

Hastings Secondary College Upgrade | Port Macquarie Campus / Response to DPIE Request for Information

SINSW SSDA — REV 1 — 13/10/21

<b>Project Name</b>	<b>Hastings Secondary College Upgrade • Port Macquarie • Response to DPEI Request for Information</b>		
<b>Project Code</b>	<b>HSPM</b>		
<b>Revision</b>	<b>Date</b>	<b>Comment</b>	<b>Approved</b>
0	12/10/2021	Draft for Review	EC
1	13/10/2021	For issue	EC



## **Additional questions and request for information:**

### **1 Built Form**

GANSW advice (dated 12th August 2021) recommended that detail be provided demonstrating how the extensive circular west facing aperture on the PCYC relates to place, in particular micro climate, thermal comfort and glare, and how it is envisaged to be protected from western sun. Sole reliance on high performance tinting or glazing is to be avoided.

The East and West elevations of the PCYC, SSDA-310200-Revision 04 indicates that the extensive circular east and west facing apertures consist of dark coloured performance glazing. It is recommended that alternative options for solar performance be investigated.

### **2 Sustainability**

GANSW advice (dated 12th August 2021) recommended that detail and sections through new and refurbished built form (be provided) to demonstrate how passive design strategies will contribute to the 4 star Greenstar target and ensure that access to natural light and ventilation are provided and maximised for all internal spaces.

It is recommended that opportunities for operable glazing be investigated in the CAPA building, which appears to have predominantly fixed glazing.

1 Built Form

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The East and West elevations of the PCYC, SSDA-310200-Revision 04 indicates that the extensive circular east and west facing apertures consist of dark coloured performance glazing. It is recommended that alternative options for solar performance be investigated.

Response Built Form

An additional layer of detail has been provided following on going design development to address the acoustic and thermal performance of the facades.

Circular window

To the west and east this window will be protected externally by fixed powder coated aluminium louvres. These louvres will be supported by a suppressed framing system so that the horizontality of the louvres remains the dominant feature. The window to the west is fixed glazing to address acoustic requirements but to the east has an

element of operability to meet the required 5% natural ventilation of all non air conditioned areas (Courts, Foyer and Circulation).

Internally the western window will have a projector screen which will also act as a brown out blind.

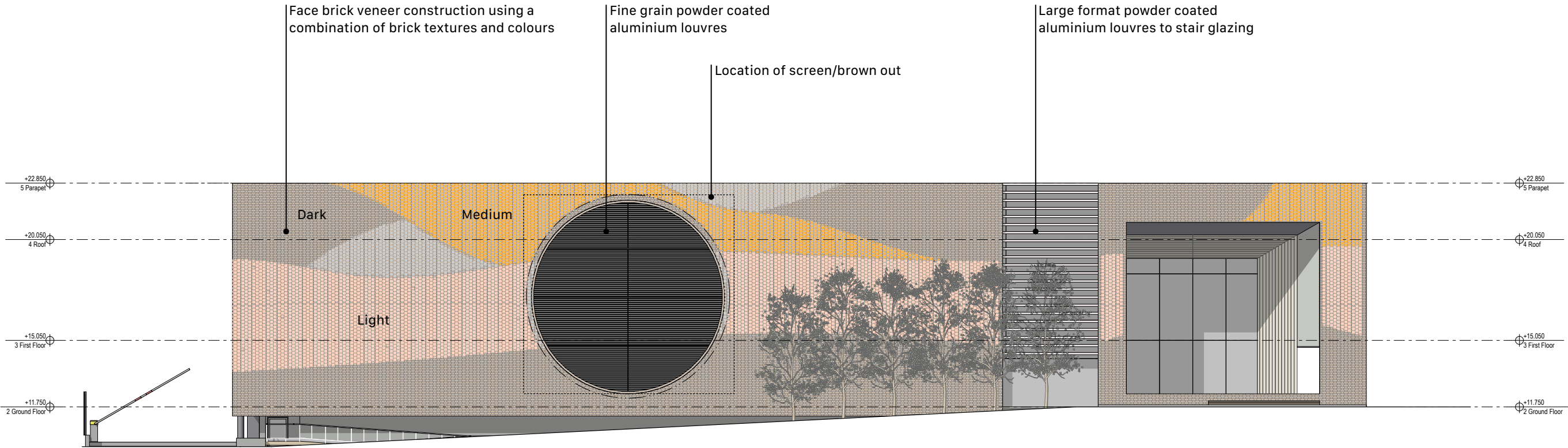
West/East Link

The west/east link is proposed to be experienced as a clear glazed link separating the courts and the support spaces. To maintain a high level of transparency a larger format external powder coat aluminium louvre is used to the west. Similar to the western circular window, the link glazing to the west is fixed. The link glazing to the east will be large format glazed louvres with expressed framing.

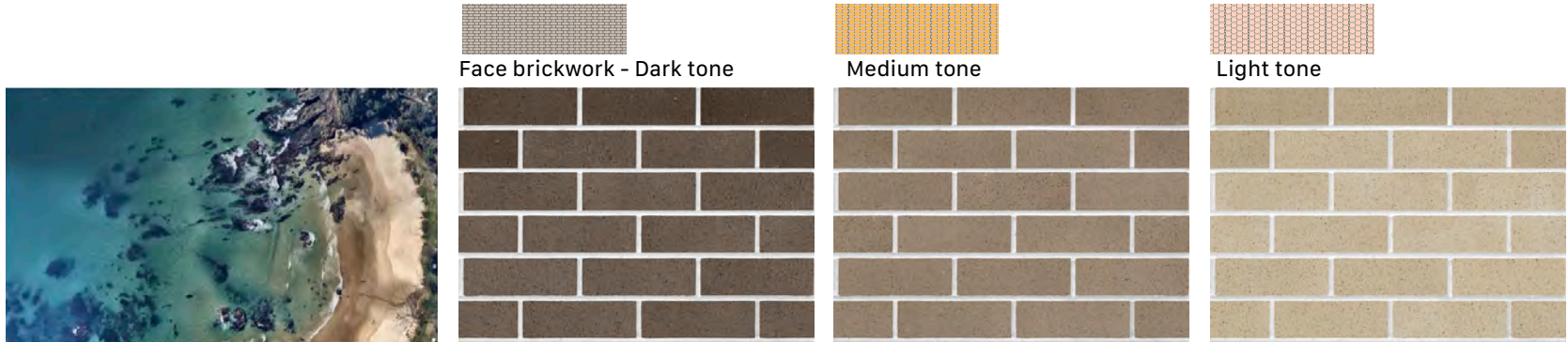
Face Brickwork

The masonry facades have been further developed to provide a finer grain of detail. Three tones of brickwork have been used with a brickwork palette complimentary to the coast dunes and a subtle texture will also be provided to introduce shadow play across the facade, using combinations of brick patterns.

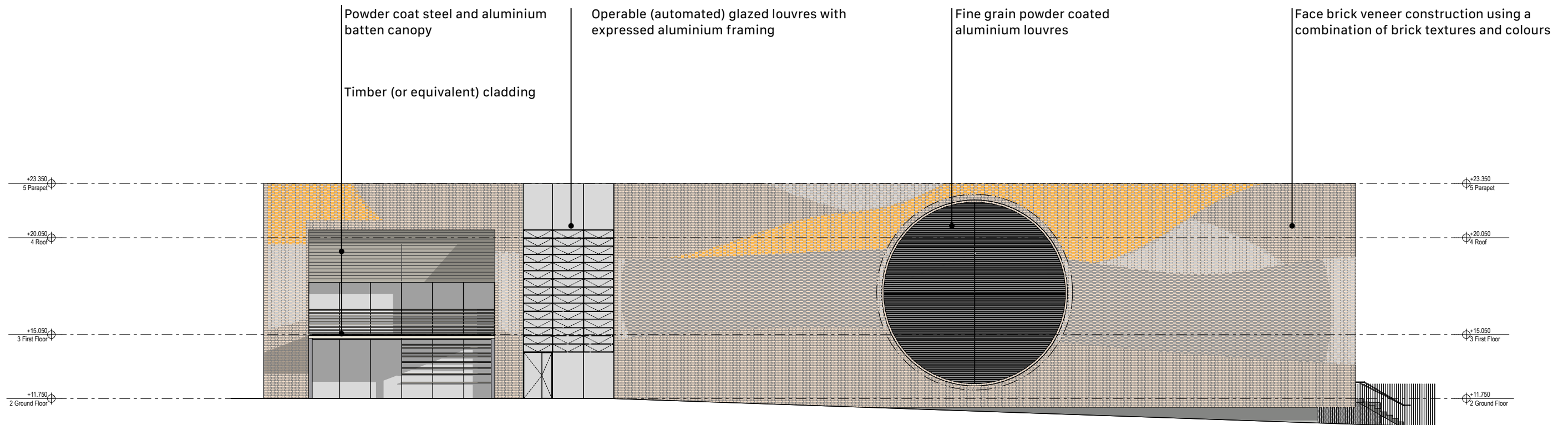
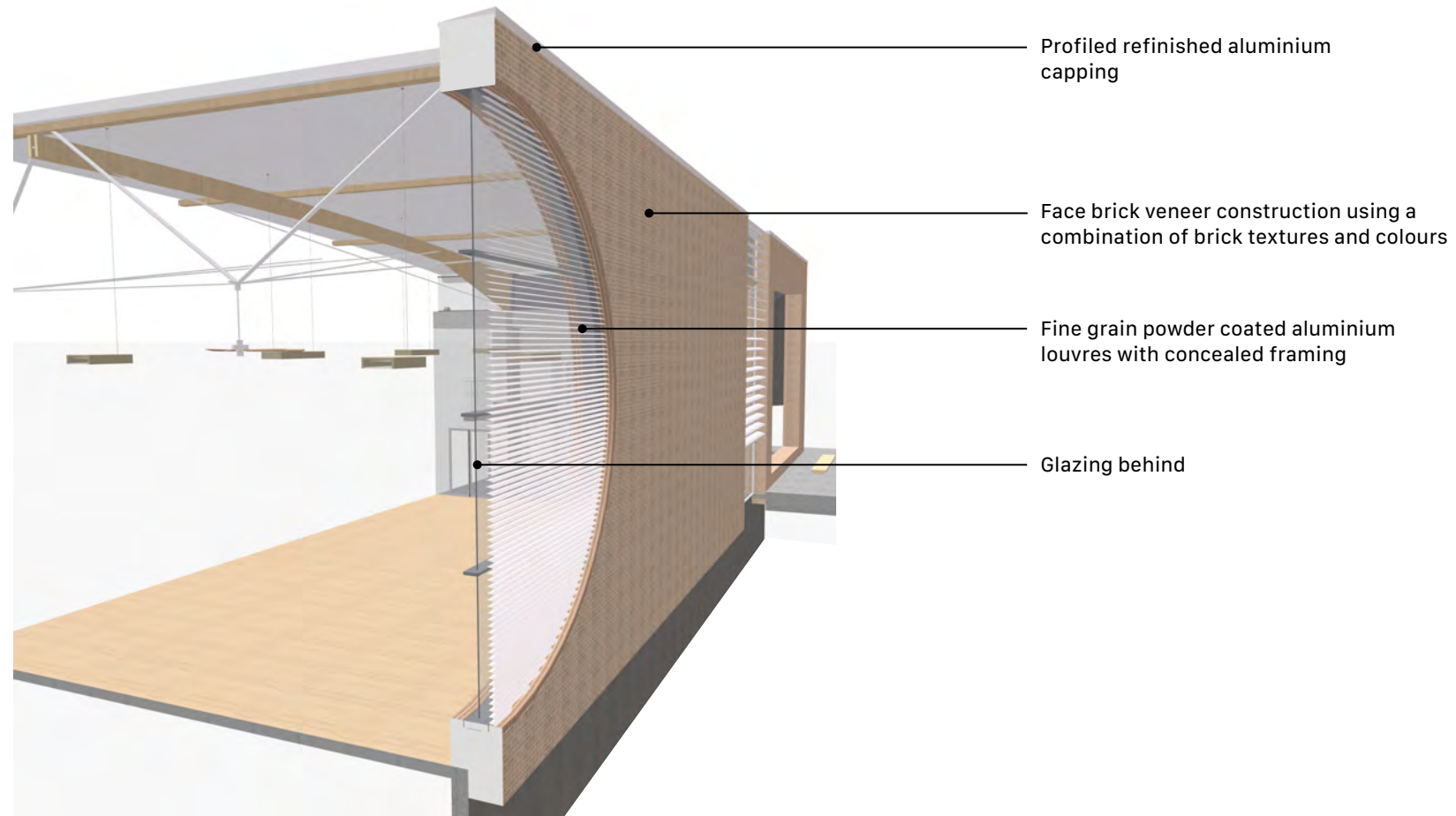
The pattern is indicative and will be developed during the next phase.



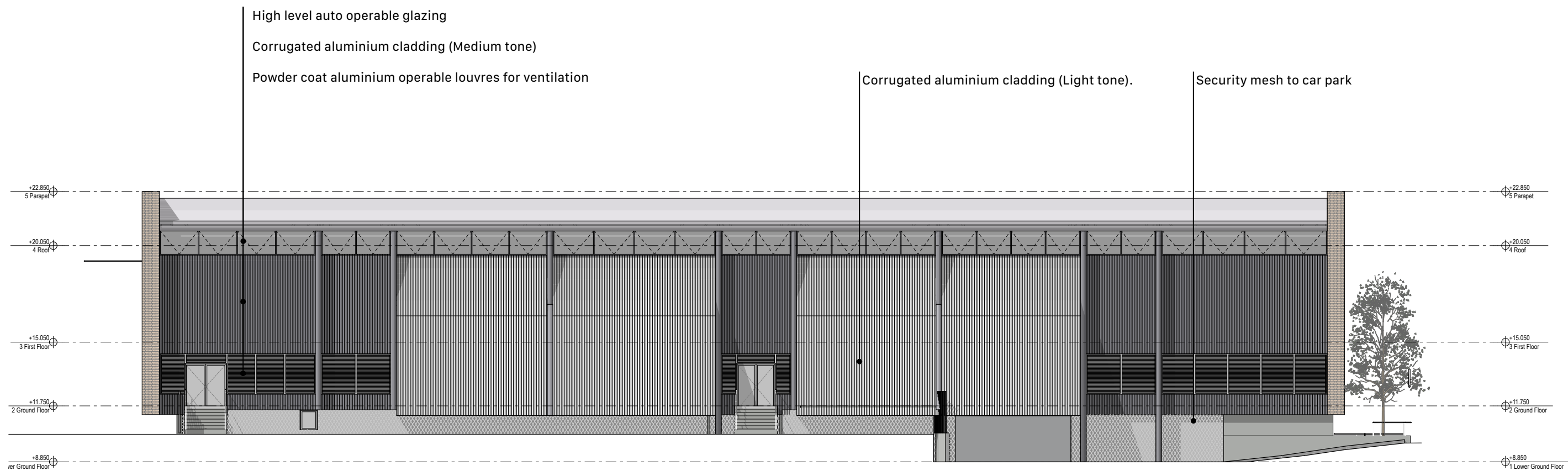
West Elevation



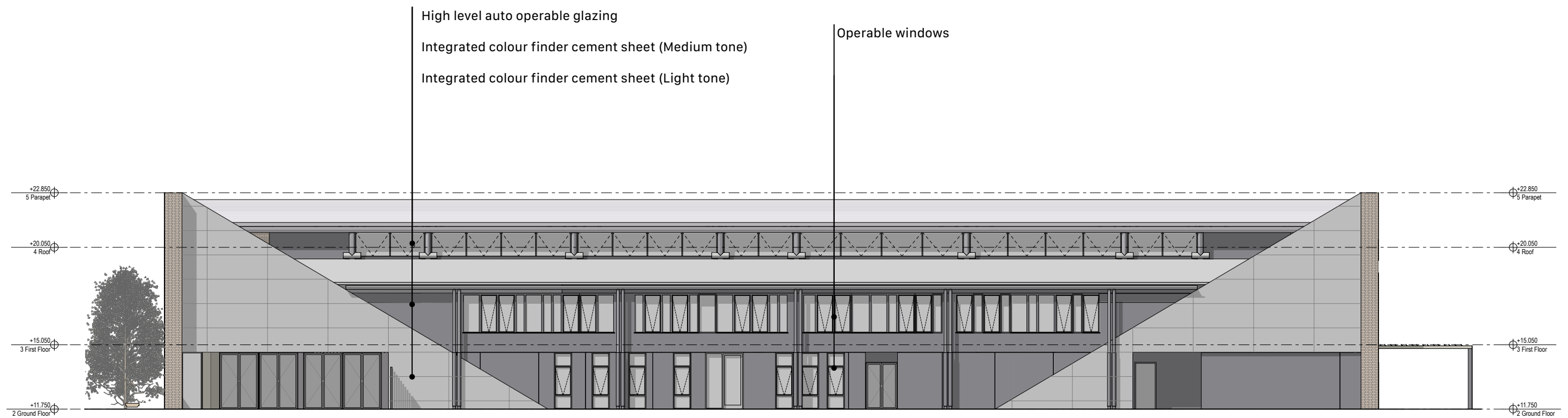




East Elevation



North Elevation



South Elevation



## 2 Sustainability

*GANSW advice (dated 12th August 2021) recommended that detail and sections through new and refurbished built form (be provided) to demonstrate how passive design strategies will contribute to the 4 star Greenstar target and ensure that access to natural light and ventilation are provided and maximised for all internal spaces.*

*It is recommended that opportunities for operable glazing be investigated in the CAPA building, which appears to have predominantly fixed glazing.*

### Response

The PCYC and the CAPA are the only 2 new buildings identified within the SSDA. Both the CAPA and the PCYC will be Greenstar Certified.

All other areas are within the existing buildings – Building L and one General Learning Space in Building B.

#### *Building L (South)*

The west and east facades of the 2 new General Learning Spaces on the Ground Level of Building L South, will include both openable glazed doors and glazed louvres. As this area was originally an undercroft, the intention is that the two facades are visually connected to the external landscaped areas.

#### *Building L (North) (and Building B Level 1)*

The refurbishment on Level G is contained within the existing envelope, therefore the existing facade will be retained. A new mechanical system will be installed which is compliant to the SiNSW Guidelines. Natural ventilation is provided with the existing facade system.

# PCYC Ground Level Plan

## PCYC

The PCYC will be ventilated with a combination of natural ventilation (Courts, Circulation including stairs and foyer and the lower ground car park), mechanical ventilation (Amenities and Stores) and air conditioned spaces (Multi purpose Rooms, Gymnasiums, Meeting Rooms, Learning Spaces and Administration spaces).

### Natural Ventilation

Openable windows or louvres are provided to the north, east and southern facades, plus roof mounted cowls. The majority of the natural ventilation is focussed at low level to the north and east to enable air to be drawn across the space. Additional high level ventilation is provided at the high level and full height to the east.

All other non service areas with the exception of the Administration Office have direct facade natural ventilation. The Administration Area is visually and at time, physically, open to the Foyer and the Courts due to its function, therefore will utilise borrow natural ventilation from these spaces.

### Mechanical Ventilation

All support areas will be mechanically ventilated as required by the NCC. Note that the courts will have large roof top mounted mechanical vents with fans to provide exhaust air.

Large ceiling fans will also be provided in the Gymnastics Court.

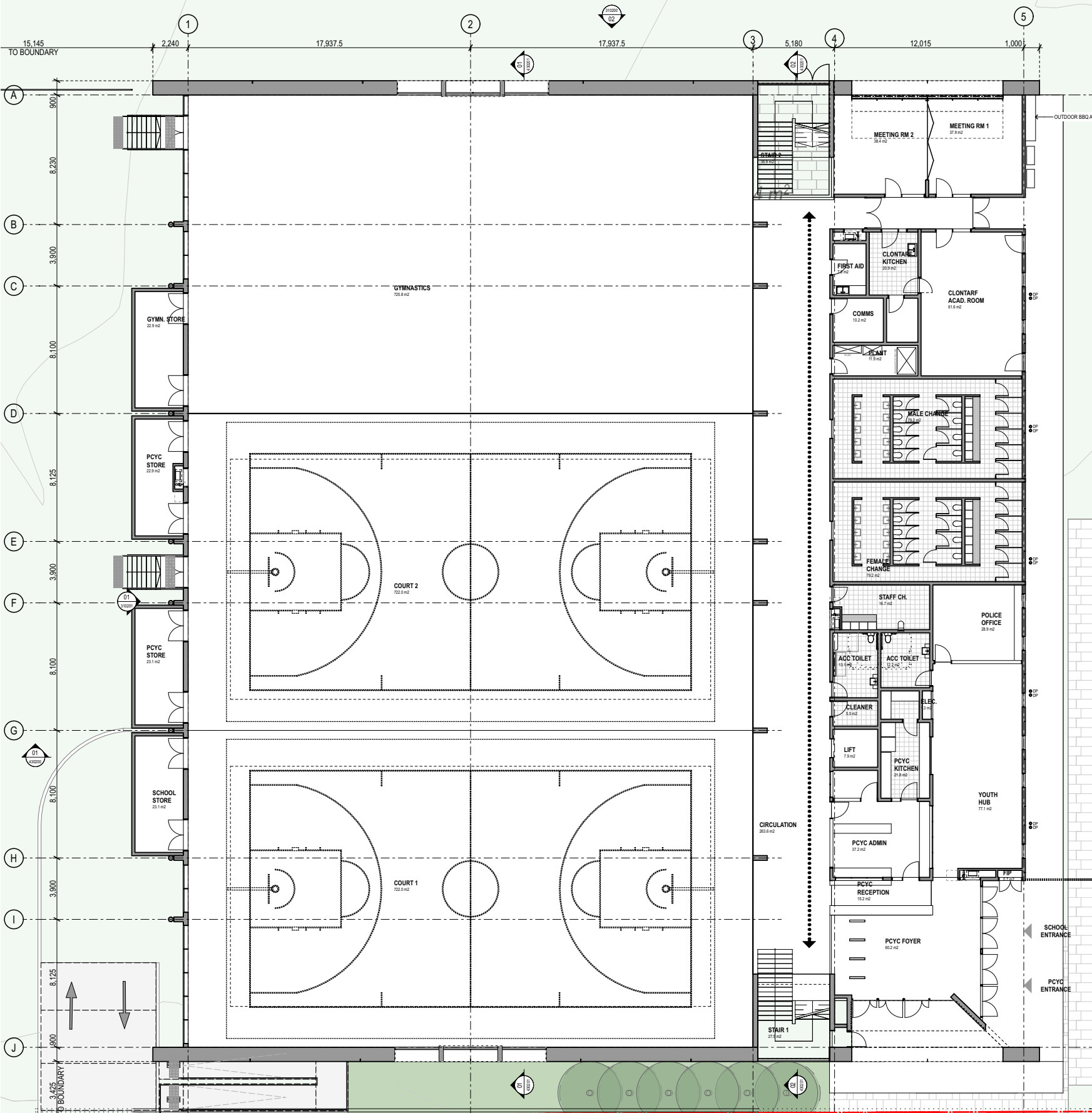
### Air Conditioning

The Meeting Rooms, Clontarf Academy Room, Police Office and Youth Hub will all be air conditioned on Ground and the Gymnasium, and 3 x Multi purpose Rooms on Level 1.

### Daylighting

All usable areas have access to natural daylighting, with the exception of the Administration Area. Due to its function it is located in a central position with borrowed light from the Youth Hub and the Foyer.

The courts are daylight through both the eastern and western circular windows, which will be protected with fine external louvres and high level windows at roof level.





## CAPA

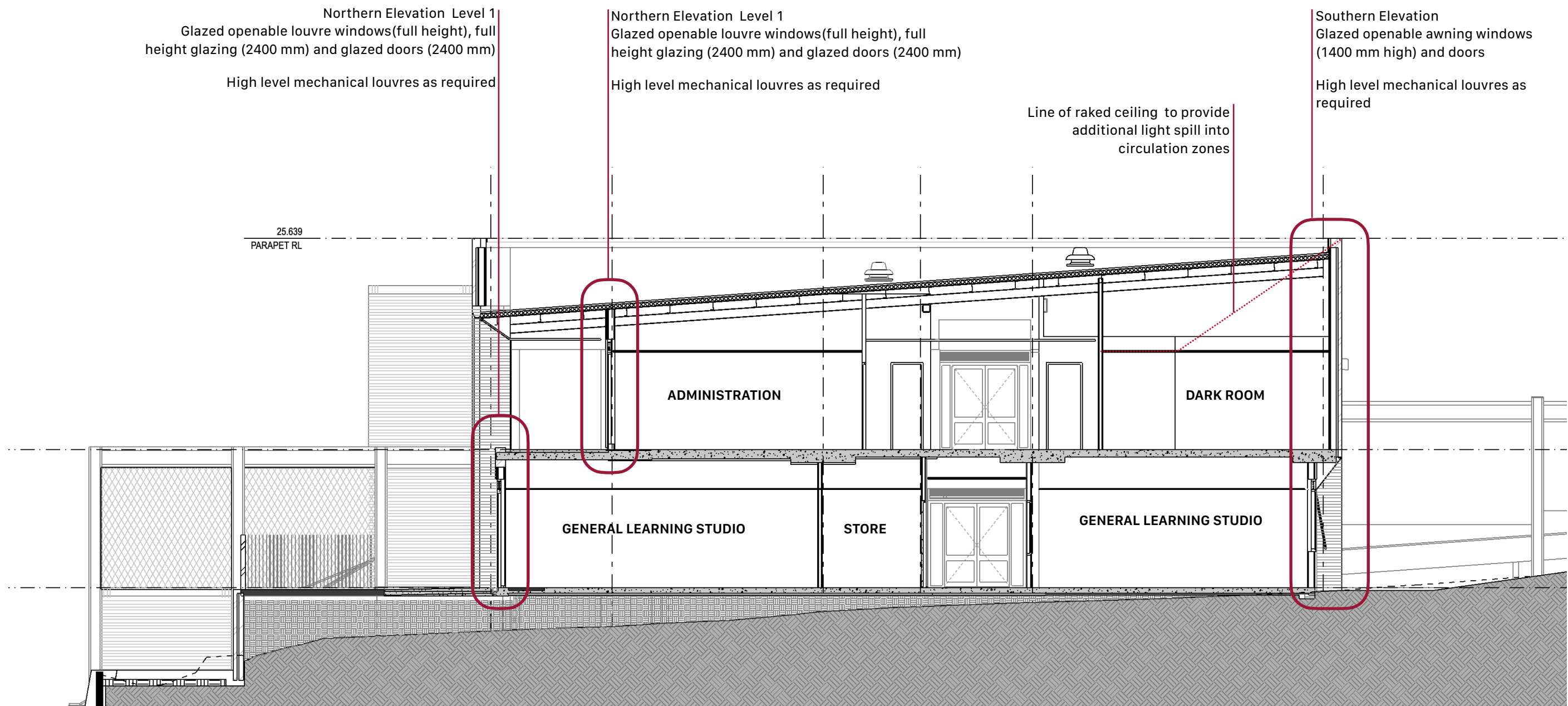
In accordance with SiNSW (Department of Education) requirements the CAPA will be both naturally ventilated and air conditioned.

Openable windows are provided to the north and the south - either glazed louvres or awning windows with limiters. Each room is provided with either the required or above the required percentage of natural ventilation. One Seminar Room on Ground Level (identified on the following plan) will not have access to direct daylighting or natural ventilation, however this room will have a ducted fresh air mechanical solution. It is intended that this room will be predominately used as a Music Practice Room. Glazed vision panels are provided to both the circulation space and the adjacent Seminar Room to provide observation opportunities.

Daylight is provided through both windows and glazed doors and there is a balance of glazing, acoustic and writable walls for each Learning Space. As CAPA is used for both Visual Arts and Performing Arts the location of learning studios and workshops is considered. The Visual Arts Hub is located to Level 1 where the northern windows are shaded by the outdoor learning verandah and there is direct access to an external outdoor learning area.

The maximum depth of a learning space with single sided glazing is 9m, however the zone further from the glazing is designated storage.

Internally all Learning Studios have glazing to the adjacent corridor to provide a good visual connection and additional borrowed daylight is available from the stair glazing to the south.



# CAPA Ground Level Plan

**Each window bank to have a zone of mechanical fresh air intake louvres. In active louvres to be blanked off.**

**Windows recessed between brick piers/  
columns to provide east/west shading**

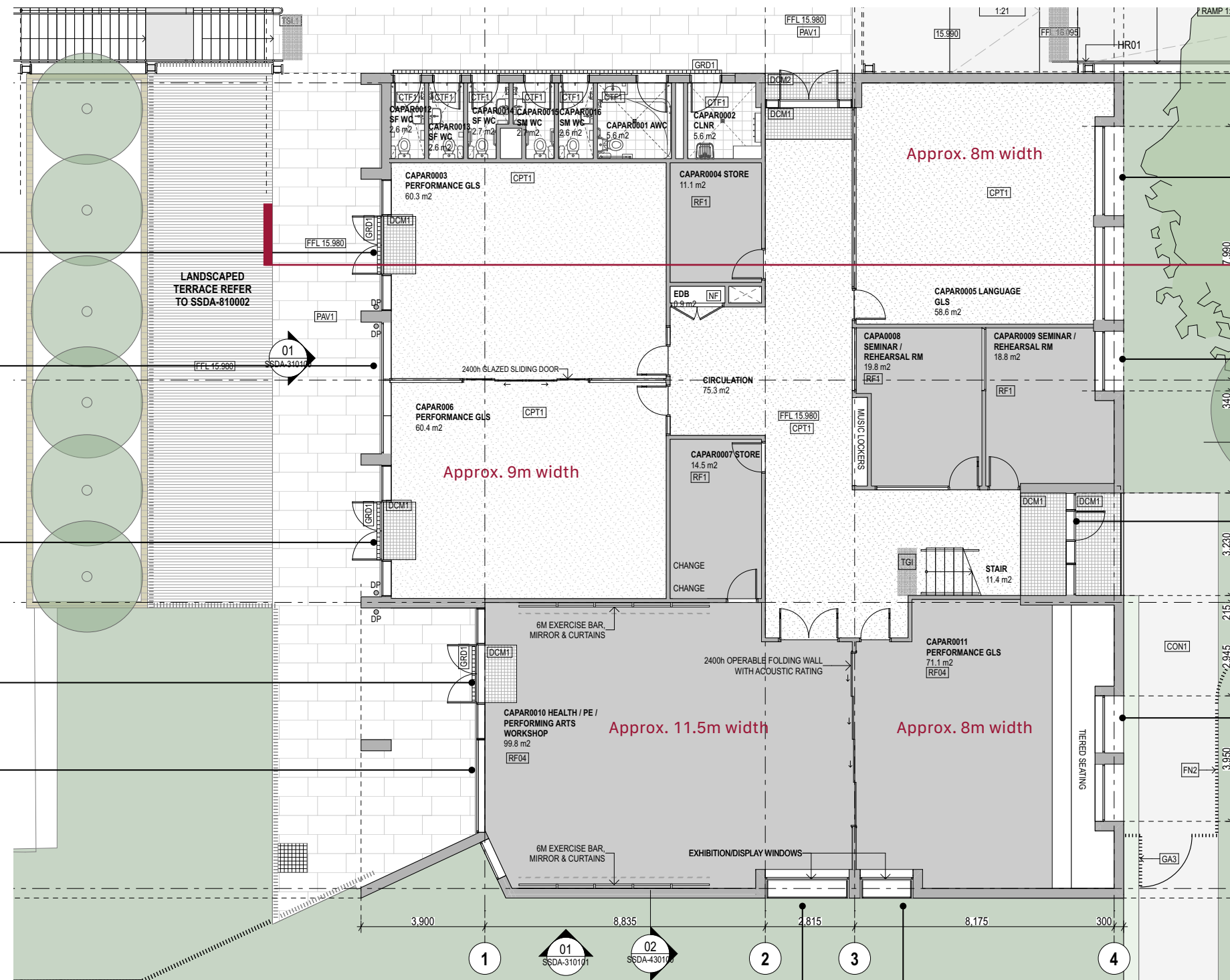
2 x aluminium framed glazed door with operable glazed louvre side lights.

Adjacent full height fixed glazed panel

2 x aluminium framed glazed door with operable glazed louvre side lights.

2 x aluminium framed glazed door with operable glazed louvre side lights.

Adjacent full height fixed glazed panel



2 x 3 x glazed openable awning windows (with limiters) - 1000 mm - 2400 mm.

2 x glazed openable awning windows (with limiters) - 1000 mm - 2400 mm.

- Aluminium framed glazed door and sidelight.

- 2 x 2 x glazed openable awning windows (with limiters) - 1000 mm - 2400 mm.

- Fixed glazed "display window box" with translucence glazed panel behind to access display zone



# CAPA Level 1

**Each window bank to have a zone of mechanical fresh air intake louvres. In active louvres to be blanked off.**

**Windows recessed between brick piers/  
columns to provide east/west shading**

2 x aluminium framed glazed door with operable glazed louvre side lights.

2 x aluminium framed glazed door with operable glazed louvre side lights.

1 x aluminium framed glazed door with operable glazed louvre side lights.

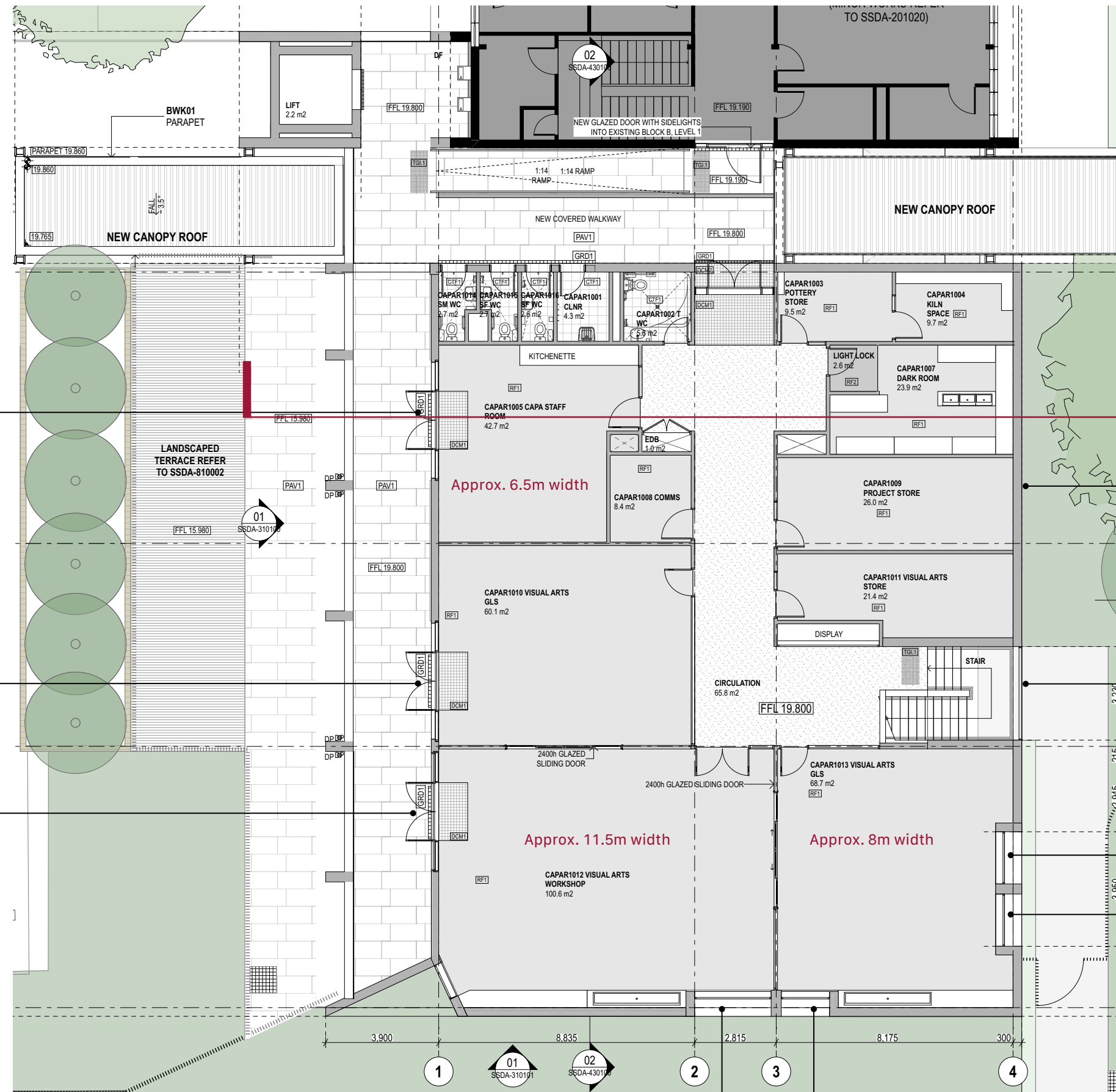
- Face brick veneer construction to Dark Room and Stores

3.23 Full height aluminium framed glazing with angled coloured soffit behind

2 x glazed openable awning windows (with limiters) - 1000 mm - 2400 mm.

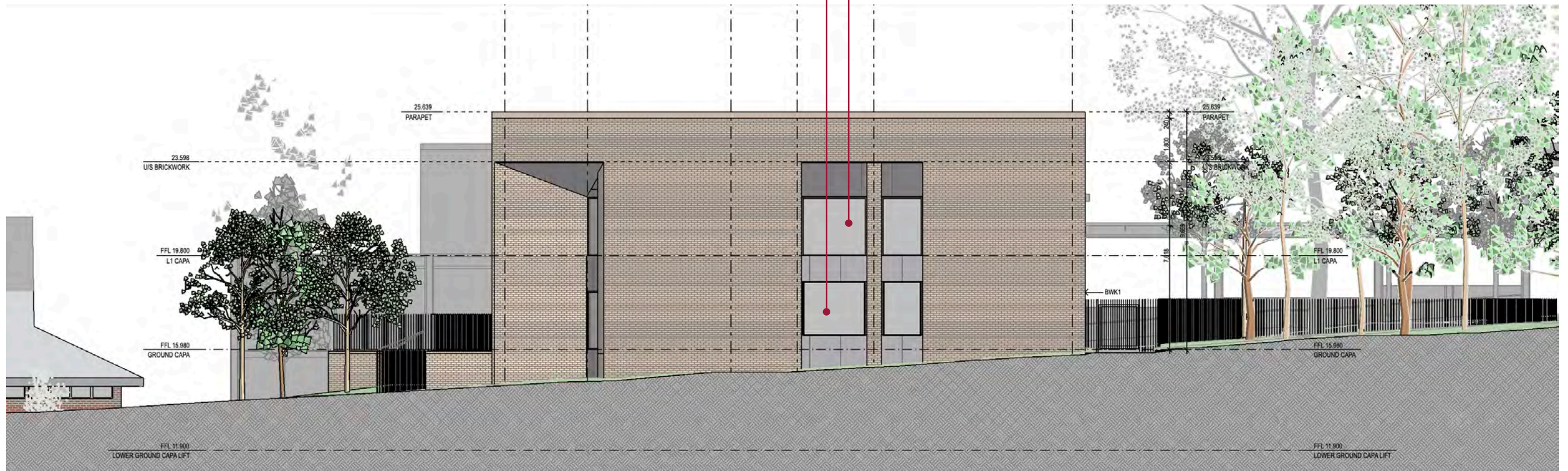
2 x glazed openable awning windows (with limiters) - 1000 mm - 2400 mm.

- Fixed glazed window



Fixed glazed window

Fixed glazed window "display box"  
with openable translucent glazing  
behind to access box.



Western Elevation



Open stainless steel security mesh providing safety but allowing adequate daylight penetration

Air intake louvres located above door/ window head height. Louvres to be continuous with blanked off sections as required.

Glazed openable windows and doors set behind a north facing verandah to both Level G and Level 1. Windows at be glazed louvres from 1000mm - 2700mm adjacent to traffic able zones



**Northern Elevation**



Openable glazed awning windows (with limiters) from 1000 mm - 2700 mm. Integral colour fibre cement sheet rain screen cladding above and below windows.

Double storey glazed facade to provide south light deep into stair and adjacent circulation corridor. A coloured angled internal soffit will provide additional light modelling.

Integral colour fibre cement sheet rain screen cladding with 2700mm high aluminium framed glazed door and side light.

Air intake louvres located above window head height. Louvres to be continuous with blanked off sections as required.

Openable glazed awning windows (with limiters) from 1000 mm - 2700 mm. Integral colour fibre cement sheet rain screen cladding above and below windows.



Southern Elevation

# GFA

The overall GFA has been updated to align with the LEP Definition:

GFA definition (LEP 2012 - NSW Legislation)

gross floor area means the sum of the floor area of each floor of a building measured from the internal face of external walls, or from the internal face of walls separating the building from any other building, measured at a height of 1.4 metres above the floor, and includes:

- (a) the area of a mezzanine, and
  - (b) habitable rooms in a basement or an attic, and
  - (c) any shop, auditorium, cinema, and the like, in a basement or attic,
- (b) but excludes:
  - (d) any area for common vertical circulation, such as lifts and stairs, and
  - (e) any basement:
    - (i) storage, and
    - (ii) vehicular access, loading areas, garbage and services, and
  - (f) plant rooms, lift towers and other areas used exclusively for mechanical services or ducting, and
  - (g) car parking to meet any requirements of the consent authority (including access to that car parking), and
  - (h) any space used for the loading or unloading of goods (including access to it), and
  - (i) terraces and balconies with outer walls less than 1.4 metres high, and
  - (j) voids above a floor at the level of a storey or storey above.

At the SSDA level of detail the following areas have been excluded:

- all new and existing stairs
- all new lifts
- Lower Ground: ramp to access 1 required accessible car space
- Lower Ground: 1 no. accessible car space
- Lower Ground: Plant Area

Services risers have not been included at this level of detail as they are in design development.

A new set of GFA Plans follow overleaf.



02510m

GENERAL NOTES

ALL DIMENSIONS AND EXISTING CONDITIONS SHALL BE CHECKED AND VERIFIED BY THE CONTRACTOR BEFORE PROCEEDING WITH THE WORK.

ALL LEVELS RELATIVE TO 'AUSTRALIAN HEIGHT DATUM'.

DO NOT SCALE DRAWINGS.

USE FIGURED DIMENSIONS ONLY.

legend

Total Site Area = 34518.1m<sup>2</sup>

GFA LEGEND

EXISTING BUILDING - NO RENOVATION

EXISTING BUILDING - PROPOSED INTERNAL RENOVATION

EXISTING UCA - UNDERCOVER AREA

UCA - UNDERCOVER AREA

NEW CONSTRUCTION - PCYC

NEW CONSTRUCTION - CAPA BUILDING

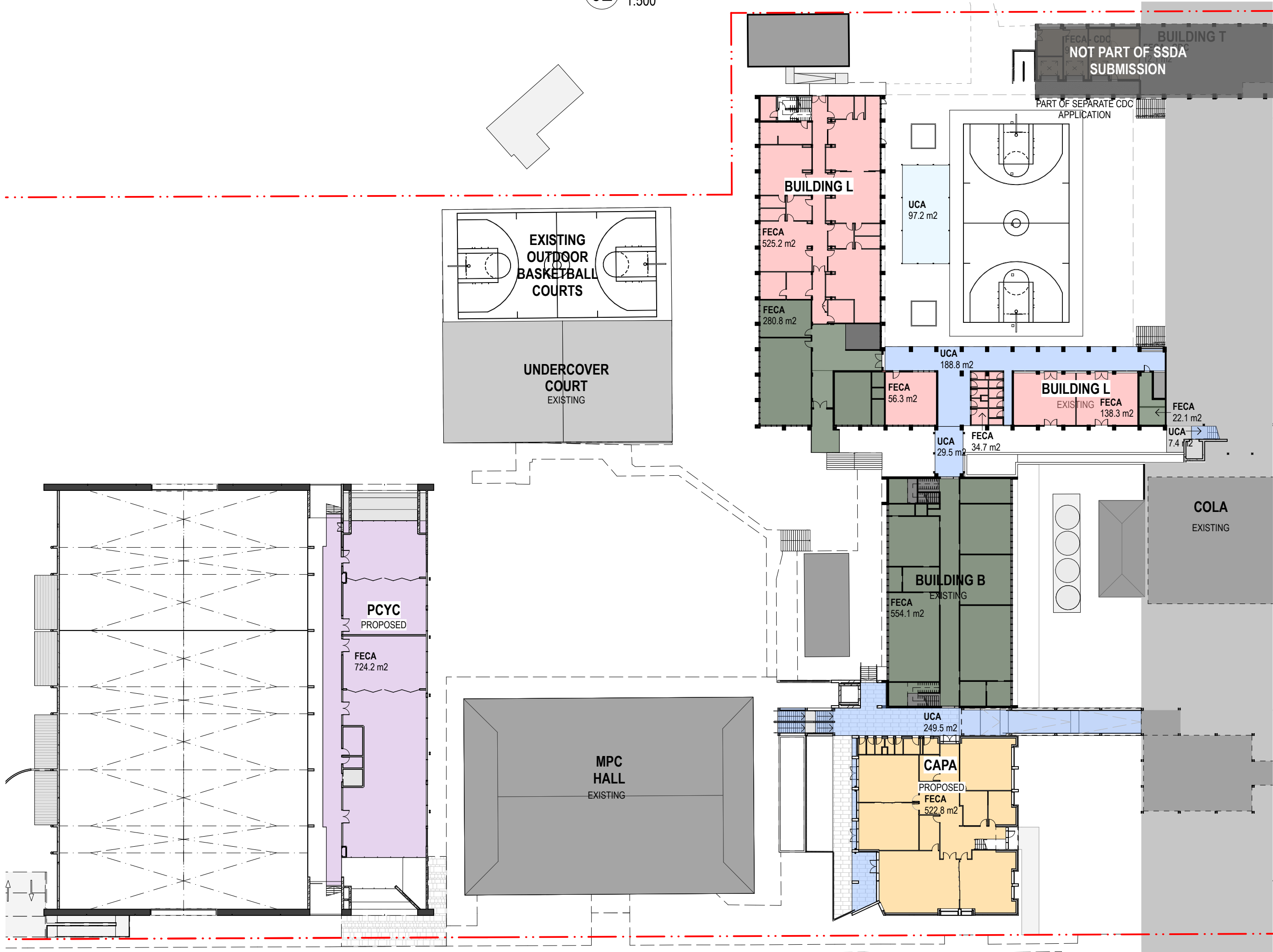
AREA NOT INCLUDED - SEPERATE CDC APPLICATION

NOTE:

PLEASE REFER TO SSDA-280001 FOR GFA PLANS

01 PLAN Lower Ground PCYC  
1:500

02 PLAN Ground floor PCYC & MPC Hall  
1:500



03 PLAN Level 1 PCYC, Ground Floor CAPA, Building B & L  
1:500

05	13/10/21	For Information	SJP	
04	18/8/21	For Information	SJP	
03	30/7/21	For Information	SJP	
02	14/4/21	SSDA	MJ	
01	26/3/21	SSDA	KT	
rev	date	name	by	chk

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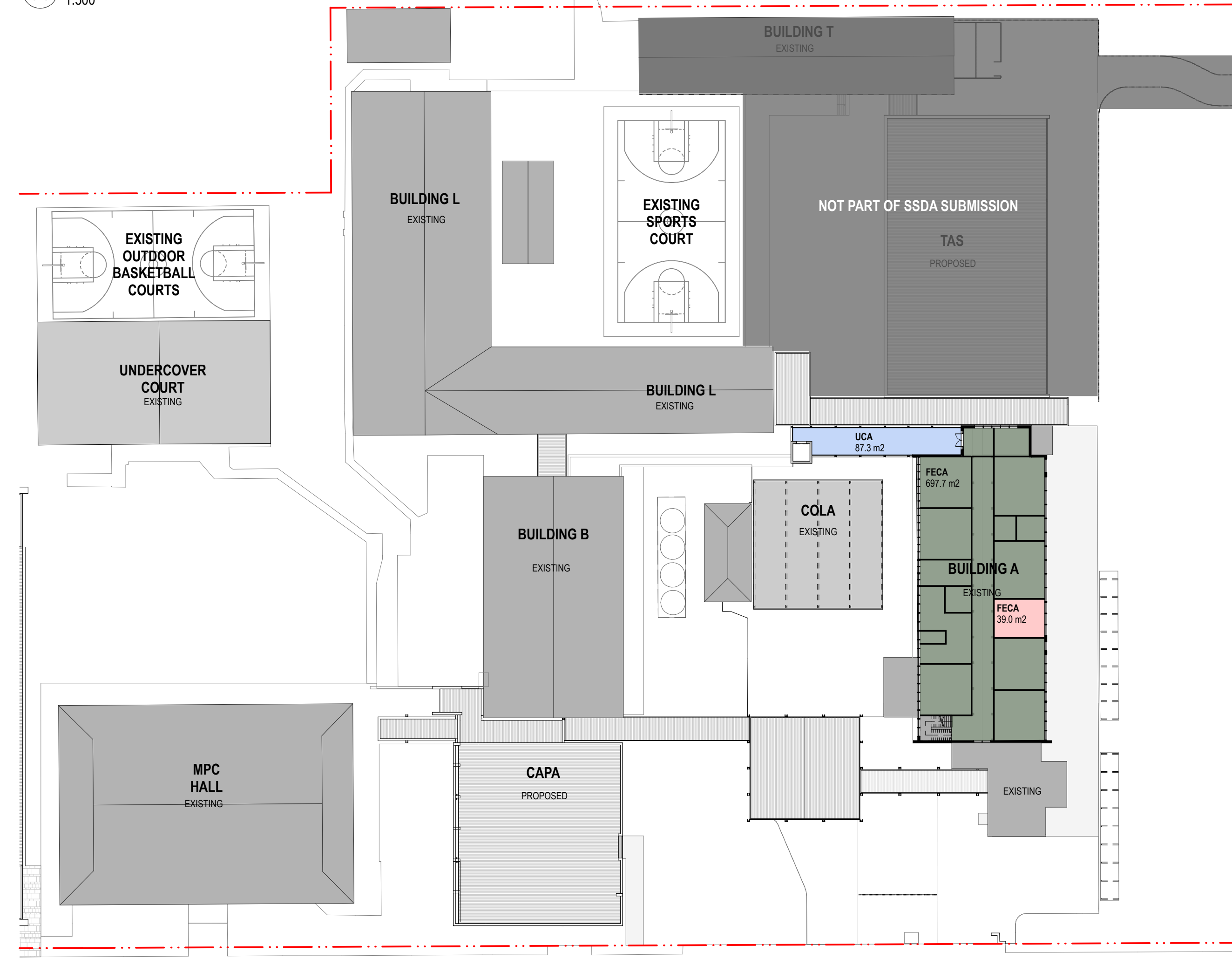
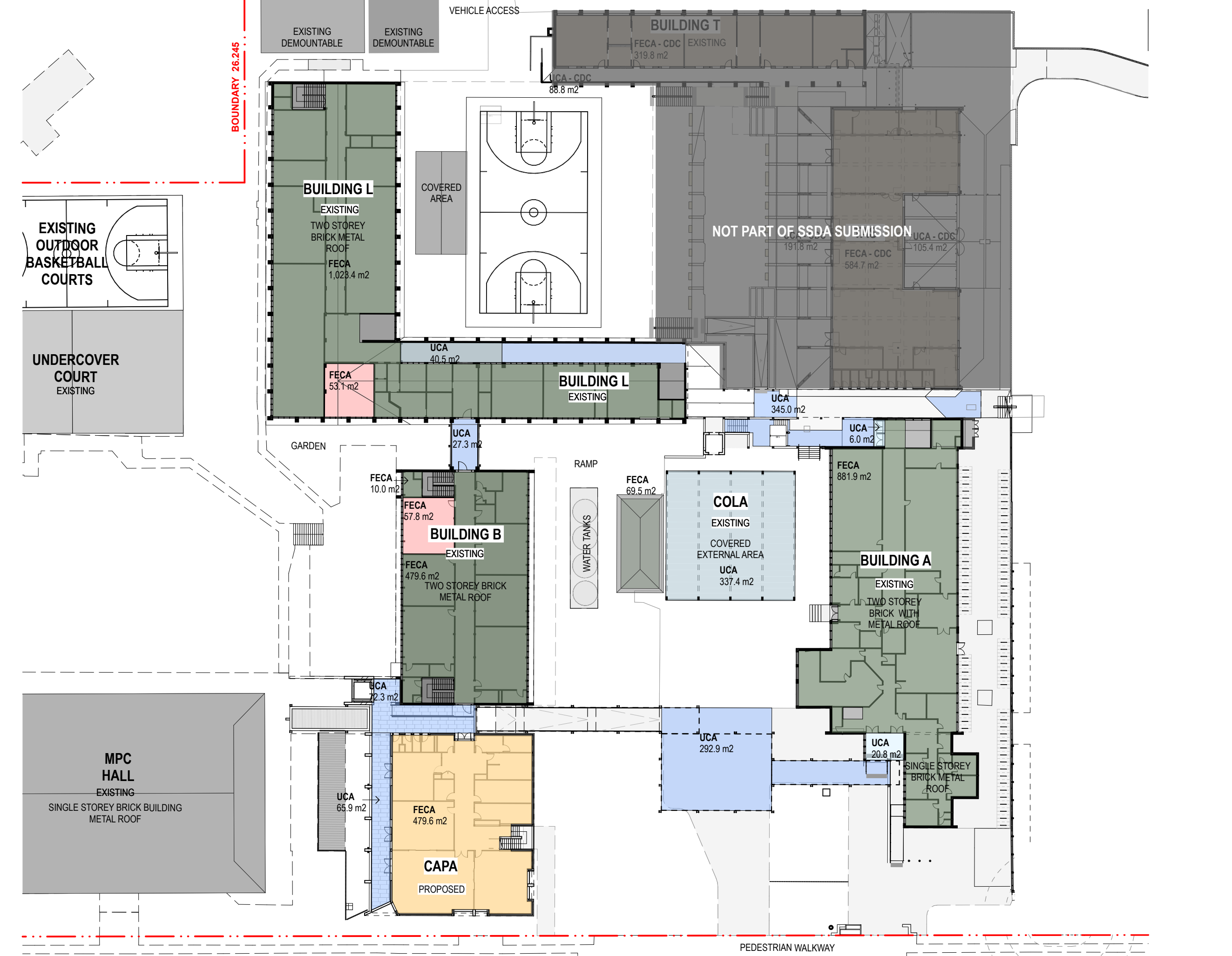


project  
**Hastings Schools Port Macquarie**  
Hastings Secondary College  
Port Macquarie NSW 2444

title  
**Area Calculation Plans**  
**GFA Plans**

scale	1:200 @ A1	first issued	26/3/21
project code	sheet no.	revision	
<b>HSPM</b>	<b>SSDA-280000</b>	<b>05</b>	





GFA Schedule FECA Existing			
Zone	Existing / Proposed	Location	Measured Area
FECA	A-Area-GFA-Existing	Building A - Ground Floor	881.88
	A-Area-GFA-Existing	Building A Level 1	697.67
	A-Area-GFA-Existing	Building B Ground Floor	554.06
	A-Area-GFA-Existing	Building B Level 1	10.01
	A-Area-GFA-Existing	Building B Level 1	479.61
	A-Area-GFA-Existing	Building L Ground Floor	22.13
	A-Area-GFA-Existing	Building L Ground Floor	280.75
	A-Area-GFA-Existing	Building L Level 1	1,023.44
	A-Area-GFA-Existing	Building U	69.46
	A-Area-GFA-Existing	MPC Hall	912.94
			4,931.95 m <sup>2</sup>

GFA Schedule FECA Proposed			
Zone	Existing / Proposed	Location	Measured Area
FECA	A-Area-GFA-Proposed CAPA	CAPA Building Level 1	479.64
	A-Area-GFA-Proposed CAPA	CAPA Ground Floor	522.82
	A-Area-GFA-Proposed CAPA	CAPA Lower Ground	21.16
			1,023.62 m <sup>2</sup>
	A-Area-GFA-Proposed PCYC	PCYC Ground Floor	3,183.86
	A-Area-GFA-Proposed PCYC	PCYC Level 1	724.25
	A-Area-GFA-Proposed PCYC	PCYC Lower Ground	712.92
			4,621.03 m <sup>2</sup>
	A-Area-GFA-Refurbished	Building A Level 1	39.00
	A-Area-GFA-Refurbished	Building B Level 1	57.83
	A-Area-GFA-Refurbished	Building L Ground Floor	34.65
	A-Area-GFA-Refurbished	Building L Ground Floor	56.28
	A-Area-GFA-Refurbished	Building L Ground Floor	138.29
	A-Area-GFA-Refurbished	Building L Level 1	53.13
	A-Area-GFA-Refurbished	Building L Ground Floor	525.19
			904.37 m <sup>2</sup>
			6,549.02 m <sup>2</sup>

GFA Schedule UCA			
Zone	Existing / Proposed	Location	Measured Area
UCA	A-Area-GFA-Existing	Building A Entry	6.02
	A-Area-GFA-Existing	Building A Entry	20.80
	A-Area-GFA-Existing	Building L Level 1	40.48
	A-Area-GFA-Existing	Existing COLA	337.35
	A-Area-GFA-Existing	Undercover Area	97.21
	A-Area-GFA-Existing	Undercover Court Existing	574.82
			1,076.68 m <sup>2</sup>
	A-Area-GFA-Proposed Circulation	Building A Linkway Level 1	87.31
	A-Area-GFA-Proposed Circulation	Building L & A Linkway	344.96
	A-Area-GFA-Proposed Circulation	Building L & B Linkway Level 1	27.26
	A-Area-GFA-Proposed Circulation	Building L Ground Floor	29.50
	A-Area-GFA-Proposed Circulation	Building L Ground Floor	188.81
	A-Area-GFA-Proposed Circulation	Building L Linkway Lower Ground	7.39
	A-Area-GFA-Proposed Circulation	CAPA Ground Floor	249.53
	A-Area-GFA-Proposed Circulation	CAPA Level 1	65.92
	A-Area-GFA-Proposed Circulation	CAPA Level 1	72.34
	A-Area-GFA-Proposed Circulation	Entry Canopy	292.86
			1,365.88 m <sup>2</sup>

GFA Schedule CDC			
Zone	Existing / Proposed	Location	Measured Area
FECA - CDC	A-Area-GFA	Building T Ground Floor	319.79
	A-Area-GFA	Building T Lower Ground	12.06
	A-Area-GFA	Building T Lower Ground	91.52
	A-Area-GFA	TAS Building	584.67
			1,008.04 m <sup>2</sup>
UCA - CDC	A-Area-GFA	TAS Building	105.37
			105.37 m <sup>2</sup>
	A-Area-Room	TAS Building	191.83
			191.83 m <sup>2</sup>
A-Area-Room CDC	A-Area-Room CDC	Building t Ground Floor	88.85
	A-Area-Room CDC	TAS Building	191.83
			280.68 m <sup>2</sup>
			1,585.92 m <sup>2</sup>

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- USE FIGURED DIMENSIONS ONLY.

Legend

Total Site Area = 34518.1m<sup>2</sup>

#### GFA LEGEND

- EXISTING BUILDING - NO RENOVATION
- EXISTING BUILDING - PROPOSED INTERNAL RENOVATION
- EXISTING UCA - UNDERCOVER AREA
- UCA - UNDERCOVER AREA
- NEW CONSTRUCTION - PCYC
- NEW CONSTRUCTION - CAPA BUILDING
- AREA NOT INCLUDED - SEPERATE CDC APPLICATION

NOTE:  
PLEASE REFER TO SSDA-280000 FOR GFA AREA SCHEDULES

07	13/10/21	For Information	SJP
06	18/8/21	For Information	SJP
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04	14/4/21	SSDA	MJ
03	26/3/21	SSDA	KT
02	23/2/21	Draft SSDA 02	KT
01	12/2/21	Draft SSDA	MJ
rev	date	name	by
			chk

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project  
**Hastings Schools Port Macquarie**  
Hastings Secondary College  
Port Macquarie NSW 2444

title  
**Area Calculation Plans**  
**GFA Plans & Area Schedule**

scale	1:200 @ A1	first issued	12/2/21
project code		sheet no.	revision
HSPM		SSDA-280001	07