



SANTA SOPHIA CATHOLIC COLLEGE
SSDA ARCHITECTURAL REPORT
16 MAY 2019 ISSUE A

CLIENT

Catholic Education Diocese of Parramatta

DESIGN TEAM

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INTRODUCTION

Overview

This **Design Report** has been prepared by **BVN** on behalf of the Catholic Education Diocese of Parramatta c/TSA Management Pty Ltd (the Applicant).

It accompanies an Environmental Impact Statement (EIS) in support of State Significant Development Application (SSD 18_9772) for the new Santa Sophia Catholic College on the corner of Fontana Drive and the future road 'B', between Red Gables Road and Fontana Drive, in Box Hill North (the site).

The new school will cater for approximately 1,920 primary and secondary school students, inclusive of a 60 student Catholic Early Learning Centre. The school will have 130 full-time equivalent staff.

The proposal seeks consent for approximately 15,000sqm of floor space across a part five and part six storey building. The building will present as three main hubs connected by terraced courtyards and garden spaces.

The school will include:

- Catholic Early learning centre for 60 students;
- General Learning Spaces for years Kindergarten to 12;
- Community Hub – knowledge centre and cafe;
- Creative Hub – art and applied science;
- Performance Hub – multipurpose hall and music, dance and drama spaces;
- Professional Hub – administrative space;
- Research Hub – science and fitness;
- Associated site landscaping and open space including a fence and sporting facilities;
- Bus drop off from Fontana Drive;
- Pick-up and drop-off zone from future road 'B';
- Pedestrian access points from Red Gables Road north, Fontana Drive and future road 'B';
- Staff parking for 110 vehicles provided off site in an adjacent location;
- Short term parking for pick up and drop off for Catholic Early Learning Centre from Red Gables Road; and
- Digital and non-digital signage to the school.

The purpose of this Design Report is to fulfil the following SEARS requirements

3. Built Form and Urban Design (BVN, MGC)

| SEARs requirement | Report reference |
|--|--------------------------------|
| <ul style="list-style-type: none">• Address the height, density, bulk and scale, setbacks and interface of the proposal in relation to the surrounding development, topography, streetscape and any public open spaces. | Report Section 6 |
| <ul style="list-style-type: none">• Address design quality and built form, with specific consideration of the overall site layout, streetscape, open spaces, façade, rooftop, massing, setbacks, building articulation, materials, colours and colours. | Report Section 5 + 6 |
| <ul style="list-style-type: none">• Provide details of any digital signage boards, including size, location and finishes. | Report Section 11 |
| <ul style="list-style-type: none">• Clearly demonstrate how design quality will be achieved in accordance with Schedule 4 Schools – Design Quality Principles of State Environmental Planning Policy (Educational Establishments and Child Care Facilities) 2017 and the GANSW Design Guide for Schools. | Report Section 7 |
| <ul style="list-style-type: none">• Detail how services, including but not limited to waste management, loading zones, and mechanical plant are integrated into the design of the development. | Report Section 10 |
| <ul style="list-style-type: none">• Provide detailed site and context analysis to justify the proposed site planning and design approach including massing options and preferred strategy for future development. | Report Section 3 + 4 |
| <ul style="list-style-type: none">• Provide a detailed site-wide landscape strategy, including consideration of equity and amenity of outdoor play spaces, and integration with built form, security, shade, topography and existing vegetation. | |
| <ul style="list-style-type: none">• Provide a visual impact assessment that identifies any potential impacts on the surrounding built environment and landscape including views to and from the site and any adjoining heritage items. | See Drawing Set |
| <ul style="list-style-type: none">• Address CPTED Principles. | See CPTED report and Section 7 |
| <ul style="list-style-type: none">• Demonstrate good environmental amenity including access to natural daylight and ventilation, acoustic separation, access to | See ESD report and Section 7 |

| | |
|--|--|
| landscape and outdoor spaces and future flexibility. | |
|--|--|

| 4. Design Excellence (BVN Design report) | |
|---|------------------|
| SEARs requirement | Report reference |
| <ul style="list-style-type: none"> Describe the design process leading to the Concept Proposal. | Report Section 5 |
| <ul style="list-style-type: none"> Provide design quality guidelines for the future built form and integration of landscape design. | Report Section 7 |
| <ul style="list-style-type: none"> Provide a Design Excellence Strategy, developed in consultation with, and to the satisfaction of, the Government Architect NSW, for the future stages of the development which demonstrates how design excellence will be achieved. This strategy should set out: <ul style="list-style-type: none"> the design process leading to the Concept Proposal the type and details of the competitive design excellence processes proposed to be undertaken, in accordance with The Hills LEP, and clear rationale for this process having regard to established design excellence policy context and best practice a method setting out how the proposed design excellence, public domain and landscape excellence process will be implemented as part of the planning process details of the method for the incorporation of sustainability into design. | Report Section 7 |

| 5. Environmental Amenity | |
|--|------------------------------------|
| <ul style="list-style-type: none"> Assess amenity impacts on the surrounding locality, including solar access, visual privacy, visual amenity, overshadowing and acoustic impacts. | Report Section 3 + drawing set |
| <ul style="list-style-type: none"> Conduct a view analysis to the site from key vantage points and streetscape locations (photomontages or perspectives should be provided showing the building envelope and likely future development). | Drawing Set |
| <ul style="list-style-type: none"> Include a lighting strategy and measures to reduce spill into the surrounding sensitive receivers. | |
| <ul style="list-style-type: none"> Identify any proposed use of the school outside of school hours (including weekends) and assess any resultant amenity impacts on the immediate locality and proposed mitigation measures. | |
| <ul style="list-style-type: none"> Detailed outline of the nature and extent of the intensification of use associated with the increased floor space, particularly in relation to the proposed increase in staff and student numbers. | |
| <ul style="list-style-type: none"> Detail amenity impacts including solar access, acoustic impacts, visual privacy, view loss, overshadowing and wind impacts. A high level of environmental amenity for any surrounding residential land uses must be demonstrated. | Report Section 3 + 6 + drawing set |

2.0 EXECUTIVE SUMMARY

In collaboration with the Catholic Education Diocese of Parramatta (CEDP) and TSA, BVN have been engaged to deliver Santa Sophia Catholic College (SSD 6772). This school is a new pre to post school for 1920 students in the town centre of the master planned community, The Gables Box Hill.

Santa Sophia Catholic College is currently temporarily housed in two locations. Santa Sophia Secondary College is located within the Schofields campus of St John Paul II Catholic College and Santa Sophia Primary campus is located at Our Lady of Angels Primary, Rouse Hill.

The school will be a 4 stream primary and 6 stream secondary housing 1860 students at full capacity. A Catholic Early Learning Centre (CELC) will provide early education services for 60 3-5 year olds.

The design has been driven by the learning that it will accommodate. Provision has been made for the most up to date technology to enable the future students to learn and collaborate. The school will be a safe place for communities of learners, thinkers and achievers.

The form has been conceived as a series of islands in a sea of decks. The learning spaces operate horizontally with specialist spaces a vertical destination. The existing site conditions have influenced the servicing of the design and allowed for a split level approach to the buildings. Outdoor space has been prioritised through the design and a playful approach to landscaping will ensure an active and well utilised outdoor space.

The school aims for Design Excellence and has been consulted with the State Design Review Panel. The SEPP, CEDP’s Design Principles and Guidelines and internal BVN design processes have been utilised to craft a building that strives for design excellence and delivers the best outcomes for CEDP and the future students of Santa Sophia.

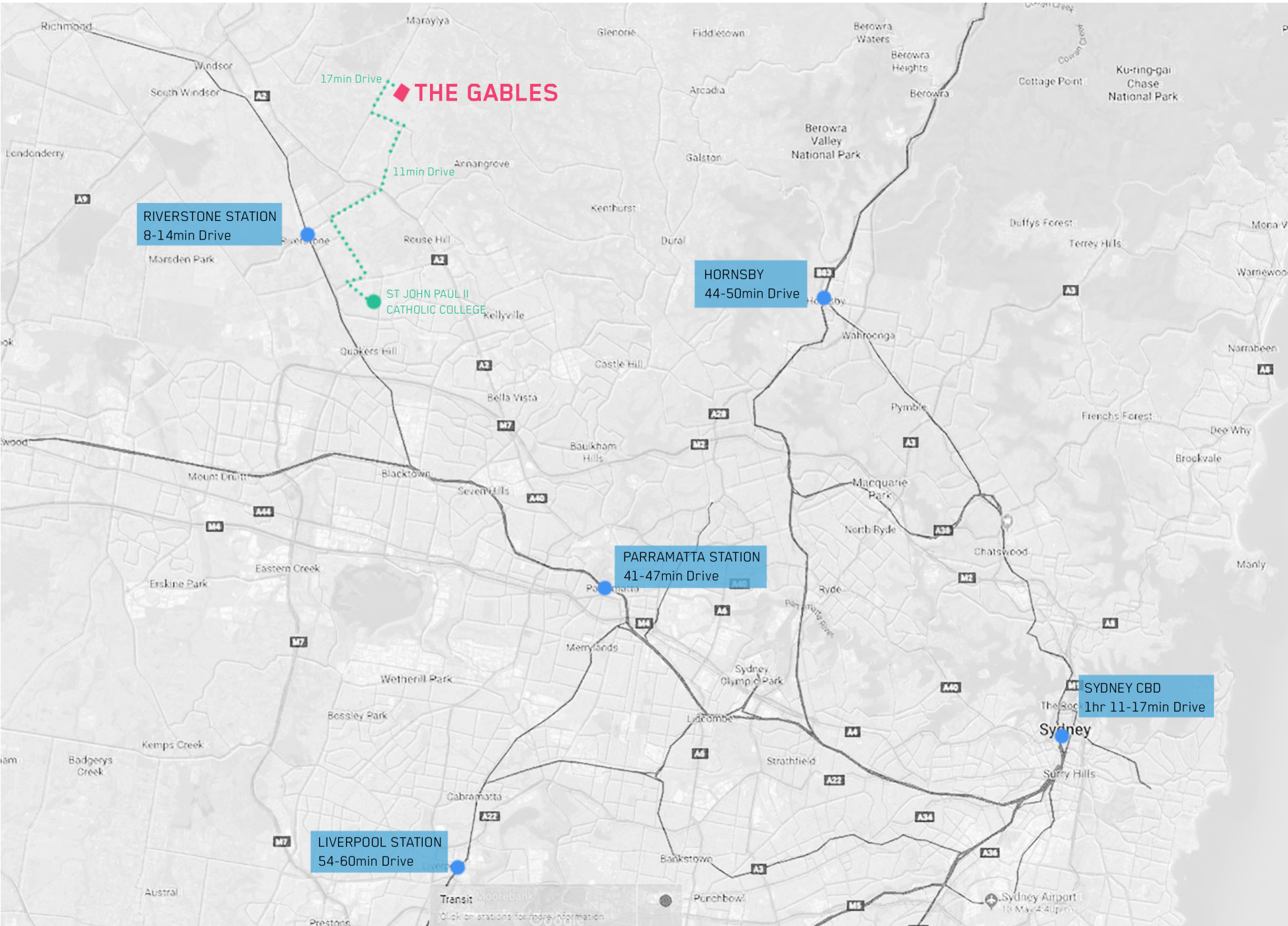
This report accompanies an Environmental Impact Statement (EIS) prepared by Urbis in support of this application.

3.0 PROJECT DESCRIPTION

3.1 LOCATION

SITE OVERVIEW

The site is located 42km north-west of Sydney’s central business district in the local government area of The Hills Shire, part of the Hills district region. It is located in the proposed town centre development for The Gables. The new town centre development will deliver local amenities and provide a vibrant community hub for the area.



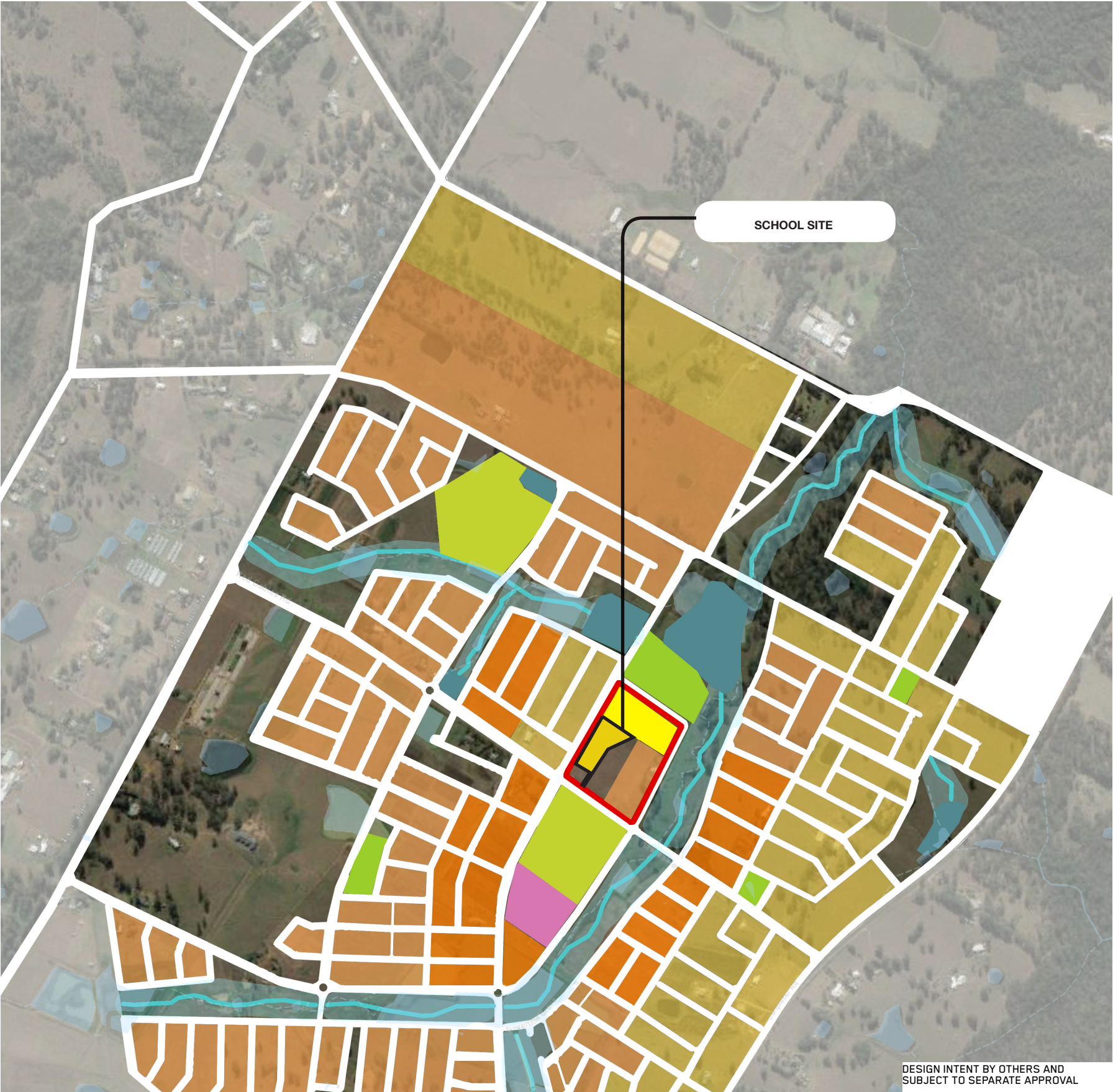
3.0 PROJECT DESCRIPTION

3.2 BROADER MASTER PLAN

THE GABLES BOX HILL MASTER PLAN

Santa Sophia Catholic College will be located in the town centre of new 63,000sqm master planned community called The Gables. The centre is envisaged as a vibrant and active community containing a retail and commercial precinct, playing fields, a lake and high density residential accommodation.

- TOWN CENTRE BOUNDARY
- RETAIL
- FUTURE DOE PUBLIC SCHOOL
- HIGH DENSITY RESIDENTIAL
- MEDIUM DENSITY RESIDENTIAL
- LOCAL PARK
- SPORTS FIELD
- RIPARIAN CORRIDOR/DRAINAGE
- LAKE
- SITE



DESIGN INTENT BY OTHERS AND
SUBJECT TO SEPARATE APPROVAL



4.0 SITE ANALYSIS

4.0 SITE ANALYSIS

4.1 MASTER PLAN TRANSPORT LINKS

12



PUBLIC TRANSPORT

This diagram highlights the main public transport nodes. The school specific bus service will use Fontana Drive.

- Legend
- The Green Heart
 - Community Centre
 - School
 - Playground
 - Potential bus stops
 - Potential bus route

*diagram courtesy of Aecom



VEHICULAR MOVEMENT

This diagram highlights the main vehicular movement across the overall master plan.

- Legend
- The Green Heart
 - Community Centre
 - School
 - Playground
 - Major collector road
 - Future major collector road
 - Minor collector road
 - Future minor collector road
 - Town Centre - Street typology 1
 - Town Centre - Street typology 2

*diagram courtesy of Aecom

4.0 SITE ANALYSIS

4.2 MASTER PLAN TRANSPORT LINKS



CYCLE PATHS

The green travel plan for the school will be supported by the network of cycle paths which will be in place across the Gables development. It is envisaged that the riparian corridor will be the main cycle thoroughfare.

DESIGN INTENT BY OTHERS AND
SUBJECT TO SEPARATE APPROVAL

Legend

- The Green Heart
- Community Centre
- School
- Playground
- Bike parking
- Shared user path in road reser
- Future cycle path
- Shared user path in parklands

*diagram courtesy of Aecom



PEDESTRIAN CIRCULATION

This diagram highlights the main pedestrian routes around the Gables

DESIGN INTENT BY OTHERS AND
SUBJECT TO SEPARATE APPROVAL

Legend

- The Green Heart
- Community Centre
- School
- Playground
- Signalized pedestrian crossing
- Pedestrian crossing
- Primary pedestrian link
- Future pedestrian link
- Secondary pedestrian circulation
- Town Centre internal circulation
- Bridge connections

*diagram courtesy of Aecom

4.0 SITE ANALYSIS

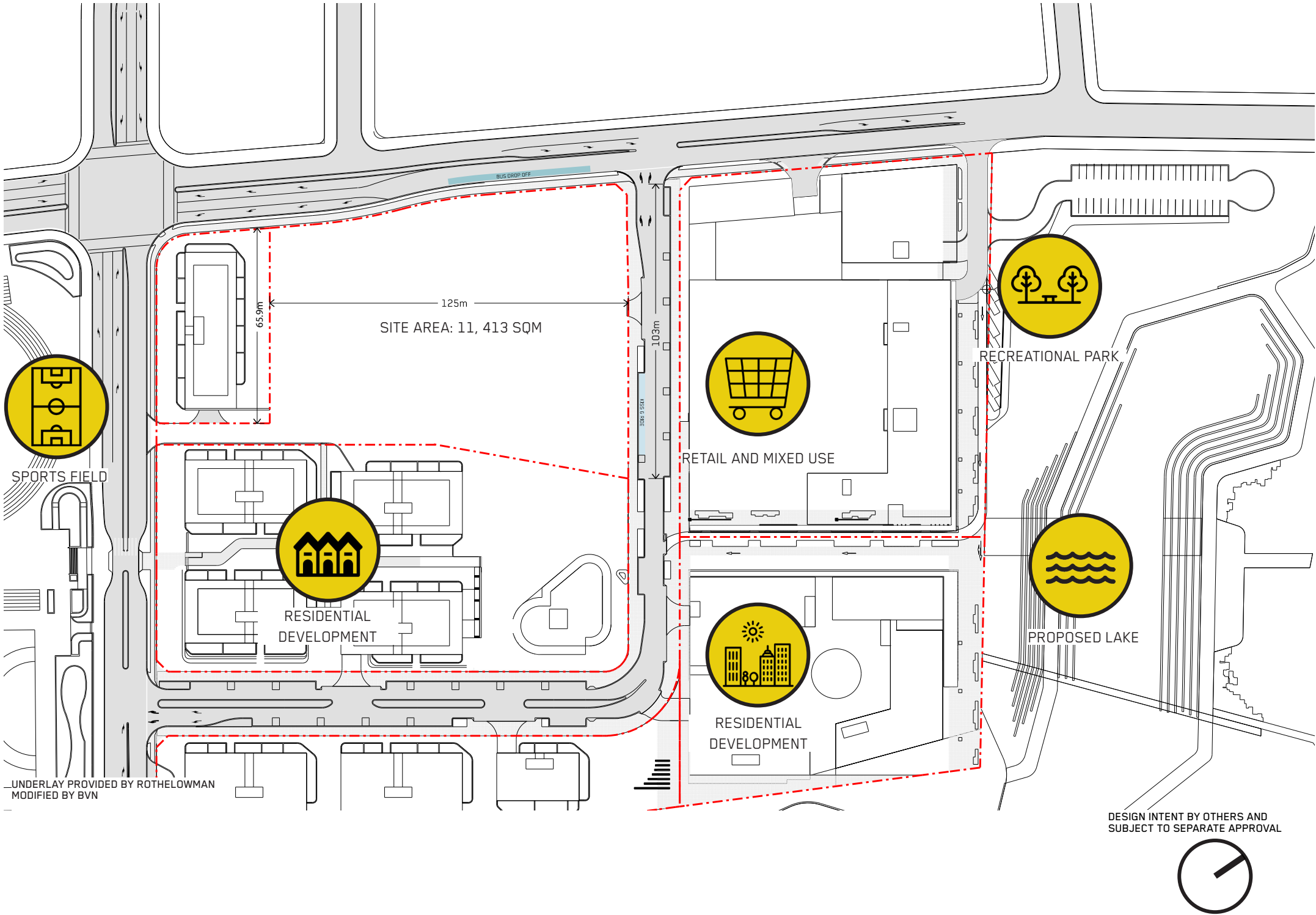
4.2 SITE AND CONTEXT

THE SITE

The site for Santa Sophia College is 11,413sqm in the middle of the proposed town centre in the Gables, Box Hill. A planning proposal has been approved by Hills Shire council for the height and density of the surrounding buildings and their typology.

To the south are hockey fields to be built by the developer. Santa Sophia College is in the process of developing a shared use agreement for this facility.

The school is opposite a proposed retail development and adjacent to a public plaza. An easement is provided along the eastern boundary to connect pedestrians through to the hockey fields



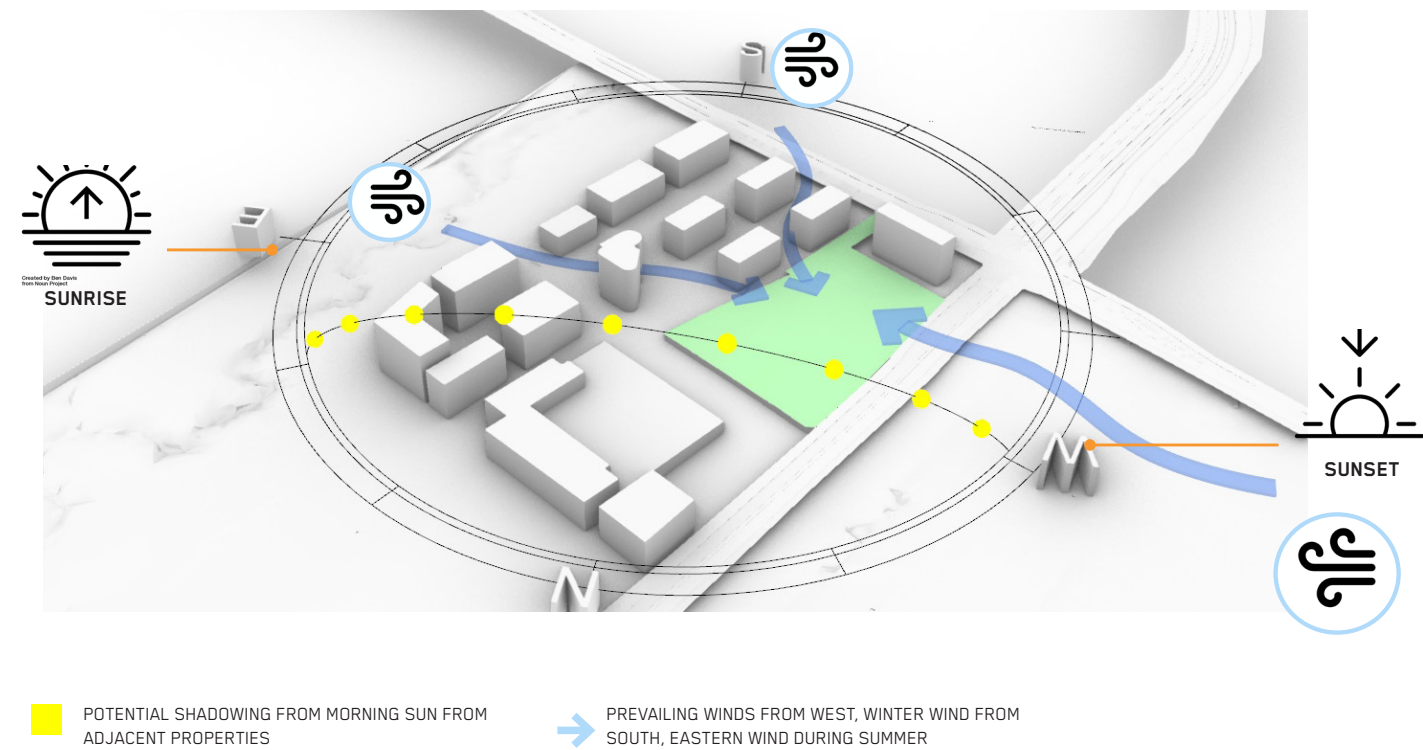
4.0 SITE ANALYSIS

4.3 SITE CONDITIONS

4.3.1 CLIMATE - WIND & SOLAR

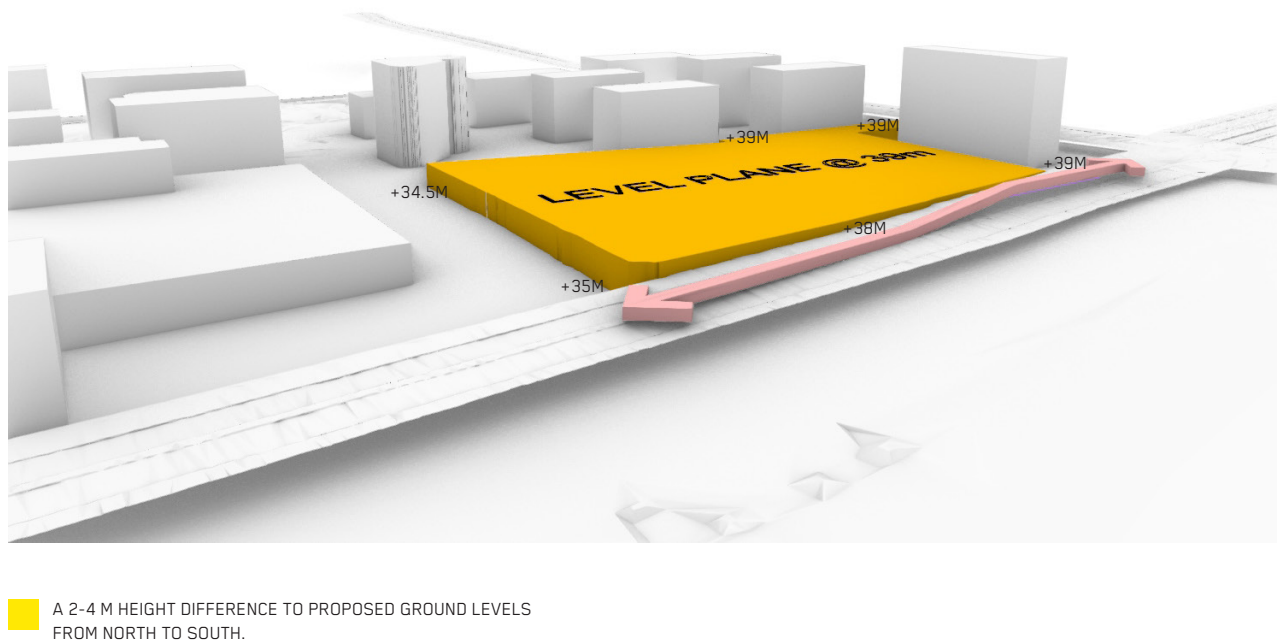
The adjoining diagram highlights the orientation and the prevailing winds throughout the year.

The formal massing of Santa Sophia will aim to maximise the solar access to the school whilst minimising the overshadowing on neighbouring residences. Shelter from prevailing winds has been considered in the overall massing of the school.



4.3.2 SITE LEVEL CHANGES

The survey illustrates a drop of approximately 4m from south to north across the site. This difference creates an opportunity to have split levels and at grade access.



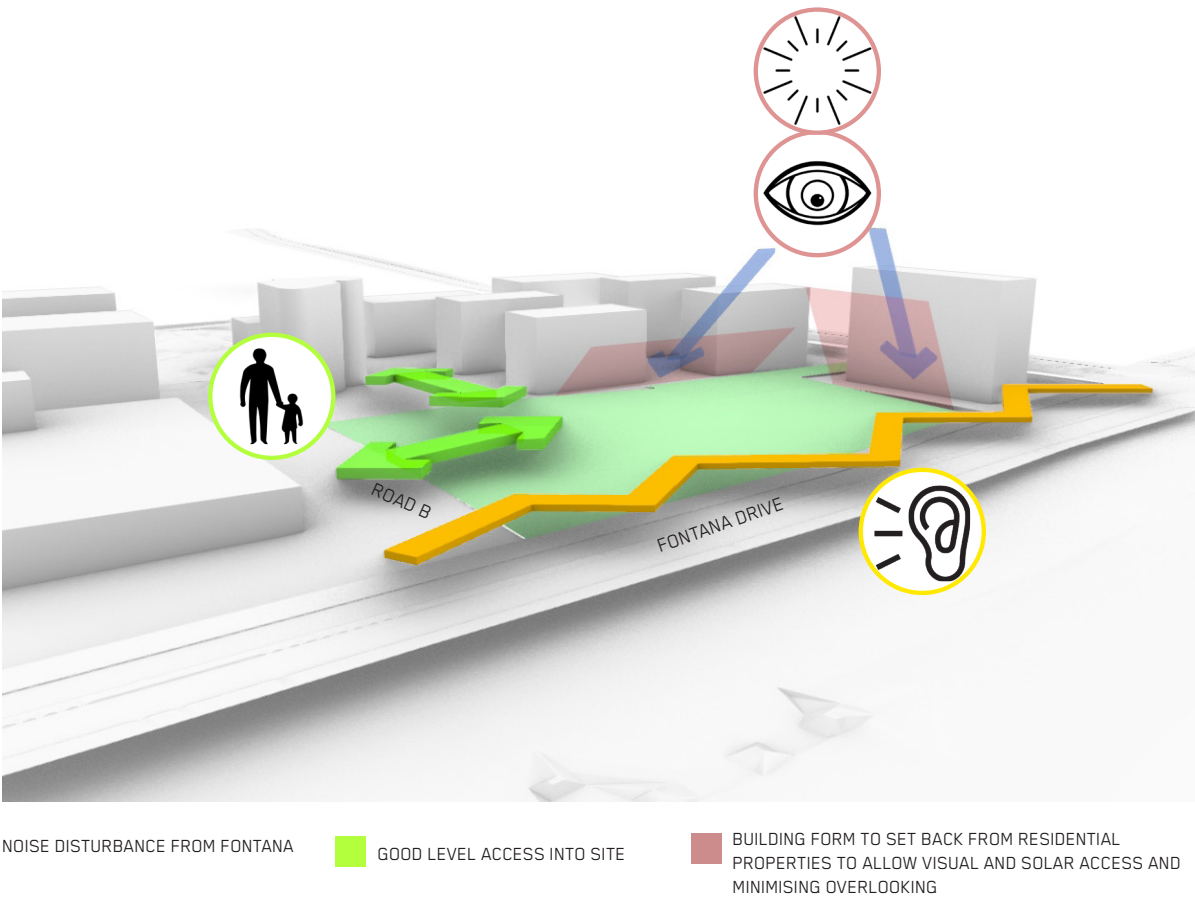
4.0 SITE ANALYSIS

4.3 SITE CONDITIONS

4.3.3 SITE EDGE CONDITIONS

The adjacent diagram highlights key aspects of the site edges that will have an impact on the design. The site is bounded by Fontana Drive to the North West and Road B to North East. Acoustic impacts from the road have been quantified and measures taken within the design to respond to these potential impacts. Refer to the acoustic report for more detail.

On the South West and South East the design will consider the solar impact of the school on the neighbouring residential properties and minimise the potential visual overlooking on future, as yet not confirmed, developments.



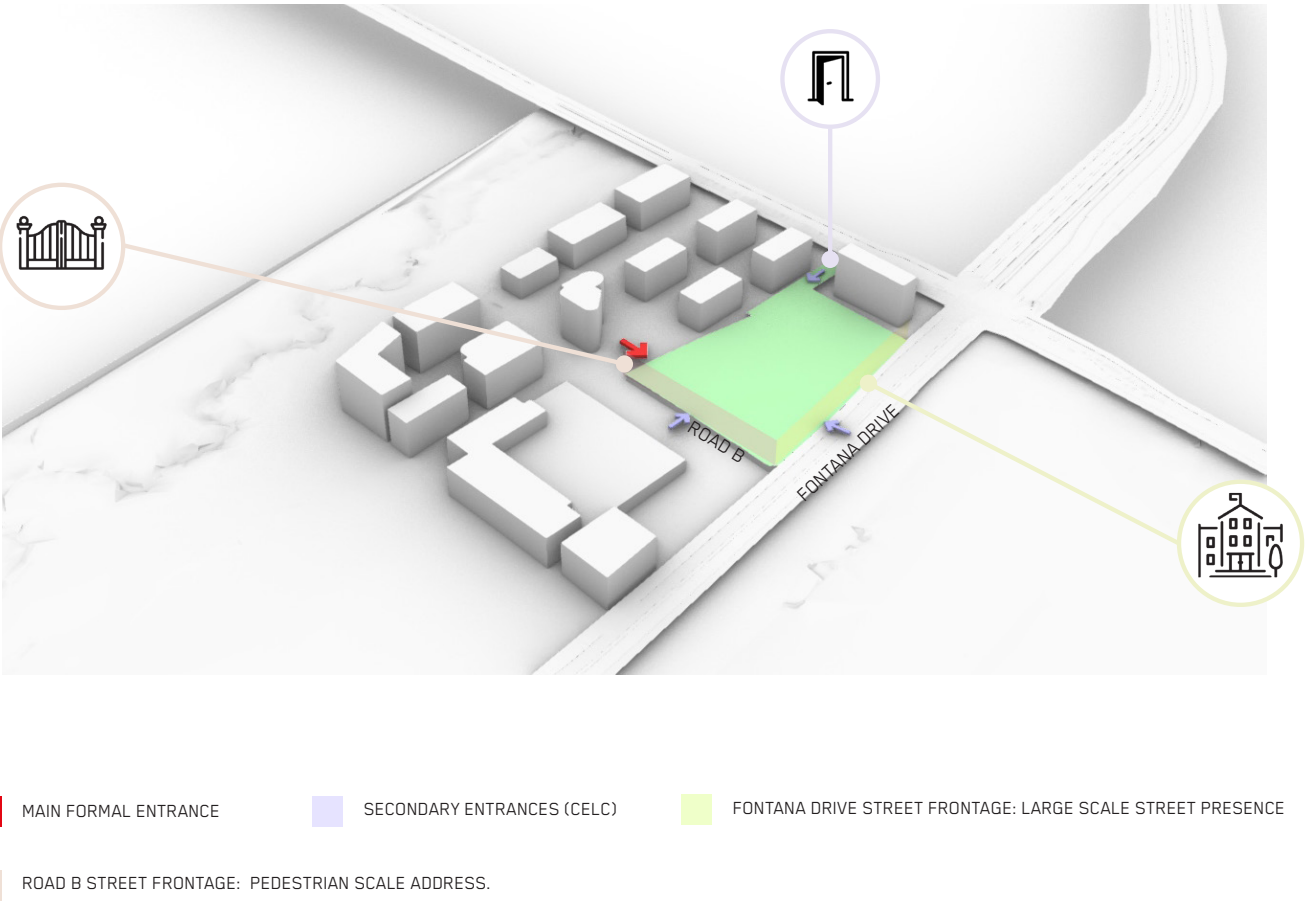
4.3.4 ENTRANCES & FRONTAGES

Road B's frontage is intended to be a hard urban edge signalling the entry to the school. The kiss and drop + servicing for the school is located along this frontage.

The town centre plaza area provides the main access point to the school and gives a strong connection with the Gables community.

The frontage to Fontana Drive gives protection from the noise and activity of a 4 lane road and is intended to function as the entry/ exit point for students on bus drop off

The private road to the south is used as a secondary entrance to facilitate direct drop off for the Catholic Early Learning Centre (CELC) and to provide access for students to the fields to the west.



4.0 SITE ANALYSIS

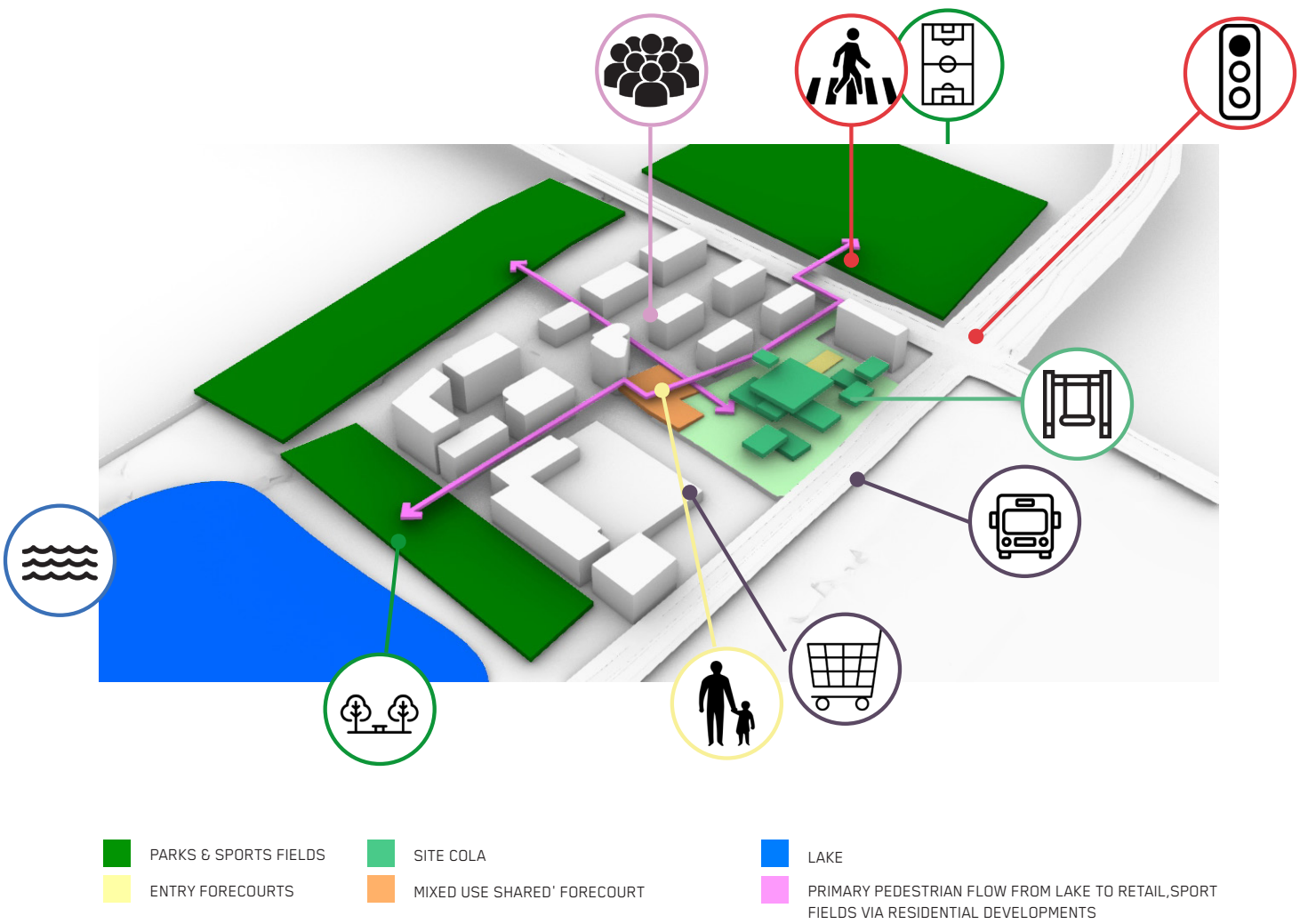
4.3 SITE CONDITIONS

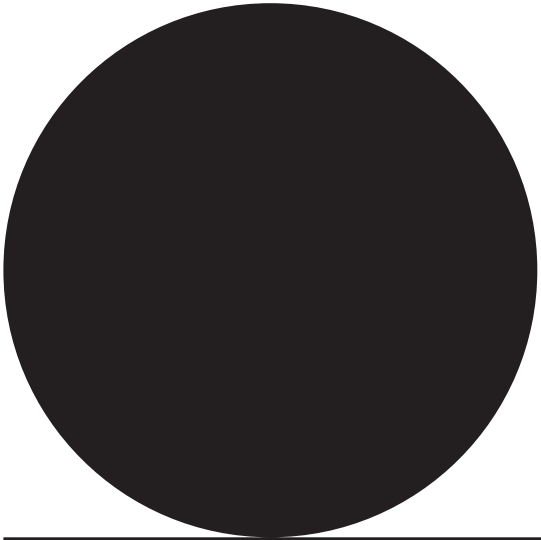
4.3.5 DESIRE LINES

The overall master plan creates a strong axial landscaped pedestrian route to the east of the site connecting the hockey fields and landscaped lake area. Smaller desire lines then feed into the school. Some of these desire lines will be control points

4.3.6 OUTDOOR SPACE OPPORTUNITIES

Tiered deck and landscaped roof areas are utilised to deliver outdoor space to the school in addition to dedicated ground level outdoor play space to the CELC. The plaza entry area is envisaged as the central entry point and the opportunity for the school campus to engage directly with the overall community and encourage the sharing of facilities. The tiered decks provide both the play space and the covered outdoor learning area (COLA) for the school.





5.0 SITE OPPORTUNITIES

5.1 OPPORTUNITIES & CONSTRAINTS

The Site

The site is part of a new town centre within a master planned community. The surrounds are currently not built and planning proposal indicates residential buildings of up to 27m surrounding the school.

Santa Sophia College will respond to the future built environment both in mass and height. Close collaboration with Celestino, the developers of the town centre will ensure a positive inclusive and active town centre.

Climate

The immediate climate of the site has guided the design of the building. Santa Sophia College benefits from a predominately northern outlook. The spatial planning has been organise to maximise the learning spaces to the perimeter to capitalise on this aspect of the site. In addition the massing of the school has been designed to minimise overshadowing to its proposed residential neighbours.

Site Level Changes

The existing level change of approximately 4m has been exploited in the design of Santa Sophia College to achieve a building which addresses two frontages and provides direct kiss and ride for the Catholic Early Learning Centre (CELC) as well as the main school.

Site Edge Conditions

The boundary of Fontana Avenue and Road B allow for a public and community presence for the school. Acoustic control has been considered both in the impact of the school on the surrounds as well as the surrounds on the school. The proposed boundary conditions of residential developments have been carefully considered in the design approach to preserve amenity to both the school and the residential blocks surrounding.

Entrances and Frontages

The position of the school at the corner of two active roads facilitate a public presence and provide the opportunity to create a welcoming gesture to the community by orientating the main school entry towards the proposed public plaza.

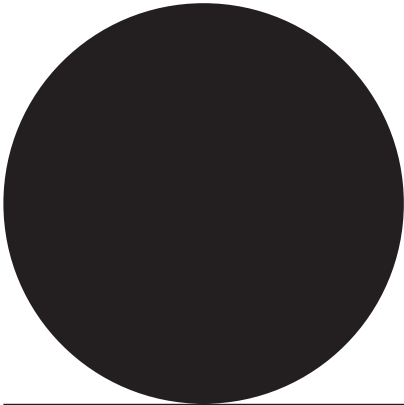
Desire Lines

The school works with pedestrian desire lines to integrate itself within the overall proposed community. A formal pedestrian easement spine has been agreed by the developer, Celestino and CEDP to facilitate the movement of pedestrians from the retail centre, through the plaza and along the side of the school to the hockey fields. This allows for a safe movement of people and a close connection to the community by the school.

Outdoor Space Opportunities

Santa Sophia College seeks to maximise the outdoor space opportunities presented by the site. The split level is exploited to provide a public plaza and main entry integration with the Level 01 providing dedicated play space for CELC and primary students. The outdoor decks for the upper levels Tier, with each one of these specifically designed to cater for its corresponding year groups and provide attractive, active and inviting zones through architectural and landscape design elements





6.0 CONCEPT DESIGN

6.0 CONCEPT DESIGN

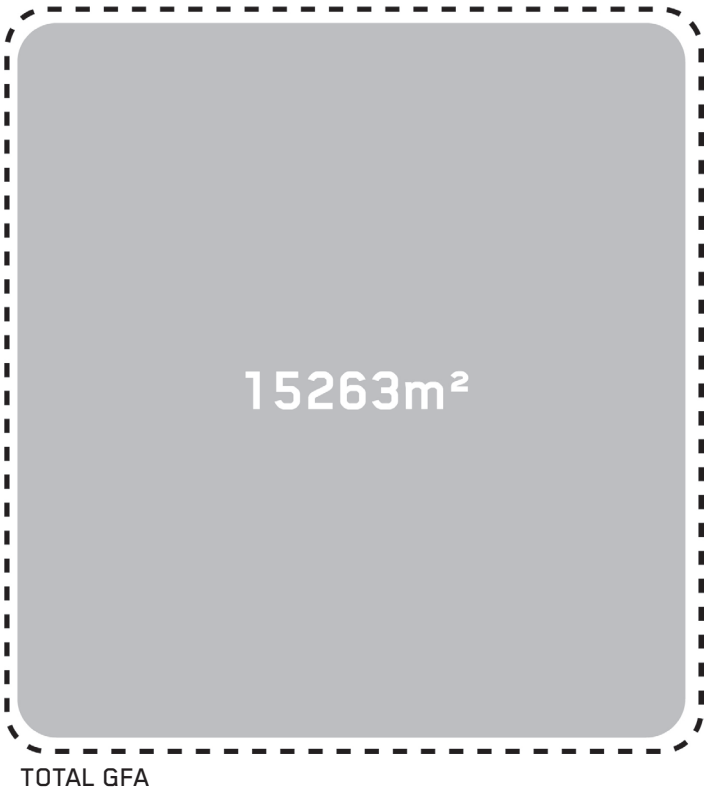
6.1 PROJECT BRIEF

The project brief is to design and delivery a new pre to post school that caters for 1920 students at full capacity. The brief includes a Catholic Early Learning Centre (CELC) and an Activities Club.

The diagram on the right illustrates the breakdown of the Schedule of Accommodation (SOA) developed with the client.

The SOA includes;

- Inquiry Hub - The general learning spaces or home bases for the student population. It is intended that these are occupied in cohorts of 60 from K-10 and 50 from Years 11-12
- The Professional Hub is a space designed for administration and staff .
- The Creative Hub is an area allocation for Food Technology, Visual Arts, Fabrication, Assembly and Electronics.
- The Performance Hub is an area that houses a multi-purpose hall and the music dance and drama component of the school
- The Research Hub is an area that houses the science labs
- The Knowledge Centre is an area that provides the central library for the school



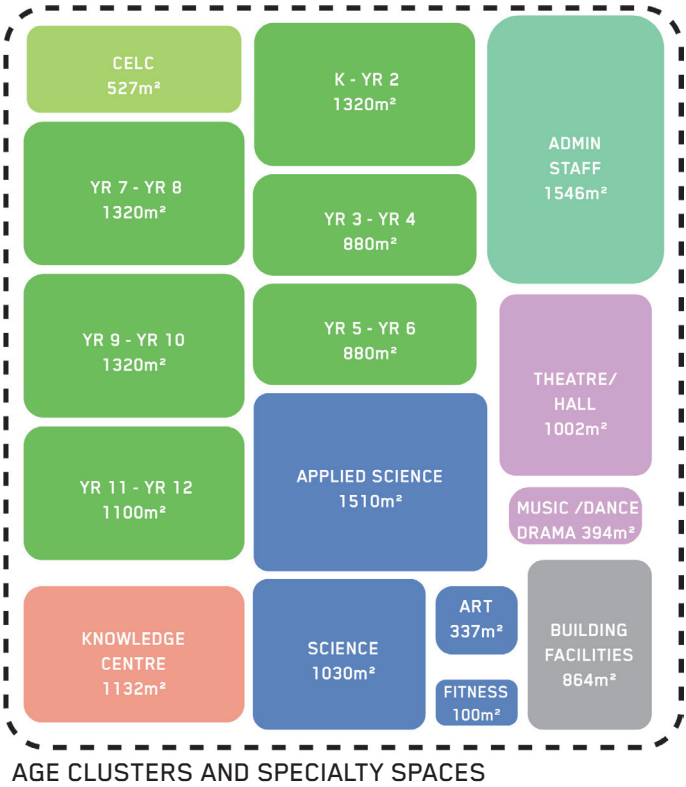
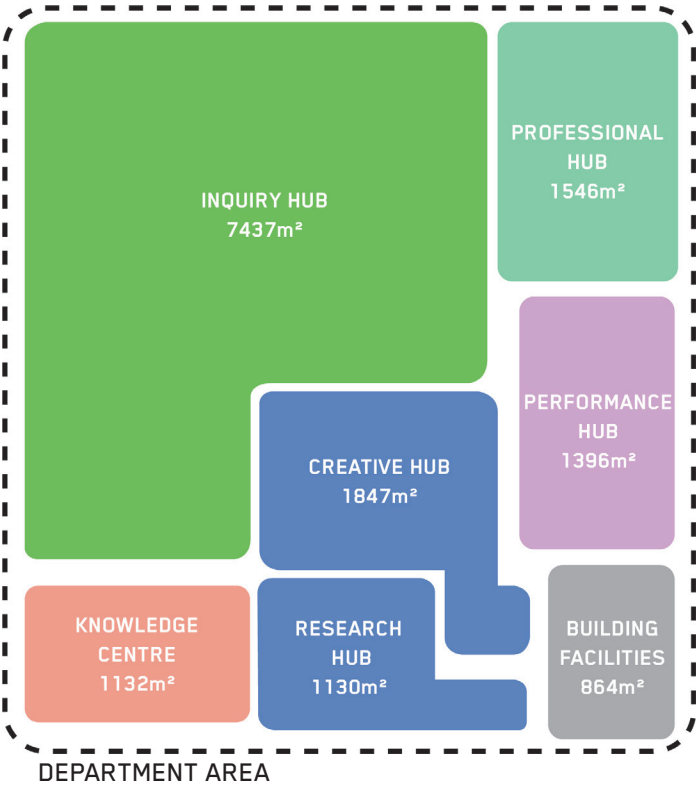
6.2 DRIVERS OF DEVELOPMENT

The school development has been driven by current and future student demand in Box Hill. Santa Sophia College is currently operational and housed in temporary locations. A permanent position is required to cater for student demand in a y new area.

The design of Santa Sophia College is driven by a client desire to:

- Create a welcoming and inclusive school for students as well as the local community
- Provide a safe and secure environment for students and staff.
- Create a sustainable building
- Provide a healthy environment to students and staff
- The school should be intentionally Catholic
- The pedagogy drives the design

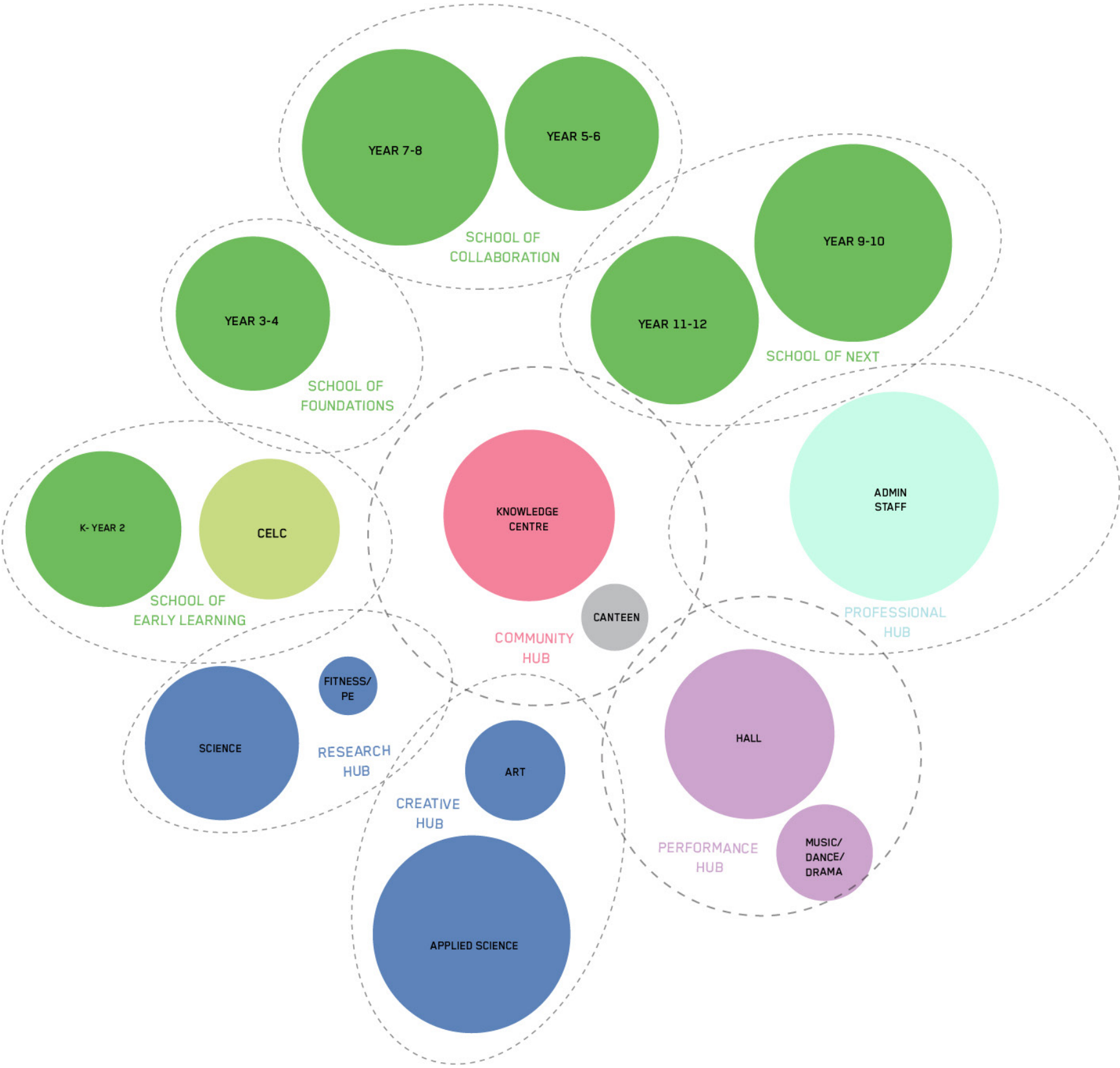
The school development has been driven by current and future student demand in Box Hill.



6.3 DESIGN PROCESS

The diagram on the right illustrates the breakdown of the Schedule of Accommodation, the conceptual relationship between these spaces and the potential shared components.

The learning clusters have been developed with guidance from the CEDP. This diagram organises the clusters and their overlapping program and function which are orientated around the knowledge centre which is the heart of the school.



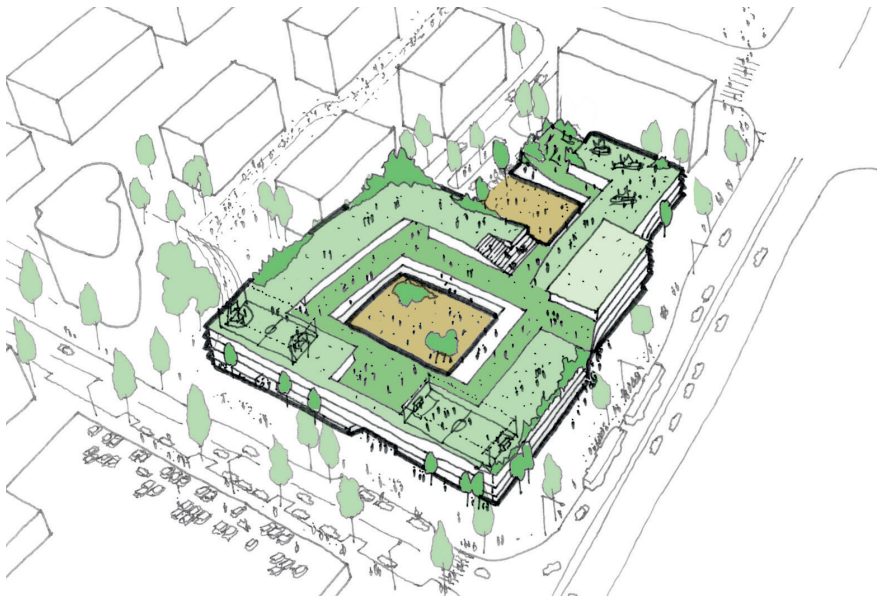
6.4 USER GROUPS AND PROJECT CONTROL GROUP

Regular user group sessions have been held to facilitate, guide and inform the design of Santa Sophia College. These user groups have been composed of representatives of CEDP as well as current staff members of Santa Sophia Primary and Secondary (which are temporarily located at Schofields and Rouse Hill), BVN, TSA and other members of the design team as necessary. Each spatial component of the new Santa Sophia College has been reviewed a number of times in this process until the client sign off has been achieved.

A Project Control Group made up of representatives of CEDP, the project manager and the head design consultant has been formed for key decision making and endorsement at critical dates.

6.5 CONCEPT DESIGN DEVELOPMENT

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DESIGN OPTION 1

This massing option was explored and presented to the client with option 2. It was found to be the preferred option.



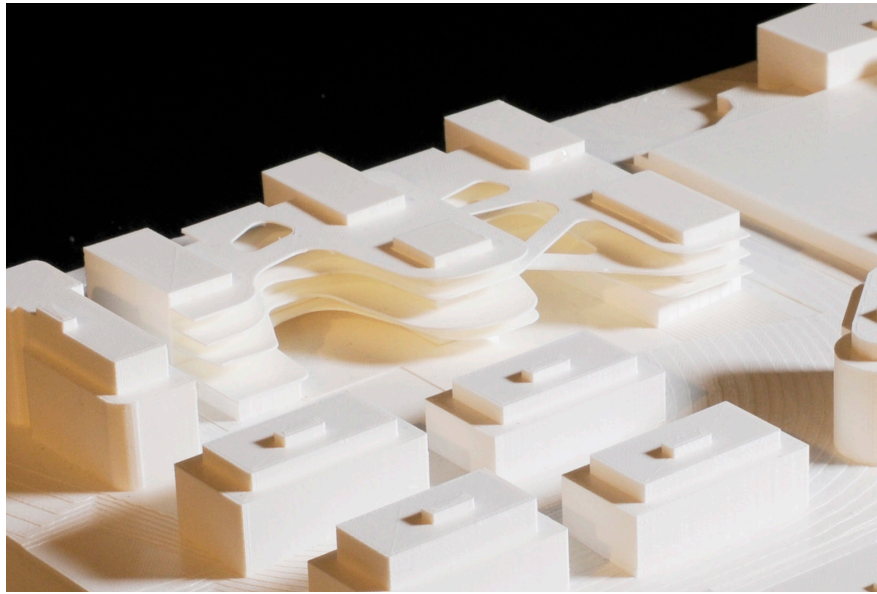
DESIGN OPTION 2

Developed and presented to the client.



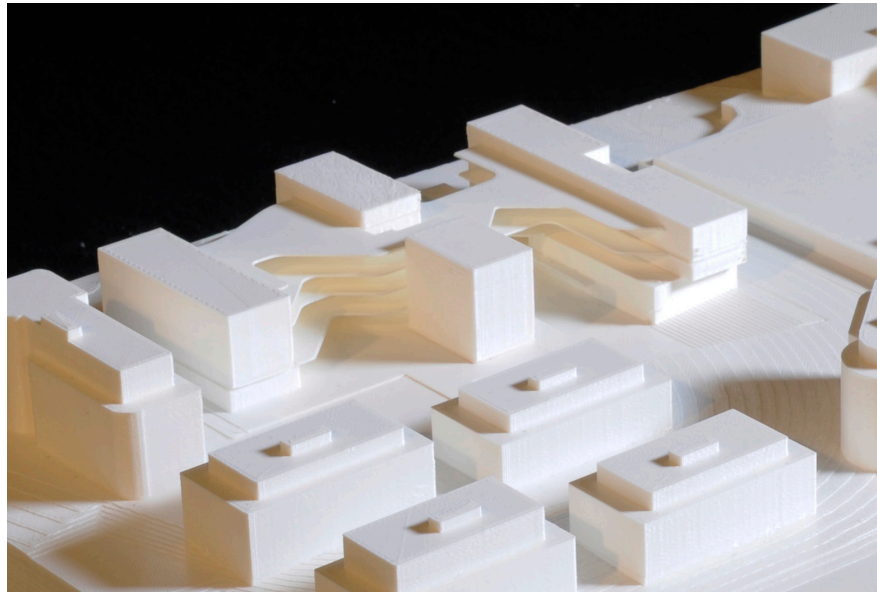
DESIGN OPTION 3

A design development of option 1. The full ribbon was found to be too enclosed and lacked a presence to the plaza or an urban address.



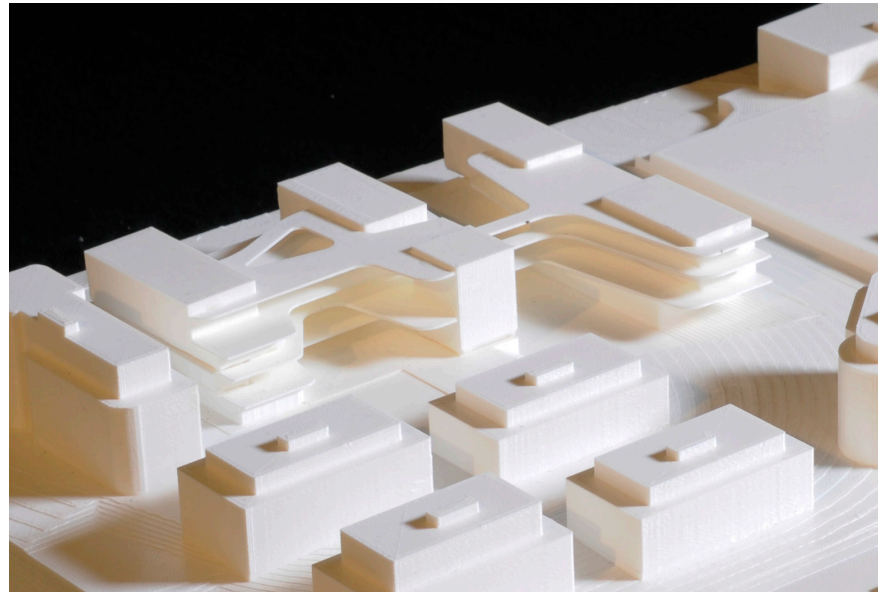
DESIGN OPTION 3A

Stacking play areas, creating bridges between buildings and introducing voids.



DESIGN OPTION 3B

Removing bridges and introducing play areas to the north of the site.



DESIGN OPTION 3C

Re- introducing voids to improve lighting conditions in the deeper floor plates.

6.5 CONCEPT DESIGN DEVELOPMENT



ARTIST IMPRESSION

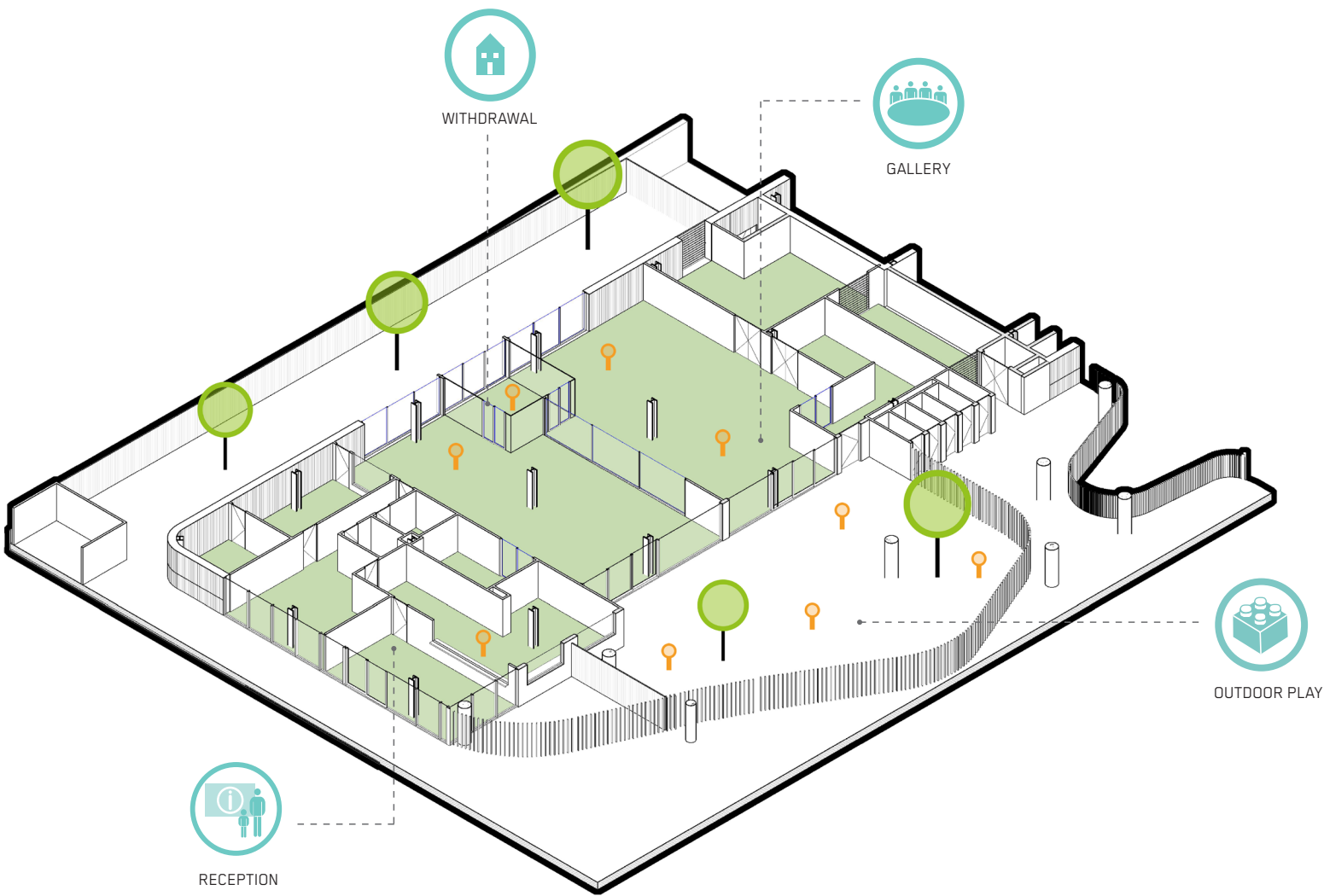
BIRDS EYE VIEW OF CURRENT MASSING CONCEPT

6.6 LEARNING SPACES

6.6.1 CATHOLIC EARLY LEARNING CENTRE (CELC)

INTRODUCTION

Catholic Early Learning Centre in Santa Sophia provides safe and playful learning space for 60 children between 3-5 years old. The facility operates from 6am to 6pm and the internal planning takes St Lukes CELC as a case study model. CELC requires adequate supervision, views in and out for secure learning environment. The indoor space includes reception area with office including interview rooms, staff area, kitchen to prep meals, two galleries with shared withdrawal space, internally and externally accessible toilets and change room. The outdoor area includes covered verandah, play zones such as sand pit, a play equipment and storage space. This outdoor play area provides an opportunity to be shared with kindergarten students when it is not in use by CELC children.



LEVEL 01 - CELC FLOOR PLAN



6.6 LEARNING SPACES

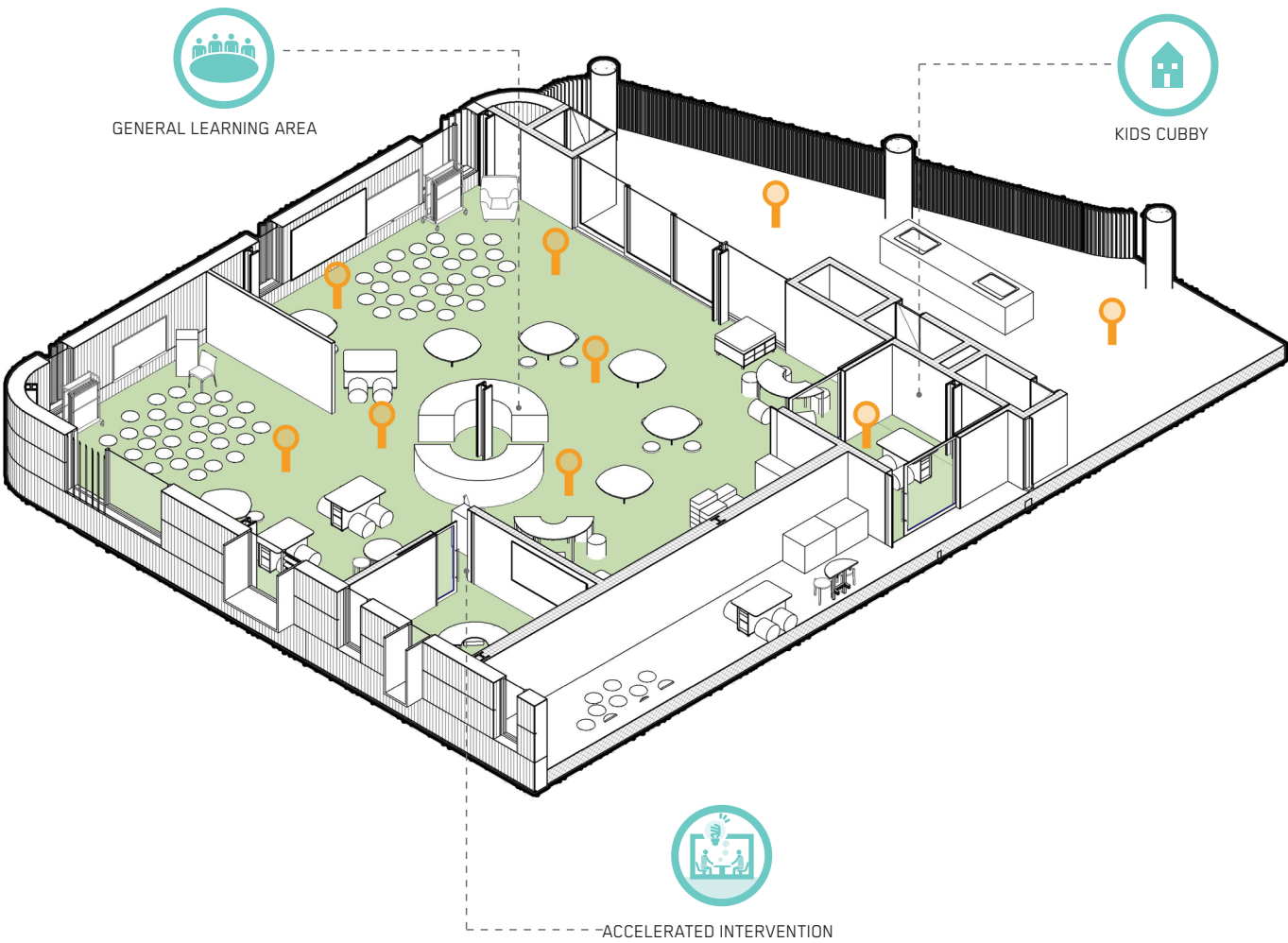
6.6.2 INQUIRY HUBS YR K-4

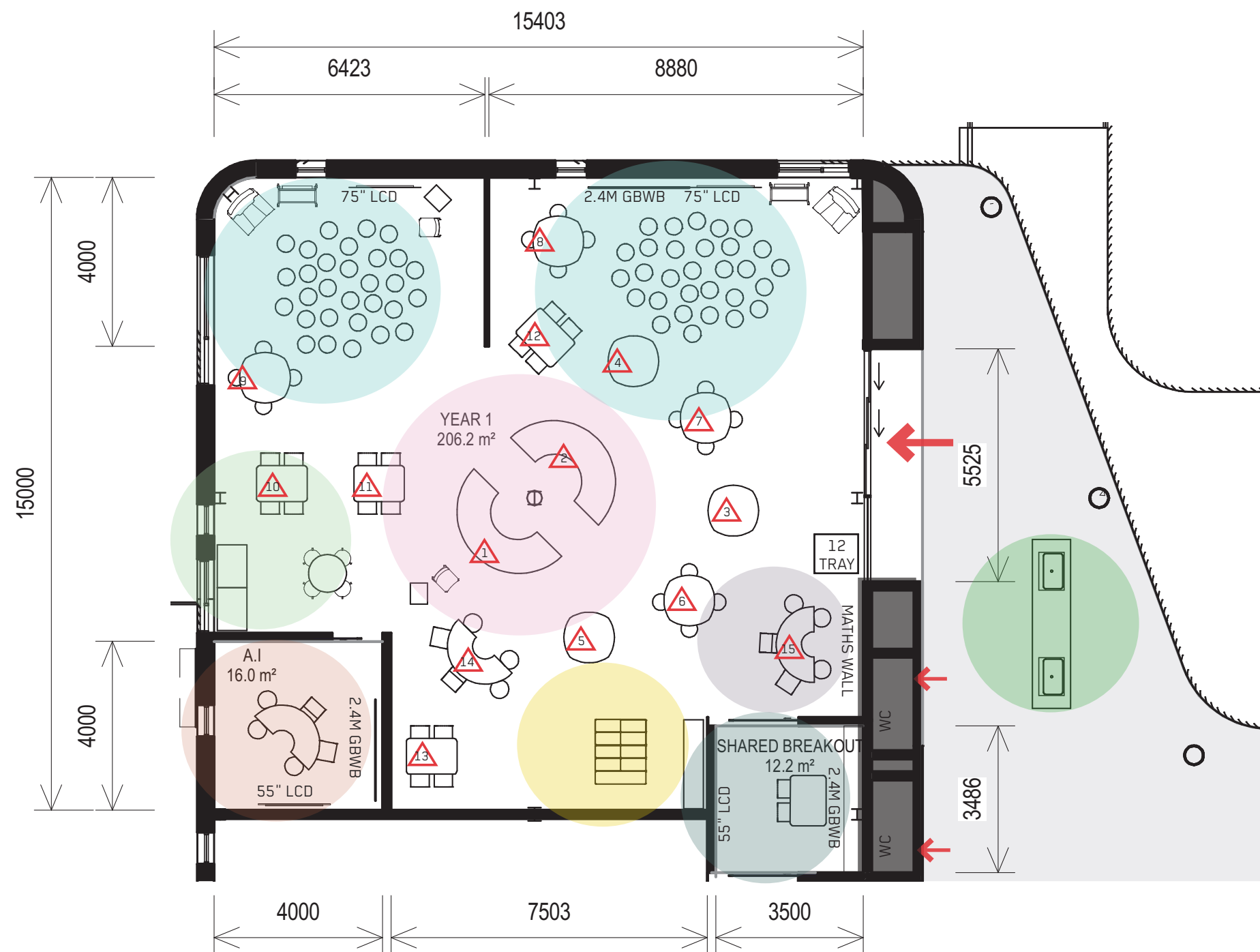
INTRODUCTION

There are 18 individual Inquiry Hubs spread across Santa Sophia South, Central and North buildings. The Inquiry Hubs will offer a series of learning settings and provide 15 points of focus per Hub. A series of workshops were conducted to form a specific brief for the Inquiry Hubs which resulted in the development of three different modules to reflect the learning needs of students in Year K- 4 , Year 5-10 and Year 11-12.

K - Year 4

The early years focus on developing capabilities and encouraging curiosity. These learning groups utilise a number of different furniture settings and points of focus to enable hands on learning.





TYPICAL LEARNING SETTING FOR K-YR 3

△ 15 X POINT OF FOCUS (LEARNING SETTINGS)

K - Year 4 :60 students per Inquiry Hub

General Learning Area - 220sqm with multiple furniture setting styles including shared reading space and constructive play area.

Accelerated Intervention - 16sqm withdrawal area for the use of 1 student with 1 teacher for literacy learning or 4 students with 1 teacher for numeracy learning.

Creative Zone - covered area shared between 2-3 Inquiry Hubs used for maker space.

Fixtures + Finishes: Broadloom carpet for learning space.

Dark colour of Autex pinboard behind TV screens.

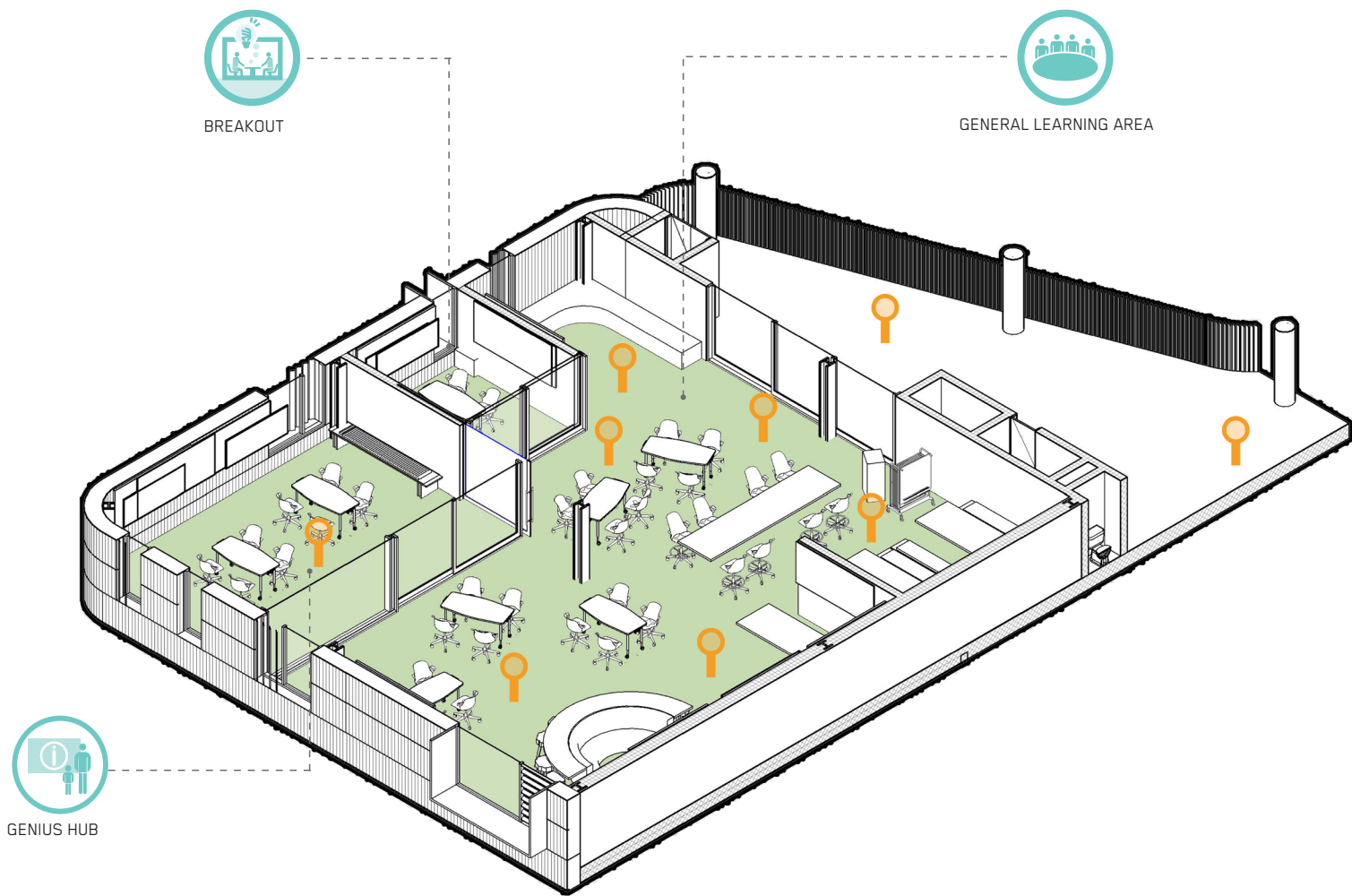
- **READERS HUB**
 - 1 X MODULAR BOOKCASE
- **SHARED READING**
 - 25/30 STUDENTS SEATING ON THE FLOOR
 - STORAGE WITH WALL MOUNTED LCD
 - 1 X GRANDMOTHER'S CHAIR
 - 1 X MOBILE LITERACY CENTRE WHITEBOARD
- **CONSTRUCTIVE PLAY AREA**
 - TECH HUB STORAGE
- **ACCELERATED INTERVENTION**
 - 1 X HORSESHOE INTENSIVE TEACHING STATION
- **SHARED ACCELERATED INTERVENTION (BREAKOUT)**
 - 5 X SEATS
- **WRITERS SPACE**
 - 1 X WRITERS TABLE
- **MATHS WALL**
 - 1 X 12 TRAY STORAGE
 - 1 X MATHS WALL
- **CREATIVE SPACE (COLA)**
 - 2 X HORSESHOE INTENSIVE TEACHING STATION
 - 4 X LOW PEBBLE TABLE
 - 3 X STAND UP PEBBLE TABLE
 - 4 X T-TABLE
 - 2 X TEACHER'S CHAIR & CADDY

6.6 LEARNING SPACES

6.6.3 INQUIRY HUBS YR 5-10

Year 5 - Year 10

The middle years focus on collaboration and investigation. These active middle years also utilise specialist spaces and the internal furniture is arranged to facilitate these years specific pedagogy. These learning group starts to use vertical surfaces as a point of focus and start utilizing the specialist hubs available such as Creative, Research, Performance Hubs.





TYPICAL LEARNING SETTING FOR YR 5 - YR 10

△ 15 X POINT OF FOCUS (LEARNING SETTINGS)

Year 5 - Year 10: 60 Students per Inquiry Hub

General Learning Area - 160sqm with multiple furniture setting styles

Genius Hub- 40sqm for maximum 20 students.

Direct teaching space. Default learning layout to be 2 tables with 4 seats. Acoustically treated when it is closed but most of times to be opened.

Breakout - 16sqm for 4-6 students.

Furniture: Chairs on casters. Suggested furniture supplier: Norva Nivel and Steel Case.

Fixtures + Finishes: Carpet tiles for learning space.

Dark colour of Autex pinboard behind TV screens.

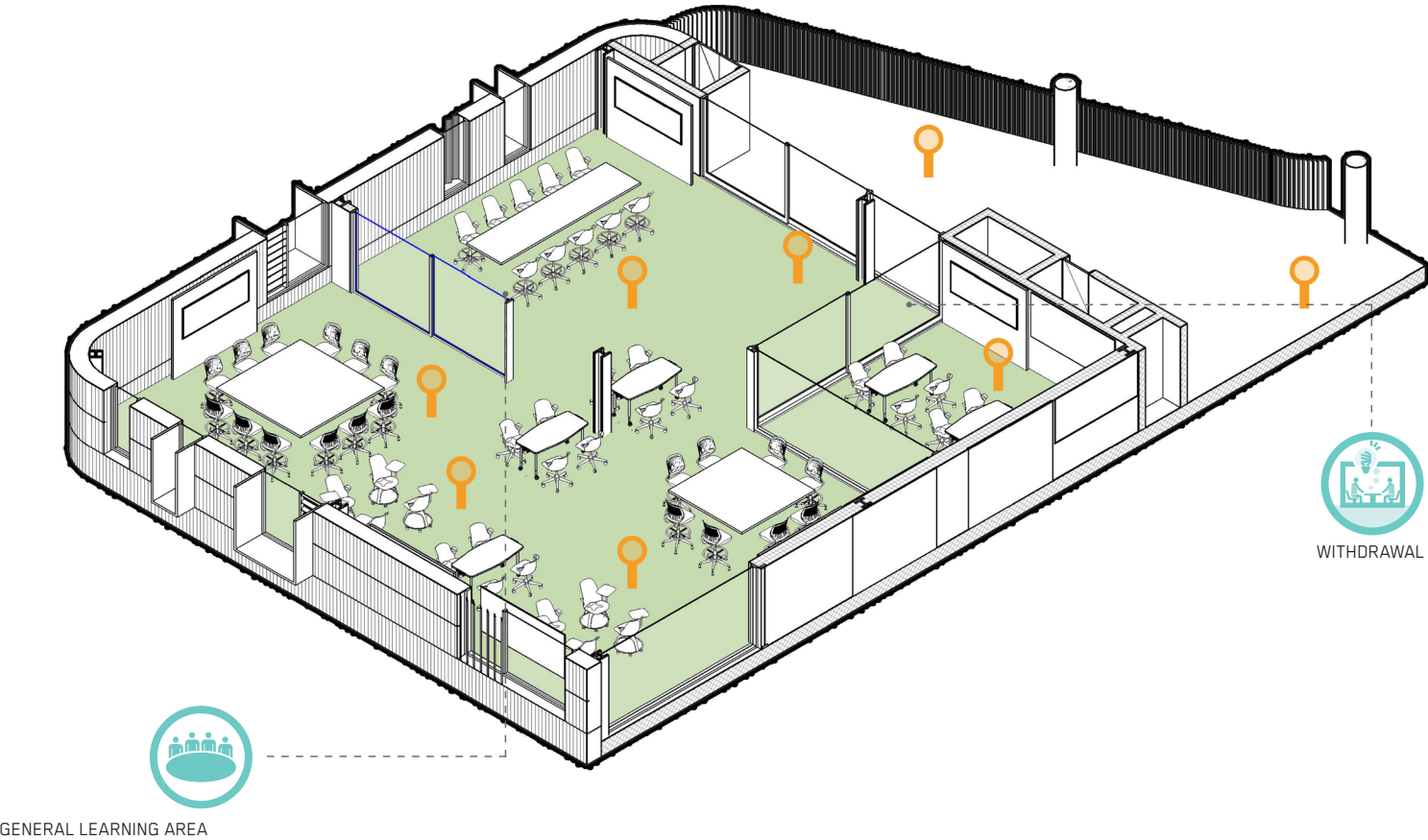
- GENERAL LEARNING AREA = 173M2 INCLUDES;
- - 3 X HAPPY DAY BOOTH
4 STUDENTS EACH BOOTH WITH LCD
- - 1 X PRESENTATION SETTING
16-20 STUDENTS GATHER AROUND LCD
- - 1 X PEER REVIEW OBSERVATION
BUILT IN BENCH SEATING
- BREAKOUT = 19M2
- GENIUS HUB = 40M2
- TOTAL AREA = 232M2

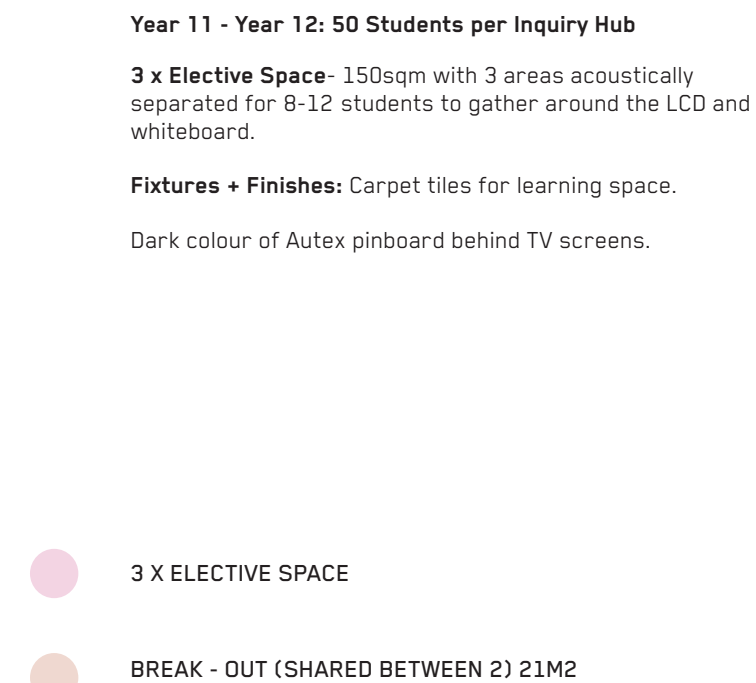
6.6 LEARNING SPACES

6.6.4 INQUIRY HUBS YR 11-12

Year 11 - Year 12

The senior years provide a personalised learning program that enables genuine dialogue, problem solving and exploration of interests. These learning groups use a variety of seminar type settings for small elective classes.





△ 15 X POINT OF FOCUS (LEARNING SETTINGS)

6.6 LEARNING SPACES
6.6.5 RESEARCH HUB

INTRODUCTION

The Research Hub is located on the Level 01 of building central over the Creative Hub. It aims to maximise visual connection with the lower level through a central void adjacent to the Research Hubs seminar space.

The hub arranges its wet labs to the north and dry labs to the south, with the specialist spaces such as the seminar spaces and mini labs arranged at the centre of the floor plate adjacent to the Void to the lower Creative Hub. The central seminar space aims to maximise the 5m floor to floor height on this level with a large LCD display screen to engage students both in and outside of the Creative Hub.

The labs have been designed to maximise visual connection between student groups and allow for students and teachers to move between classes.

Areas: Labs between 80 - 100m² contain 6 groups of 4

Preparation area 100sqm

Chemical store area 60sqm

A separate seminar space for direct teaching.

Furniture: Benches around the perimeter with a central prep area. Minimum of 23 bench stations bookable. A shelf for laptops with power and data.

Bench dimension 3600mm x 1500mm, alternate a sink/storage. 600mm x 1500mm module at the end of each bench.

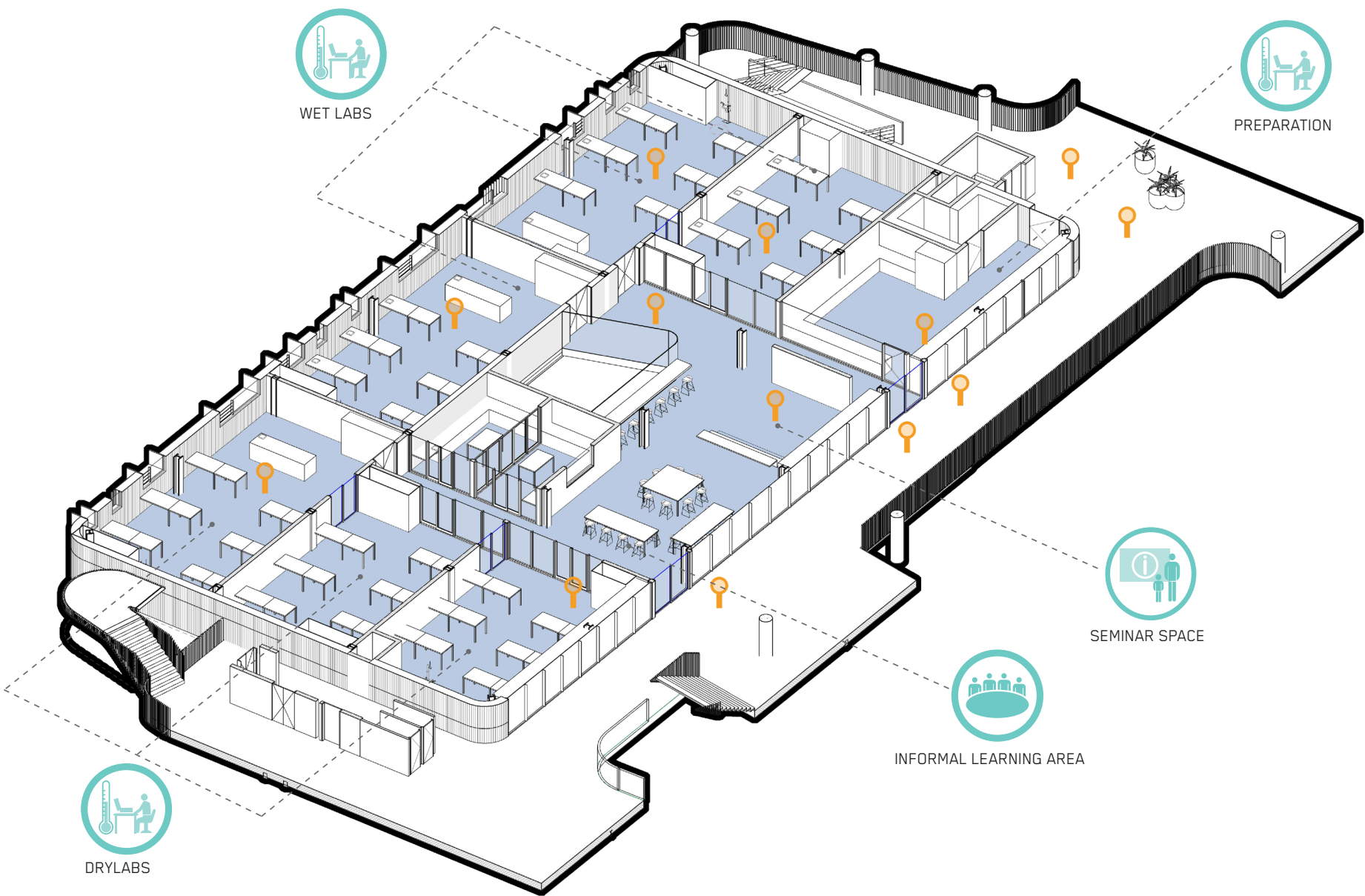
Other Items: All wet labs accessible to a safety shower.

Separate chemical store with lockable fume cupboard.

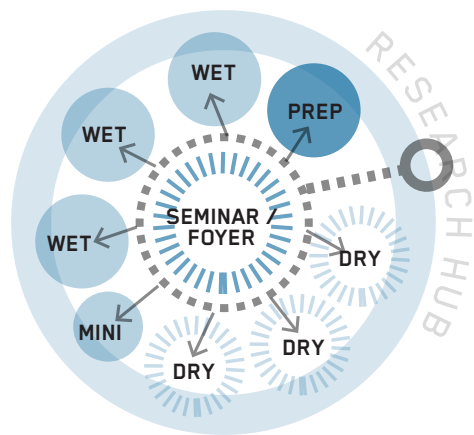
One hand-wash sink.

Fixed whiteboards around the window locations.

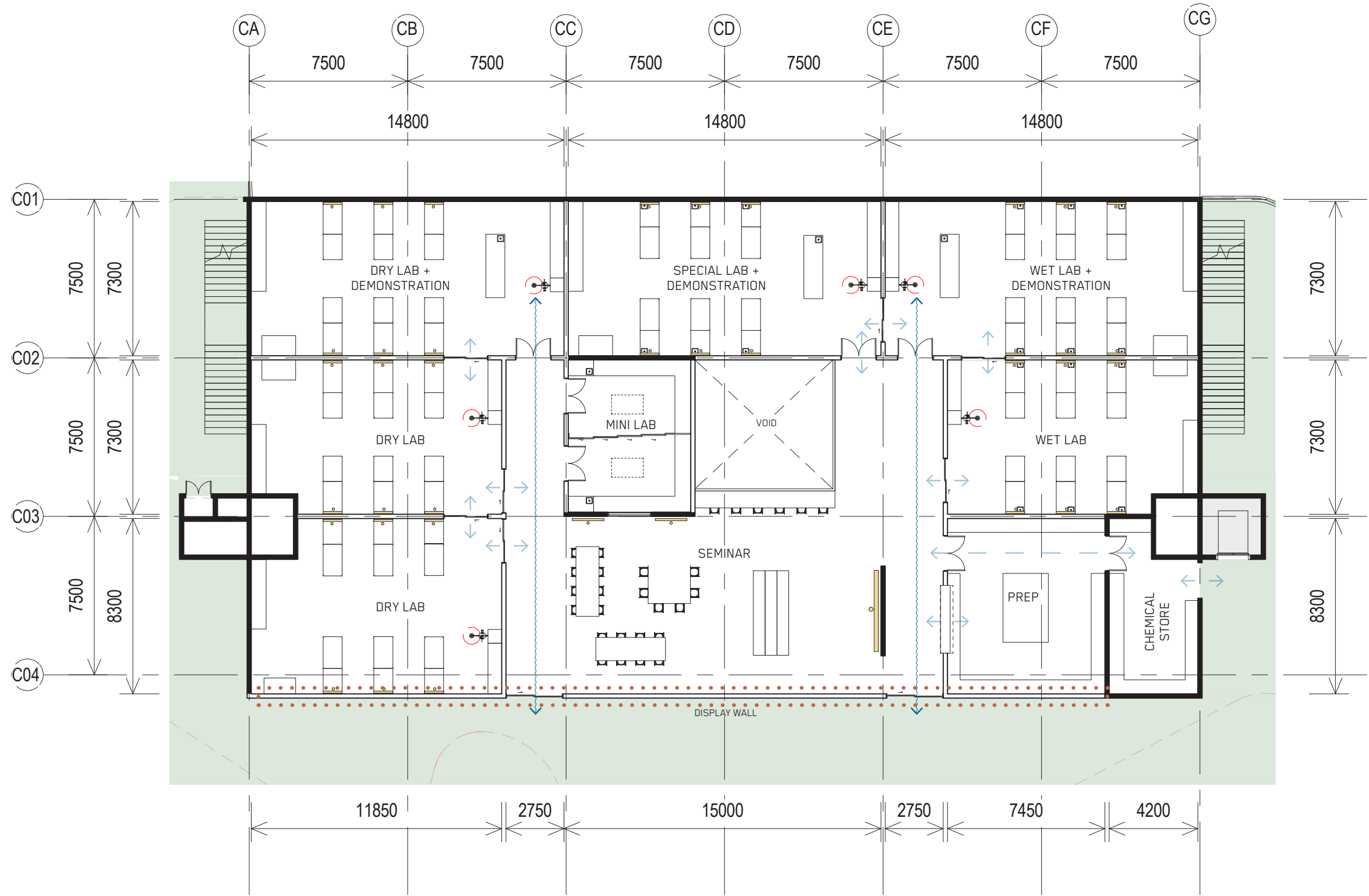
Bag hooks to be provided away from the lab tables.



LEVEL 01



LEVEL 00 - RESEARCH HUB FLOOR PLAN



6.6 LEARNING SPACES
6.6.6 CREATIVE HUB - ARTS & APPLIED SCIENCE

INTRODUCTION

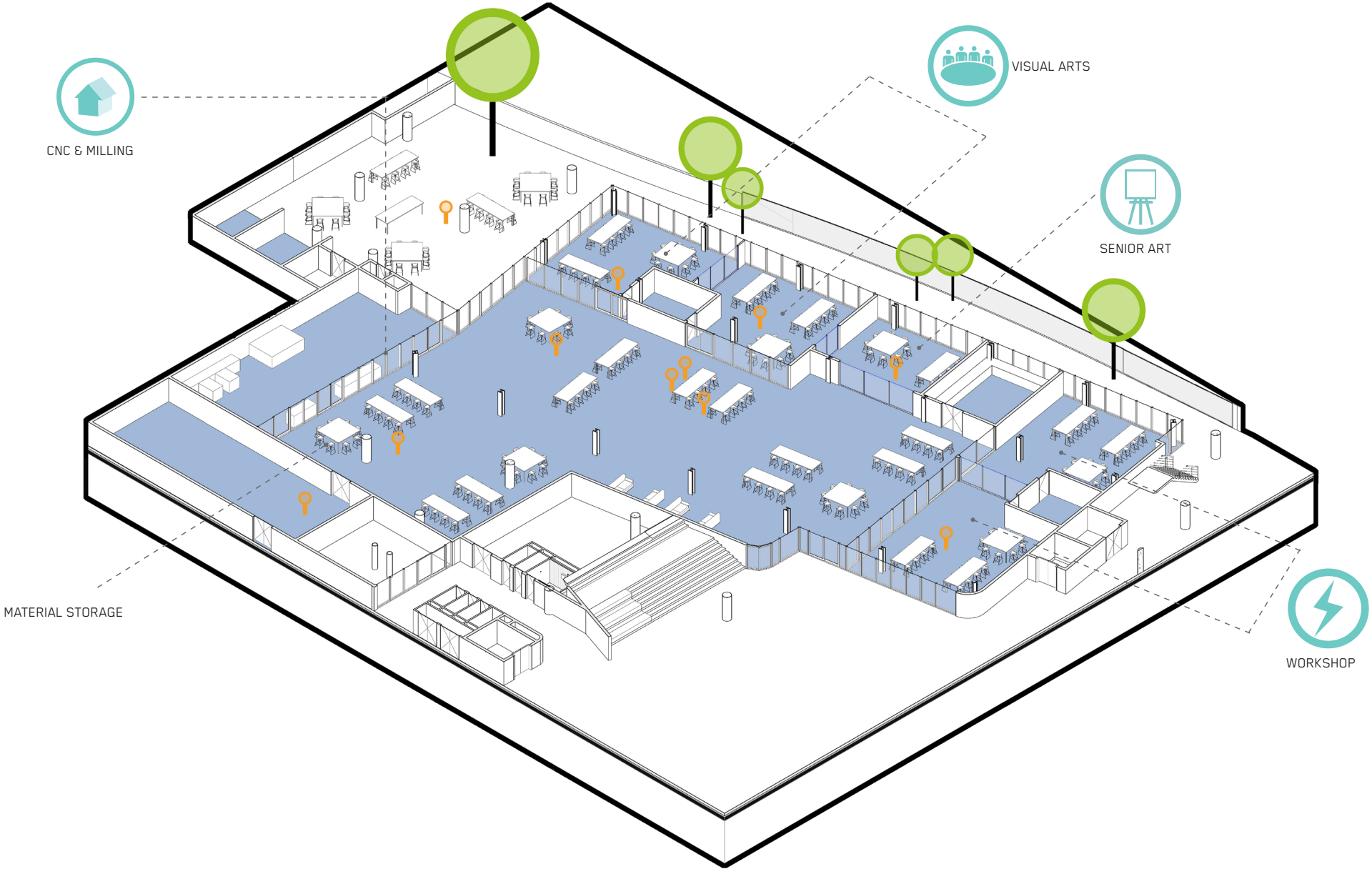
The Creative Hub comprises of a series of enclosed workshop and classroom spaces that are arranged around a central Fabrication Assembly area.

The main Fabrication Assembly area allows for the students to work in a bright, spacious environment with a direct connection to outdoor learning and play areas. In order to maximise visual connection with others students, two voids over the fabrication spaces have been created. The first is a void connects to the Creative Hub above, the second is a glazed Lantern beneath the Stair 02 that allows students in the outdoor area on level 01 to view down into the fabrication area of the Creative Hub.

The workshop spaces within the Creative Hub cater for a number of different mode of leaning and house machines and equipment ranging from 3d printers, laser cutters to CNC millers and routers. There are also dedicated workshop space for Electronics.

The dedicated Visual Arts learning spaces are located adjacent to the Outdoor Fabrication areas in order allow easy access to ancillary spaces such as the spray booth and kiln. A senior workspace has also been designed in close proximity to the Visual Arts spaces to allow senior students to work on long term projects and store their work in the adjacent storage.

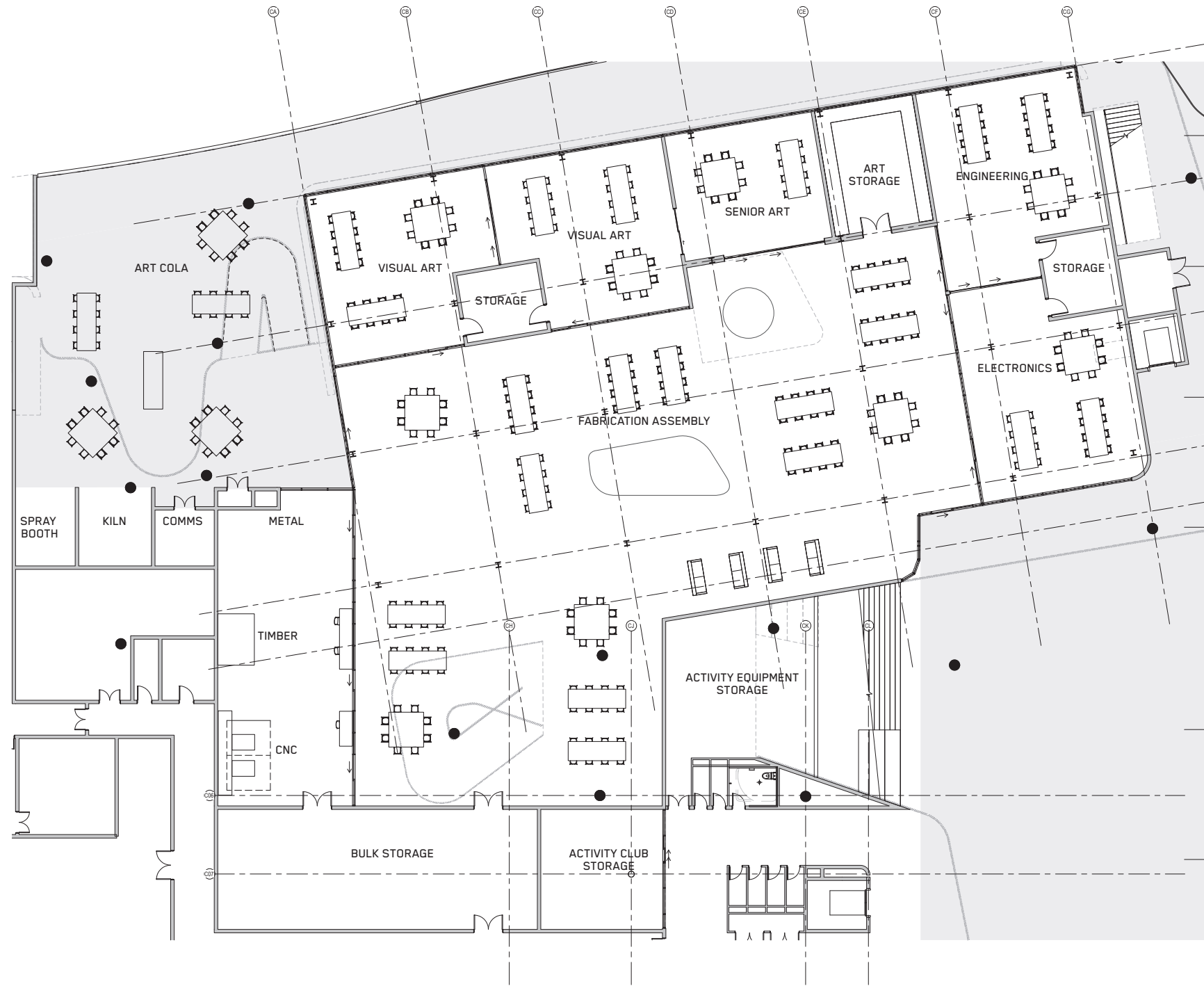
A dedicated exhibition space has been incorporated in an aim to engage the wider school community.



LEVEL 00



LEVEL 00 - CREATIVE HUB FLOOR PLAN



KEY POINTS

- 4 X LABS OF 24
- 6 X LEARNING CLUSTERS
- 1 X SENIOR ART SPACE ?

EACH LAB CONTAINS

- 24 STUDENTS
- 3 X 8 SEATER TABLES
- 3 X VIRTUAL POINTS OF FOCUS

EACH LEARNING CLUSTER CONTAINS

- 24 STUDENTS
- 3 TABLES
- 2-3 DIGITAL OR SURFACE POINTS OF FOCUS

6.6 LEARNING SPACES
6.6.7 CREATIVE HUB - FOOD TECHNOLOGY

INTRODUCTION

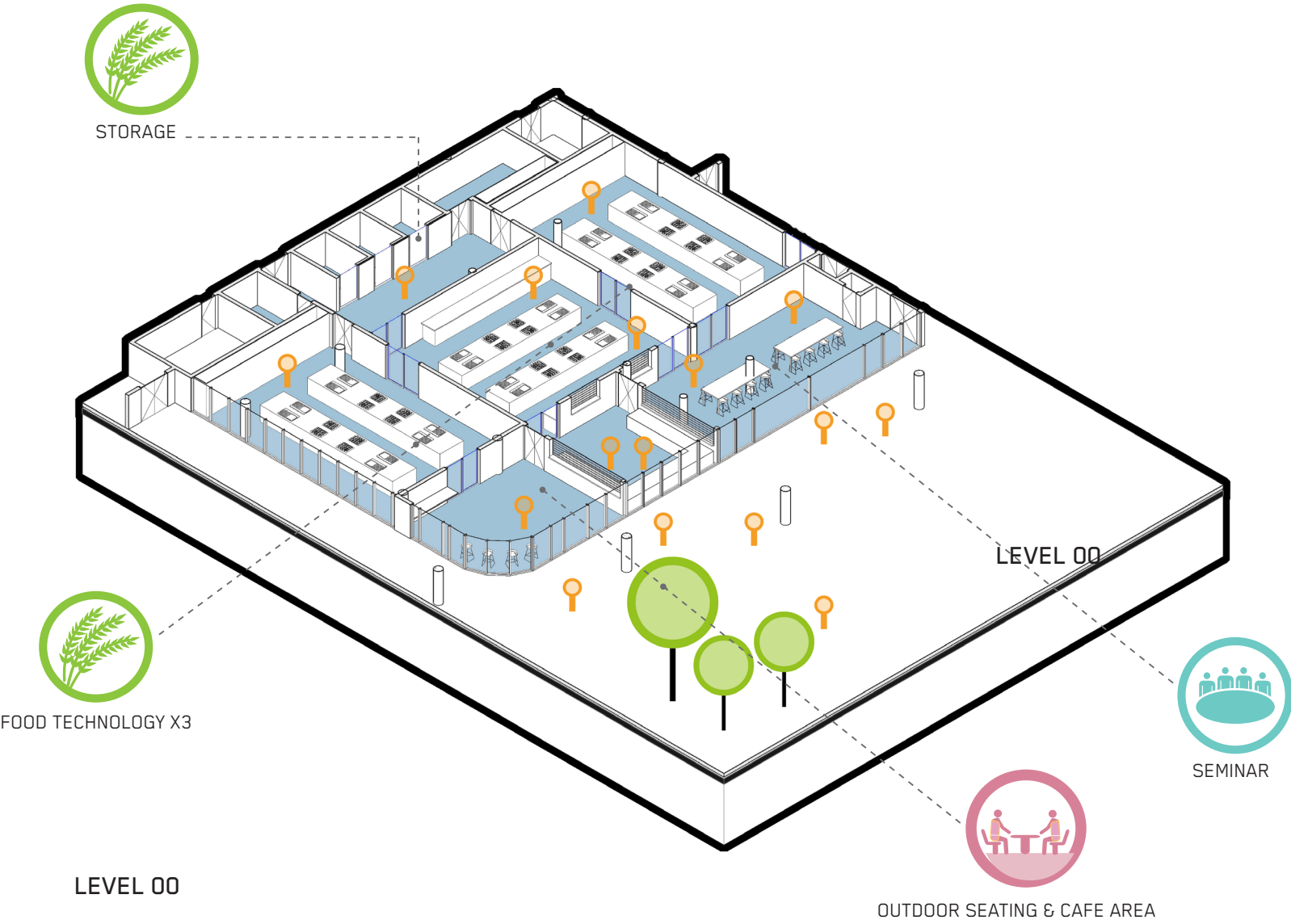
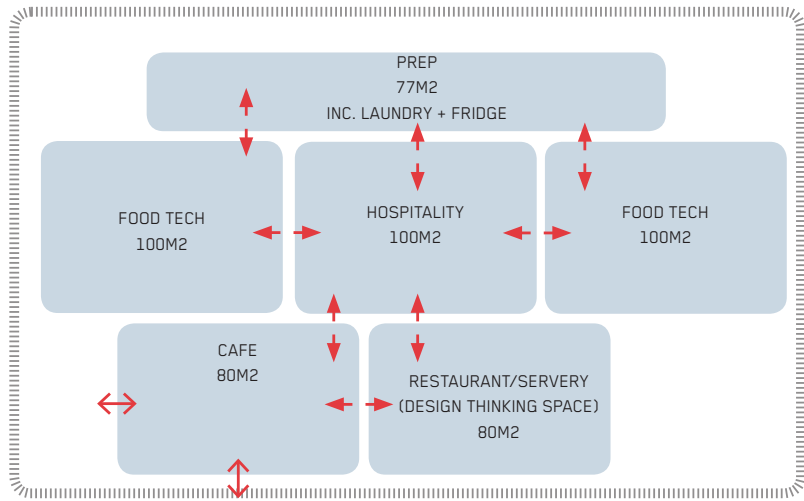
The food technology portion of the creative is located on Level 00 in the Central Building. . The hub consists of food prep and storage areas, food technology and hospitality classrooms, a design thinking space and a cafe to serve the school.

The relationships shown in the diagram were developed by CEDP in order to maximise the connectivity between the classroom spaces , the cafe and design thinking space .

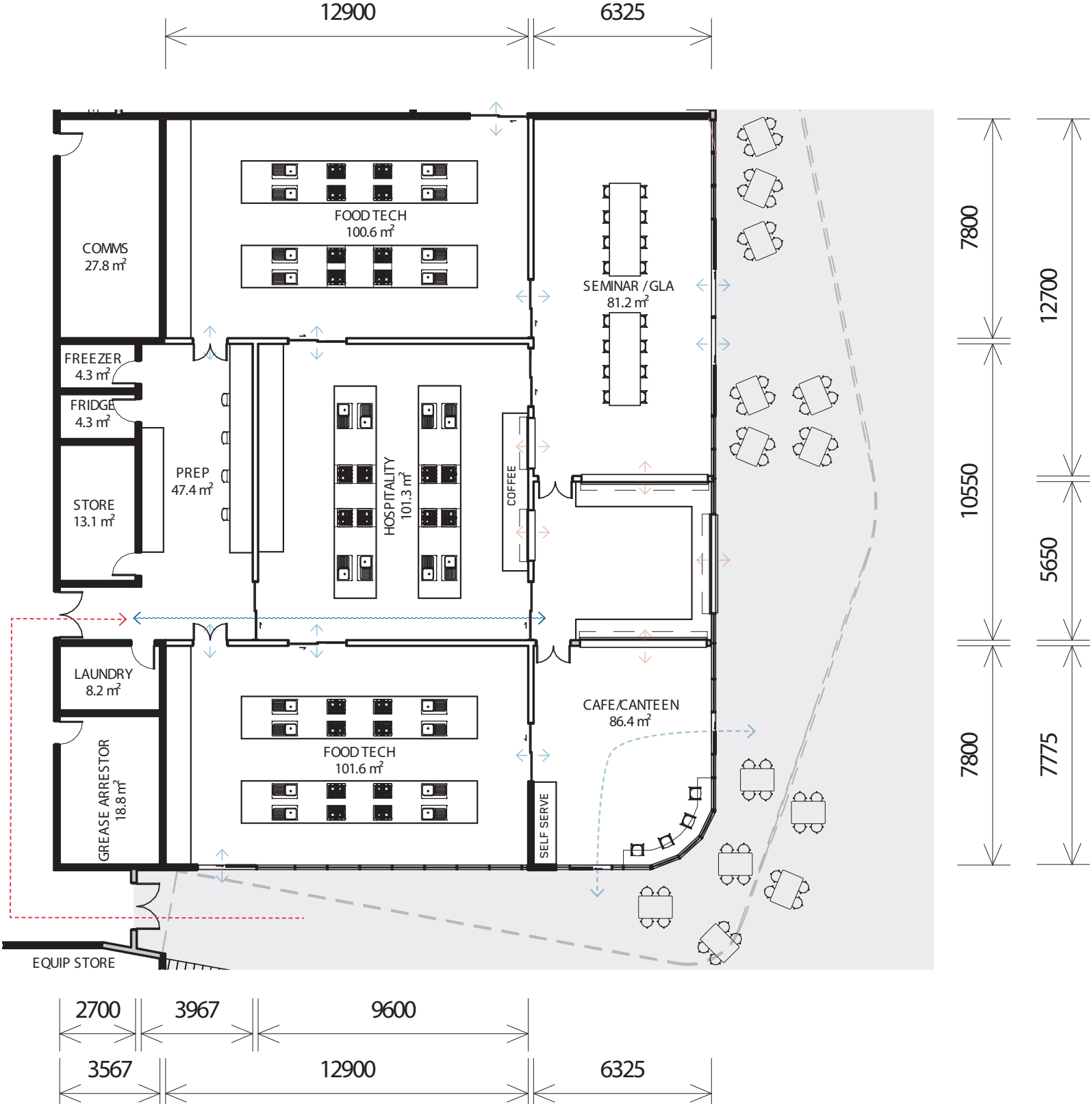
Each classroom will house 16-24 students at one time where they will work in groups of 3-4 people, each group having access to sufficient bench space, an oven and sink.

Supplies and utensils will be prepared in the prep space before classes commence and then moved into the food technology rooms when required.

The design thinking space will act as a breakout area for classrooms and as a 'restaurant' for students to prepare food and learn hospitality skills.



LEVEL 00 - FOOD TECHNOLOGY FLOOR PLAN



6.6 LEARNING SPACES
6.6.8 PERFORMANCE HUB

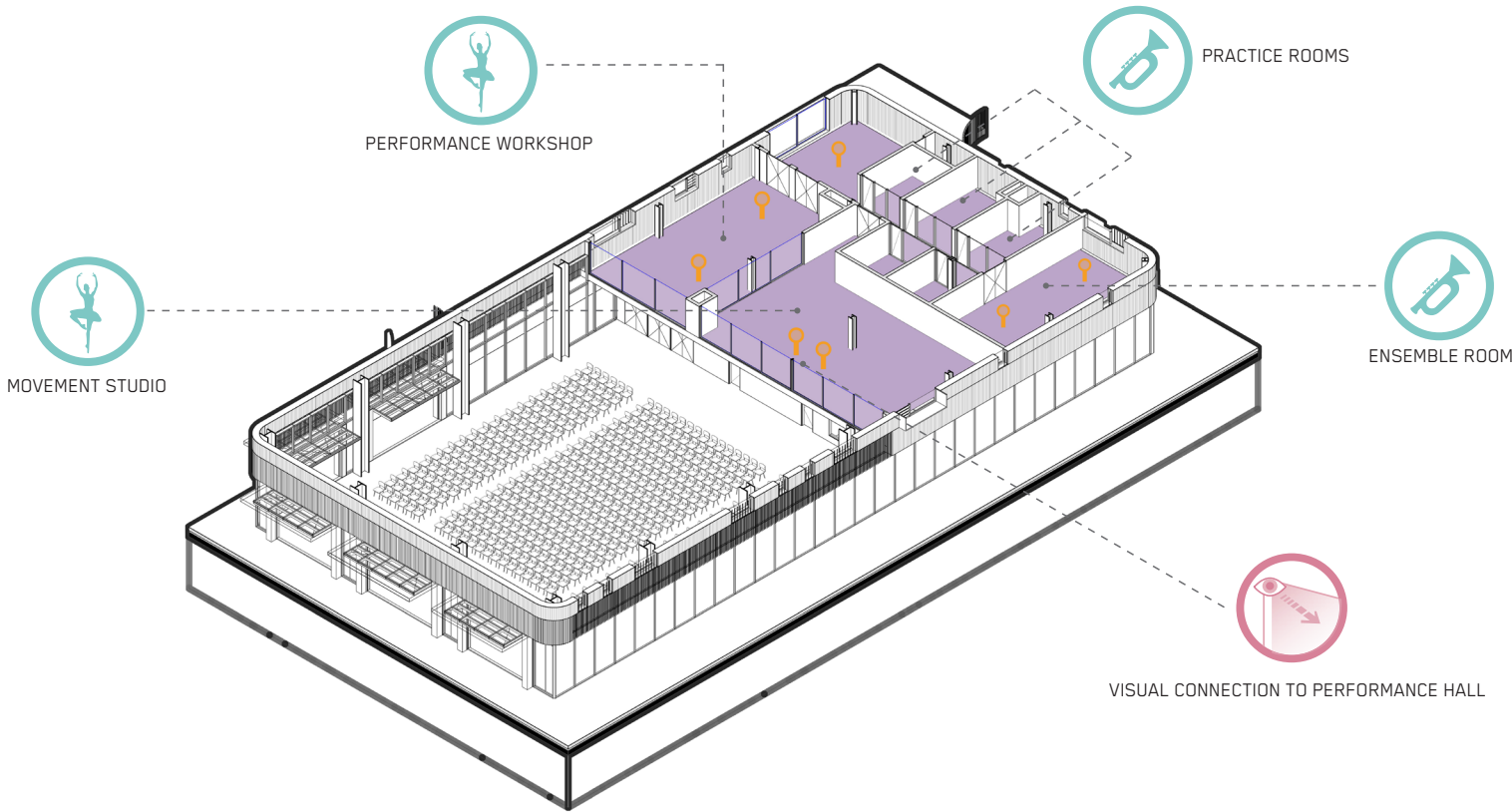
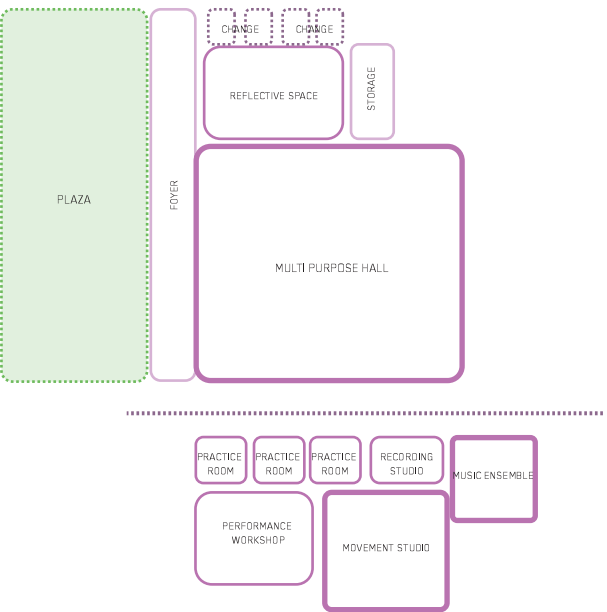
INTRODUCTION

The Performance Hub is located in the Northern Building of Santa Sophia and is distributed across two levels. It accommodates both the Performance Hall & the Music , Dance and Drama facilities.

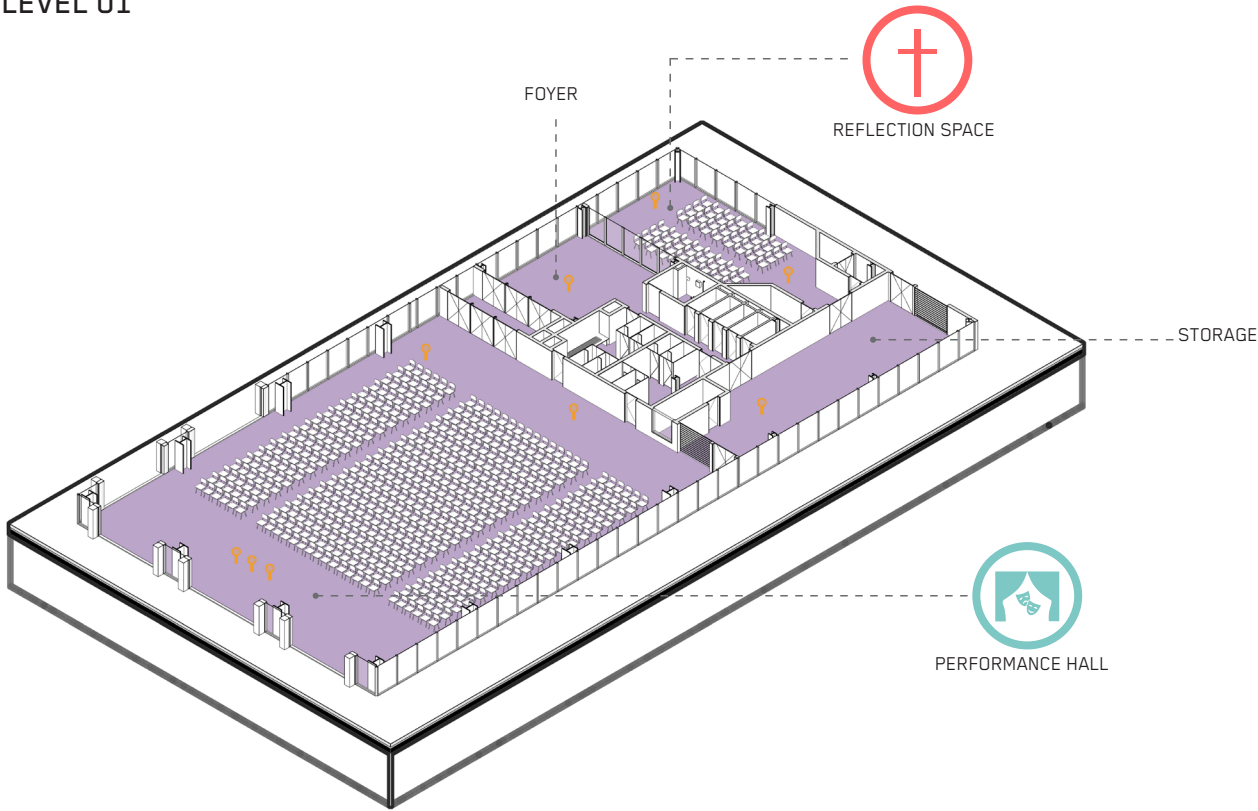
Level 00 consists of a multi-purpose hall that will comfortably accommodate 500 people for gathering and events. The hall has been designed to open onto the central school plaza to increase capacity during special events. This level will also house the schools reflective space and a multi-purpose foyer that can act as an extension of the reflective space or additional teaching space.

The second level will accommodate for a number of varying sizes of Performing Arts studios and Practice rooms for the teaching and learning of Music/Dance/ Drama related subjects. Both the movement studio and Performance workshop have been placed on Level 01 to capitalise on the 5m floor to floor height on this level. The wall between the two spaces will allow for the spaces to be joined, catering for larger class numbers whilst the walls adjacent to the hall will comprise of glass sliding doors to enable these rooms to cater for increase view numbers for events.

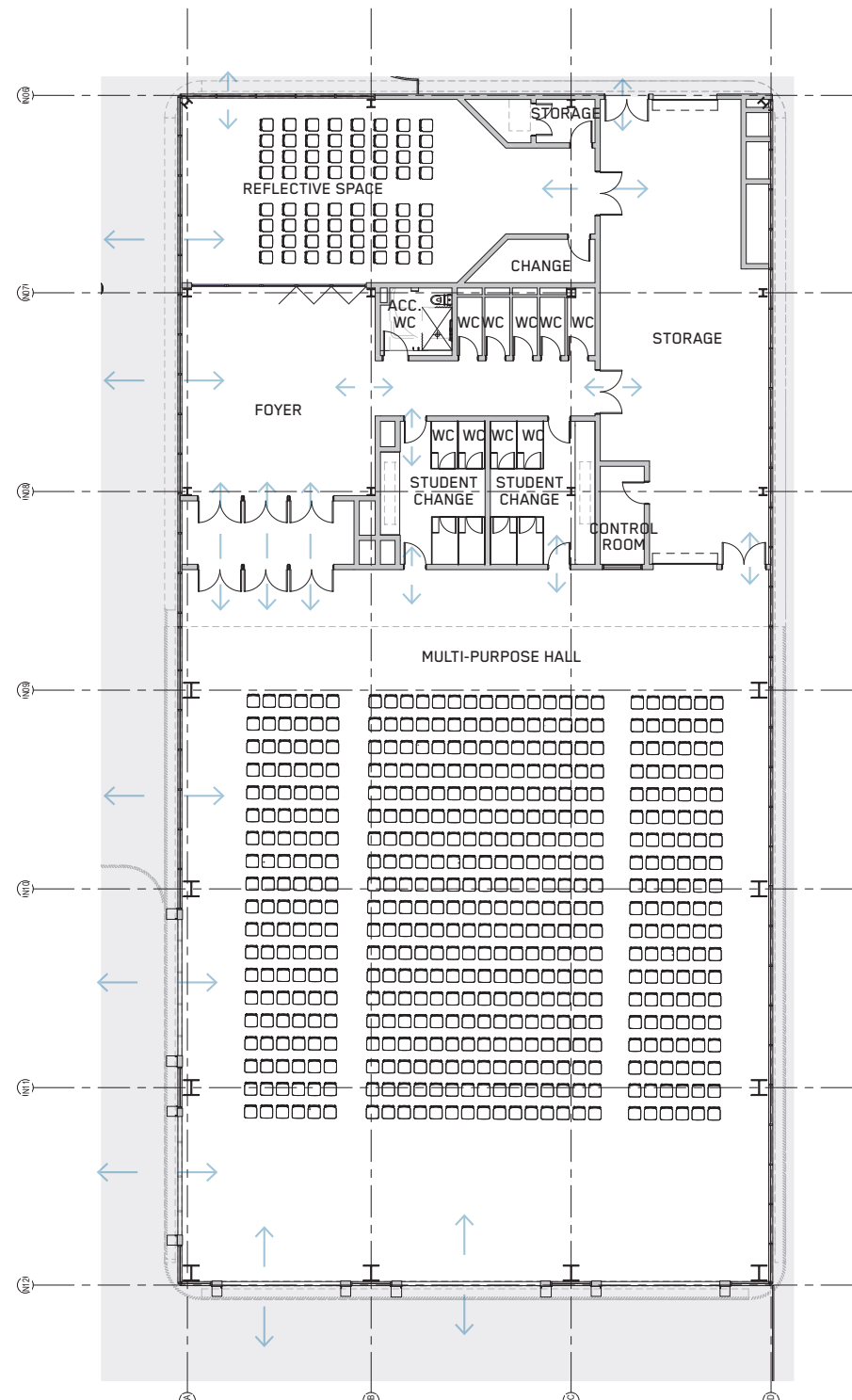
In highlighting one of the Guiding Design Principle of the project: Catholic School and Community - it is important for the school to incorporate facilities which can be used, shared or hired by the greater community. The Performance Hubs lower level is designed to allow the school to hire out the hall to the wider community after school hours and on weekends.



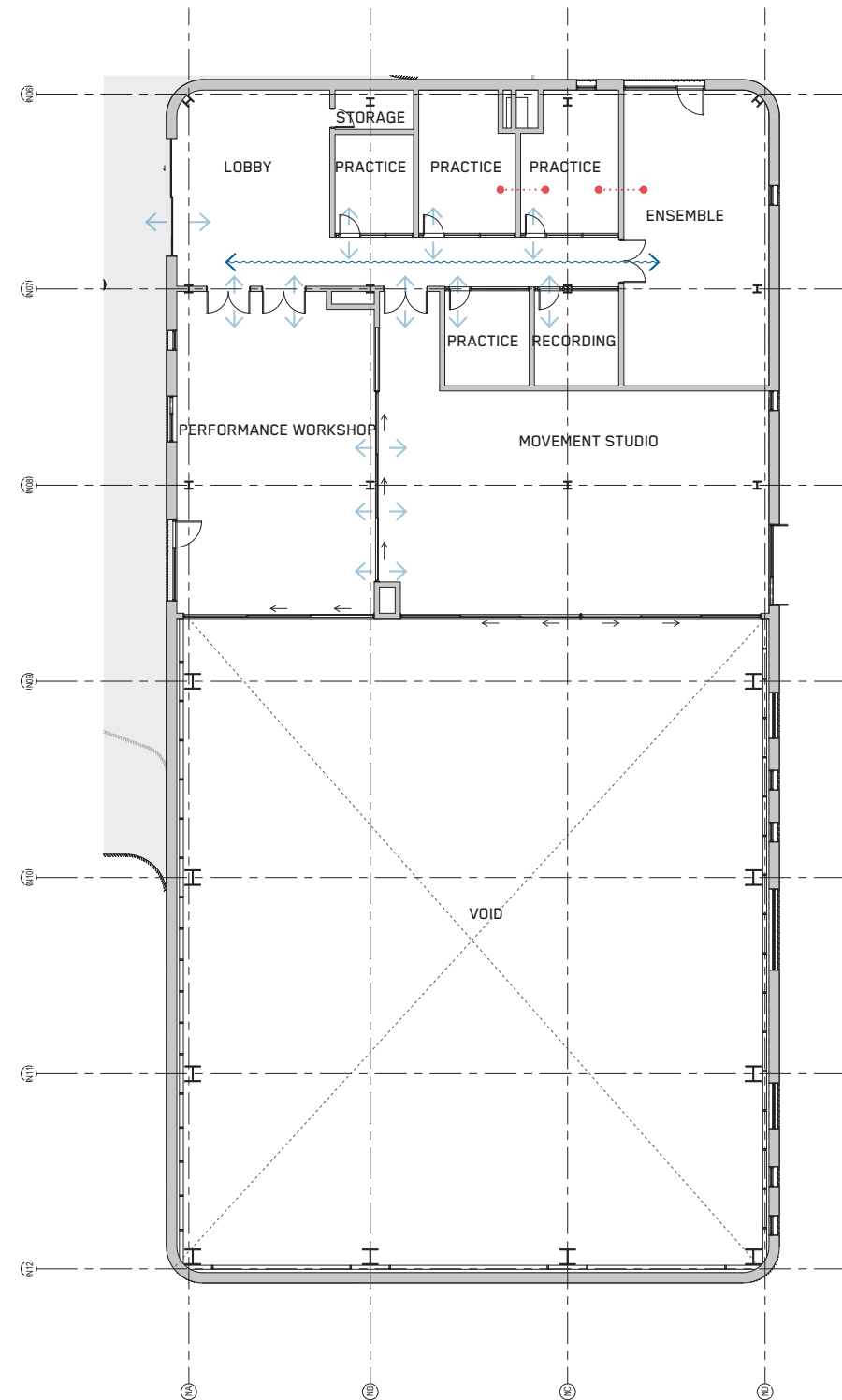
LEVEL 01



LEVEL 00



LEVEL 00



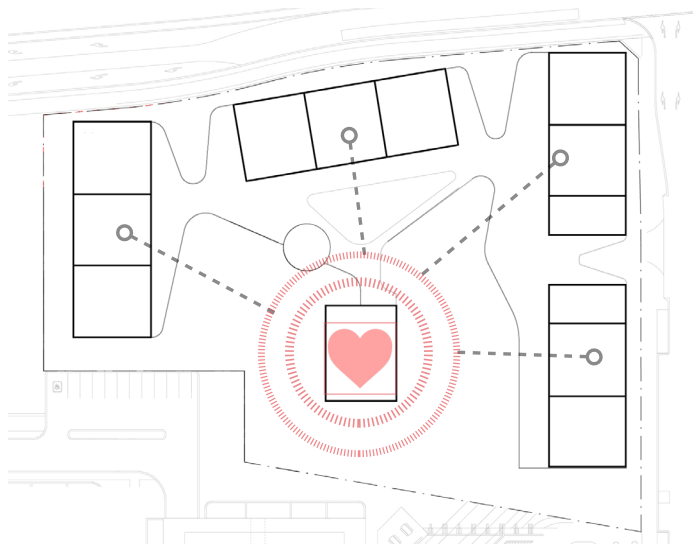
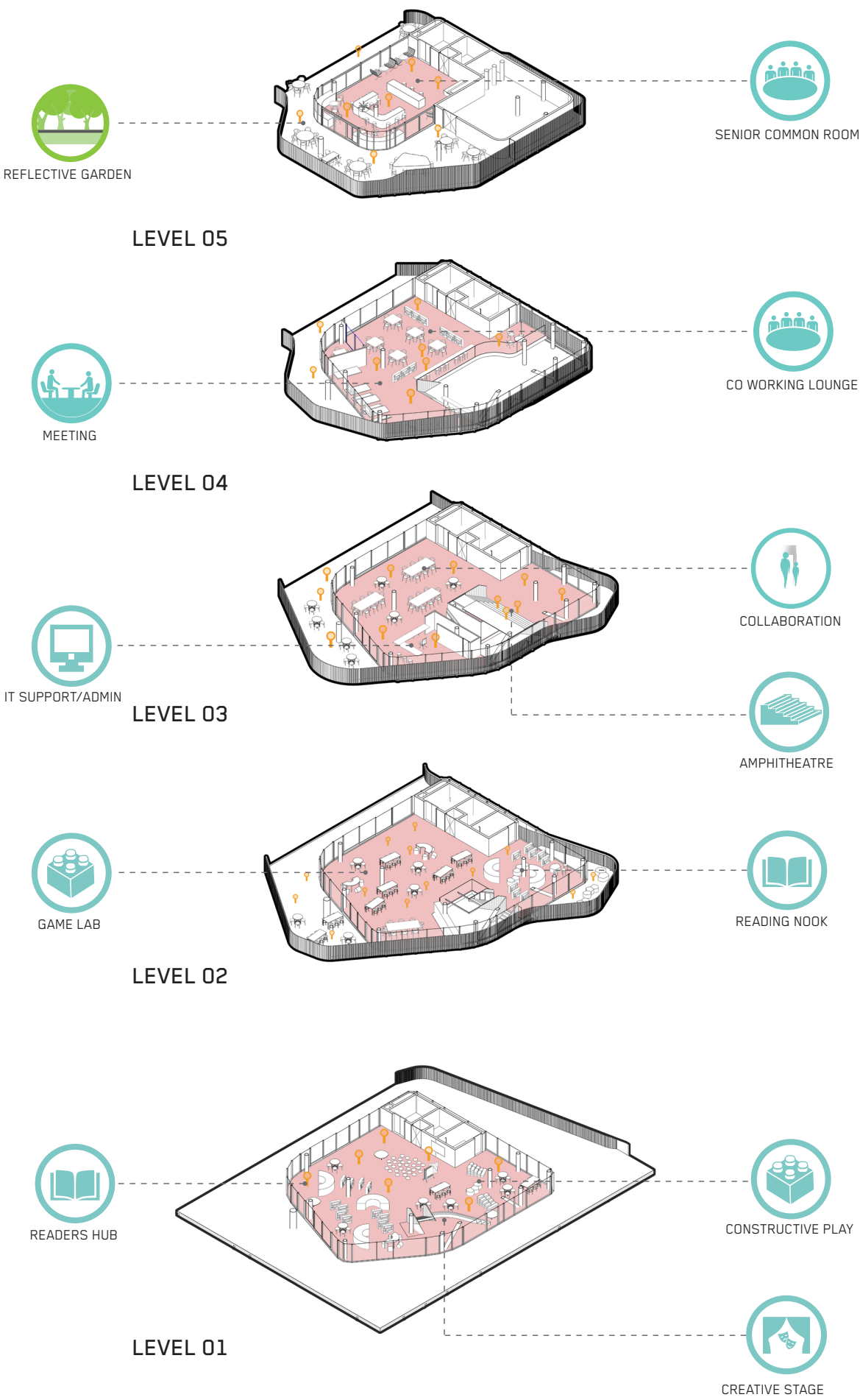
LEVEL 01

6.6 LEARNING SPACES
6.6.9 KNOWLEDGE CENTRE

INTRODUCTION

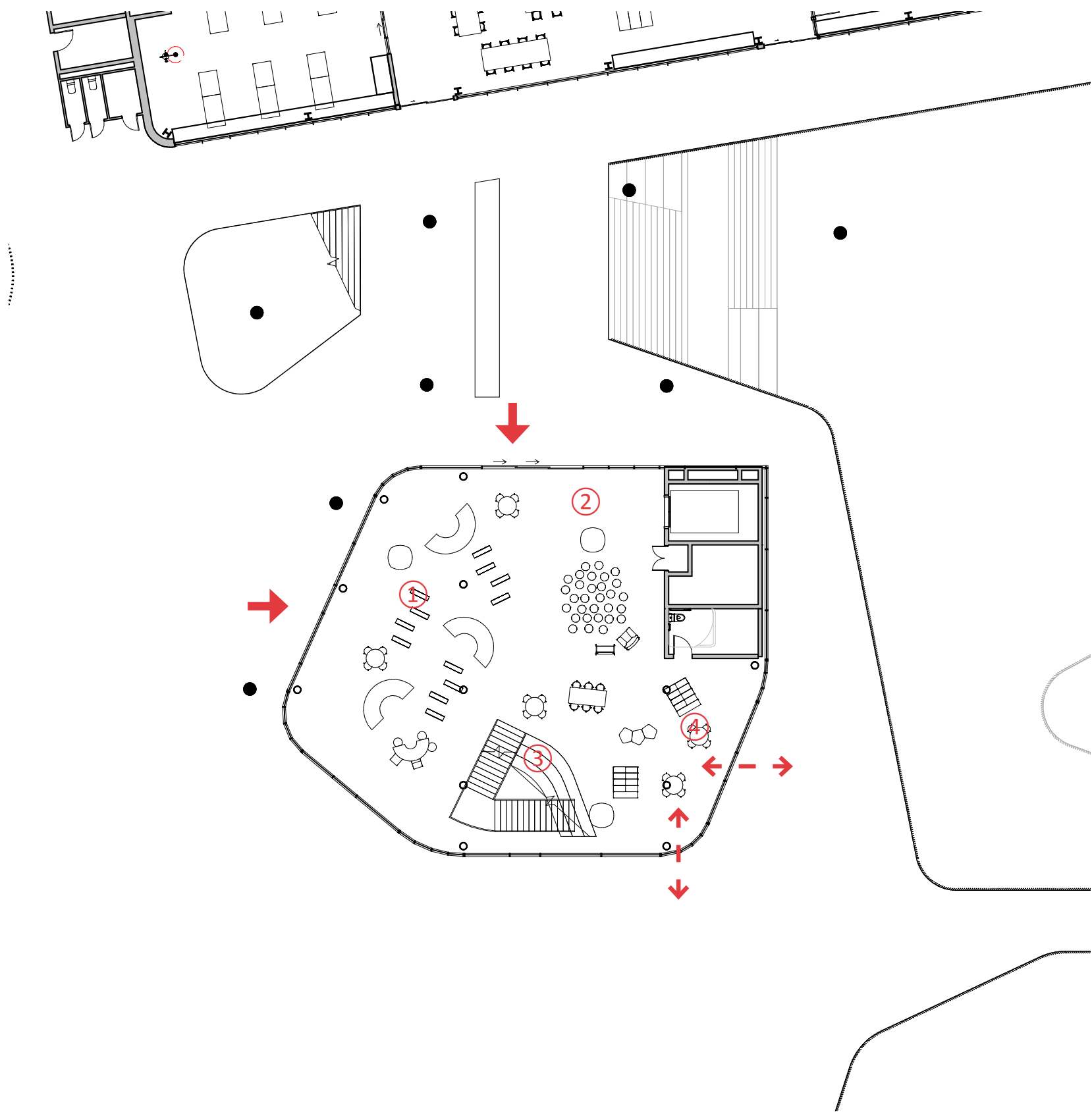
The Knowledge Centre acts as the heart of the school and a beacon to the wider school community. Its central location on the site helps to maximise its physical presence in the school whilst also ensuring visual connection to the Inquiry Hubs, Outdoor play areas and main entrances.

The Knowledge Centres program has intentionally been spread across 4 levels in order to promote its use by all school years. The internal program also reflects the needs of the respective year groups on each level, with each level acting to assist the learning modes of the surrounding Inquiry Hubs. The visual connections between levels and the central circulation aims to promote intrigue between year groups and encourage students to explore the learning of others.



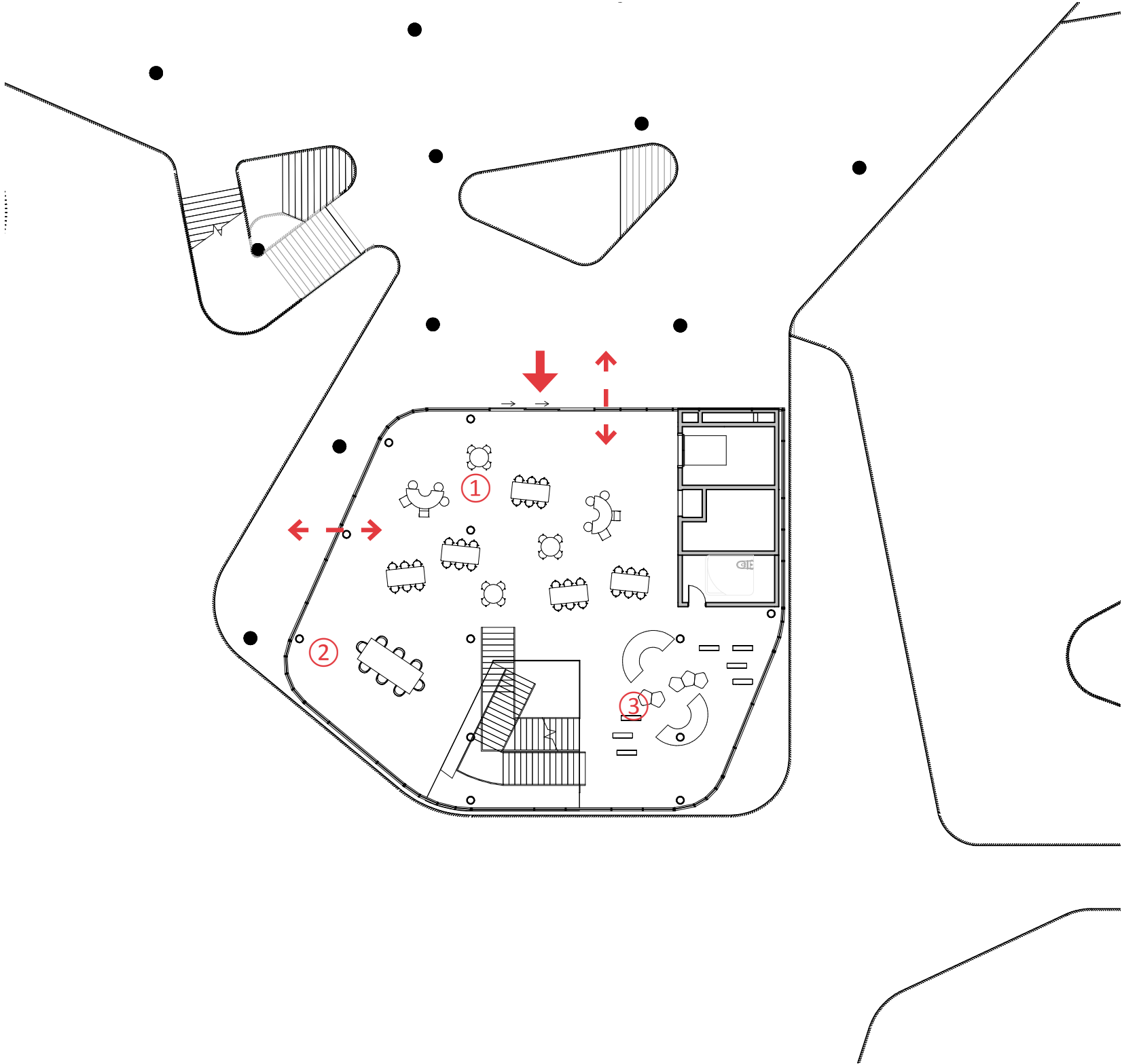
LEVEL 01

First level of the Knowledge Centre focuses on activities for early learning group which incorporates a variety of settings for reading and play. Readers hub is located centrally and closely to the entrance for children's easy access to the books. The Creative stage with playful cubby house have good connectivity with constructive play which will be arranged with Lego tables and walls. Design intention of this level is to open up as much as possible for easy flow between indoor and outdoor areas.



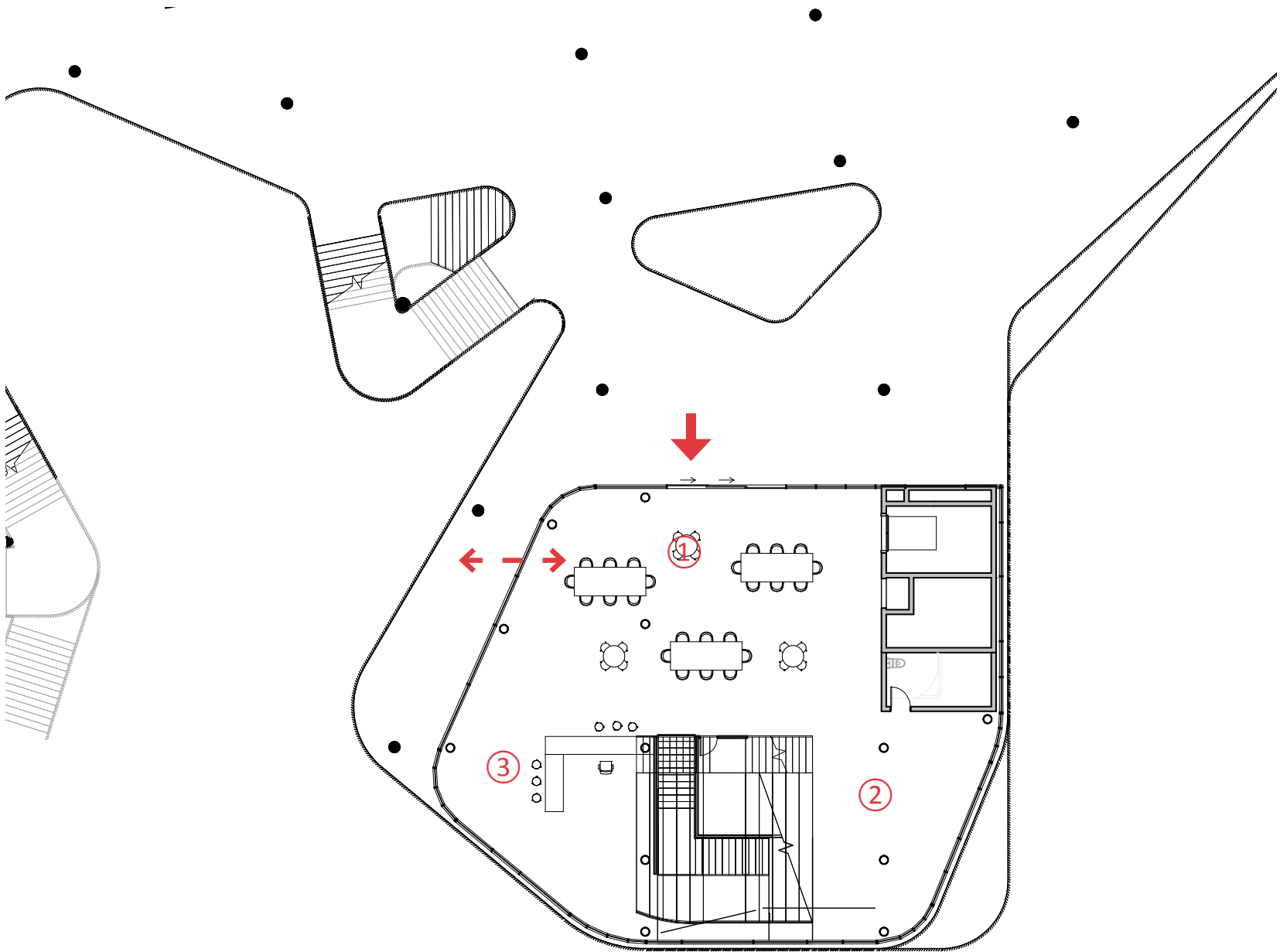
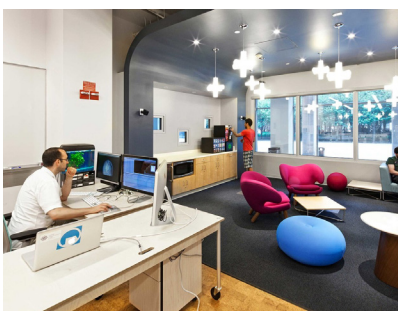
LEVEL 02

Second level of the Knowledge Centre focuses on activities for early learning groups and encourages K-Yr 4 students to move between level 1 and level 2 to utilize play space. The game lab incorporates tables for boardgames and lego with storage spaces. Reading nook is designed to provide a comfortable and quiet zone for younger children. Maker space focuses on electronic and engineering activities, introducing junior STEM activities.



LEVEL 03

The third level of the Knowledge Centre focuses on activities for the middle year groups and begins to introduce collaborative spaces. The Collaborative cafe consist of various types of collaboration tables for student interaction. The lecture theatre can incorporate maximum 120 people seating with drop down screen to project screen for learning or use for guest lecturer presentations. This level also includes administration area for teacher librarian and IT support.



LEVEL 04

The forth level of the Knowledge Centre focuses on activities for the senior year group such as quiet individual study area and meeting spaces. The Lecture theatre on level 3 a creates visual and physical connection between the two levels. This level includes different types of quiet zones, meeting rooms for large groups and booth seating for mediums to small group. Bench seating and table settings allow for individuals to focus on quiet study. Also, staff may use this space for staff meetings or interaction with students.

