

04 DESIGN PROCESS

04 DESIGN PROCESS

SITE APPROACH + OPTION TESTING

DESIGN APPROACHES AND OPTIONING

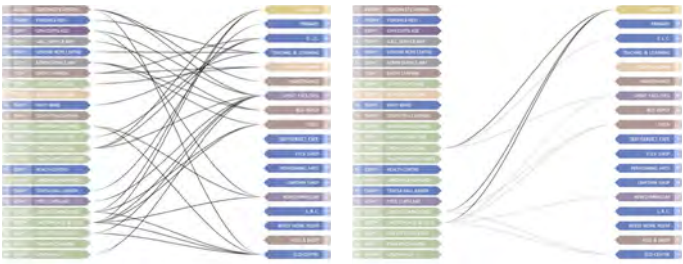
The Loreto Normanhurst Design Leadership Team, AJ+C and consultant team engaged in a rigorous master planning design process. This included deep analysis of the brief, functional requirements of the school and pedagogical concepts, site constraints and barriers to controlled growth.

Extensive consultant input was provided and also forms part of this submission.

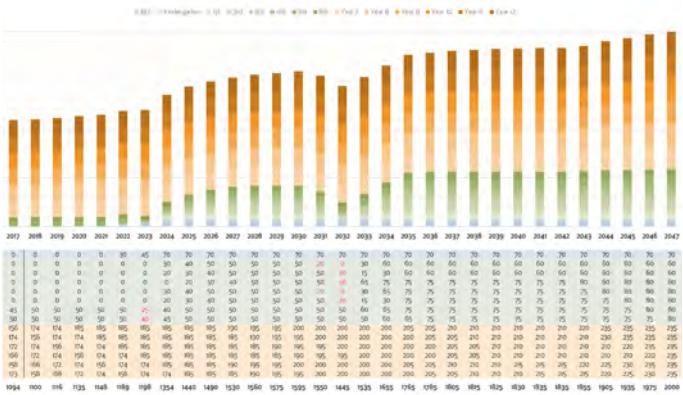
The site selection of the major projects was refined through an extensive optioning process that found the best location for each function without shutting out good opportunities for competing functions.

Each of the reference designs in the master plan included critical briefing notes that stemmed from the site selection process and controlled growth objectives.

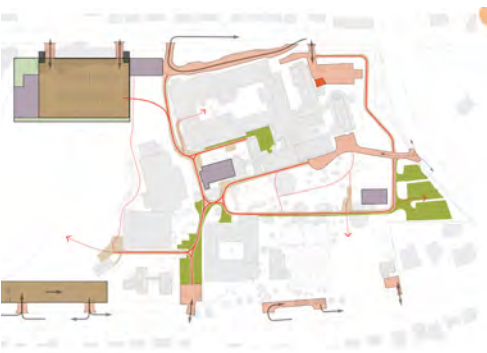
Fortnightly meetings were held with the school and design teams. The preparation for these meetings was collated into *design diaries* enabling the team to execute multiple ideas and concepts across the master plan while constantly testing the designs against the school's vision, strategic path and the goals of the Education SEPP. These design diaries acted as a return brief document which was constantly reviewed and updated.



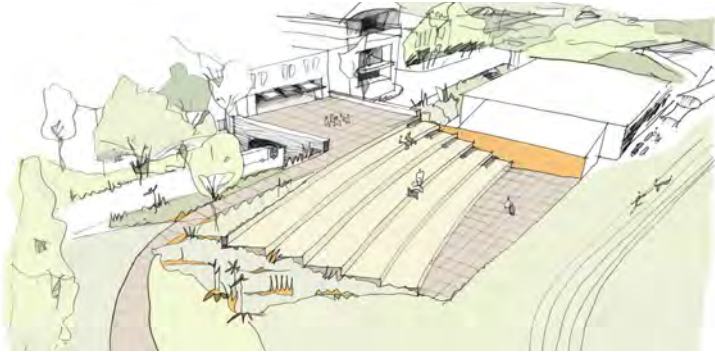
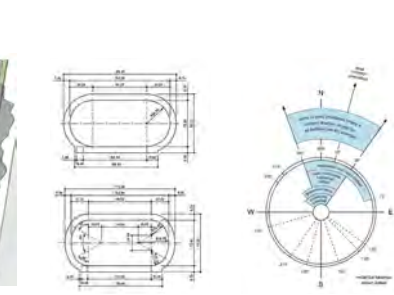
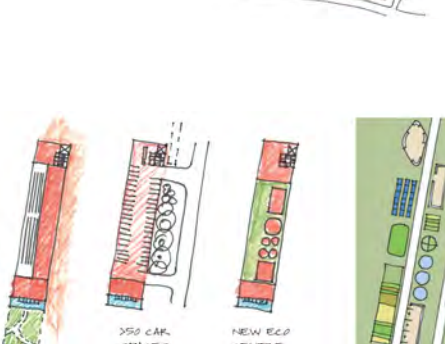
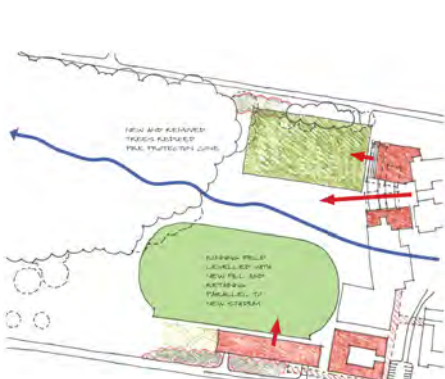
FUNCTION / SPACE CORRELATION ANALYSIS

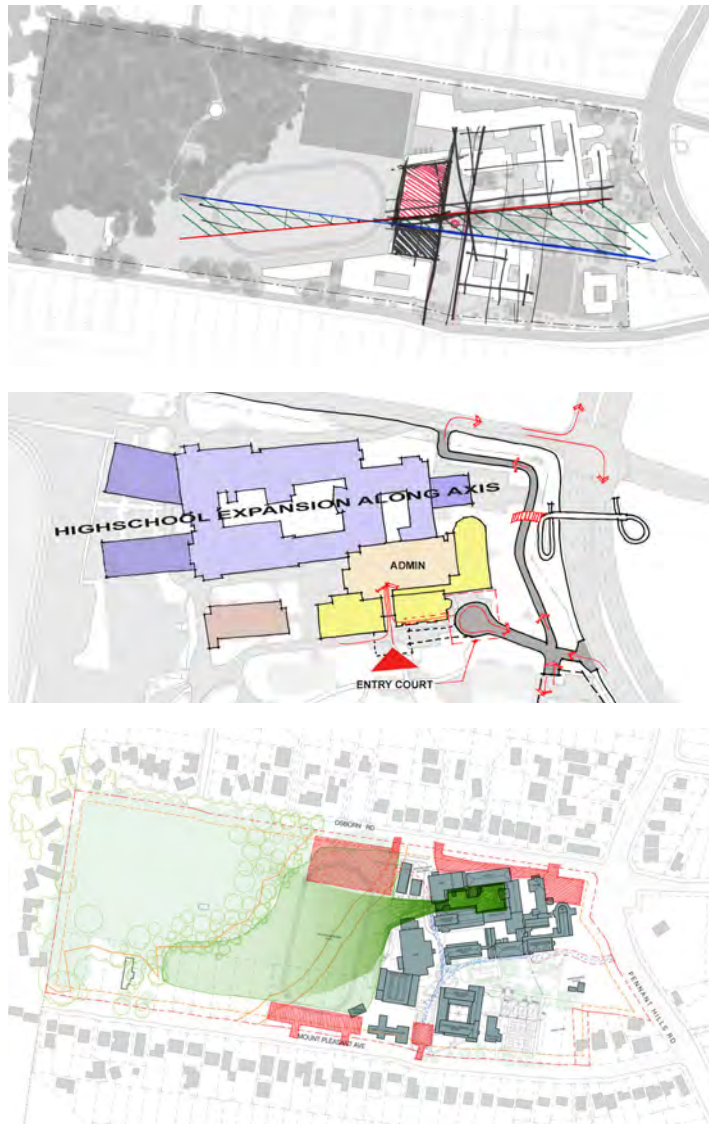


CONTROLLED POPULATION GROWTH ANALYSIS



PEDESTRIAN VEHICLE SEPARATION CONCEPTS

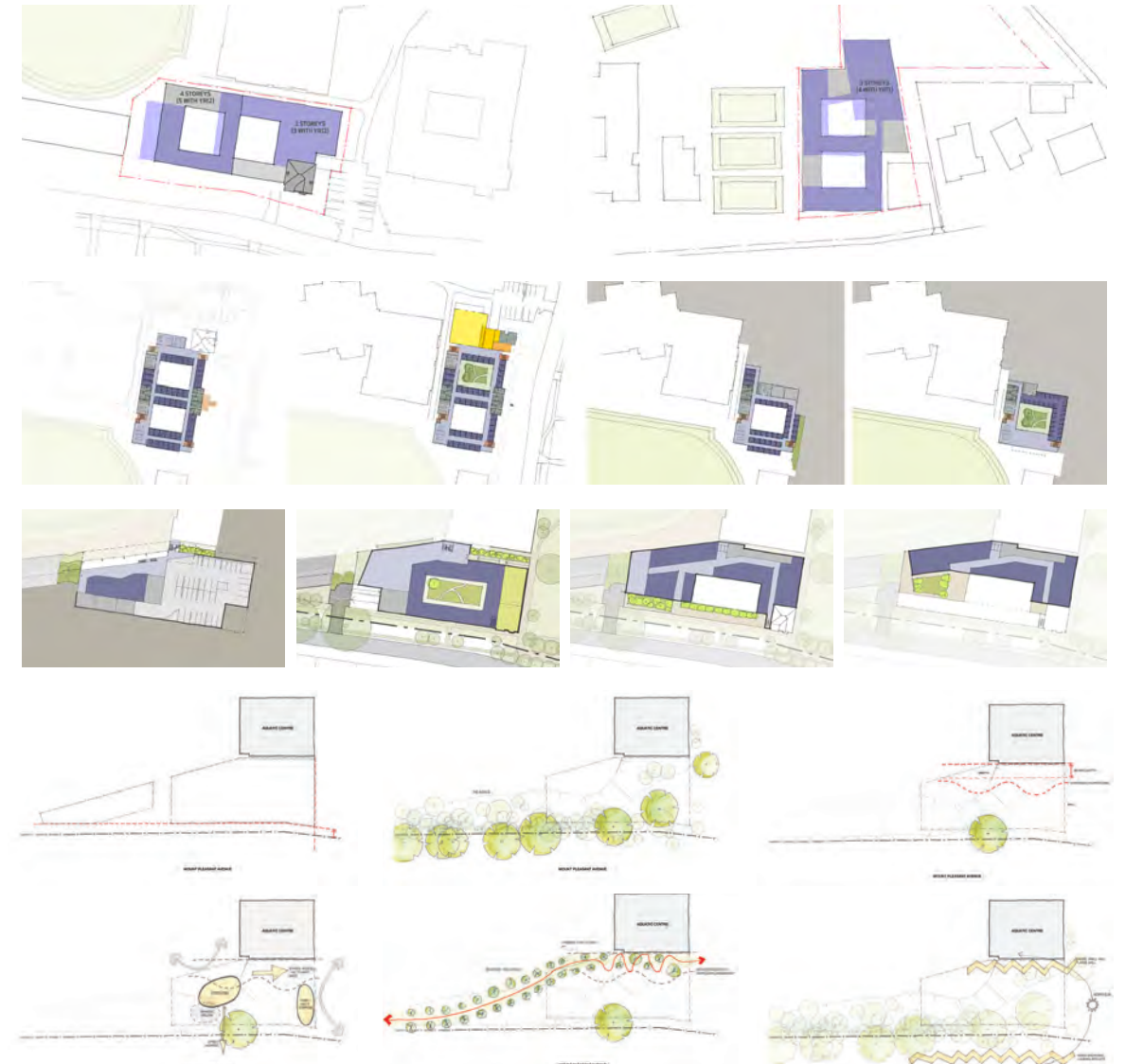




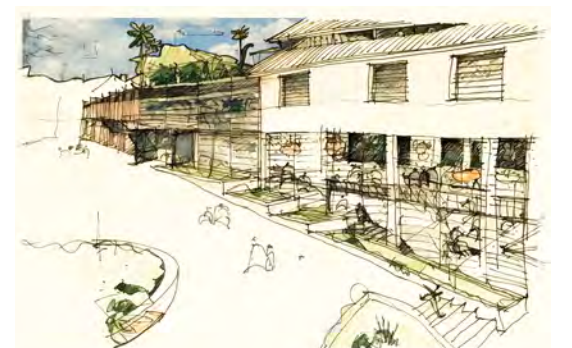
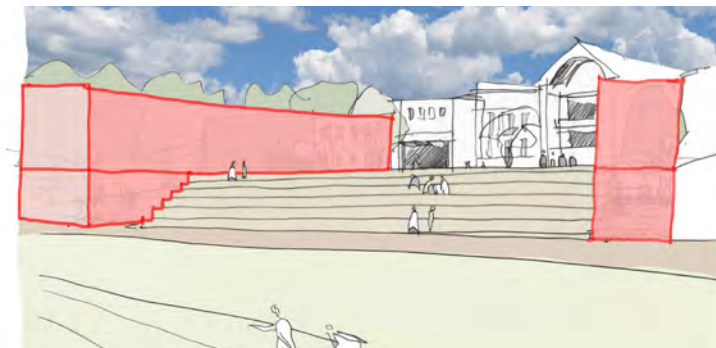
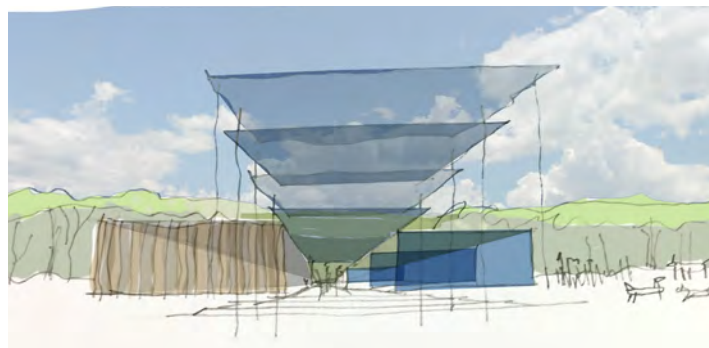
AXIS, ADDRESS AND ENTRY CONCEPTS

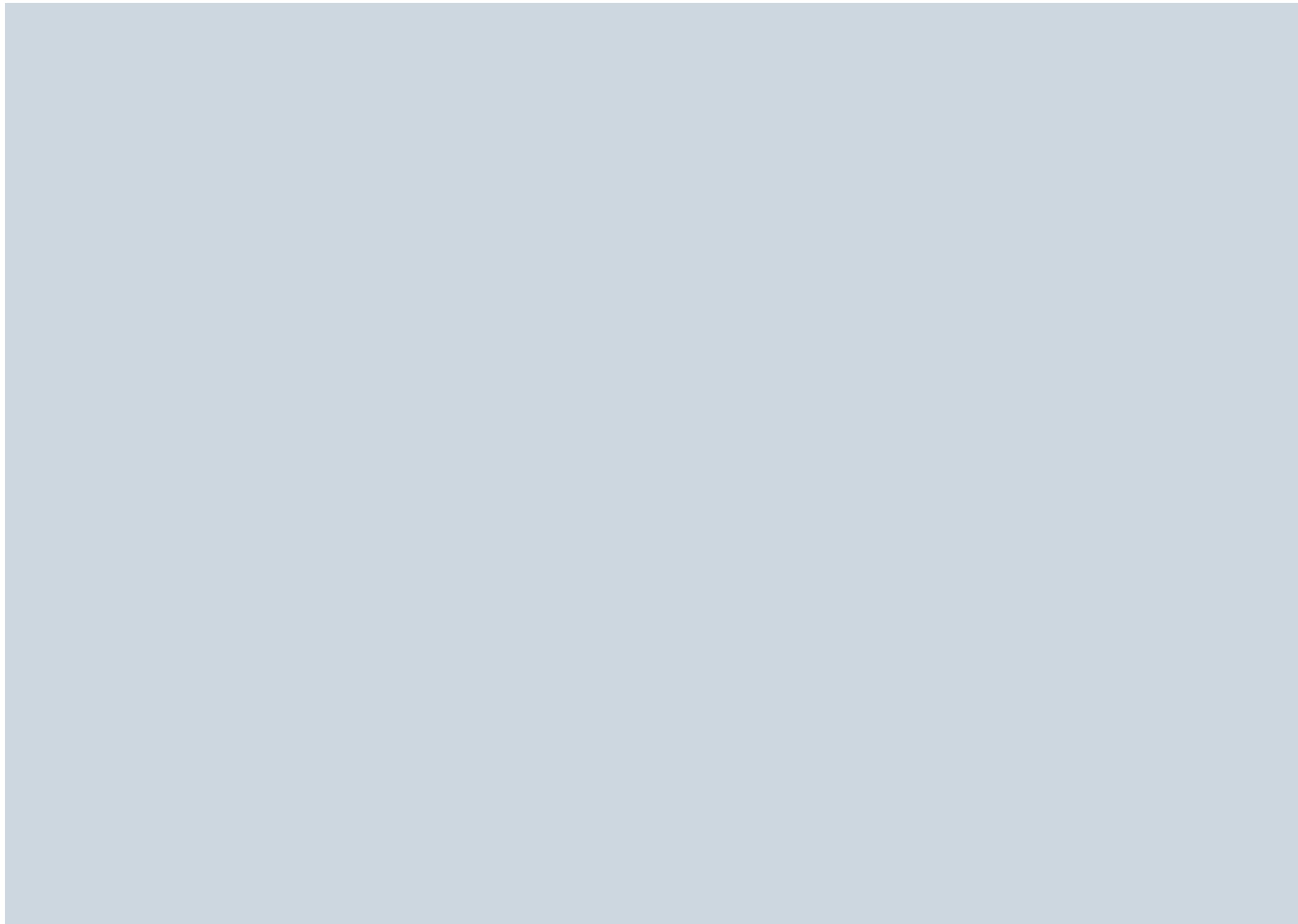


BOARDING HOUSE CONCEPTS AND LOCATION STUDIES



BOARDING HOUSE SITING AND FUNCTIONAL CONCEPTS







05 CONCEPT PROPOSAL

05 CONCEPT PROPOSAL

CONCEPT MASTERPLAN



Refer architectural drawing set of Concept Proposal for full drawing set including elevations and plans and details of envelopes.



05 CONCEPT PROPOSAL

MAJOR PROJECTS + KEY BRIEFING ITEMS

ENVELOPE 1 (STAGE 01 PROPOSAL)

- Boarding Facility**
- + boarding accommodation with dining, parking, dock and commercial kitchen

Refer Stage 1 architectural drawing package and chapter for details

Project A (Stage 01 Proposal)

- Garden Plaza**
- + New landscape located in the current primary school car park, designed to allow for outdoor assembly of the whole school population

Project B (Stage 01 Proposal)

- Landscape to Demolished Dock + Maintenance Wing**
- + Fully pedestrianise the existing services court by removing all vehicles except for small service buggies
 - + Relocate existing dock, kitchens and waste centre
 - + Demolish the enclosed walkway, classroom and staff room building connecting the existing dining room and Mary Ward Building to enable restoration of the heritage convent building
 - + Replace bitumen areas with terraced gardens and paved areas
 - + Create generous verandahs, openings and glazing to maximise indoor/outdoor connections around the new courtyard

ENVELOPE 2

- Secondary School**
- + Connection between Mary Ward courtyard and north quad
 - + Relocate main reception
 - + Relocate staff and administration
 - + Increase interface between staff and students
 - + Third storey addition to ‘Science’ block
 - + Additional teaching spaces
 - + Internal renovations after removal of boarding and relocation of reception and staff
 - + Provide connection from the heritage eastern gardens and new arrival plaza through into the secondary school top courtyard

Project C

- Arrival and Main Visitor Entrance**
- + Relocate main visitor entry to between 1897 Building and current boarding dining room (current entry to boarding reception)
 - + Demolish and widen entry with new glazed opening constructed within heritage constraints.
 - + Demolish level 5 toilet block
 - + Lightweight cantilever awning/entry to provide a sense of an address
 - + Drop-off to be provided from new cul-de-sac minimising bitumen surface and vehicle access
 - + Paved walkways to be provided between drop-off and entry
 - + Clear view to reception and beyond into administration

Project D

- Reception**
- + Direct visual and physical connection between reception and administration
 - + Generous naturally lit reception desk, waiting and office areas with gallery and display areas
 - + Semi-public access to special function areas
 - + Waiting areas connected directly to verandahs and new landscaped courtyards to the south
 - + Reception to incorporate small teaching areas for casual interactions between staff, students and the wider community.
 - +

Project E

- Learning Resource Centre Expansion**
- + Increase the floor area by adding a ‘pigeon loft’ roof
 - + Provide strong connections to other learning areas
 - + Large curved stair linking the two floors with views south to playing fields and bush
 - + Covered landscaped rooftop walkway + garden to the north connecting new addition to the existing building

Project F

- Deirdre Rofe extension**
- + Three storey extension adjacent to Deirdre Rofe building and additional third storey to the science wing
 - + Provision of approximately 5 flexible, general learning areas
 - + Teacher and staff areas expanded on the ground level around the upgraded top quad.
 - + Maximise student-staff visibility and contact and remove barriers to allow incidental interaction
 - + Existing tuck shop will be replaced with a new uniform shop on the lower ground level
 - + The Deirdre Rofe extension will enclose and complete the Top Quad. The existing largely solid classroom and office walls will be opened up to create a more transparent, cloistered effect

Project G

- Theology Centre**
- + Generous space with approximately 6 general learning spaces across two storeys
 - + Flexible learning environments
 - + Proximity to the chapel for possible theological use
 - + Sympathetic to architecture of the chapel
 - + Minimise impact on existing trees

ENVELOPE 3

- Pennant Hills Road Facility**
- + Possible uses to be considered include:
 - + Multi-function hall
 - + Sports hall
 - + Music and drama centre
 - + Year 11 and 12 school and study facilities
 - + Multi-storey school extension
 - + Underground parking to be included in the development
 - + Future proof car parking for alternative use
 - + Escarpment to Pennant Hills Road may allow for lower level windows

ENVELOPE 4

- Primary School**
- + Expansion to accommodate years K-4
 - + Current health centre building to be repurposed as Primary School expansion
 - + Separate common rooms for Years K-2 and Years 3-4
 - + Generous outdoor play areas with gardens, cubby houses, play equipment and indoor/outdoor playground
 - + Kitchen with cooking facilities
 - + Maximise connection between indoor/outdoor spaces
 - + Staff and visitors to share underground car parking
 - + Short stay and drop-off dedicated car spaces adjacent to Primary School, accessed from Mt Pleasant Ave

ENVELOPE 5

- Mary Ward Building**
- The Mary Ward Building will be upgraded after the relocation of current boarding facility.
- + Facility to be upgraded to be inclusive incorporating lift access and accessible classrooms
 - + Basement area teaching spaces to be upgraded
 - + Ground floor teaching spaces to be upgraded
 - + Conversion of upper levels that currently house boarder accommodation
 - + Teaching spaces to be upgraded to provide a variety of general learning areas including common spaces and adaptive learning areas.

ENVELOPE 6

New Gymnasium

- + 3 multi-purpose courts
- + Capacity for full school to assemble (2000 students plus staff)
- + Generous central lobby + circulation space to comfortably connect upper school campus level and playing fields and reconnect sporting precinct. Allow for secure closure to school campus out of hours
- + Additional large rooms for functions including weights and pilates
- + 2-3 sports/PDHPE learning spaces
- + Oversized storage facility and potential stacked seating
- + Upper or lower level stadium seating
- + Maximise natural ventilation and minimise air-conditioning
- + Provide substantial connection to playing fields and outdoor areas
- + Provide ample well connected staff rooms and facilities
- + Incorporate large cafe and viewing platforms overlooking the grounds

ENVELOPE 7

Performing Arts Centre - Gonzaga Barry extension

- + 300 seat theatre with wings and semi-fly tower
- + 4-8 classrooms with an emphasis on drama and sustainability
- + Possible location for rooftop eco-centre with outdoor learning space connected to GBC
- + Terraces and bleacher seating between Mary Ward Quad and the new all-weather playing field

ENVELOPE 8

All-weather field with underground car park

- + Full size hockey/soccer field (with level a surface)
- + Well-drained synthetic grass
- + Connected to school, sports facilities, change rooms
- + Location: Adjacent to Osborn Rd to minimise the impact on the adjacent bush and allow for the retention of an improved running field (drainage upgraded and surface levelled).
- + Stadium, bench and bleacher seating to be provided
- + 200 car parking spaces including accessible spaces
- + Motorbike parking and space for 200 bicycles
- + Car park to incorporate maintenance and storage facilities and school bus depot
- + Future proof for reduced car numbers and consider future uses (suitable within fire protection zone) including; water reservoir, black water treatment, bio-digester, battery storage
- + Only partially underground; south wall full height ventilation with fire shutters to the Bush
- + Underground buggy tunnel to connect maintenance to school campus
- + Accessible lift to be provided into GBC extension and allow out-of-hours access to sports facilities

ENVELOPE 9

Mount Pleasant Pavilion

- + Stadium overlooking running field
- + Multi-use conference room
- + Flexible teaching and learning areas
- + Weights room/gym
- + Ecology studies
- + Small dock area and 11 car spaces

ENVELOPE 10

Bush Chapel, The Bridge

Bush research Centre

- + Bush chapel. Outdoor learning space for faith-based and ecological studies within the 1943 glade.
- + Ecologically sensitive design, avoiding impact on endangered species.
- + Subject to ecology study, endeavour to reinstate creek within the 1943 glade and introduce the connection between existing pathways with a low-impact bridge
- + Investigate opportunities for elevated walkways and adventure sports facilities
- + Re-purpose the Principal's Residence as a Bush Research Centre and investigate opportunities for garden and crop research
- + Seek a way to increase ecological value of bush including; increasing habitat opportunities for endangered species, eradicate invasive species and increase native biodiversity

ENVELOPE 11

Early Learning Centre

- + ELC subject of Hornsby Shire Council Development Application

ENVELOPE 12

Pedestrian Bridge Link

- + Pedestrian Bridge Link between the Learning Resource Centre and the Mary Ward Wing

LANDSCAPE IMPROVEMENTS

Site wide

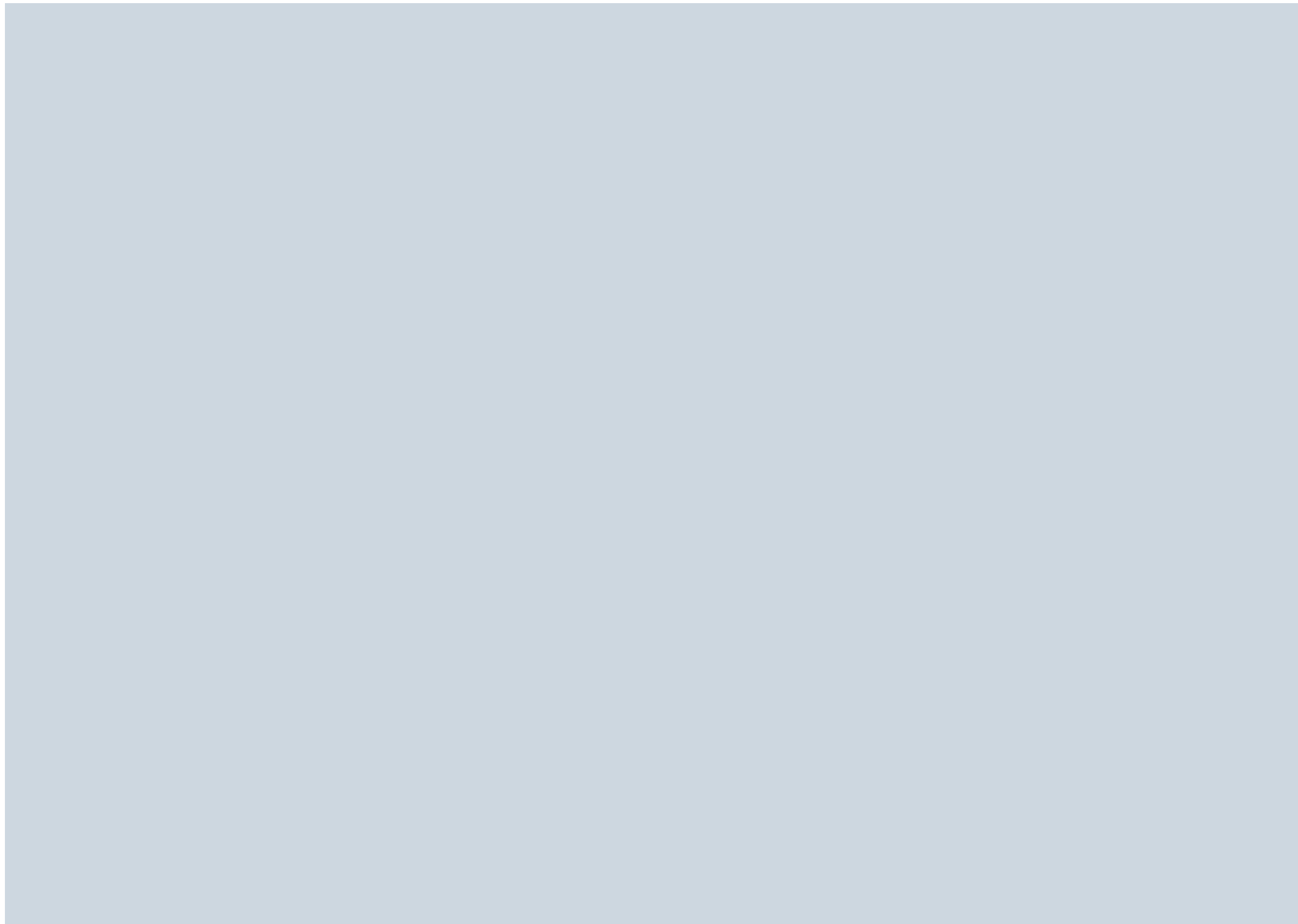
- + Reduce roadways within the campus
- + Create new paths
- + Upgrade landscape surfaces (reduce bitumen)
- + Replace all bitumen roadways with landscaping and paving within the school grounds and limit vehicle access to small service buggies only.
- + Car park access, buses and trucks to be kept to the periphery of the site along Osborn Street and Mt Pleasant Ave.
- + All parking to be underground except for small drop-off areas. Institute a long-term plan for car-use reduction.
- + Underground car parks to be designed for future functionality with access to daylight and fresh air. Where possible, high ceiling levels to be incorporated into designs
- + Every effort to be made to create attractive connected green spaces between all areas of the school campus.

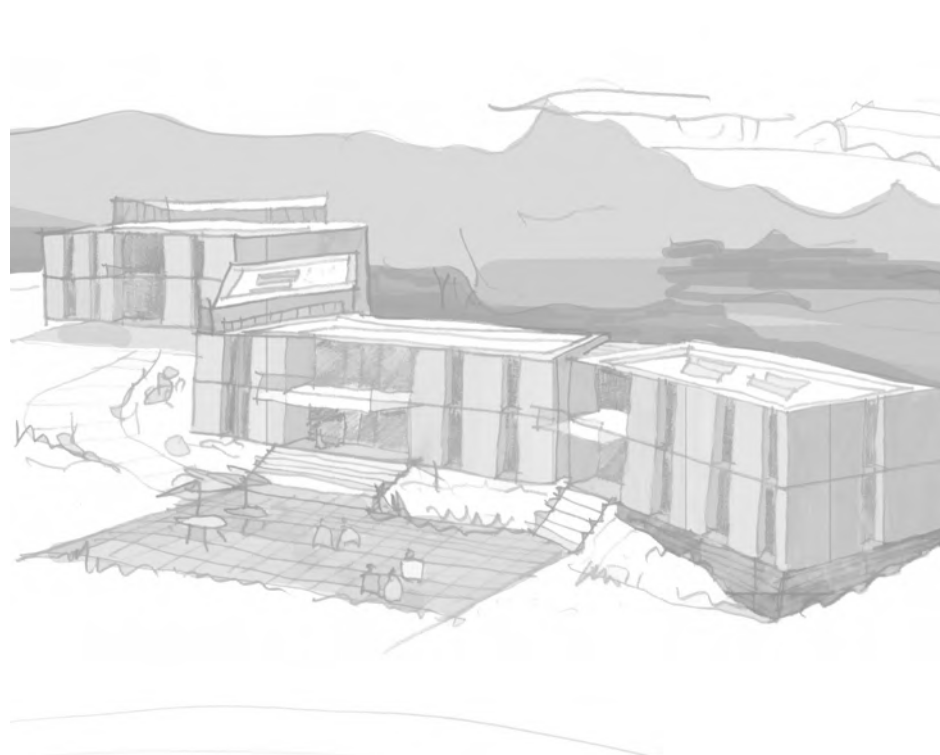
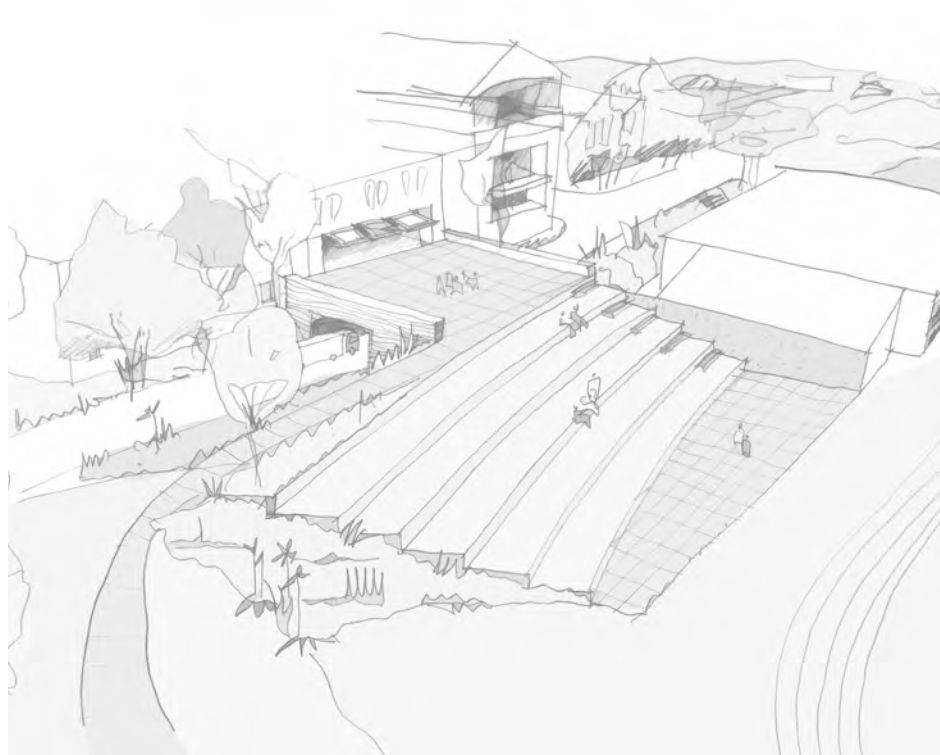
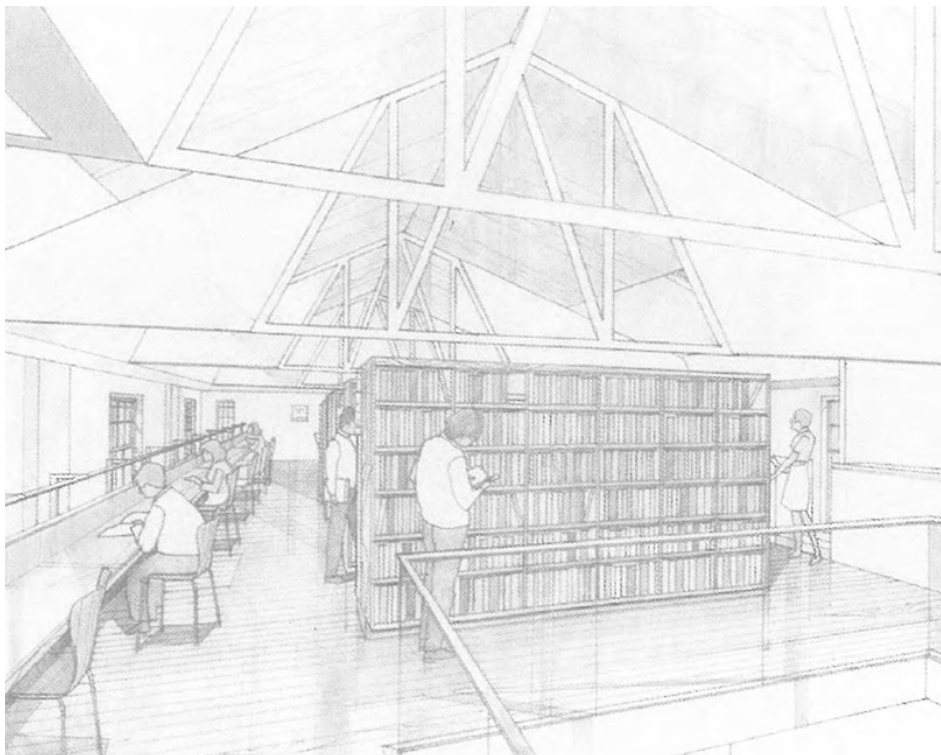


EXISTING SITE



PROPOSED ENVELOPES





06 STAGING

06 STAGING

PROJECTED DEVELOPMENT TIME LINE

The periods shown here for the realisation of the concept plan are indicative only, as development of the concept plan is subject to financing and population growth and will be prioritised on an as needs basis over the next 30 years.



EXISTING CONDITION



STAGE 1



FUTURE WORKS



2018 →

EXISTING CONDITION



~2-5 years →

STAGE 1

- + Early Learning Centre (subject of DA currently under assessment by HSC)
- + New Boarding Facilities
- + Excavation works to accommodate partially underground car park and dock facilities within the proposed footprint of the new boarding house facility
- + Demolition works to buildings between Mary Ward and the existing dining room building and associated works to make good existing
- + Landscaping works and removal and replacement of approximately 50 trees of varying significance
- + Augmentation of connection services and utilities infrastructure



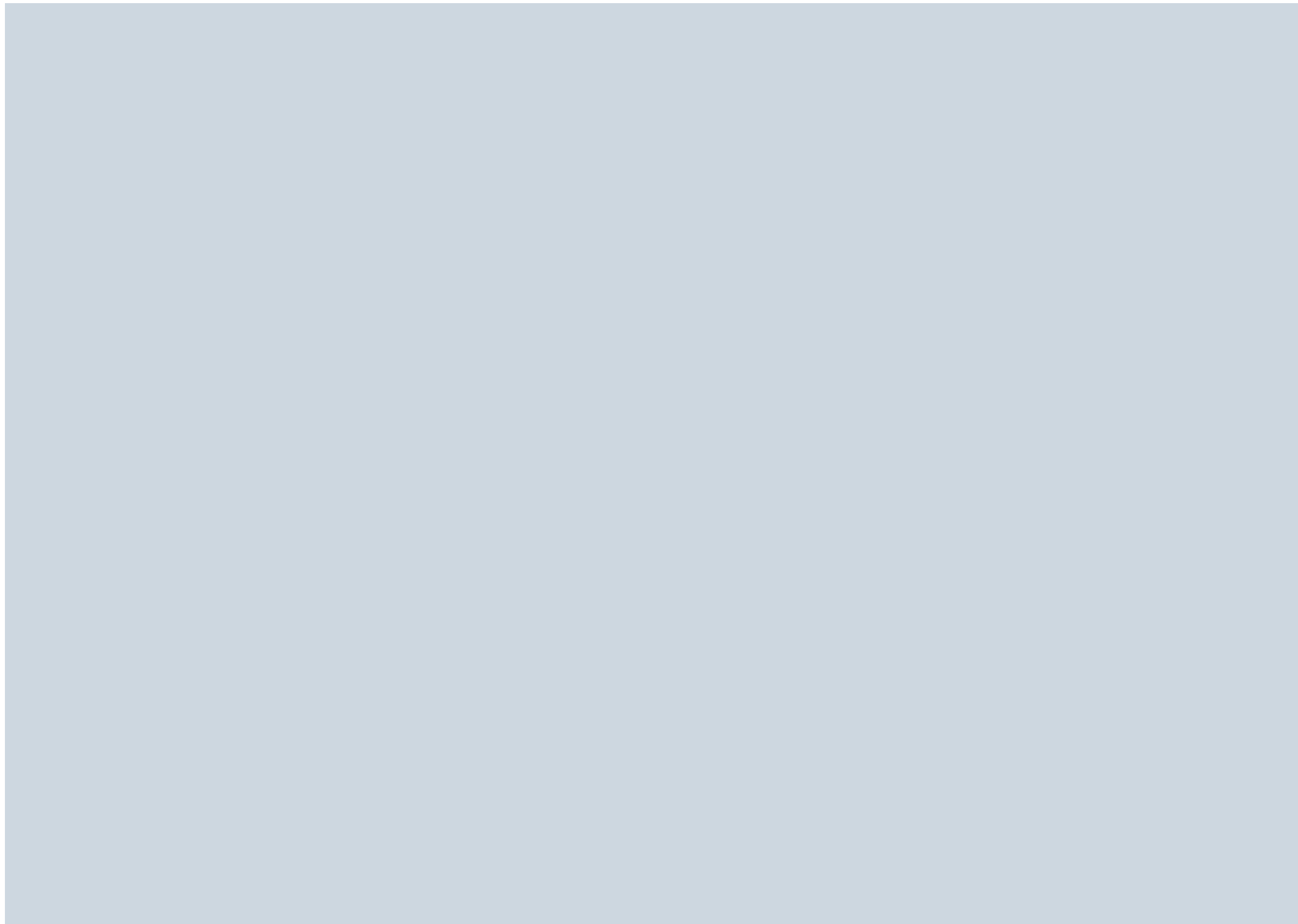
~30 years →

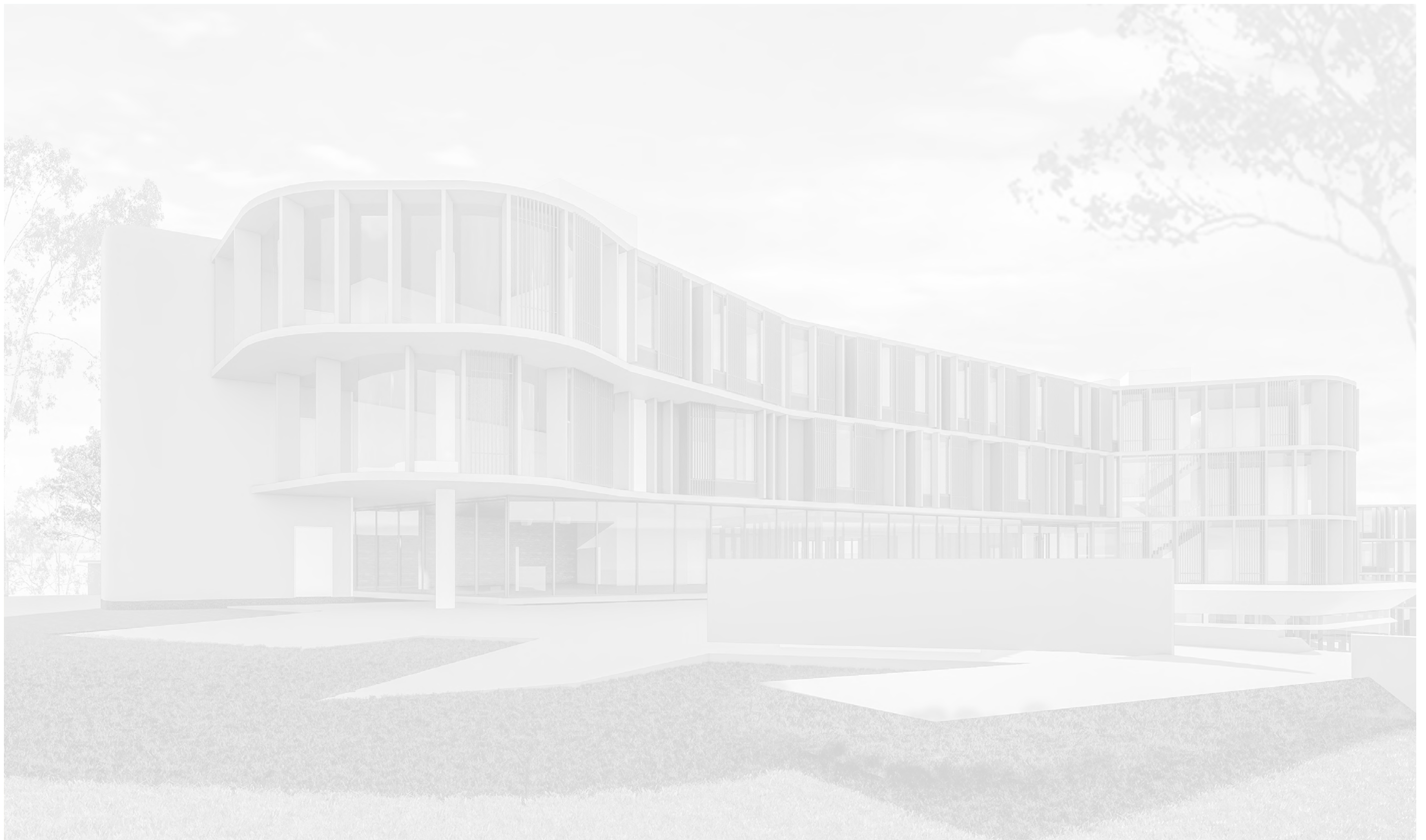
FUTURE WORKS - PROGRESSIVELY DELIVERED

- + renovation to old boarding facilities + upgrade of administration and staff areas affected by boarding relocation and new reception and entry
- + secondary school expansions including; expanded LRC
- + bush chapel
- + stadium
- + amphitheatre
- + year 12 car park redeveloped - use to be determined
- + primary school upgrade
- + bush learning centre
- + new sporting facilities including a multi-use hall and all-weather playing field



STAGE 01





07 STAGE 1 PROPOSAL

The three strategic pathways: faith, people and ecology underpin the proposal’s spiritual, technical, physical and aesthetic ambitions. Further guided by the principles and concepts outlined in earlier chapters of this report the proposal aims to create a lively and safe environment. This has been achieved through the provision of a variety of internal and external spaces that provide the backdrop for the daily rhythms of student life.

The site for the boarding facility is very steep with a fall of 10m from north to south. This topography was critical to the conceptual development of the scheme. Historically, this part of the school was characterised by a rocky escarpment and sandstone retaining wall which created a stepped interface between the high and low portions of the grounds. However, progressive development of the school has concealed this character which is largely no longer apparent.

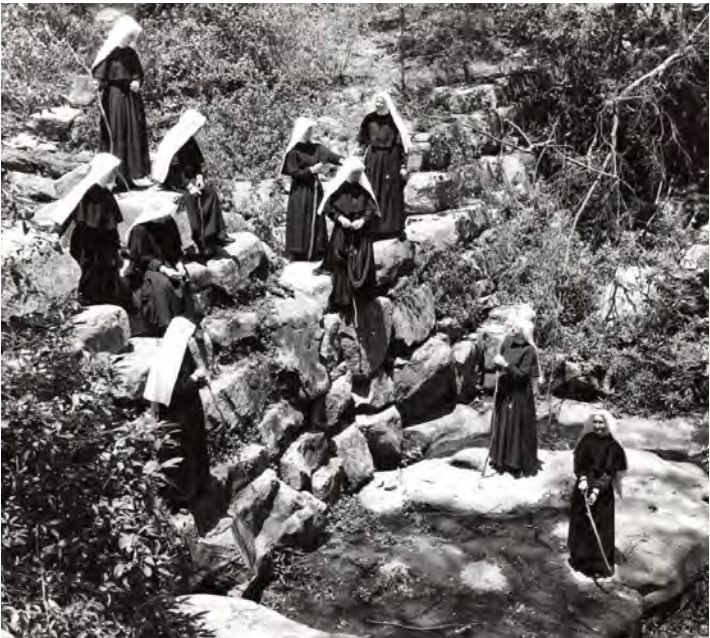
The boarding brief called for the provision of a collection of places to socialise, study, meet or retreat. This item together with the topography presented the opportunity to harness the natural features of the site to create a progression of spaces that were physically distinct because of the fall across the site and to reintroduce a sense of the former escarpment. The topography not only allows for the introduction of a landscape that speaks to the escarpment but also enables the building to be stepped. This means that the bulk and scale of the building can be broken down to reduce its apparent size, and partially embed it in the site.

The boarding house required by the brief is a large facility, housing beds for 216 boarders. As such, it was important to find a way to create intimacy. This has been achieved with the provision of a variety of spaces for interaction and privacy so that it could be a place where residents would feel comfortable and ‘at home’.

The manifestation of this concept is a cascading series of spaces, both internally and externally, connected by seemingly effortless meandering paths resulting in a building which opens out to the ground at 4 different levels.

The following key terms were used during the briefing process:

- + Retreat
- + Lively
- + Safe
- + Fluid
- + Neighbourhoods





This part of the report outlines the approach to amenity and design quality for the Stage 1 proposal. Refer to architectural drawing set for detailed plans, elevations, sections and other architectural drawings. Refer also specialist consultant reports and drawings for details as required.

SITE LAYOUT

The scheme responds to both the context of the campus and also external neighbours. The formal design has also been largely driven by a direct response to nature, topography, sunlight and amenity.

The approach to the scheme was initially governed by a desire to improve campus-wide connectivity, in particular the visual and physical connection between the high and low parts of the site. As such, a long narrow building was developed with a terraced walkway along the western edge of the site connecting the proposed plaza with the oval. The landscape buffer to the west helped to improve amenity within the building, now pushed eastwards away from the aquatic centre. However, while a straight building would work for this typology, the peculiarities of the site and brief would have resulted in a long facade.

To reduce the apparent length of the building from the street, the linear form was kinked in key locations. This also improved building amenity by enabling the provision of sunny north-facing common spaces.

OPEN SPACES

The open spaces within the boarding facility site enhance not only the scheme and its specific locale but improve the outlook and context for neighbouring properties which overlook the school grounds.

The built form, by breaking up the apparent length of the building breaks up the scale at ground level creating intimate, distinct outdoor spaces that function like outdoor rooms improving navigation of the steep topography.

The school campus is currently characterised by a series of gardens and courtyards providing spaces for both passive and active recreation. The landscaped spaces within this project build upon this context and present an opportunity to improve the overall character of the school by improving connection to the oval and providing additional varied outdoor rooms including the northern plaza, the cascading terraces and the dining terrace.

The open spaces along the street frontage at Mount Pleasant Avenue effectively break down the scale and bulk of the building and permit the retention of key significant trees. In this way the design reduces detrimental visual and privacy impacts on neighbours, and presents to the street as a series of volumes rather than a long and relentless street wall. The gardens along the street frontage also provide a positive visual outlook for neighbours.

For detailed open space character refer landscape plan.

ROOFTOP

The roof of the building incorporates a number of functions including plant, photovoltaic panels and accessible roof terraces. The roof plane is split in the centre, allowing the building to step down the hill and reduce its apparent bulk and scale.

MASSING, HEIGHT + DENSITY

The building form has been carefully designed so that it is highly responsive to its context, including the slope of the topography, the scale of the residential neighbours, the adjacency to the oval, and the relationship to other buildings on the school campus.

Despite being overall comprised of 5 storeys, the effective height of the building is carefully controlled to create an appropriate street frontage to Mt Pleasant Ave.

From the northern approach, the building forms an edge to the new garden plaza and acts as part of the container for this space. It has a three-storey presence and a highly articulated form. From the Mount Pleasant Avenue approach, the expression of the building is three brick-clad volumes, each two storeys high, and each with articulation and detailing reminiscent of the residential character of the streetscape. From the west, the long side of the building is visible from the school oval. The form is articulated into a curving zig-zag shape, yet the material palette and detailing is restrained, which permits this building to read as a solid edge to the green space in a similar way to the forest opposite.

The design utilises the slope of the land in order to manage its height. From Mount Pleasant Avenue, the building reads as a series of 2-storey pods with a larger volume floating behind which is either three or four storeys high, but which turns away from the street at its tallest end, creating an increased setback. In contrast, from the west, the full height of the building presents to the school campus and provides an attractive edge to the oval.



BOARDING FACILITY

07 STAGE 1 PROPOSAL

DESIGN QUALITY + BUILT FORM



TOPOGRAPHY

The building design steps in accordance with the slope of the land, utilising cut and fill to provide a cascading series on internal and external spaces which create strong links with the surrounding context at multiple levels.

STREETSCAPE, SETBACKS + ARTICULATION

Mount Pleasant Avenue is a local road which runs in a north south direction. The eastern side has frontages for single and two-storey dwellings set within garden blocks or battle-axe blocks, which are typically set back from the street with lawns, gardens, driveways and in some cases low picket fences presenting to the street. The western side is dominated by the side boundary of Loreto Normanhurst school which generally presents to the street as a 1.8m high metal security fence with school buildings and grounds visible beyond. The streetscape at the boarding house site is dominated by a stand of established trees including native gum species, most of which are within the school boundary.

The design response to this streetscape is to break down the length of the facade by pushing forward three smaller volumes which 'pop out' from the main line of the building behind. Intended to provide a counterpoint to the main building facade, these three pop-outs will be clad in brick and will achieve a domesticity of detail and proportion. The scale and materiality of these pop-outs will establish a dialogue with the brick dwellings along Mount Pleasant Avenue. The placement of these pop-outs will permit the retention of significant trees along this boundary to significantly reduce the visual impact of the development.



FACADE + MATERIALS

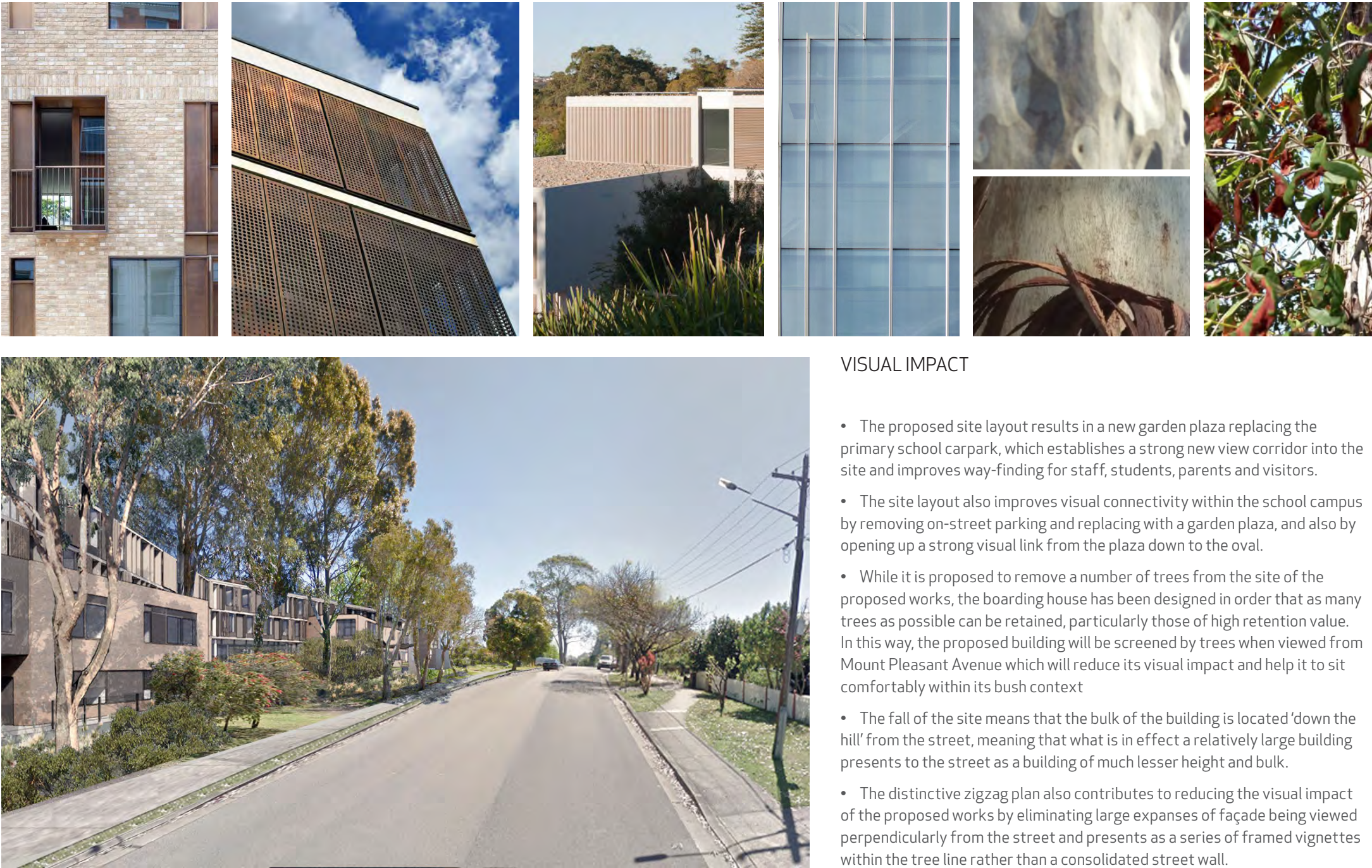
The building utilises a harmonious palette of materials to create an aesthetic which is tactile and characteristically warm. The external expression of the building reads as a series of single storey layers which curve around the building’s form and step down the site. Each layer is characterised by an expression of vertical metal fins, vertical bay windows and shading screens.

The colours and materials employed make a subtle reference to the nature of the bushland, which the building faces from across the oval. The colours are reminiscent of the delicate swirl of hues visible in the bark of the gum trees – a palette of soft bronze, silver and grey. On the western elevation, the metallic nature of the materials will pick up the golden rays of the setting sun and create a soft play of light, twinkle and shadow which will change as the day turns to night. In this way, the long elevations of the building will achieve a contextual fit with the patterning, hue, light and shade afforded by the native bushland of this site.

Along Mount Pleasant Avenue the façade is broken down into three smaller volumes. Intended to provide a counterpoint to the main building beyond, these three pop-outs will be clad in brick and will achieve a domesticity of detail and proportion. The scale and materiality of these pop-outs will establish a dialogue with the brick dwellings along Mount Pleasant Avenue. The placement of these pop-outs will permit the retention of significant trees along this boundary to significantly reduce the visual impact of the development.

Materials have been chosen for durability, low maintenance and longevity to ensure the building is robust and appropriate for its scale and use considering whole of life.

Please refer to the materials palette in the architectural drawing set for details.



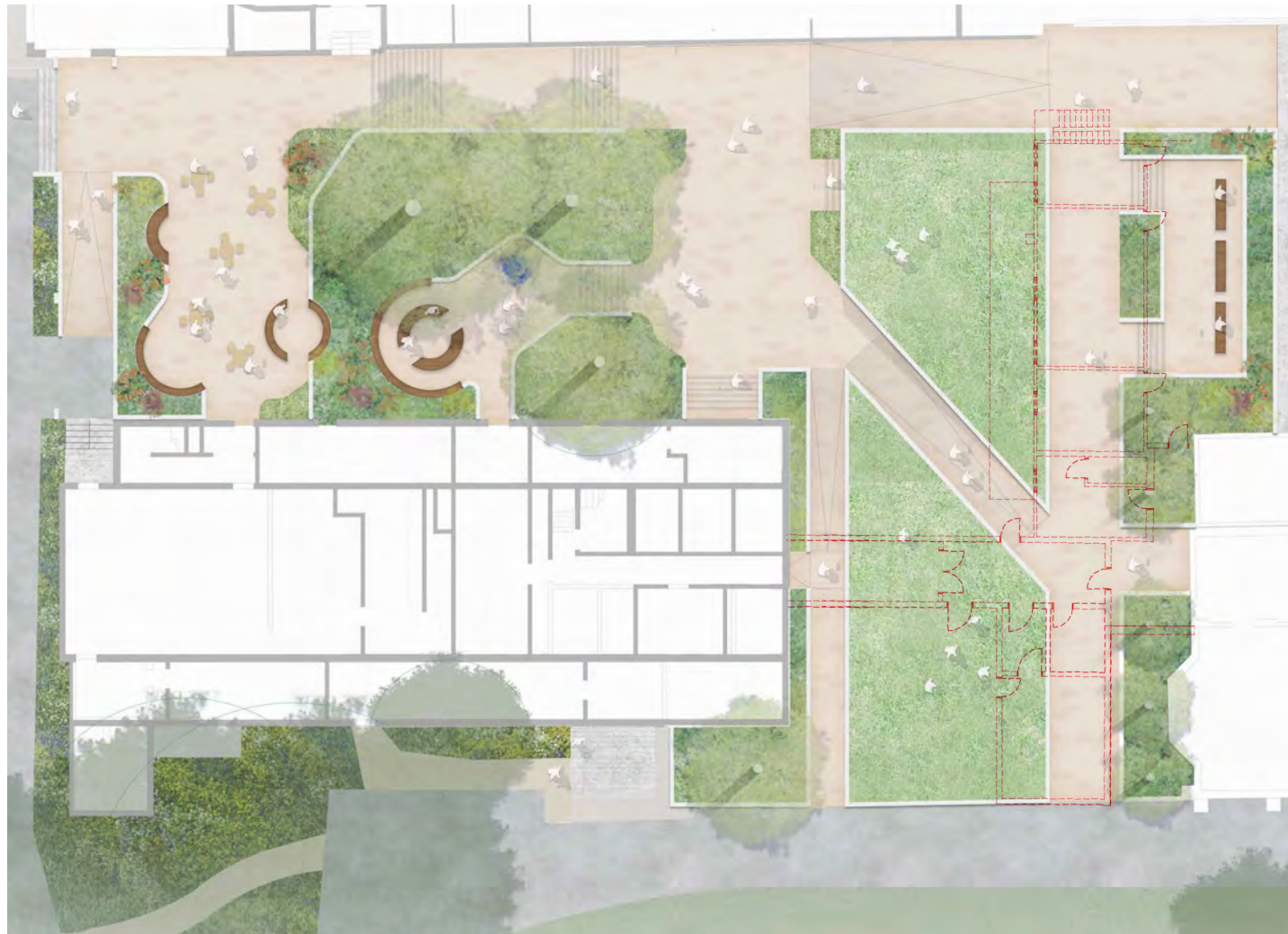
VISUAL IMPACT

- The proposed site layout results in a new garden plaza replacing the primary school carpark, which establishes a strong new view corridor into the site and improves way-finding for staff, students, parents and visitors.
- The site layout also improves visual connectivity within the school campus by removing on-street parking and replacing with a garden plaza, and also by opening up a strong visual link from the plaza down to the oval.
- While it is proposed to remove a number of trees from the site of the proposed works, the boarding house has been designed in order that as many trees as possible can be retained, particularly those of high retention value. In this way, the proposed building will be screened by trees when viewed from Mount Pleasant Avenue which will reduce its visual impact and help it to sit comfortably within its bush context
- The fall of the site means that the bulk of the building is located 'down the hill' from the street, meaning that what is in effect a relatively large building presents to the street as a building of much lesser height and bulk.
- The distinctive zigzag plan also contributes to reducing the visual impact of the proposed works by eliminating large expanses of façade being viewed perpendicularly from the street and presents as a series of framed vignettes within the tree line rather than a consolidated street wall.

MARY WARD COURTYARD & GARDEN PLAZA

07 STAGE 1 PROPOSAL

DESIGN CONCEPT + QUALITY



MARY WARD COURTYARD

- It is proposed to demolish three existing buildings between the boarding dining wing and Mary Ward Building. These consist of a boarding and maintenance wing, small staffroom and classroom and an enclosed walkway. Works to the remaining buildings are limited to the widening of an existing set of steps from the ground floor Mary Ward Building balcony, minor external and make good works to the surrounding buildings.
- The new open area between the boarding dining wing and Mary Ward Building and to the tiered gardens to the south will be re-levelled and landscaped in accordance with landscape design prepared by Oculus

GARDEN PLAZA

- It is proposed to replace the Teresa Ball Primary Centre carpark with a new garden plaza that provides safe pedestrian access between the new boarding house and the centre of the school. It will also provide new arrival and address and consequent improvement to wayfinding into the school from Mt Pleasant Avenue
- Refer to the landscaped design documents prepared by Oculus for details

