

tonkinzulaikhagreer



# St Luke's Grammar School

New Senior Campus

SEARS APPLICATION | FINAL

Prepared by  
Tonkin Zulaikha Greer Architects  
For St Luke's Grammar School

03 April 2019



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Disclaimer: Site boundary information based on survey provided by Steven Carr. Information outside Site boundary based on Aerial photographs and are approximate only.

ISSUE DATE	REVISIONS	ISSUED BY
29 Mar 2019	DRAFT	TZG
03 Apr 2019	FINAL	TZG



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1.0

Project Brief and Statutory Context

1.1 Project Overview Plan



# 1.2 Project Brief

## Project Objectives

The prime objectives of the project are as follows:

- 1 To provide a new senior school campus for St Luke’s Grammar School located at 800 Pittwater Road with sporting facilities at 224 Headland Road.
- 2 Total St Luke’s school enrollment to have 1,600 students, with 600 students on 800 Pittwater Road and 1000 on 210 Headland Road.
- 3 To provide a vertical connection linking 224 Headland Road and 800 Pittwater Road.
- 4 The project is to be designed for final operation with division into stages following to suit the availability of the site.
- 5 To provide an ideal delivery solution that will allow staging of the school development as the surrounding residential population grows and enrolment demand is generated.

## Educational Planning Objectives

The following objectives have been developed based on the Educational Consultant Report prepare for St Luke’s by Anne Knock, Educational Consultant and the Department of Education (DoE) Educational Principles as outlined in the Educational Facilities Standards and Guidelines (EFSG). The objectives will guide all future decision-making, planning and evaluation of the learning environment from an educational perspective. The designs are to be based on ‘Destination 2030’ Future focused learning and will:

- Shift learning from separate to connected.
- Focus on inquiry approaches to learning.
- Include multi-modal learning environments.
- Involve teachers as designers.
- Focus on overall wellbeing.
- Plan for and embrace technological disruption.
- Be flexible and allow customisation to suit different contexts by providing both core and optional space types.
- Provide public and community spaces to welcome the community into the building.
- Allow response to changes in student numbers.
- Offer a safe and secure learning and working environment that invites community participation and engagement.
- Be mindful of the needs of learners at different learning stages.
- Offer an engaging and supportive student experience suited to a range of learning styles.
- Offer flexible and well connected teaching and learning spaces.
- Offer technology-enabled settings with an emphasis on mobility.
- Have the capacity to support comprehensive curriculum delivery.
- Be configured to maximise meaningful and functional relationships and links between people, disciplines and resources.
- Support teachers in their roles as student mentors and members of a professional community.
- Maximise outdoor learning opportunities.
- Create a healthy and environmentally sustainable environment that serves as a tool for learning.
- Respond to varied access and usage patterns.

## The Brief

A preliminary brief was produced which is subject to review. The brief aims to incorporate the school’s educational vision for a future-focused environment and ensure that the design of the new school facilities is aligned to, and is supportive of the planned learning and teaching approach. The spaces are clustered into precincts as follows:

### 800 Pittwater Road:

#### Village Centre:

- Welcoming the community into the building
- Cafe and heart of the building
- Natural daylight + green spaces
- Administration zone

#### Gathering Spaces:

- Auditorium for 700+ students
- Library hubs
- Social + Informal learning hubs

#### Science and Maths Precinct:

- Speciality learning areas (Physics, Chemistry, Biology)
- General learning areas; connection to support units
- Seminar rooms

#### Arts Precinct:

- Speciality learning areas (Visual Art, Kiln)
- General learning areas; connection to support units
- Seminar rooms

#### Design + Technology Precinct:

- Speciality learning areas ( Food technology, Design and technology)
- General learning areas; connection to support units
- Seminar rooms

#### Humanities Precinct:

- General learning areas; connection to support units
- Seminar rooms

#### Wellness Precinct:

- Pool with change facilities
- Dance studio
- Gymnasium
- General learning areas; connection to support units

#### Media Centre:

- Recording studio
- Editing studio
- Green screen
- Media presentation room

#### External Areas:

- External hardcourts
- Open space

### 224 Headland Road:

#### Sports Precinct:

- 2 new basketball courts
- Existing half basketball court
- Existing change rooms
- Existing school clothing store

#### Total Car Parking:

- 60 staff car parking
- 60 student car parking
- Bicycle parking

	BRIEFED LEARNING SPACES				PROPOSED LEARNING SPACES			
	SLA	GLA	Seminar	Other	SLA	GLA	Seminar	Other
<b>TOTAL</b>	<b>12</b>	<b>24</b>	<b>4</b>	<b>8</b>	<b>12</b>	<b>25</b>	<b>5</b>	<b>8</b>

	NET	GROSS	NET	DIFFERENCE
<b>TOTAL AREA</b>	<b>7814</b>	9377	<b>7859</b>	45

**LEGEND**

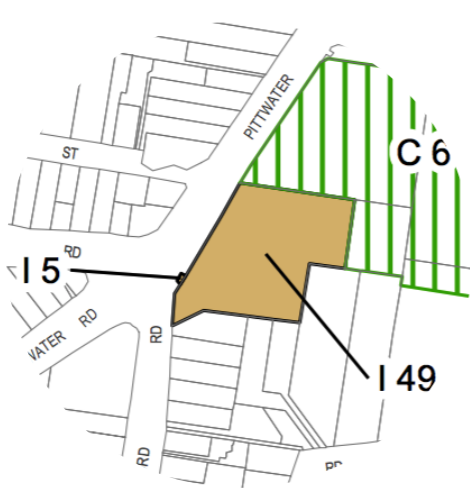
xxx assumed area / to be confirmed by client

# 1.4 Planning Controls Review

Taken from the Warringah Local Environment Plan 2011



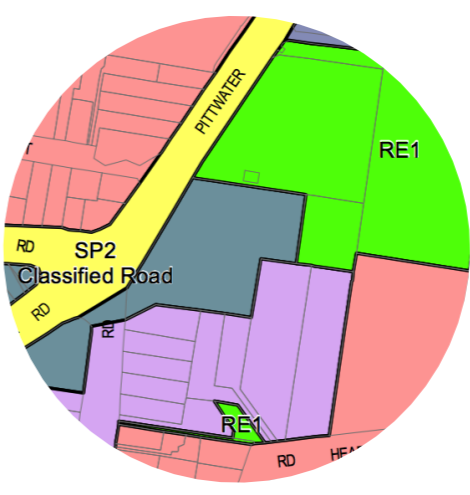
**01 Height of Building**  
Category L  
11m



**02 Heritage Items Map**  
800 Pittwater Road is identified as Heritage item 49. The historic bus stop on Pittwater Road is Heritage item 15.



**03 Landslip Risk Map**  
Categories A (yellow) + B (orange).  
A = slope < 5°  
B = Flanking Slopes 5° - 25°



**04 Land Zoning Map**  
800 Pittwater Road - Category B5 Business Development.  
224 Headland Road - Category IN1 General Industrial



**05 Minimum Lot Size**  
224 Headland Road - Category W 4000m2

\* For details refer to planning report

2.0

Site Analysis

2.1 Location Plan

LEGEND

- SITE
- LOCAL GREEN SPACE
- LOCAL SCHOOLS

St Luke’s Grammar School is located in Dee Why and Curl Curl on Sydney’s Northern Beaches. The site is bordered by Pittwater Road, Harbord Road, Headland Road, Quirk Street, Tango Avenue and the Stony Range Regional Botanic Garden.

The Northern Beaches comprise the northern coastal suburbs of Sydney, on the Pacific coast. Originally the area was inhabited by the Garigal or Caregal people in a region known as Guringai country.

There are numerous schools located on the Northern Beaches and within the vicinity of St Luke’s Grammar School. The area also comprises a mix of residential, light industrial and commercial buildings with the Dee Why shopping district located along Pittwater Road to the North of the school, and the Brookvale shopping and industrial district to the South.



2.2 Site Analysis

- LEGEND
- SUMMER SUN PATH
  - WINTER SUNPATH
  - BOTANIC GARDEN
  - PREVAILING WINDS
  - ROAD NOISE

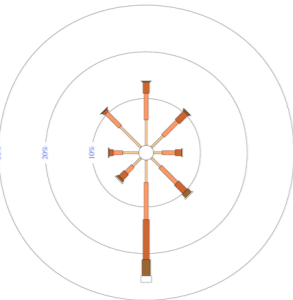


Figure 2: Wind Rose: Sydney, January avg. wind frequency  
Source: <http://www.bom.gov.au/climate/averages/wind/index.shtml>

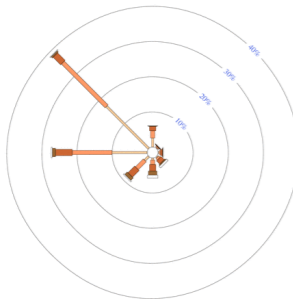
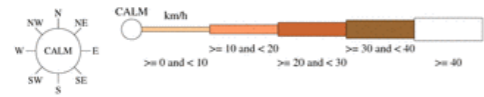
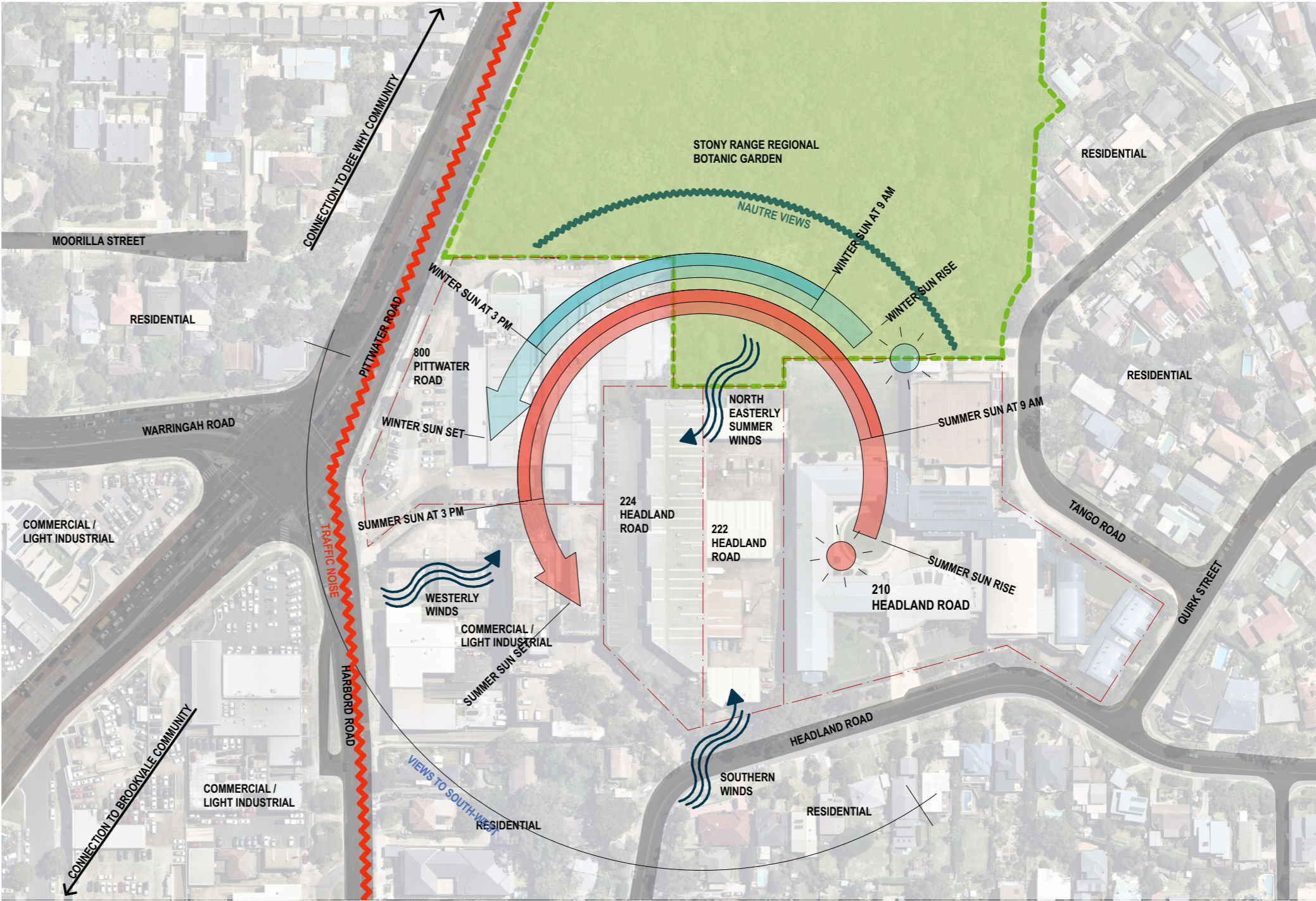


Figure 3: Wind Rose: Sydney, June avg. wind frequency  
Source: <http://www.bom.gov.au/climate/averages/wind/index.shtml>



A climate analysis was carried out for the site exploring solar, wind, noise impacts. The diagram to the right shows this in more detail.



## 2.3 Access and Movement Analysis

### LEGEND

- |  |  |
|--|--|
|  PEDESTRIAN ACCESS  |  PROPOSED PEDESTRIAN ACCESS |
|  STAFF PARKING      |  PROPOSED STAFF PARKING     |
|  STUDENT PARKING    |  PROPOSED STUDENT PARKING   |
|  BIKE PARKING       |  PROPOSED BIKE PARKING      |
|  BUS STOP           |  PROPOSED DROP OFF ZONE     |
|  DROP OFF ZONE      |  |
|  TRAFFIC SUPERVISOR |  |

### Pittwater, Harbord + Warringah Road

800 Pittwater Road is situated at the intersection of Pittwater, Harbord + Warringah Roads. It is a main transit route connecting the City to the upper Northern Beaches and beyond. Pedestrian footpaths are provided on these roads and there are traffic lights for crossing at intersections.

### Public Transport

Bus routes running along Warringah, Pittwater + Harbord Road provide links between the City and Northern Beaches. A council school bus is provided with busses stopping at 210 Headland Road on Headland Road, Tango Road and Quirk Street.

### Active Travel - Bicycle and Pedestrian Movement

Bike racks and parking are proposed at 800 Pittwater Road to encourage students and staff to ride to the school.

### Vehicle, Loading and Off Street Parking

Additional off street parking is proposed at 800 Pittwater Road and 224 Headland Road to serve St Luke's Grammar School. A total of 243 car spaces is allowed for across the school including 7 accessible parking spaces. A bus turning circle is proposed at 800 Pittwater Road as well as garbage and services pick up.

### Drop off and Pick Up Initiative

Existing drop off and pick zones are located on Tango Road at 210 Headland Road. A 40km/h School zone is required at school times for children on their way to school, with signs, road markings and flashing lights. No parking areas, signed as drop off and pickup will be required for parents to legally drop off or pick up their children within a two-minute time-frame.



## 2.4 Opportunities and Constraints

### 2.4.1 Opportunities ●

The 800 Pittwater Rd. St Luke's site encompasses a series of opportunities that will provide the new school and community with a strong relationship and link to their surrounds.

**LEGEND**

- CONNECTION TO COMMUNITY
- SITE ACCESS + PUBLIC TRANSPORT
- CONNECTION TO 224 HEADLAND ROAD
- HERITAGE VALUE
- CONNECTION TO STONY RANGE
- VIEWS + VISIBILITY
- NEIGHBOURING PROPERTIES

**1. Connection to Community**

800 Pittwater Rd sits at the intersection of Warringah Rd + Pittwater Rd providing a potentially strong link between the school and surrounds.

**2. Site Access + Existing Public Transport**

As the site is positioned on a main road, there are many existing bus routes coming from both the north and south. An accessible pedestrian entry at the N-W corner of the site will be utalized to provide access from Pittwater Road.

**3. Link to 224 Headland Rd**

The proposal outlines a vertical connection between 800 Pittwater Rd and 224 Headland Rd. This will allow students to move between the sites without walking on busy roads. Staff and student parking is also proposed at 224 Headland Rd, easing congestion and queuing on Pittwater Rd.

**4. Heritage Value**

The heritage listed former Wormland Building on 800 Pittwater Rd. (front entrance, tower and curved former canteen) and the decommisioned heritage listed bus stop on Pittwater Rd. enhance the character of the built environment and surrounding area.

**5. Connection to Stony Range Regional Botanic Garden**

The Stony Range Regional Botanic Garden to the north of the site provides an opportunity to provide a strong visual and physical connection between the school and the natural environment of the northern beaches as well as between the school and the community.

**6. Visibility + Views**

The site occupies a prime visual location, situated above a main intersection. It is intended views from and to Brookvale and Dee Why communities will be strengthened and enhanced.

**7. Sustainability**

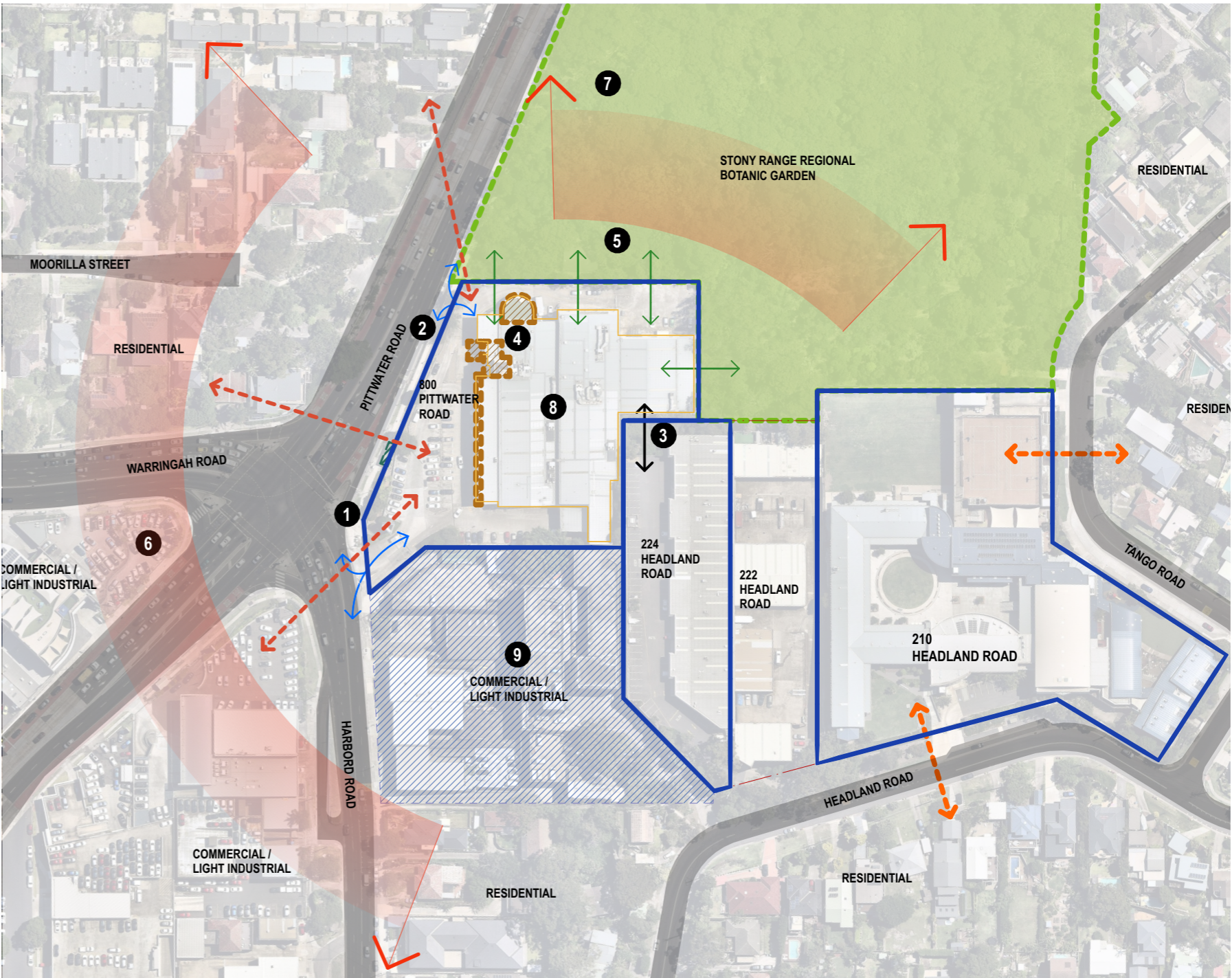
The siting of the building allows for a high level of solar access as well as cross site ventilation. There is the potential to incorporate green design principles.

**8. Building Fabric**

The existing structure is in a good condition providing a framework for the new school program and function. Enhanced fire protection and accessible access can be added along with structural and service upgrades.

**9. Neighbouring Properties**

The site does not lie adjacent to any residential properties.



2.4.2 Constraints ●

The constraints presented by the site areas are as follows:

LEGEND

 HIGHWAY / TRAFFIC NOISE

 TOPOGRAPHY

 SITE ACCESS + PUBLIC TRANSPORT

1. Highway Noise + Traffic

The traffic noiser from Pittwater Rd. require a carefully designed west facade and landscaping to mitigate the noise.

2. Topography

The dramatic level change between 800 Pittwater Rd + 224 Headland Rd will be mediated with a vertical connection, providing a link across the school. This will increase mobility throughout the school as well as increasing safety by reducing encounters with local traffic.

3. Accessibility

A fully accessible path of travel is not possible at this location between 224 and 210 Headland Road due to the existing conditions of the footpath and the site topography.

4. Vehicle + pedestrian access and parking

The primary public transport to the site includes busses dropping students off along Pittwater and Headland Roads. The potential for car banking will be mitigated with the design of the drop off zone which isn't imagined to be in high demand for year 10-12 students. Ample student and staff parking will be provided as well as bike parking to encourage riding to the school.

5. Existing shell of the building

Whilst also being seen as an opportunity, the existing shell of the building provides constraints that limit height, overall volume, orientation as well as existing problems.

6. Lack of connection

There is currently no connection between 800 Pittwater Road and the main campus. Stony Range Botanic Garden is located between the two sites.



## 2.5 Historic Photos

The building formerly known as the Wormland building and also known as the Top Dog Men's Wear Production Centre was designed by Spencer, Spencer and Bloomfield and completed in 1949. The building won the N.S.W Sulman Award for Public Architecture in 1950.

Historical photos have been obtained by TZG, show two different periods. Images 1 and 2 show the original Top Dog Men's Wear Production Centre (Bond's Wear Pty Ltd) and were obtained from the State Library of N.S.W. Images 3 and 4 show the building after slight modifications to the front facade.



Image 1 - Historic view of North West corner including heritage clock tower and curved northern room, circa 1950s.  
Source :State Library of N.S.W



Image 2 - Historic view of clock tower, circa 1950s.  
Source :State Library of N.S.W



Image 3 - Historic view of western facade including clock tower, circa 1950s.  
Source :State Library of N.S.W



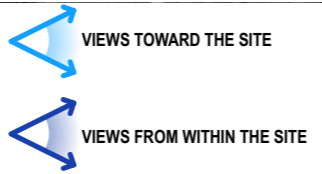
Image 4 - Historic image of workers, circa 1950s.  
Source :State Library of N.S.W

2.6 Existing state

Multiple site inspections were carried out by TZG, externally and internally in February 2019. The photos taken of the site and surroundings show the existing roads and infrastructure, site access and the context of 800 Pittwater Road and 224 Headland Road.

The building has undergone significant alterations and additions since its original construction. Plans prepared in 1996 by the architects Lippman Associates document major alterations and additions which were undertaken on the building.

\*Heritage items are indicated with a brown dashed line.



Site Plan with Views  
Source: TZG Architects, 2019



View 1 - View from North West Corner of site including heritage clock tower and curved former canteen, from across Pittwater Road.  
Source: www.realcommercial.com.au



View 2 - View from across Pittwater Road of western facade including heritage clock tower.  
Source: www.realcommercial.com.au



View 3 - View into the existing entry to the site, from Harbord Road.  
Source: TZG Architects, 2019



View 4 - View of heritage bus stop from across Pittwater Road. Source: TZG Architects, 2019



View 5 - Looking north from western boundary at 800 Pittwater Road. Source: TZG Architects, 2019



View 6 - Looking north from south-west corner of 800 Pittwater Road. Source: TZG Architects, 2019



View 7 - Looking east from current vehicular entry at 800 Pittwater Road. Source: TZG Architects, 2019



View 8 - Image of heritage item, existing curved canteen. Source: TZG Architects, 2019



View 9 - Image of heritage item, clock tower. Source: TZG Architects, 2019



View 10 - View of heritage north-western corner of 800 Pittwater Road. Stony Range Botanic Garden heritage conservation area located on the left.  
Source: TZG Architects, 2019



View 14 - View from 224 Headland Road looking out across the roof of 800 Pittwater Road showing the intersection of Pittwater Road and Warringah Road.  
Source: TZG Architects, 2019



View 11 - Looking south along iMed building. Stony Range Botanic Garden heritage conservation area located on the left.  
Source: TZG Architects, 2019



View 12 - Looking east to existing entry to carpark on northern boundary. Stony Range Botanic Garden heritage conservation area located on the left and in the distance.  
Source: TZG Architects, 2019



View 13 - View from heritage clock tower looking out over Stony Range Botanic Garden heritage conservation area.  
Source: TZG Architects, 2019



View 15 - View of north-west corner at 800 Pittwater Road.  
Source: TZG Architects, 2019



View 16 - Looking up between retaining wall and southern side of 800 Pittwater Road.  
Source: TZG Architects, 2019



View 17 - View of 224 Headland Road taken from the clocktower of 800 Pittwater Road.  
Source: TZG Architects, 2019



View 18 - Looking west from 224 Headland Road carpark.  
Source: TZG Architects, 2019



View 19 - Looking north along western facade of 224 Headland Road.  
Source: TZG Architects, 2019



View 20 - View of driveway leading up to 224 Headland Road.  
Source: TZG Architects, 2019



View 21 - View of footpath crossing at 224 Headland Road.  
Source: TZG Architects, 2019



View 22 - Cantilevered northern edge of 224 Headland Road.  
Source: TZG Architects, 2019



View 23 - Looking south-east from the carpark at 224 Headland Road.  
Source: TZG Architects, 2019



View 24 - View to 224 Headland Road.  
Source: TZG Architects, 2019



View 25 - Looking south down driveway at 224 Headland Road.  
Source: TZG Architects, 2019



View 26 - View north towards 800 Pittwater Road from 224 Headland Road carpark.  
Source: TZG Architects, 2019

3.0

Precedent Study

3.1 Relevant Educational Precedents

A range of Australian and International precedents were studied to inform the design. It is intended that the adapted building for St Luke's Grammar School will respect and embrace its industrial past, connect to the natural environment including Stony Range Botanic Garden and the Northern Beaches and represent the traditional face of the school.

Construction materials are proposed to be economical of nature with a focus on wide, open and expansive spaces and direct link with the outdoors. The industrial robustness of the structural framework will be offset with colourful inserts and a green atrium. This will bring warmth and playfulness into the school whilst the exterior will provide a face to the community.



Image 5 - COBE + MVRDV\_Roskilde Festival Folk High School, Denmark



Image 6 - COBE + MVRDV\_Roskilde Festival Folk High School, Denmark



Image 7 - COBE + MVRDV\_Roskilde Festival Folk High School, Denmark



Image 8 - COBE + MVRDV\_Roskilde Festival Folk High School, Denmark



Image 9 - COBE + MVRDV\_Roskilde Festival Folk High School, Denmark



Image 10 - COBE + MVRDV\_Roskilde Festival Folk High School, Denmark



Image 11 - Franklin Azzi Architects - Saint Nazaire Higher School of Fine Art + Architecture. Nantes, France



Image 12 - Franklin Azzi Architects - Saint Nazaire Higher School of Fine Art + Architecture. Nantes, France



Image 13 - Franklin Azzi Architects - Saint Nazaire Higher School of Fine Art + Architecture. Nantes, France



Image 14 - Franklin Azzi Architects - Saint Nazaire Higher School of Fine Art + Architecture. Nantes, France



Image 15 - Franklin Azzi Architects - Saint Nazaire Higher School of Fine Art + Architecture. Nantes, France



Image 16 - Sissons Architects - ATP community building - Sydney, Australia



Image 17 - Cunningham Group Architecture - Alexandria Area High School. Sydney, Australia



Image 18 - Bates Smart: Design competition - Australia Technology Park. Sydney, Australia



Image 19 - Tonkin Zulaikha Greer Architects - O'Connell Street Primary School. Sydney, Australia



Image 20 - 3xN - Ørestad College. Denmark



Image 21 - 3xN - Ørestad College. Denmark

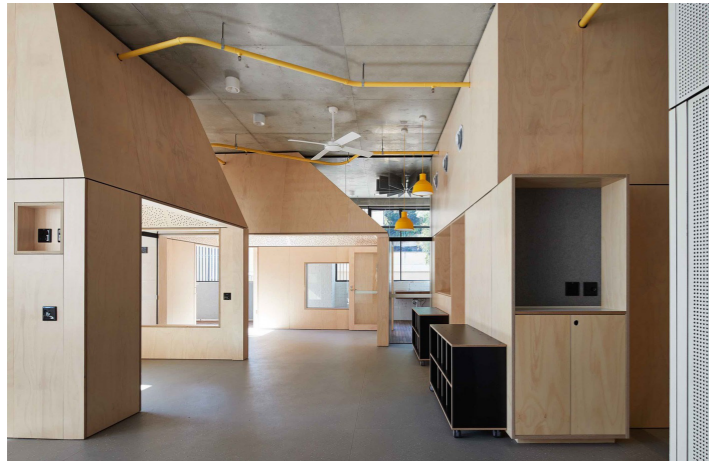


Image 22 - Andrew Burges - East Sydney Learning Centre. Sydney, Australia



Image 23 - Andrew Burges - East Sydney Learning Centre. Sydney, Australia



Image 24 - Danish Royal Library. Copenhagen, Denmark



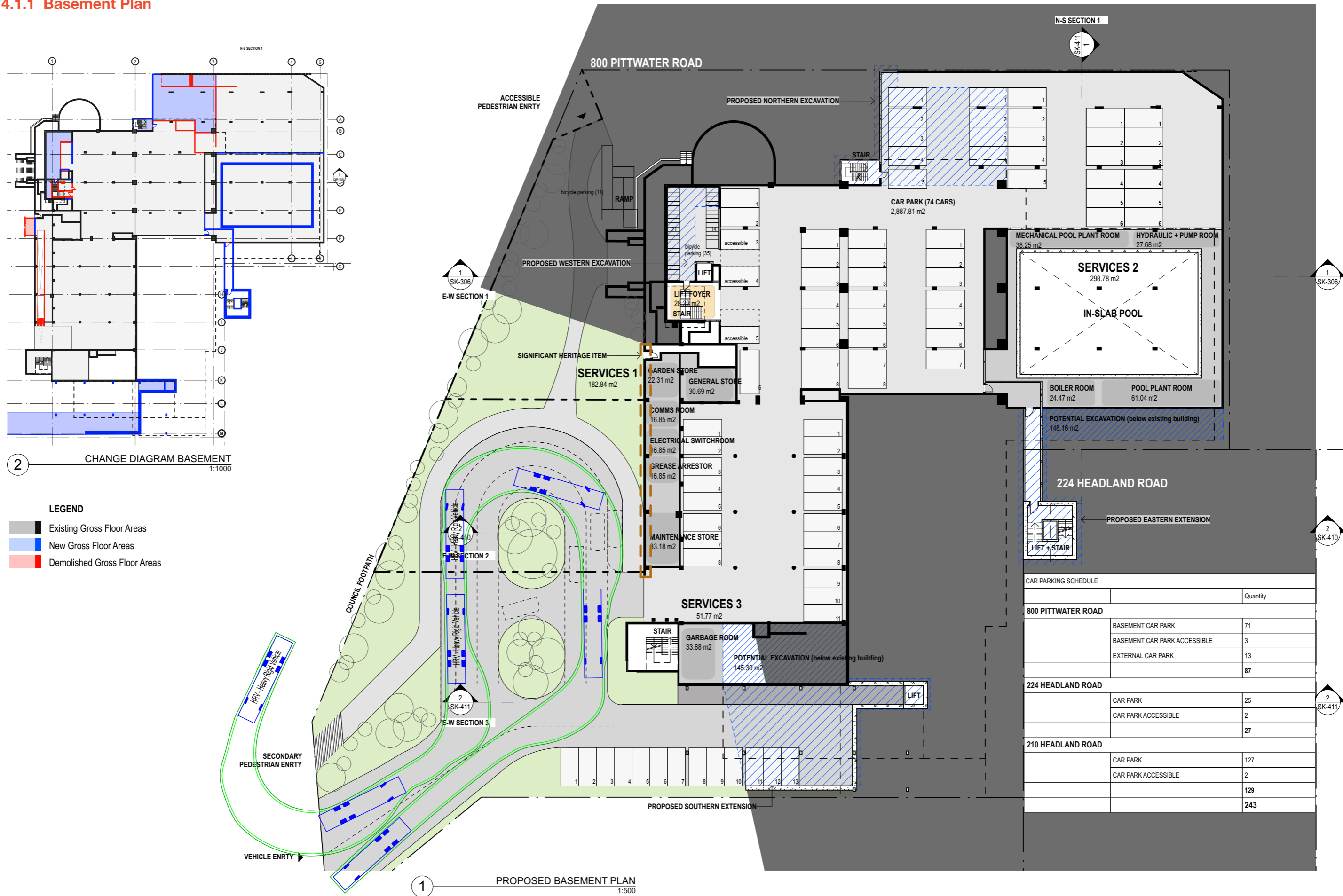
Image 25 - Ford Foundation indoor atrium. NYC, U.S.A

4.0

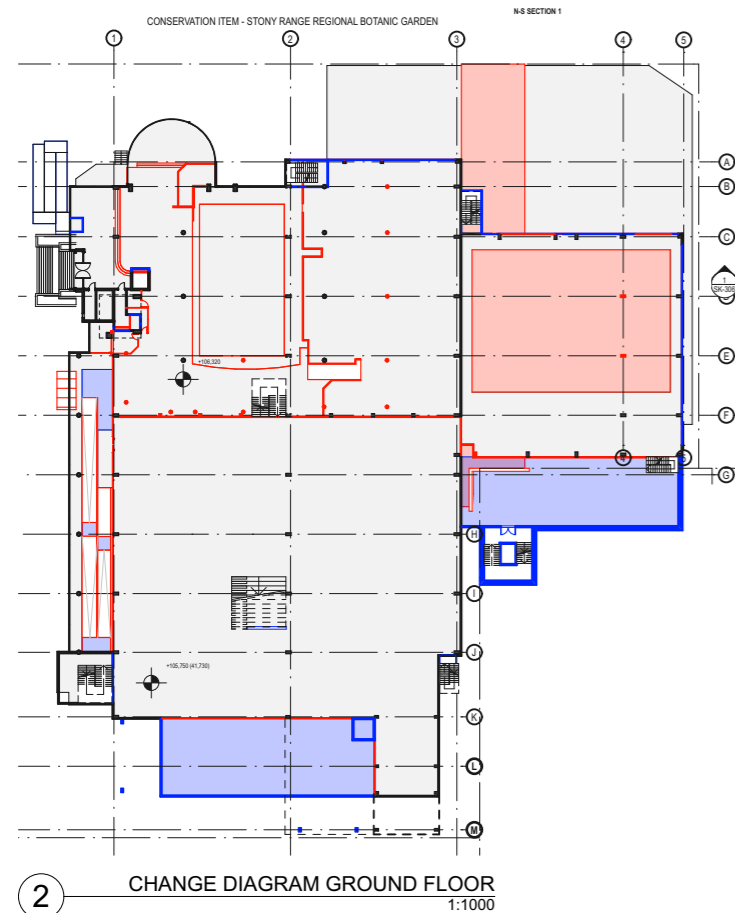
CONCEPT DESIGN

4.1 Floor Plans

4.1.1 Basement Plan

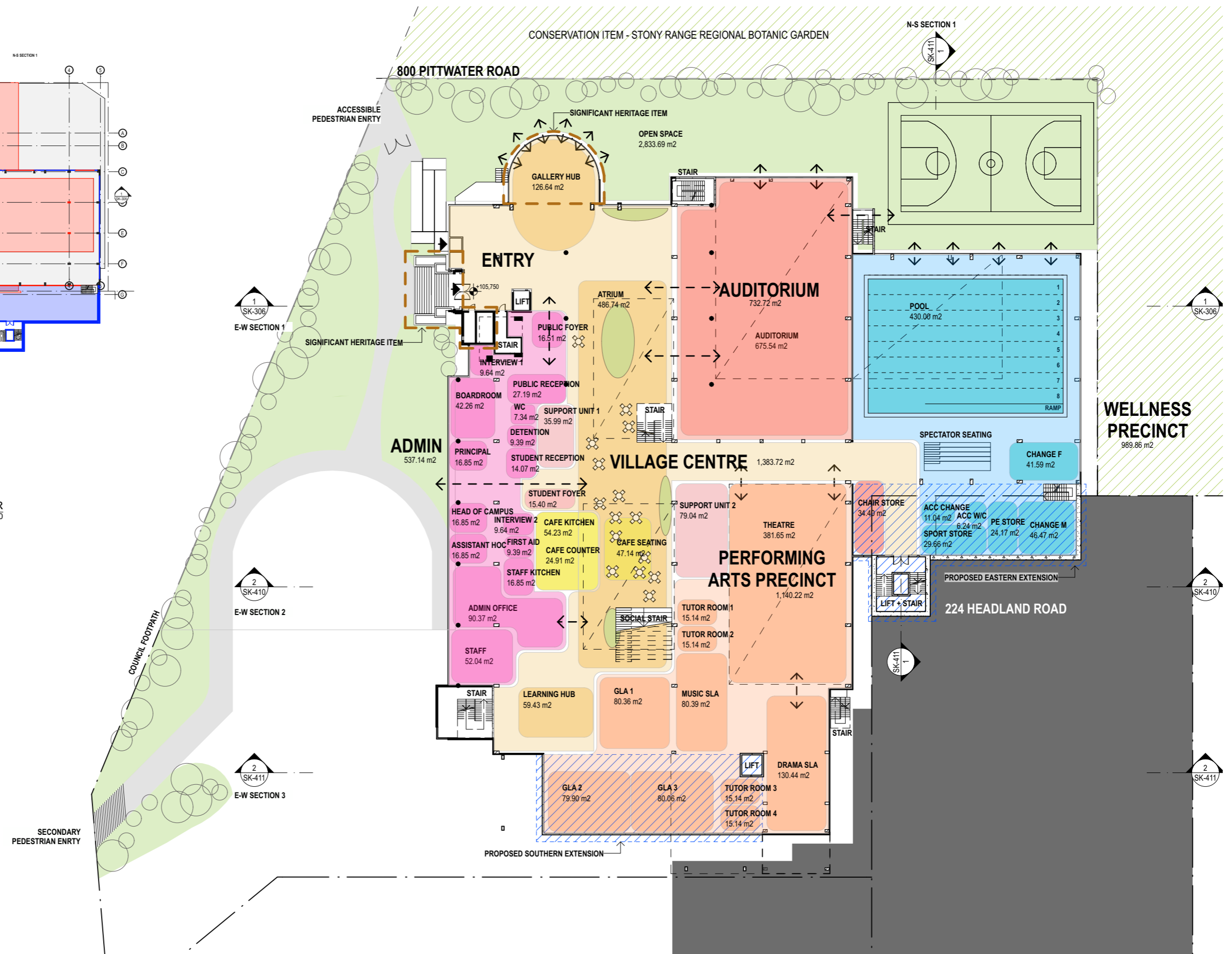


### 4.1.2 Ground Plan

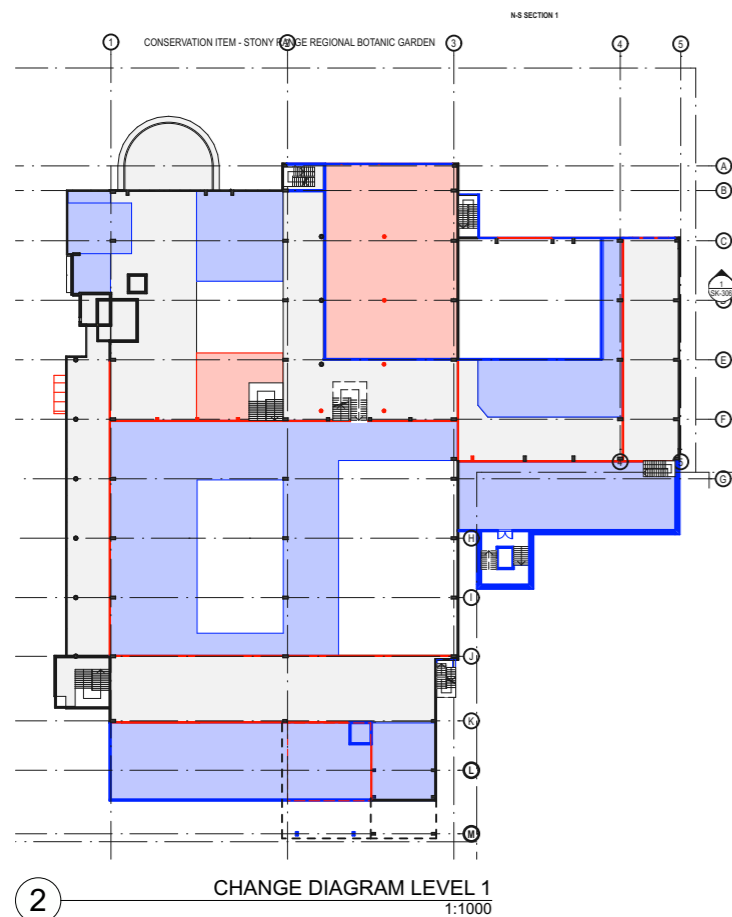


### LEGEND

- Existing Gross Floor Areas  
New Gross Floor Areas  
Demolished Gross Floor Areas

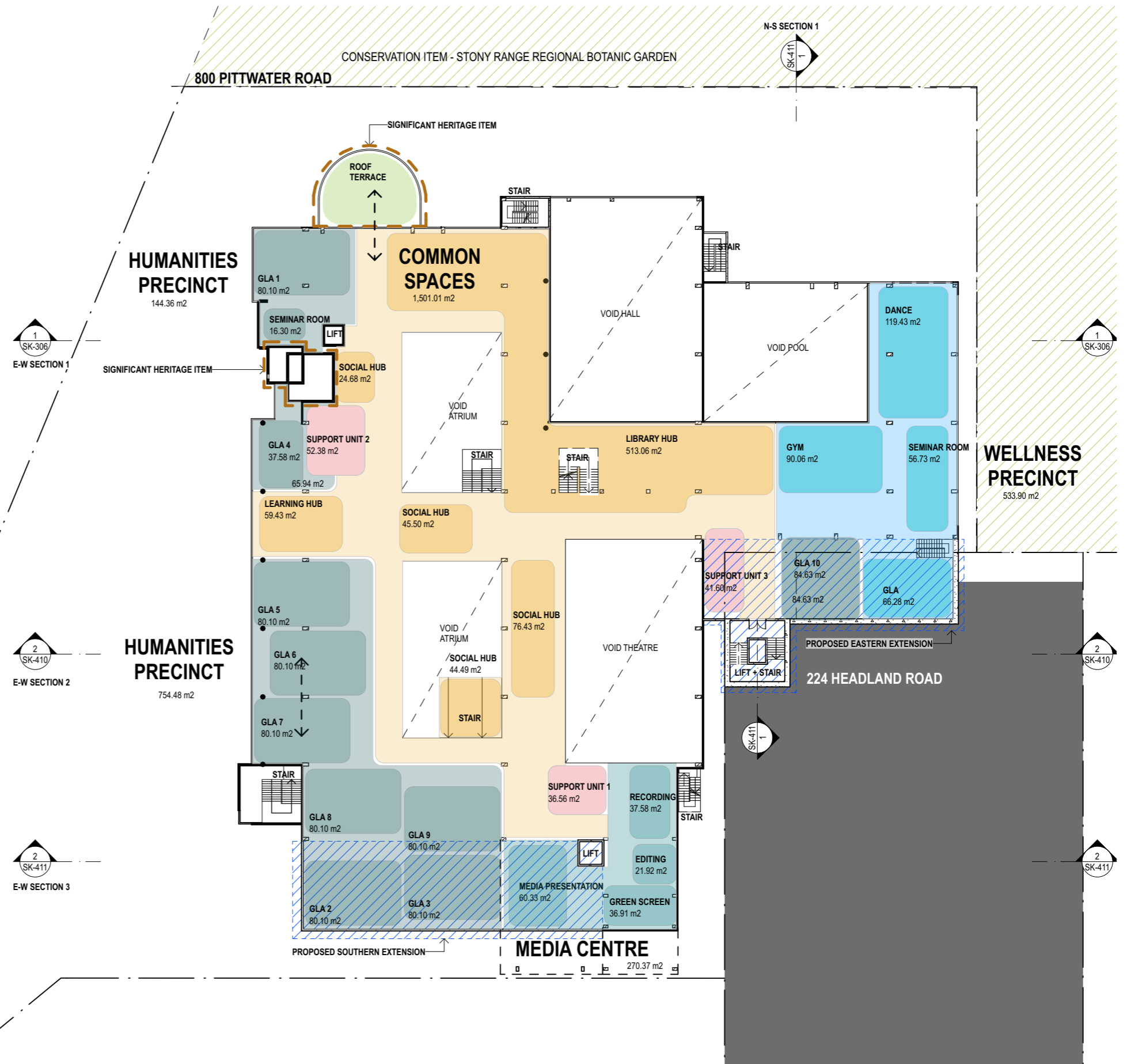


### 4.1.3 First Floor Plan

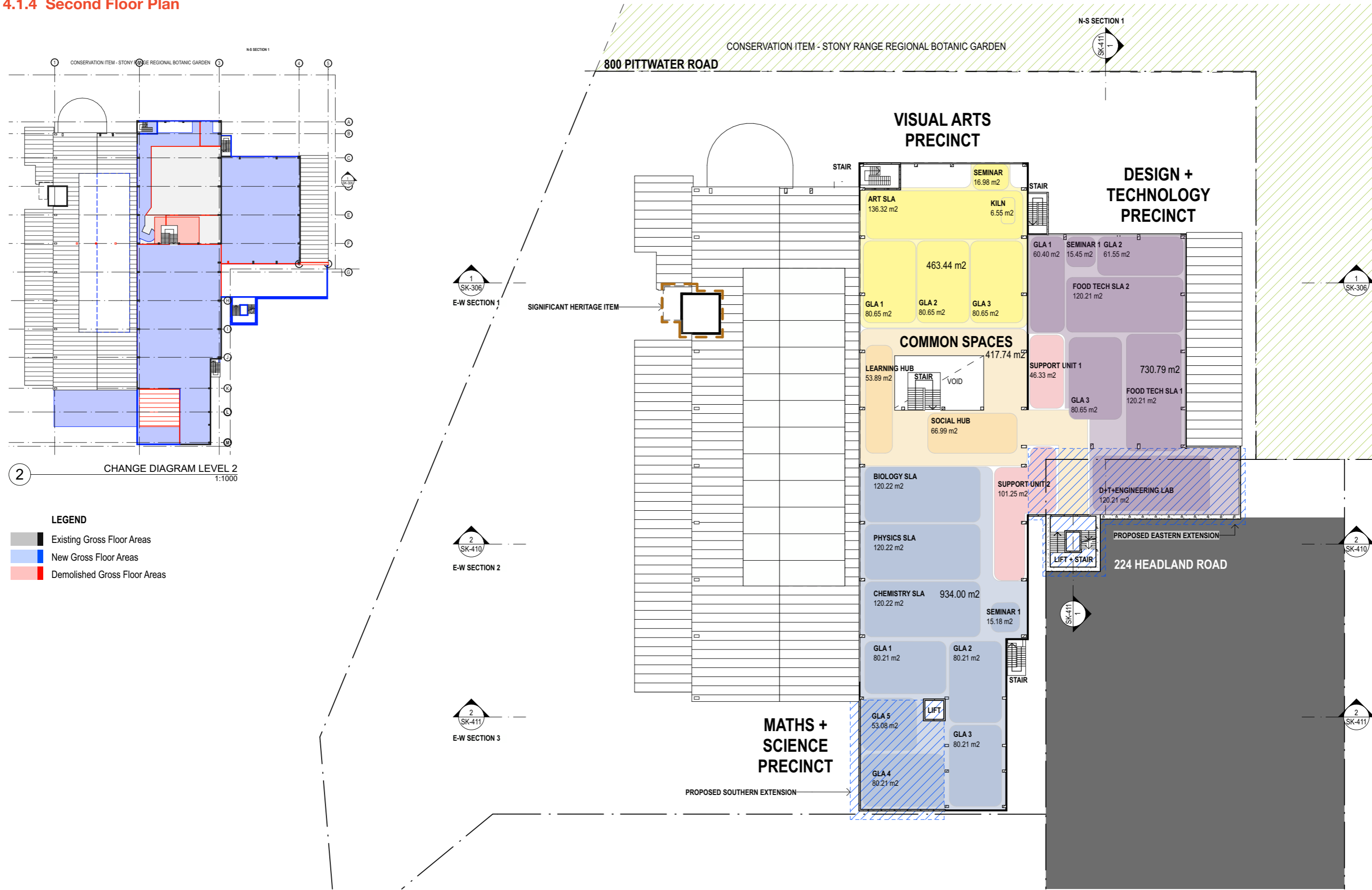


### LEGEND

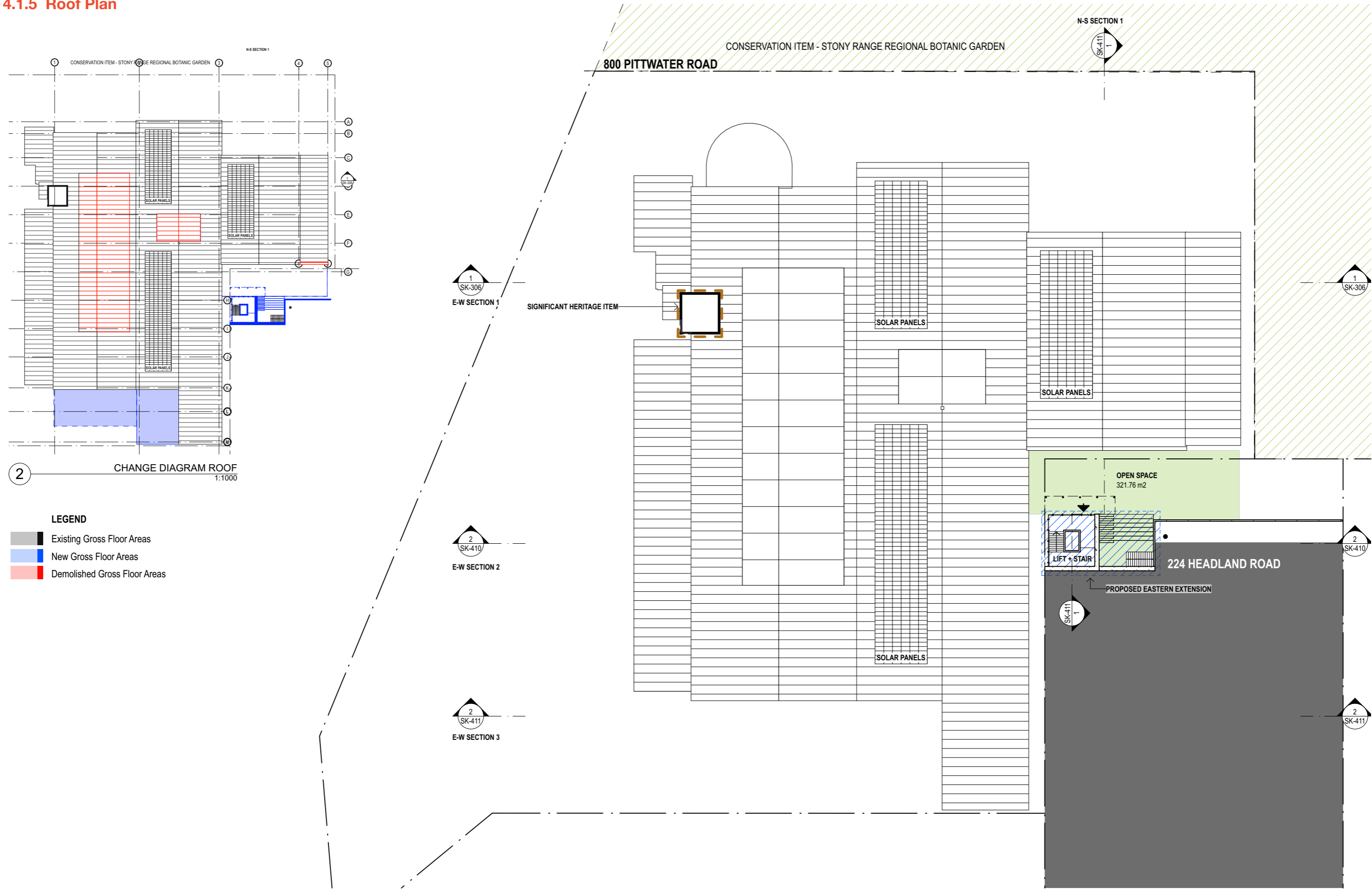
- Existing Gross Floor Areas  
New Gross Floor Areas  
Demolished Gross Floor Areas



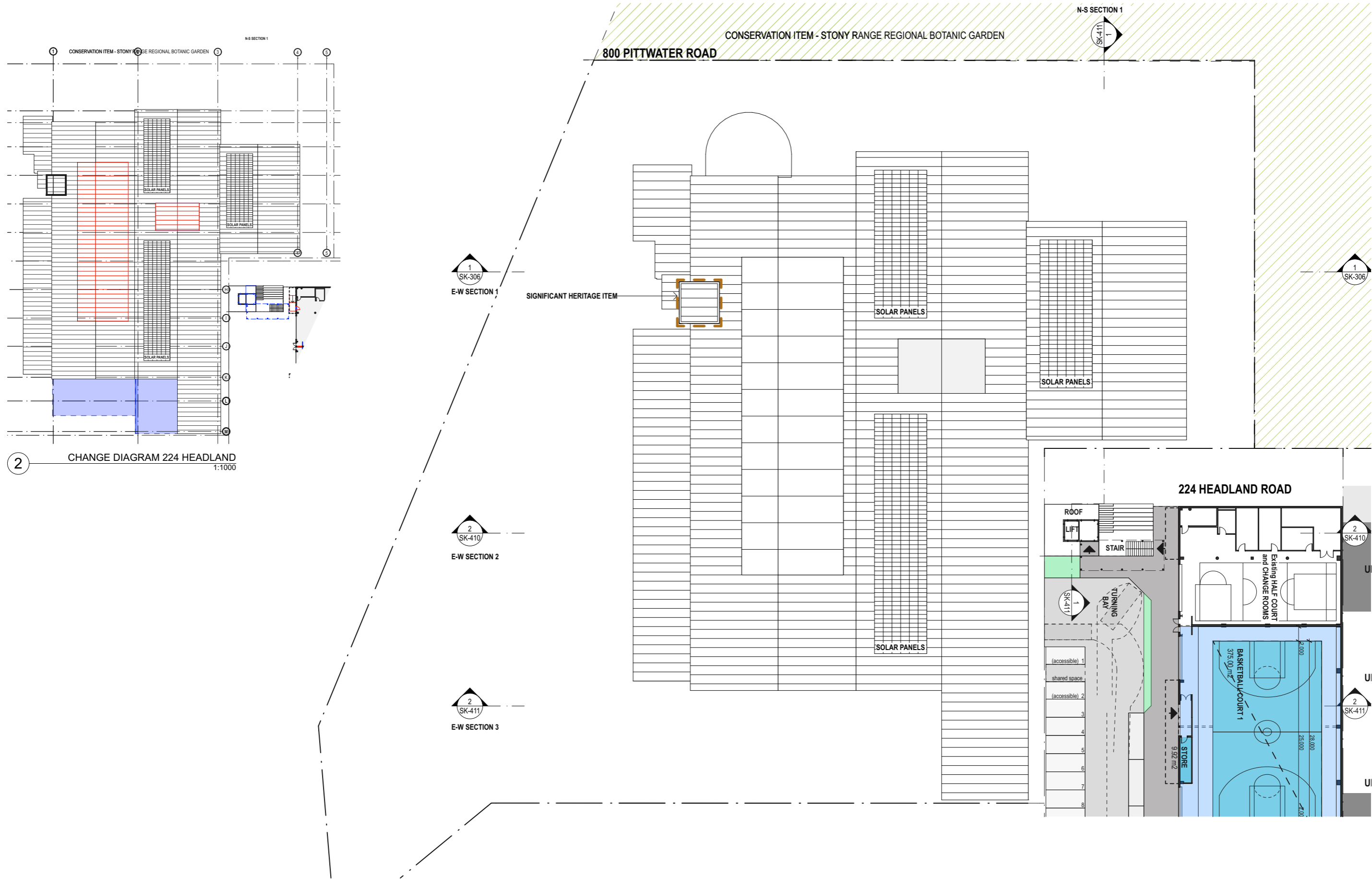
4.1.4 Second Floor Plan



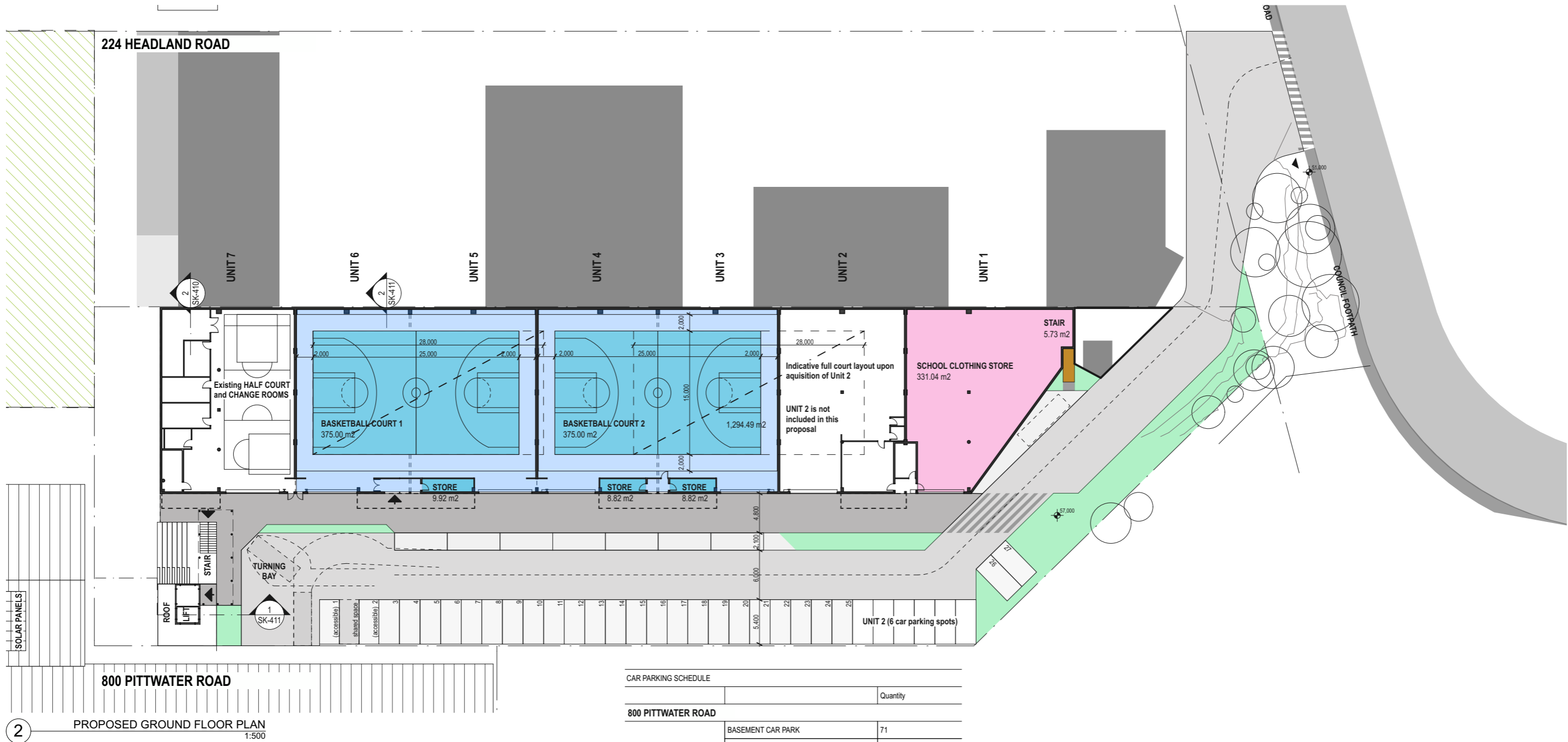
4.1.5 Roof Plan



4.1.6 224 Headland Road Level

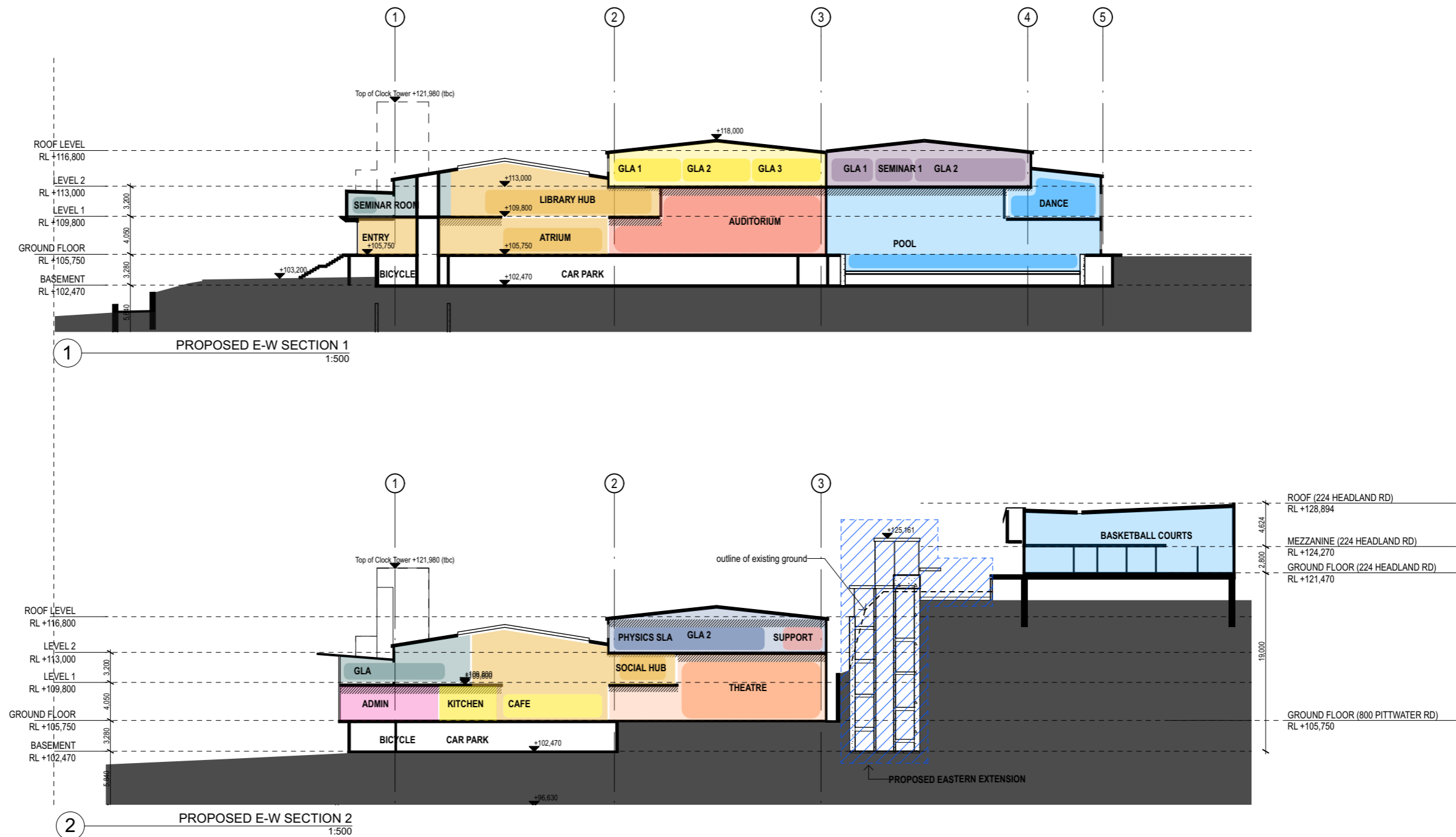


4.1.7 224 Headland Road Ground Plan

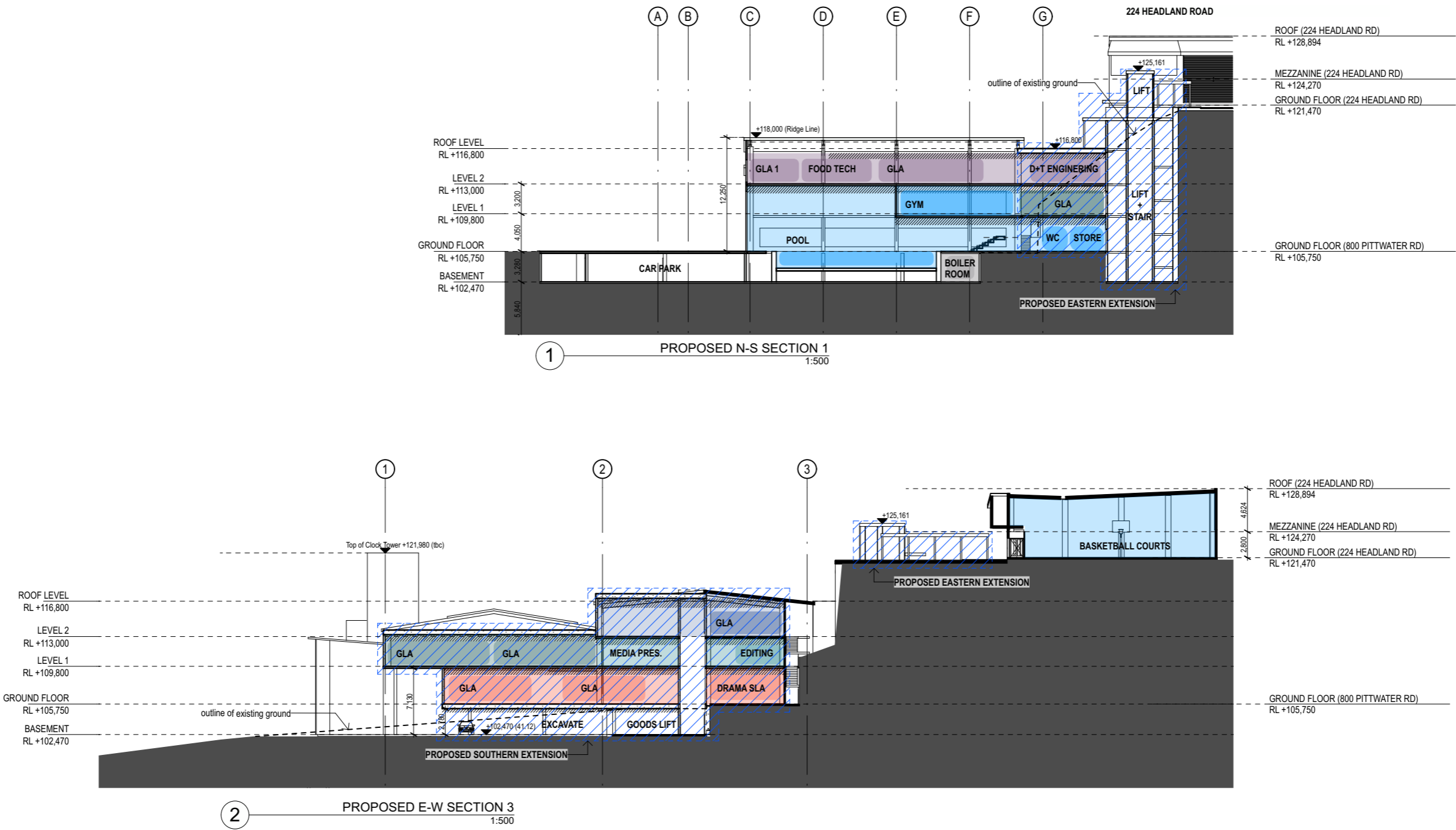


4.2 Sections

4.2.1 Sections 1

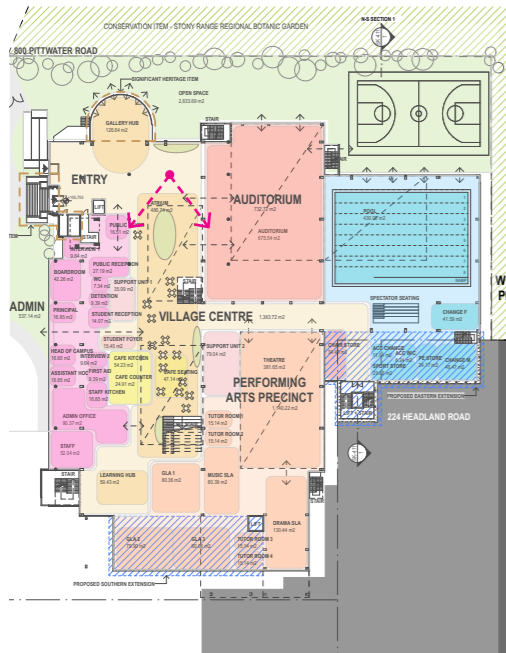


4.2.2 Sections 2

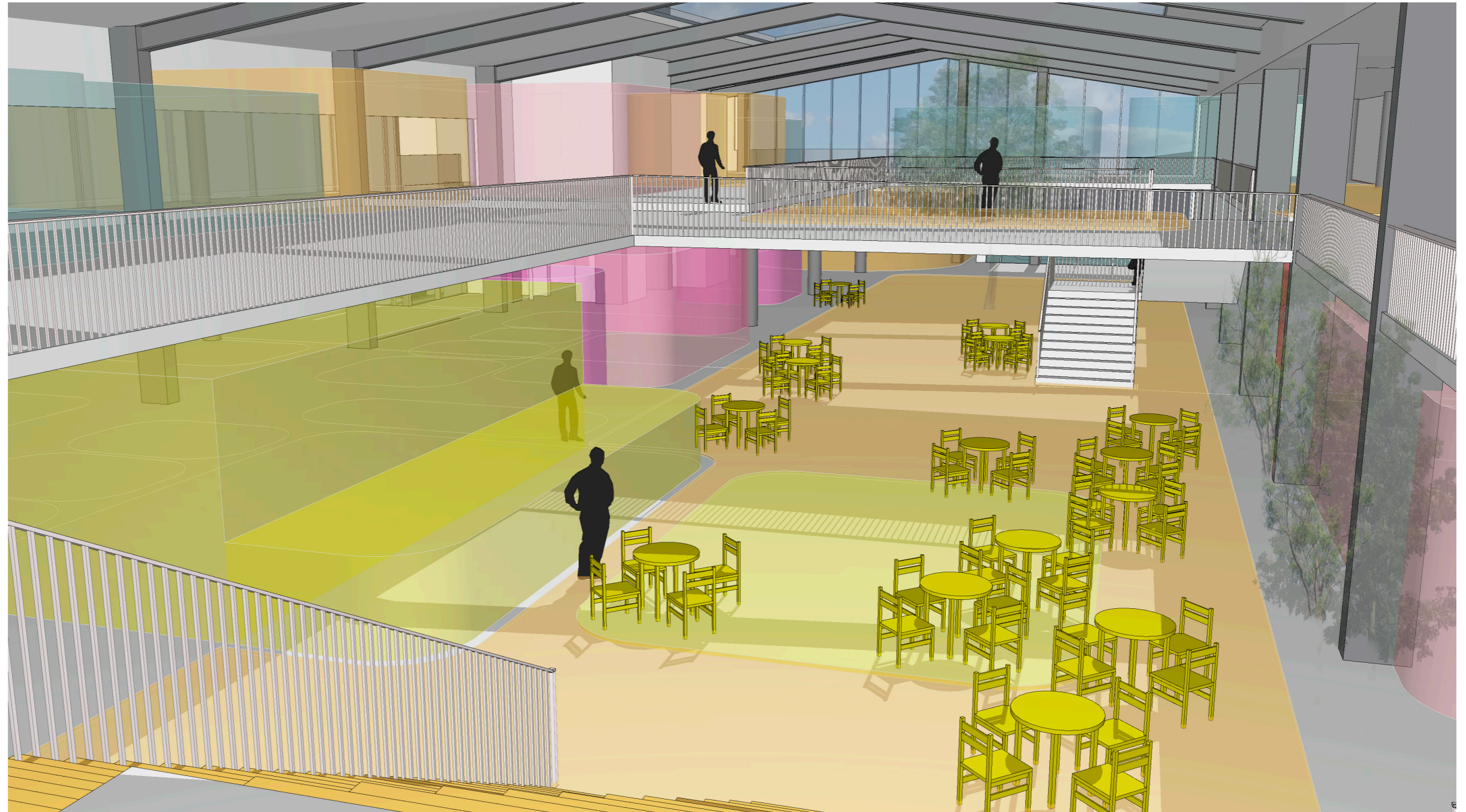


4.3 3D View

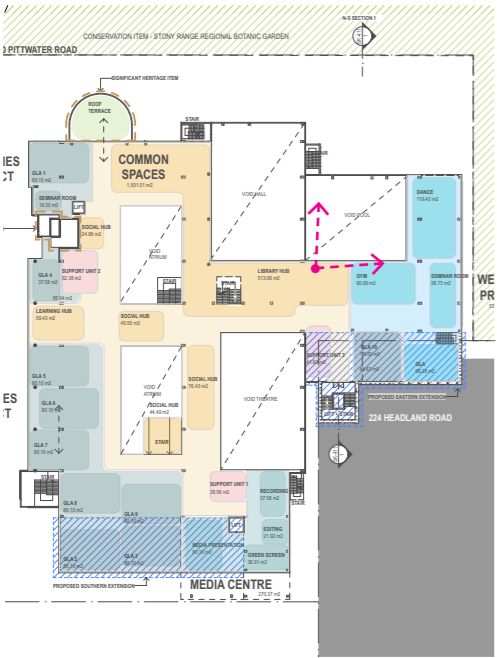
4.3.1 Interior 1



### 4.3.2 Interior 2



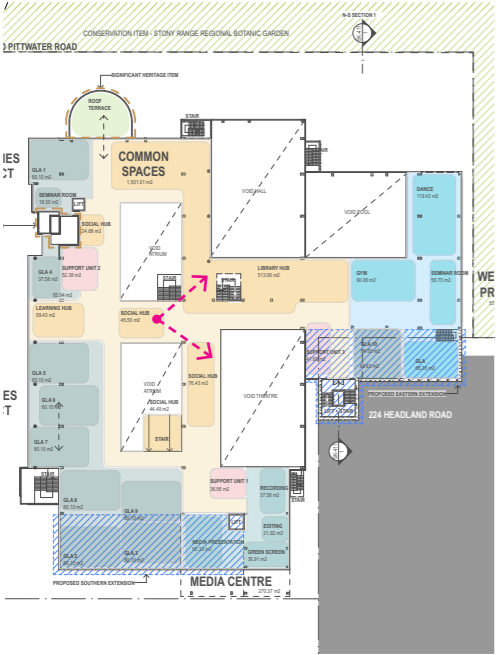
4.3.3 Interior 3



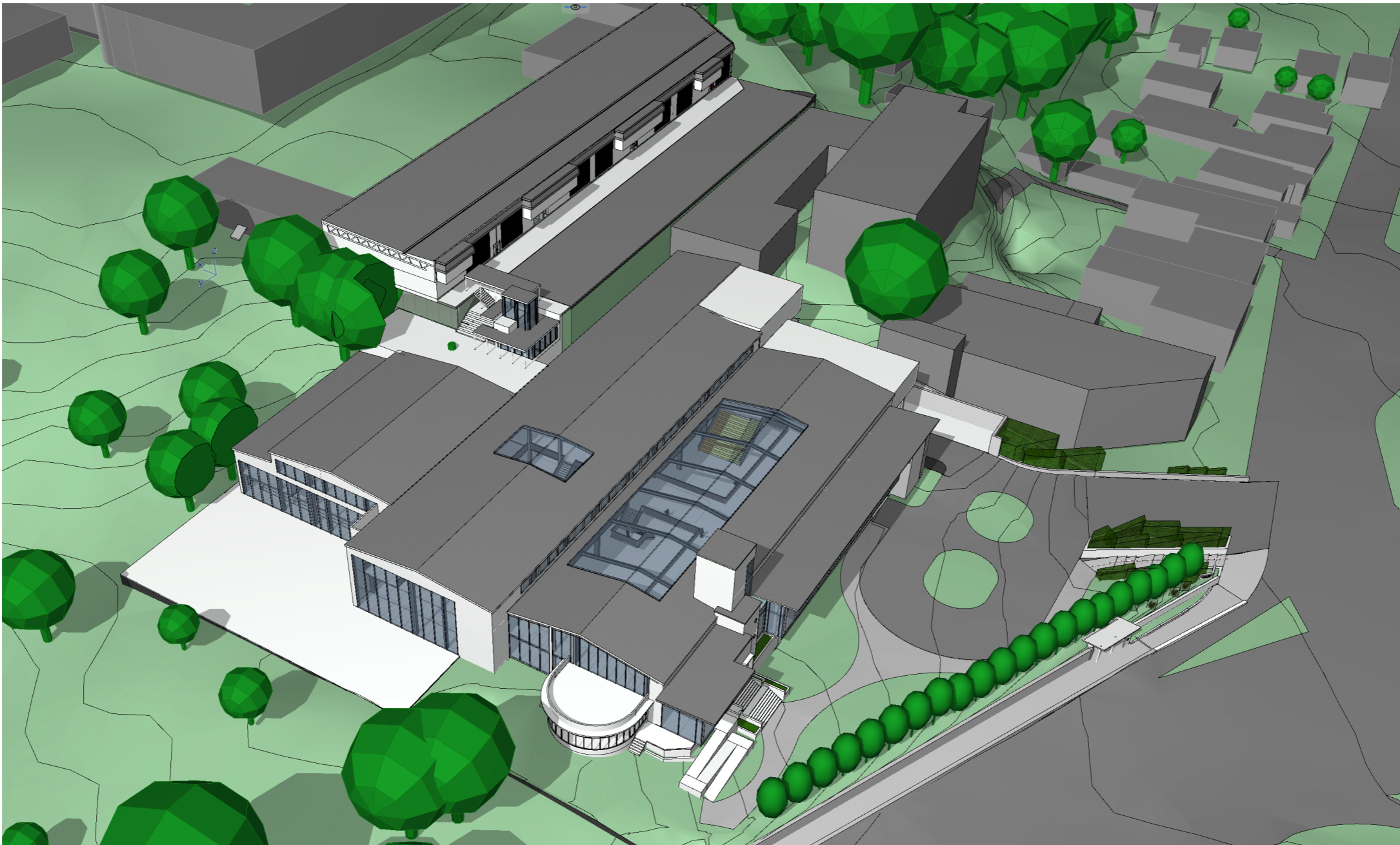
4.3.4 Interior 4



4.3.5 Interior 5



4.3.6 Exterior 1



#### 4.3.7 Exterior 2

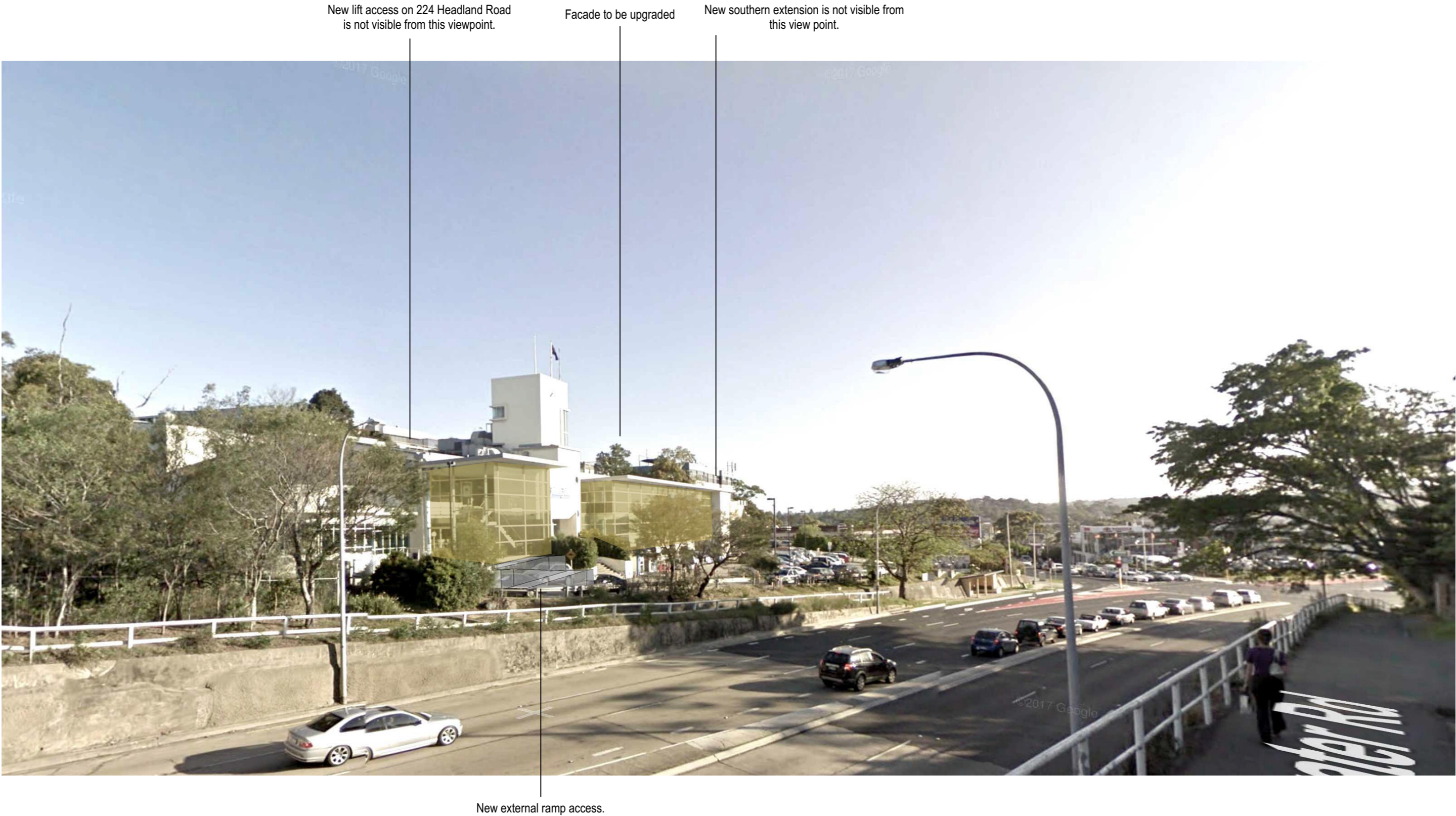


4.3.8 Exterior 3

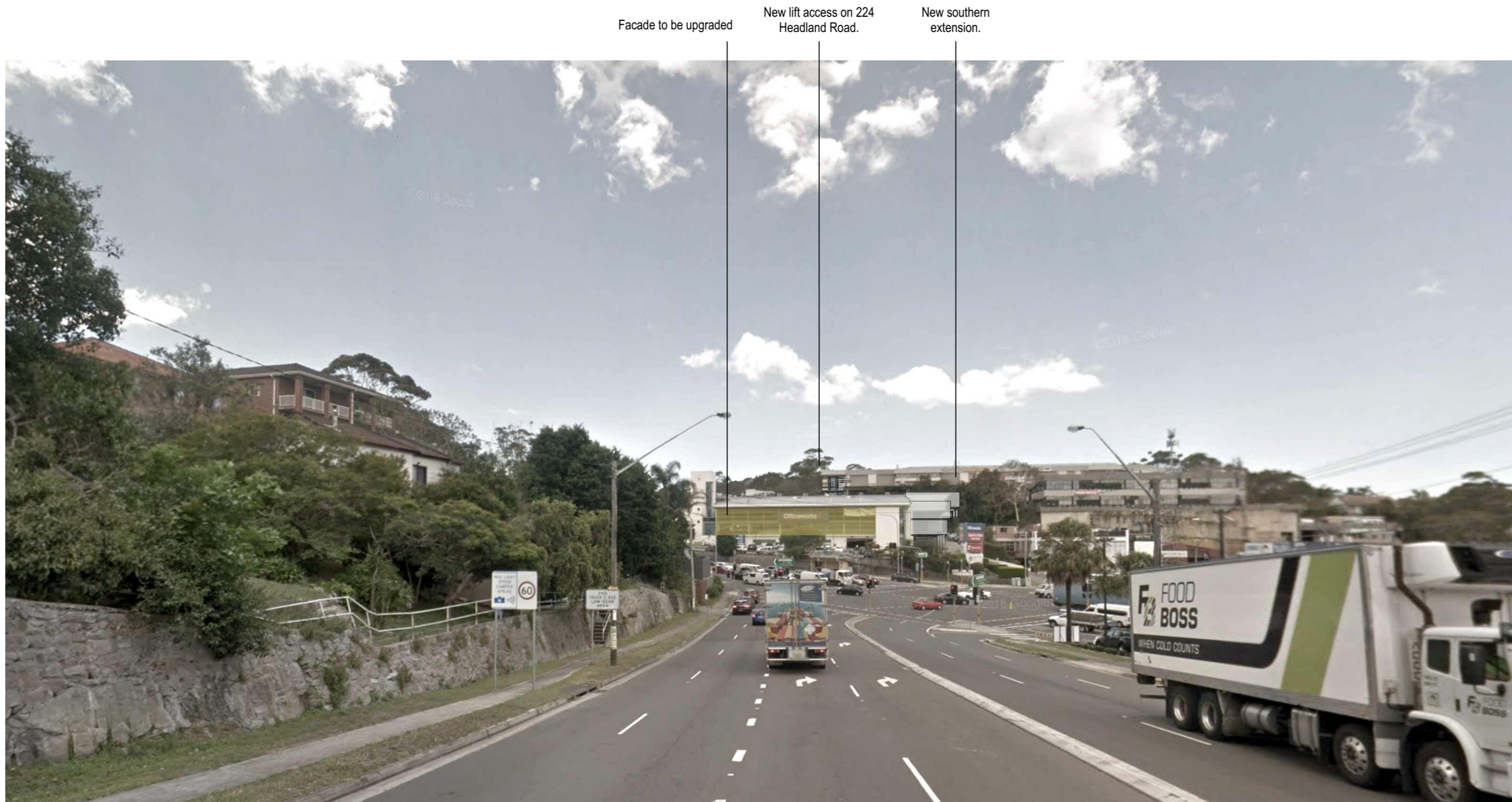


4.4 Street Views

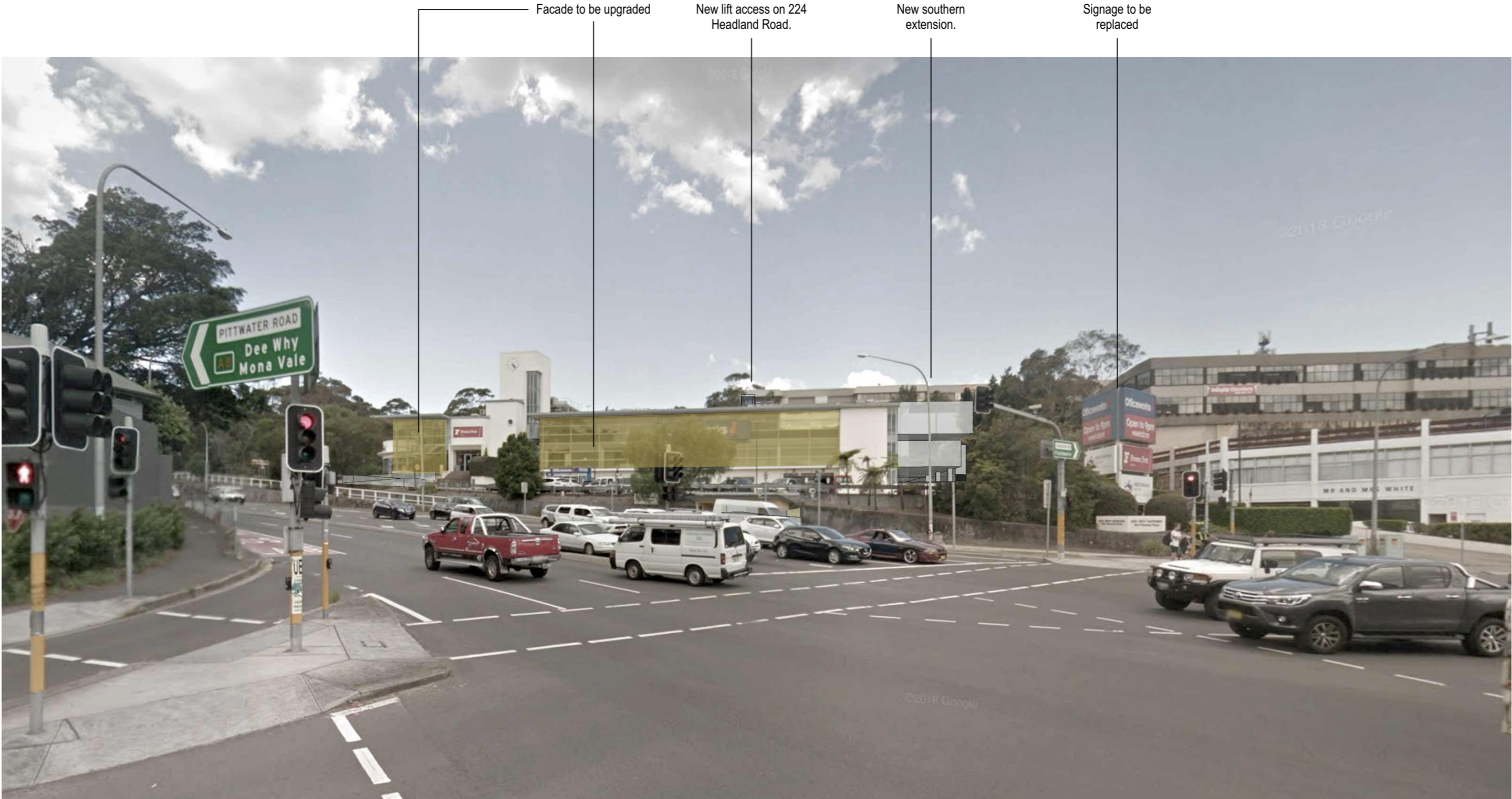
4.4.1 Street View Pittwater Road



4.4.2 Street View Warringah Road 1



4.4.3 Street View Warringah Road 2



4.4.4 Street View Harbord Road

