4 Hombases under the EFSG. This allows for the areas of facilities to be combined into larger areas that can accommodate a whole group and to be purpose designed with the required finishes, furniture, acoustics and services. In the case of the Practical Activities area which is used for art and craft activities these spaces are designed with wet area fixtures, finishes and services and are located adjacent to outdoor learning areas.

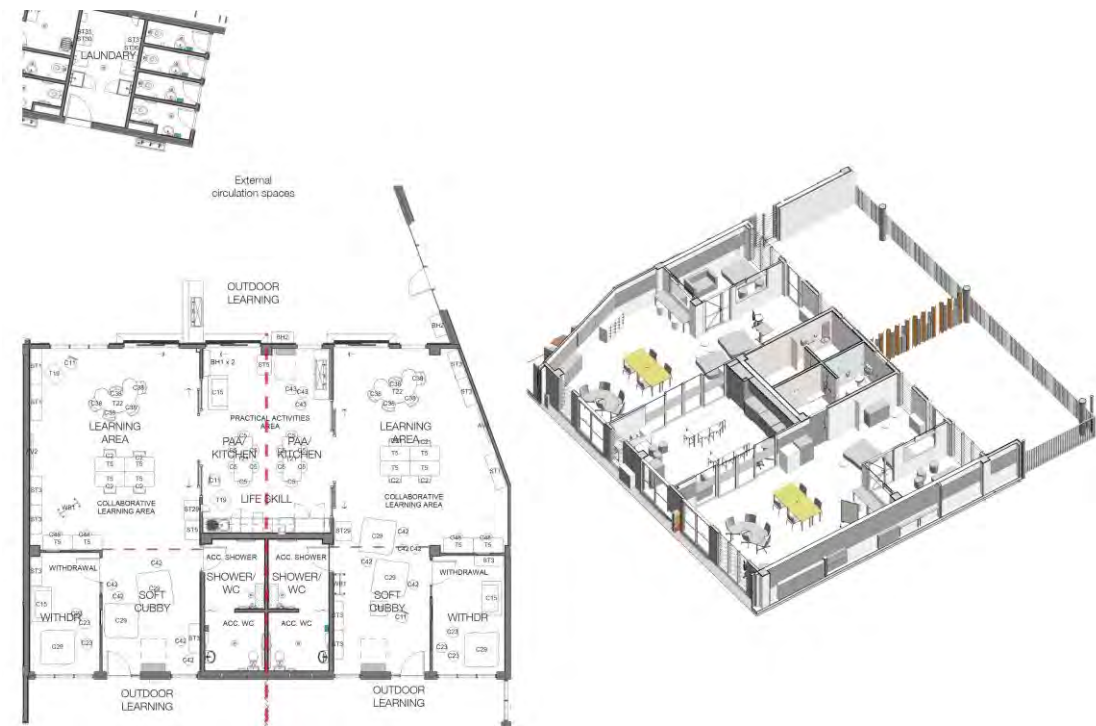
The homebases are designed as a series of interconnected spaces. They include;

- > Practical Activities areas for arts and craft activities
- > Collaborative learning areas for group work
- > Presentation spaces for didactic learning or presentation, including activities where acoustic screening is required
- > Open floor space and informal learning areas
- > Independent learning areas including booths for quieter more intimate learning
- > Meeting rooms and withdrawal rooms for quiet group work and to simulate the board room experience.

The homebases also include teacher stations and work areas. The design concept for Schofields Public School is that each Homebase opens directly onto a sheltered outdoor learning area on a verandah which also includes wet area sinks and benches. The Homebases are also entered from the verandah and each Homebase is zoned so that the more active learning activities take place closest to the verandah and the more passive, quieter activities are located away from the verandah.



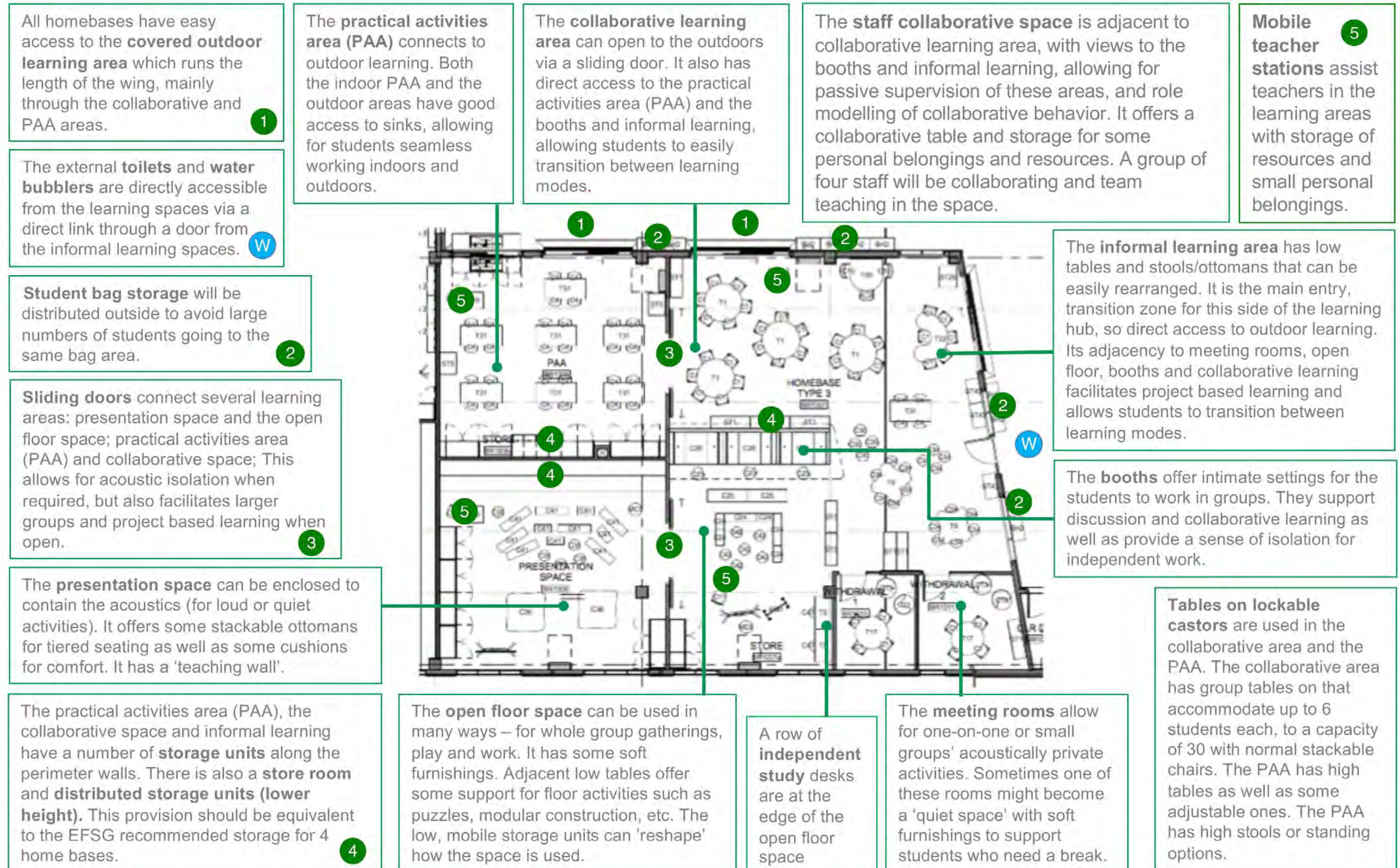
48. 3 Homebase furniture layout and comparison to NLE mode of settings



49. Special Education Homebase furniture layout



50. NLE modes of future-focused learning and associated learning setting generic diagram- Source: Translational brief by New Learning Environment Consultants



51. Pedagogy space Map- Main Stream Learning Hub - Source: Translational brief by New Learning Environment Consultants

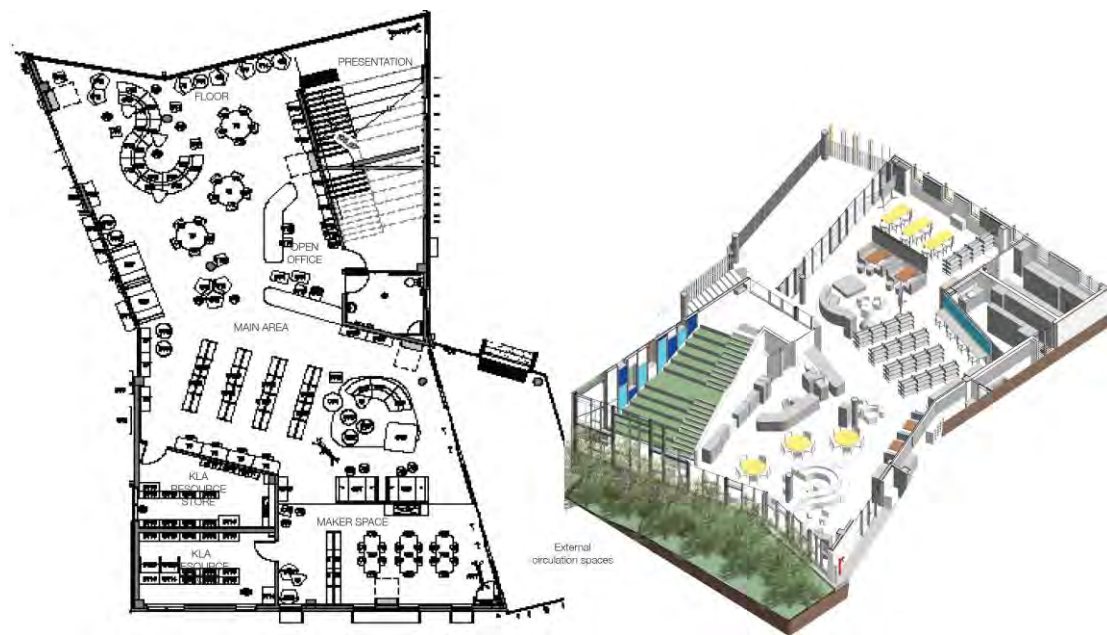
7.7 Library

"The Library Main Area is an adaptable multipurpose resource centre with access to hard copy resources, information technologies and large display areas. The area provides desks and chairs for students and areas for individual and small group research and study."

- EFSG

The Library is designed to be located on the south eastern corner of the new building. It is designed as a double height space with a glazed wall to the south to provide expansive views over the playing fields. The Library design includes collaborative learning spaces and as well as spaces for individual learning and more intimate learning activities. A key feature is the tiered steps adjacent to the glass wall, connecting the mezzanine with the main library, which is designed be used as informal seating and as setting for story time.

The location of the Library was determined by the PRG during the concept stage after consideration of a number of sites including the refurbishment and upgrade of the existing Library on the eastern, Junction Road side of the site. The PRG felt strongly that the Library was an important function in the school and that the elevated location of the approved site provided expansive views and a connection to the landscape that could be capitalised through the library design. The school has a history and culture of opening its gates for community use and the approved location of the library within the school grounds was not seen as an impediment to shared use with the community. The Library is designed so that it can be accessed independently for use during after school care or out of hours.



52. Library furniture layout

53. Concept Perspective of Library Interior



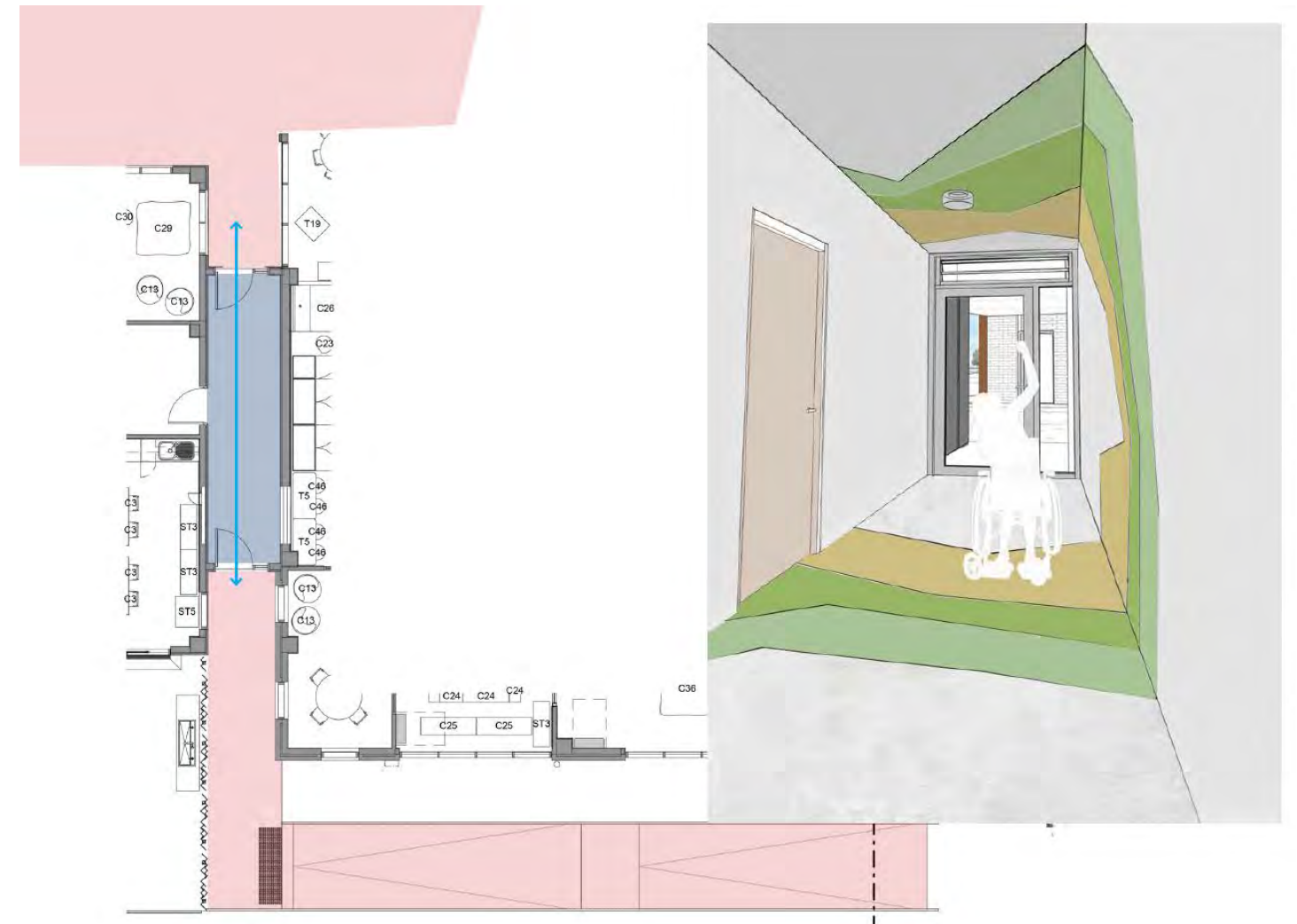
7.8 Canteen and Community Kitchen:

The on-site food cultivation and production coordinated with curricular and extracurricular activities is an ongoing program in Schofields public school which approved to be reinstated in the redevelopment. The community kitchen teaches the students about food production and healthy food choice and fosters community engagement. The current facility is used during after school care and during after-hours use of the campus.



54. Current kitchen garden Program at school

7.9 Corridor



55. Corridor connecting back of school to front-Disable access connection

7.10 Outdoor learning spaces:

The school's verandah's have been designed to provide sheltered outdoor learning areas and a transition between the homebase learning areas and the external play spaces. The deep verandahs provide shading from the sun and shelter from the rain. They include wet area sinks and benches and wide sliding glazed doors provide a direct connection to indoor spaces specifically designed for more active learning activities.



56. Building form creates outdoor learning areas opportunities while maintains the external circulation spaces

7.11 Playing fields

The existing playing fields at the southern end of the site are to be retained and protected under approval MP_8740.

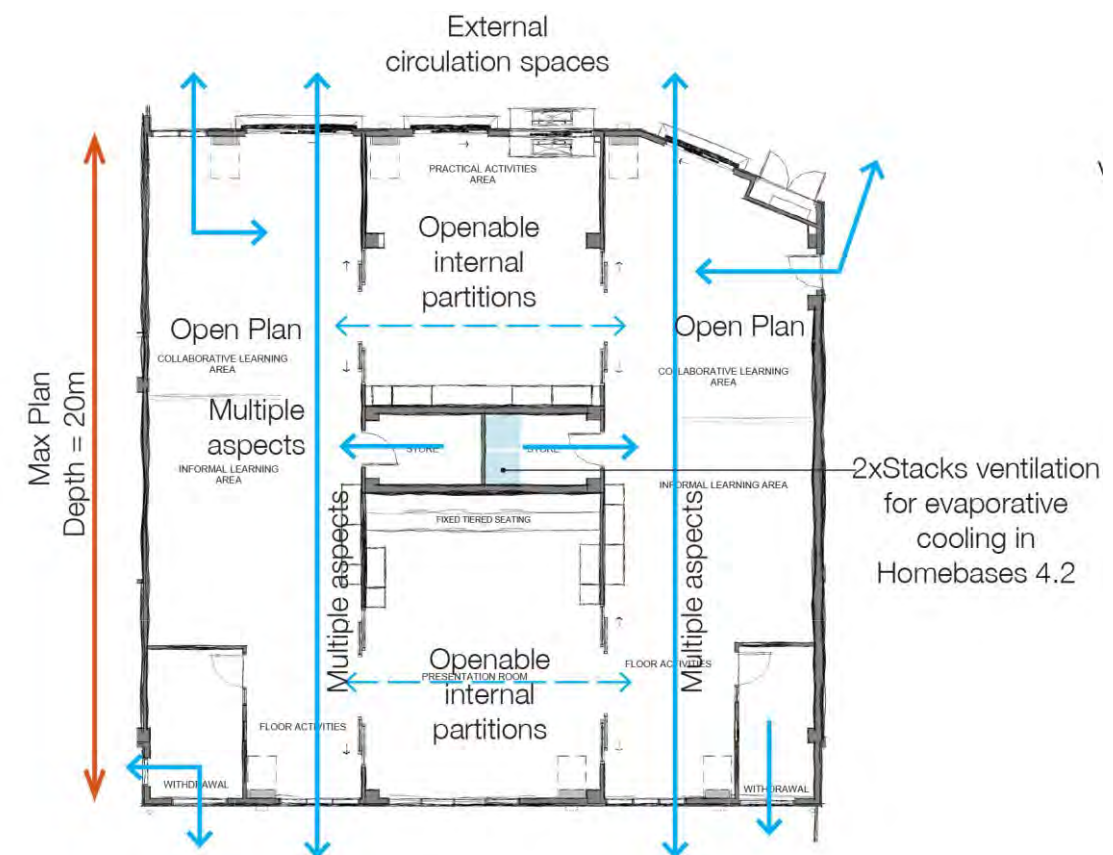
The Playing Fields may be used by the community after hours with supervision with access through the main school entries on the northern plateau. The approved design does not include a connection between the school's Playing fields and Schofields Park, however this could be easily facilitated in a number of locations along the western boundary should and arrangement for access be made in the future.

7.12 Thermal Comfort and cross ventilation

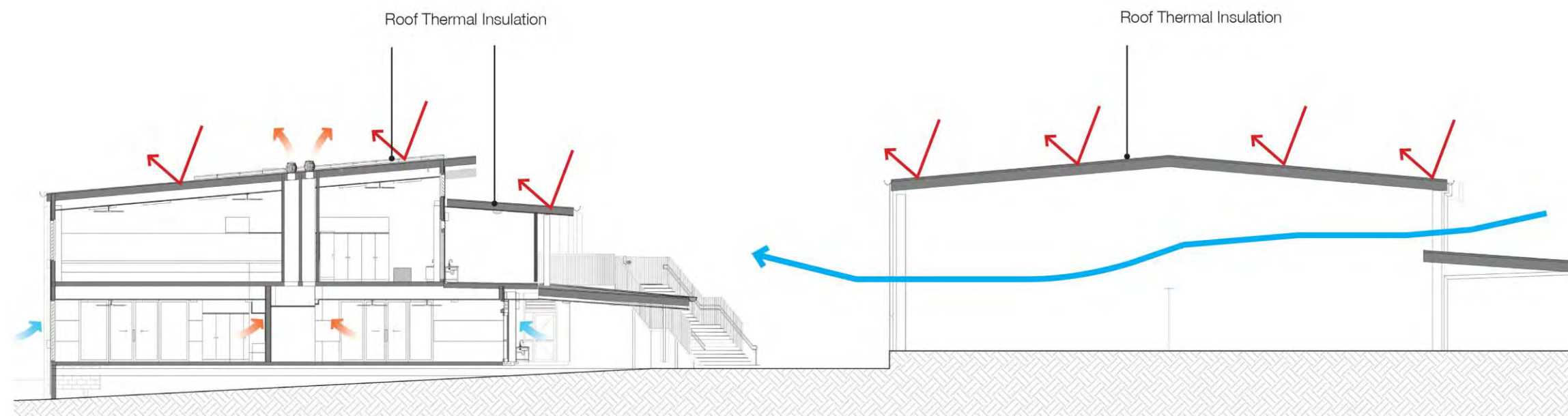
The approved upgrade of Schofields Public School involved the replacement of existing outmoded facilities with new purpose designed learning spaces designed to meet contemporary codes and standards.

The revitalized school campus will provide a healthy and safe environment for the students, staff and community. The design is environmentally responsive and responds to the environmental characteristics of the site with the aim of optimising and utilising the positive aspects of the environment whilst reducing negative impacts. The upgraded Schofields Public school will accommodate spaces for future focused learning while providing optimum comfort and amenity for the school users.

The design incorporated a number of passive design elements responding to the specific environmental conditions of the site. The new homebases and Library are designed in a linear form aligned in a north south direction meaning that the longer facades are orientated to the east and west. The western façade is shaded from the sun by a row of large trees which are one of the key landscape elements of the site. A treatment of deep reveals to windows, which is incorporated as an architectural feature, will further protect the windows on the western elevation and a similar detailing is designed to shade the northern façade windows. The east side of the building faces into the central courtyard and is shaded by deep verandah breezeways. The verandahs extend the length of the building and are designed as outdoor learning areas as well as for general circulation.



58. Air circulation through homebases diagram



57. Stack Ventilation diagram

The spaces within the building are naturally ventilated. The home base learning areas are 'open plan' and designed as a series of interconnected spaces with high ceilings. Windows and high level operable louvres provide good levels of natural cross ventilation through the spaces and the openings can be adjusted and operated by the school users to suit their needs. The depth of the individual homebases varies. In each instance the BCA requirements (5%) for ventilation are well exceeded (approximately 10%) based on the area of operable windows. These calculations, do not take into consideration the openings provided by the wide sliding glazed doors, which open onto the shaded verandahs from each homebase and will significantly add to the openable area the cross ventilation of the space. The 2 x 2 groups of homebases on the Ground Floor have the deepest floorplates in the east west direction. Again, while these homebases exceed building code requirements for the openable area of windows, wide sliding glazed doors and the addition of wind ventilator assisted stack ventilation at the centre of the homebases plan will further enhance the opportunities for natural ventilation of the space.

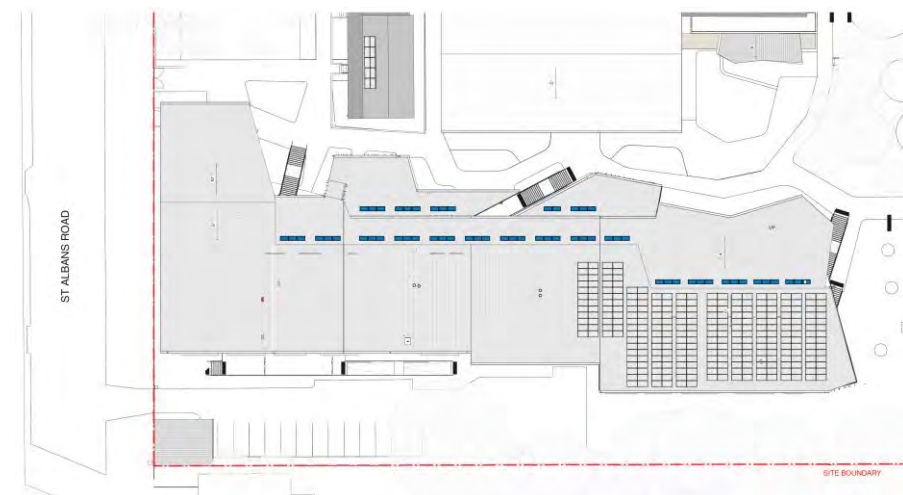
The internal spaces are provided with ceiling fans to promote further air movement. Flued gas heaters are also to be provided within the learning areas and are designed to the DOE's strict guidelines for safe and efficient heating of the learning spaces.

The design of the building fabric includes high levels of wall and roof insulation to insulate the building against heat loss and heat gain. The design also incorporates external louvre blades and sun shades, which are integrated to provide architectural expression to the building but also function to limit heat gain by shading the external façade and by reducing sun penetration to the verandahs while maintaining natural light and views.

A Daylight Modelling Report was prepared by the ESD Consultant Wood & Grieve Engineers and is attached in appendix 7. The report indicates that the learning spaces achieve adequate daylight during school hours which is balanced with the need for shading.

The Department of Education Educational Facilities Standards & Guidelines (EFSG) requires significantly more amenities for Primary Schools than the Building Code of Australia. The location of amenities within the approved design was determined through consultation between the Design Consultants, DoE stakeholders and the representatives of the School. The agreed location was based on convenient access to amenities from the learning hubs, issues regarding child protection and supervision (the school requested that no toilets be provided on the oval) and the potential for the provision of additional learning hubs in the future which would also require amenities in accordance with the EFSG.

To improve the daylight to the learning areas, particularly in the vicinity of the amenities the design documentation has been amended to include skylights in the verandah roof.

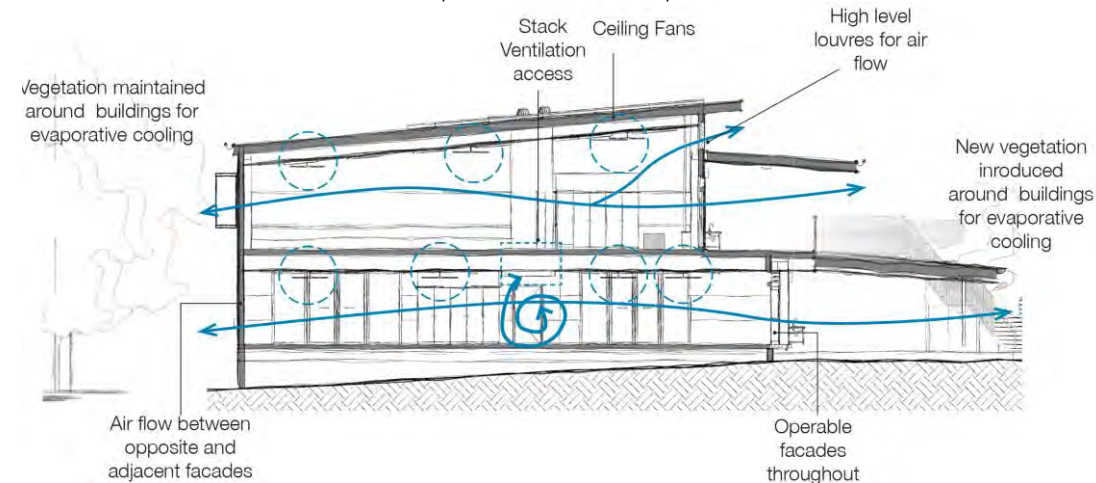


59. Roof Plan with additional skylights highlighted in blue.

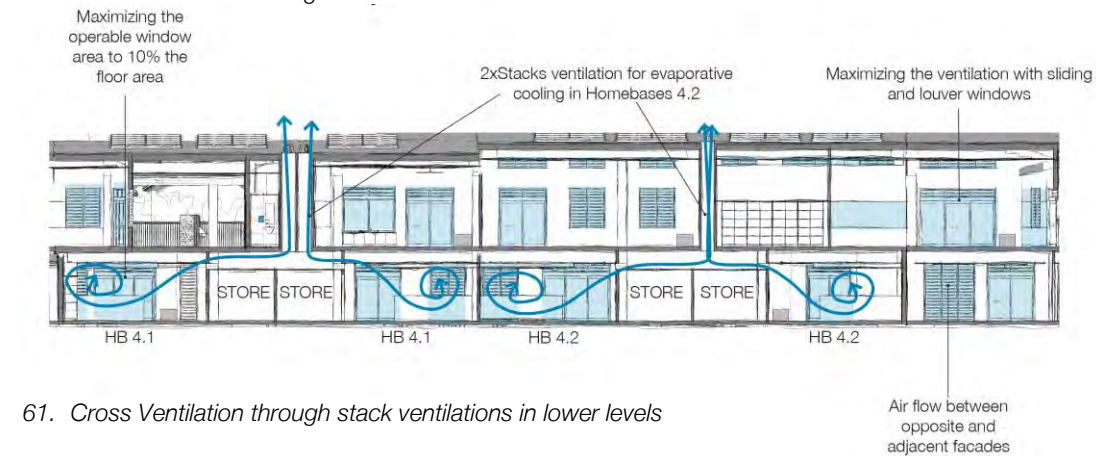
7.13 Sheltering of outdoor spaces

The approved design includes deep verandahs, a covered sports court COLA, a covered way linking the Sports Court with the existing school Hall.

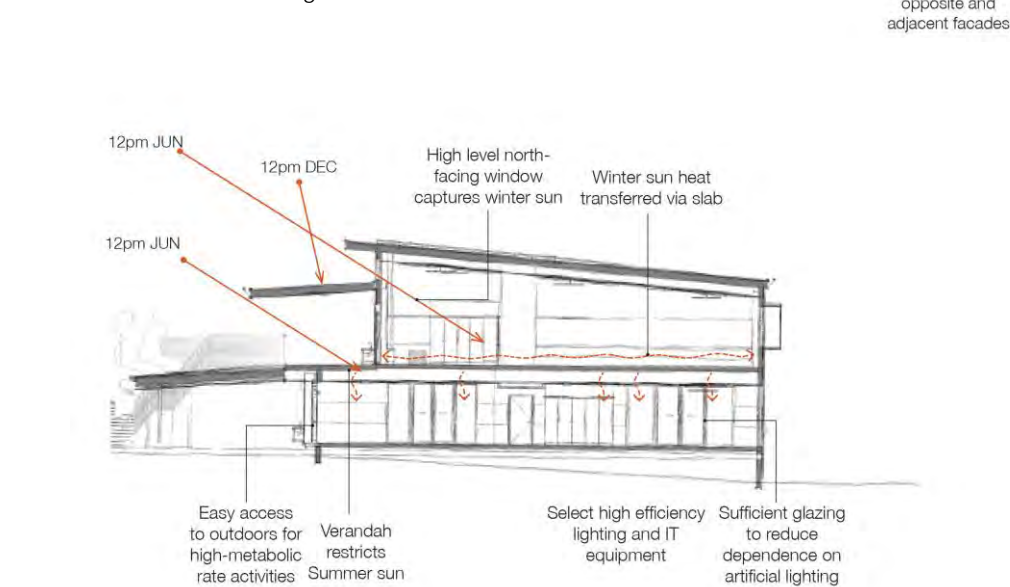
The verandahs and the COLA over the Sports Court are to be provided with the thermal insulation.



60. Cross Ventilation through windows



61. Cross Ventilation through stack ventilations in lower levels



62. Solar Access and heat transformation diagram

8.0 Response to Education SEPP Schedule 4

8.1 Response to Education SEPP: School Design Quality Principles

This Design Report has been developed to clarify the design intent of the approved design and demonstrate how Design quality was achieved in the approved design 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

Principle 1—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.

Site Planning in response to the site context

The approved design for Site planning of the approved design was based on the urban design analysis which identified the preference for retaining the site for any new School buildings in the location of the current school buildings, on upper northern plateau which is the historic location of the school, and allows the playing fields to be retained as open space.

This decision was also based on the analysis of the existing school buildings and the benefits of retaining Original School Building, the School Hall and the Administration Building as well as the clearing of the site of outmoded and redundant structures. This coincided with the desire to retain the existing school entries which, in turn, generated the siting of new structures in relation to the site entries and circulation spines, the relationship to existing buildings, the formation of outdoor play spaces and the retention and integration of key landscape features.

Another key driver of the siting of new buildings was the need to allow potential for further expansion without impact on the open space provided by the Playing Fields. The site planning therefore consolidates the construction of new structures into the northwest corner of the site providing the opportunity for the redevelopment of the north east corner of the site should the need for additional space arise. The construction of buildings to the boundaries of the site also allows for the centre of the northern plateau to be retained as outdoor space and a covered Sports Court is approved within the heart of the school as a space for sports, outdoor assemblies, activities associated with the after-school care as well as School Hall functions.

A number of options and masterplans for the site were developed before 3 final masterplans were submitted to the DOE and the PRG for review and endorsement of the preferred option. This was the design developed preferred concept option.

Built Form

As noted above the potential for the need to retain contingency for a possible further expansion of the school was one of the determining factors in the planning of the site and form of the approved development.

The approved new homebase, library and administration building is a two storey 'L' Shaped building form. The building is designed to be located in the northwest corner of the site and is setback from the residents and the trees along the western boundary by retaining the existing carpark.

The 'L' shaped form provides a degree of enclosure to the playground area in the centre and provides a buffer to the street and the carpark. The east-west leg of the 'L' connects with existing Junction Road entry and allows direct access into the school reception from the street. The approved Junction Road Street frontage provides a defined street edge which is characterised by a gabled roof form, masonry base and widow fenestration and is generally designed to relate to the residential character of the area while allowing the school to be clearly identified as a public school. The linear 'L' form also provides natural light and cross ventilation and for the homebases, the Library and the Administration which are also designed to be directly connected to outdoor areas.

The original concept for the design was named the 'tree house' as a reference to the treed nature of the site. The main roof is therefore designed with highlight windows to provide a lofty feel to the space and views of the tree canopy. In keeping with the treehouse theme, approved building is also designed with deep verandahs to the perimeter of the internal form of the 'L' providing a wide sheltered outdoor space connected with the outdoor play areas as well as the internal homebases, which has distant views through the trees. As noted above the form 'L' shaped form of the approved buildings provides enclosure to the intimate playground spaces and the verandah roofs are designed slope into the playground to enhance the sense of shelter and lower the scale. The edge of the verandah is designed as an irregular form and connecting stairs extend from the verandah edges at varying angles providing visual interest in keeping with the concept of a building relating to the natural, organic shapes found in the landscape.

Materials and Finishes

A variety of materials were selected based on their quality and durability. The approved materials include;

- > face brick
- > featured glazed brick
- > metal wall sheeting
- > pre-coloured fibre cement sheeting
- > Aluminium framed, powdercoated windows and glazed doors
- > Aluminium louvres, slats and window hoods.
- > Metal deck roofing
- > Galvanised handrails and balustrades

The face brickwork is approved at the external base of the building as a hardwearing durable material. A mix of fibre-cement sheeting and metal cladding is generally used at the higher. Aluminium blades are approved as sun shading expressed as feature elements in different side of the building.

Integration of the landscape

The approved landscape design for the site was developed by Context Landscape architects, with consideration of integrating the existing key landscape features, the existing site topography and the site orientation.

The retention of the northern plateau as the approved site for the main school group allows for the key existing landscape features such as the ring of indigenous trees at the site boundaries, the Federation path, the John Curtain tree and the Gallipoli tree to be integrated in the landscape design for the new campus layout. It also emphasises the existing school entrances which have been extended to provide a hierarchy of connecting accessways through the campus.

The approved development mainly retains the existing landform of the site and there is no significant deep soil excavation is approved. The location of the School buildings on the northern plateau also retains the playing fields as turfed open play space.

The varying topography of the site provides opportunities for both active and passive play. The approved central COLA and Sports Courts allows students to engage in formal and informal sports as well as providing a covered outdoor area for school assemblies and gatherings. The approved commemorative lawn is a celebration of the schools' heritage and is intended to provide a place for small class gatherings and reflection. Areas under existing trees are also intended provide opportunities for bush play and learning of the natural environment. Productive gardens are located adjacent the canteen to encourage practical learning through agricultural processes.

The approved landscape design utilizes the existing pedestrian entries to the school which are extended through the campus to allow ease of circulation and provide convenient connections to the school facilities. The pathways provide connections to play spaces and school facilities. All pathways are designed to integrate hard and soft landscaping elements and with consideration of the intended informal character of the upgraded school and to provide opportunities for play and learning.

A perimeter fence is approved for installation at the boundary of the site in accordance with DOE standard fencing details. The perimeter fencing is approved to be offset from boundary and installed predominantly within gardens beds to allow for a planted buffer strip along the street frontage and at main and to provide some screening of the school campus from the street. Powder coated finish of the fence is approved to be recessive in colour to minimise visual impact. At primary entry points to the school, perimeter fencing is approved to be further recessed to accentuate a sense of arrival and soften the visual impact. The additional area of recess will also allow for feature planting to be incorporated at entry points.

Heritage

Schofields Public School is included in Schedule 5 of Appendix 4 in the State Environmental Planning Policy (Sydney Region Growth Centres). Appendix 4 is the Alex Avenue and Riverstone Precinct Plan 2010. Only the original part of the school site is identified as a heritage item.

The design retains important site features which relate to the history of the School including the Original School Building, Federation path, the John Curtin tree and the Gallipoli tree, the playing fields and the boundary trees. It also retains the original school site as the site of the expanded school.

Refer to the Heritage Impact Statement submitted with the original application for further information.

Aboriginal Cultural Heritage

An Aboriginal archaeological survey of the Schofield's Public School site, including the area subject to this DA has found that the site contains a 'large concentration of ochre and a possible artefact'. The Aboriginal Archaeological Assessment prepared by Comber Consultants states that the site has potential to yield further information about the pre-Contact Aboriginal occupation of the area.

Further site investigations are to be undertaken by a specialist Aboriginal heritage consultant to determine whether Aboriginal objects are present within the DA area and, ACHAR reported there were no artefacts found on site. Should objects be found then

approval will be obtained from OEH to salvage any other objects uncovered during the approved excavation works associated with the project.

Consultation with the Aboriginal community has, and will continue to be, undertaken consistent with the NSW Office of Environment and Heritage's Aboriginal Cultural Heritage consultation requirements for proponents 2010 and an Aboriginal Cultural Heritage Assessment report.

The findings from the site investigations and their importance to Aboriginal people will be incorporated into interpretation opportunities throughout the school site.

Principle 2—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

Ecologically Sustainable Development (ESD)
The approved redevelopment of Schofields Primary School has been developed using the principles of ESD and has been assessed against a suitable accredited rating framework. The project is capable to achieve a high level of environmental sustainability and has been benchmarked as Best Practice with 4-star Green star equivalency.

Refer to the ESD Report for further information.

Passive Design

The approved building incorporates the following passive design principles:

- Natural ventilation through windows, ventilation stacks and sliding doors.
- Shaded verandahs
- High levels of daylight through windows and glazed doors.
- High levels of thermal insulation.
- Sunshading to windows and verandahs.
- 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.

Energy Efficiency

The approved building incorporates the following energy efficient initiatives:

- Energy modelling demonstrating a reduction in energy consumption of the approved building compared to a reference building.
- Natural ventilation.
- 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.

Water Efficiency

The approved redevelopment incorporates the following water efficient initiatives:

	Water efficient fittings and fixtures. Rainwater harvesting: rainwater tanks have been provided for rainwater harvesting Water Sensitive Urban Design (WSUD).
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Waste and Recycling

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

The School is well serviced by the existing public bus network, providing access to nearby public facilities and local centres. A new bus layback is approved to be constructed on the eastern side of the site on Junction Road.

The existing carpark is retained and is designed with a pick up drop zone for special needs students.

The approved design includes bicycle parking facilities and end of trip facilities for staff.

Durability of materials

The materials used in the approved new building works have been selected for their aesthetic qualities and for low maintenance and durability. Materials such as face brickwork and precoloured fibre cement have been selected for their ‘earthy’ qualities relating to the character of the natural landscape. Aluminium blades are used as sunshadning and screens and sun hoods to windows incorporate brighter accent colours appropriate for the primary school environment.

Principle 3—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.

Accessible Campus

The approved redevelopment is aimed at retaining the character of the school as a school set within welcoming landscaped grounds and gardens. The approved design retains the existing site entries and general topography. Main circulation spines through the site are approved linking with the entries so that the site will be easily navigated and wayfinding will be relatively straight forward. Where there is steeper topography walkway or ramp access is provided including to the Playing field.

Community Engagement

The design process has included engaging with the local and the school community to develop the brief and vision for the project. The project has been designed to meet the curriculum facilities requirements of the DOE whilst also providing facilities that can be shared with the larger community at times when the school is not operating.

The school has a long history and culture of opening its gates and allowing supervised access to the facilities, gardens and grounds for community use and one of the Educational Planning Principles established at the commencement of the project was ‘h) Reflect the school’s, community-focused identity and preserve the school’s sense of openness’.

While privacy and security are paramount, supervised access into the school grounds is seen as continuing to foster the strong connection with the community that the school has always enjoyed.

As noted above, the approved sitting of new buildings in relation to existing buildings has been designed with consideration of privacy and security so that new buildings are generally located towards the boundaries facing into the central courtyard. The concept for the layout is that once inside the school campus there is ease of wayfinding, convenient access and good sight lines for overall surveillance and supervision of the space.

The Administration area, the Library, the Hall, the Homebases and the Kitchen and Canteen are also designed to be independently operated and not dependant on access to other facilities for their use. There are amenities in the School Hall otherwise amenities are generally external and can also be unlocked as required for afterhours access.

The school has an active program of after school care. The approved upgrade of the school has been designed with consideration of potential use of the School Hall, Sports Court COLA, Special Programs Rooms (in the original School building) and the community kitchen for the after school care program.

There has also been consultation with the local Aboriginal community regarding the potential Aboriginal Cultural Heritage items found on the site. This consultation is ongoing and will continue through the SSDA process.

Accessible Building

The approved Expansion of Schofields Primary School 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 approved new buildings, the upgraded existing buildings and the new landscaping were 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.

The project is designed to AS 1428.1 – 2009.

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

Access provisions that will be provided in the building include:

- > Walkways and ramps to landscaped areas provided in accordance with AS 1428.1.
- > New ramp access to the Original School Building and the Canteen 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.
- > General accessible toilets and ambulant facilities for students and staff provided in accordance with AS 1428.1.
- > Special needs facilities for special needs students designed to standards including the DOE EFSG.
- > Signage in accordance with AS 1428.1.

Principle 4—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.

Healthy Building

The approved building has been designed to maximise natural ventilation and natural light to benefit the health and wellbeing of building occupants. The homebases, administration areas and library incorporate windows and glazed doors for excellent natural light. Operable windows, sliding doors and ventilation stacks provide good natural ventilation.

The building uses robust and durable materials that have low VOC. Flued gas heaters are specified in accordance with the DOE safety guidelines.

Pedestrian Amenity

The approved design is for a pedestrian friendly campus and priority is given to pedestrians. The design also includes bike parking and end of journey facilities for staff.

The Playing Fields may be used by the community after hours with supervision with access through the main school entries on the northern plateau. The approved design does not include a connection between the school’s Playing fields and Schofields Park , however this could be easily facilitated in a number of locations along the western boundary should and arrangement for access be made in the future.

School entrances have been assessed for pedestrian safety, and the Traffic Impact Assessment has addressed potential pedestrian/vehicular interactions. The existing school fence will be replaced by a 2.1m high security fence, with entrances carefully articulated for legibility and inclusivity. The design has been reviewed by a BCA consultant and the safety requirements of the EFSG have been applied.

An external lighting strategy will be included in the Detail Design stage for visibility and surveillance outside school hours.

Crime Prevention Through Environmental Design (CPTED)

6.3 Crime Prevention Through Environmental Design

The approved expansion of Schofields Primary School incorporates Crime Prevention Through Environmental Design (CPTED) to create a safe and secure environment that encourage will 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 school is located within secure private grounds and protected by a boundary fence (approximately 2.1m high) and gates to its entire perimeter.
- > The School is naturally surveilled from within the school campus by staff who will be using the facility at all times when the School is open.
- > Within the school, all spaces will be supervised by the school staff at all times when being used.
- > The staff administration area and the school reception is located at adjacent to the St Albans Road entry and the School Canteen is located adjacent to the Junction Road entry.
- > There are views across the Playing Fields from the
- > 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.
- > The school will be well maintained and will be highly used.
- > The school will be provided with an integrated system of security cameras and alarms in accordance with DOE requirements.

Amenities

Amenities are designed to be readily accessible and are positioned to be convenient to teaching and playground areas. They are also designed to be private for users but at the same time to be well ventilated and located for ready surveillance. Staff facilities are provided in the Administration area and other areas of the school.

Principle 5—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.

Amenity provided by new buildings

The approved new homebase, library and administration building is a two storey ‘L’ Shaped building form. The building is designed for good natural light and ventilation and to provide optimum views through to the landscape. The homebases are designed as ‘open planned’ teaching hubs with interconnected spaced designed to suit a range of learning settings. The internal spaces are designed using a variety of finishes and materials to provide a light and lively interior with purpose designed joinery and specifically selected furniture appropriate for particular learning setting as well as the age and stage of the school students.

The approved new building is designed with deep, shaded verandahs facing into the internal court yard playground. The verandahs are provided as outdoor learning areas and are directly connected to the homebase learning area through wide sliding glazed doors. Wet area sinks and wash facilities associated with the internal practical activities area inside each homebase are located on the verandahs.

The approved new COLA and Sports Court will provide a sheltered space for gathering and informal and formal sports. A new covered way will connect the Sport Court with the School Hall. The Community Kitchen is approved to be reinstated to continue the schools program of learning from the production of food including the use of the Kitchen after school hours.

Landscape Amenity

The landscape design is focused on retaining, protecting and reinstating the natural landscape character of the existing school grounds while provide enhanced opportunities for play and learning and ease of access thought out the site. The design retains existing key landscape features such as the John Curtin tree, Gallipoli tree and the Federation path. It also retains the large scale indigenous trees around the boundary and the open playing fields which are used extensively by the school for sport and recreation.

The topography of the site and the arrangement of buildings and pathways allows for a variety of opportunities for active and passive outdoor play areas which are incorporated in the design with a mix of hard and soft landscaping elements and extensive new planting. The paly areas designed to meet the needs of the variety of age groups and abilities of the students that will be attending the school.

The network of pathways is primarily focused providing clear access throughout the site and linking these entries with the new and existing buildings to facilitate ease of pedestrian movement while incorporating play and learning elements in accordance with informal nature of the design concept.

Acoustic Amenity

The approved redevelopment will not result in a significant additional acoustic impact on neighbouring properties. Despite the approved increase in school population the school activities generally won’t generate excessive acoustic nuisance. The approved new building generally screens the houses along the western boundary from noise generated from outdoor play areas. This also serves to protect the playground from noise from the busy roads bounding two sides of the site.

The new building is designed with acoustic insulation. The roof to the approved COLA and the external verandahs is also designed with insulation.

Refer to the Acoustic Report submitted with the original package for further information.

Amenity to Neighbours

Schofields Primary School is bound by public streets on the north, south and east sides. The majority of the western boundary abuts the open playing fields of Schofields Park. There is a row of houses facing onto St Albans Road that are adjacent to the School at the north west corner of the site. The approved new building has been designed as a two storey building generally in accordance with the 1 – 2 storey character of the surrounding area. The building is setback from the western boundary by the existing carpark which is to be retained and there is a line of substantial trees along the boundary between the first of the houses and the Carpark.

Shadow diagrams have been prepared for the approved development. These diagrams largely demonstrate that the approved development will have minimum or no shadow impacts to neighbours for most of the year.

Storage and services areas

The approved design includes storage within the homebase learning areas, the library and the Administration areas in accordance with the EFSG. The existing refuse area within the carpark is retained and is separated from the school playground areas through the location of the approved new building.

Principle 6—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.

Wider strategic planning

The approved Expansion of Schofields Primary School considers wider, long term strategy for the planning of the site. The decision to construct the new buildings on the northern plateau in the location of the existing school buildings retains the playing fields as open space. The decision to consolidate the main new building associated with the expansion into the north west corner of the site maximises the land use allows for potential for further expansion of the school while still maintaining the open space provided by the Playing Fields.

Flexibility and Adaptation

The approved new school building is designed to flexible and adaptable. The homebases are designed able to accommodate a range of learning settings, functions and activities and can be reconfigured to future and changing needs. The building fabric is designed with non-loadbearing partitions to facilitate the potential to change the layout should the need arise in the future.

The approved building provides facilities to meet the DOE’s curriculum needs, whilst providing a range of facilities that can be shared with the larger community when the school is not in operation.

Whole of Lifecycle

The approved expansion of Schofeilds Primary School 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: Two rainwater reuse tanks has been provided for the dual purpose of storm water detention and rainwater harvesting.
- Existing key landscape features are retained including large areas of deep soil

Principle 7—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 Excellence

The design for the redevelopment of Schofields Primary School has undergone a rigorous design process involving representatives of the School, the local community and the DOE who are committed to a quality outcome. The Schofields area is an area in transition and the design has evolved with consideration of the current and future context of the surrounding area.

Positive impact on the quality and sense of identity of the neighbourhood.

The approved Junction Road Street frontage provides a defined street edge which is designed as a two storey frontage with a gabled roof form, masonry base and widow fenestration generally designed to relate to the residential character of the area while allowing the school to be clearly identified as a public school.

Relationship to the context of the site

The character of the site is strongly influenced by the existing landscape features. The original concept for the design was named the ‘tree house’ as a reference to the treed nature of the site. While the Junction Road elevation is designed with an urban character the facades facing the internal landscape playground are designed to be informal and with a strong connection between internal and external spaces. In keeping with the treehouse theme, the approved building is also designed with deep verandahs to the perimeter of the internal form of the ‘L’ providing a wide outdoor space connected with the outdoor play areas as well as the internal homebases, which has distant views through the trees. As noted above the form ‘L’ shaped form of the approved buildings provides enclosure and privacy to the intimate playground spaces and the verandah roofs are designed slope into the playground to enhance the sense of shelter and lower the scale. The edge of the verandah is designed as an irregular form and connecting stairs extend from the verandah edges at varying angles providing visual interest in keeping with the concept of a building relating to the natural forms found in the landscape.

Materials selections

The materials used in the approved new building works have been selected for their aesthetic qualities and for low maintenance and durability. Materials such as face brickwork and precoloured fibre cement have been selected for their ‘earthy’ qualities relating to the character of the natural landscape. Aluminium blades are used as sunshadning and screens and sun hoods to windows incorporate brighter accent colours appropriate for the primary school environment.

9.0 Conclusion

The approved expansion of Schofields Public School is designed to serve an anticipated population growth and to meet the DoE’s Educational Planning Principles. The existing character of the local area has been extensively considered to ensure the redevelopment capitalises on the positive aspects of its context, and ameliorates the negative aspects in the approved design.

The key urban design strategies consider important street frontages, privacy, acoustic impacts, site remediation, safety for school users and the community, aesthetics, and the longevity of the school. These considerations will continue to inform the design through Detail Design and Construction phases.

the proposed 4.551A application relates to amenities, landscape, balcony and decorative elements and has negligible impact to the approved works on site