# **Development Application**

# St Sava College (K - 12 school)

381 St Andrews Road, Varroville NSW

	DRAWING LIST	
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	Perspective 1	
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A-701	Perspective 3	



## **DOCUMENTS BY OTHERS**

Planner

Michael Brown Planning Strategies PO Box 295 Camden NSW 2570 T: 02 4648 0877

#### Surveyor

BCE Spatial Pty Ltd Suite 3, 720 Old Princes Hwy Sutherland NSW 2232 T: 0428 617 411

Rev	Date	Issue
D	21/9/2022	For Coordination
Е	17/10/2022	For Client R
1	20/10/2022	Developmer
2	26/10/2022	Developmer
3	3/11/2022	Developmer

General Notes

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Arborist

Seasoned Tree Consulting PO Box 3044 Asquith NSW 2077 T: 0415 961 074

Landscape Conzept Landscape Architects Suite 101, 506 Miller St Cammeray NSW 2062 T: 9922 5312

Bushfire **Bushfire Consulting Services** PO Box 1020 Penrith NSW 2751 T: 02 4744 5800

Ecological Narla Environmental Unit 2, 8 Apollo St Warriewood NSW 2102 T: 02 9986 1295

Hydraulic Inline Hydraulic Services PO Box 284 Gymea NSW 2227 T: 0473 392 909

Flood Study / Stormwater Cohort Engineering 77 Mann St Gosford NSW 2250 T: 02 4322 6517

#### Heritage

John Oultram Heritage & Design Level 2, 386 New South Head Rd Double Bay NSW 2028 T: 02 9327 2748

Photomontage

Premier3D Studio 101, 6-8 Clarke St Crows Nest NSW 2065 T: 02 9412 0010

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Client St Sava College

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NORTH COAST Unit 1 10 Station St, Bangalow NSW 2479

Scale at A1

North  $\square$ 

Date 3/11/2022

Drawn SB, RS

**BCA / Access** Design Confidence Suite 6, 113 Reservoir St Surry Hills NSW 2010 T: 8399 3707

#### Traffic

Transport and Traffic Planning Associates Suite 502, Level 5, 282 Victoria Ave Chatswood NSW 2067 T: 02 9411 5660

Geotech / Wastewater STS Geotechnics Pty Ltd 14/1 Cowpasture Place Wetherill Park, NSW 2164 T: 61 2 9756 2166

Acoustic Acoustic Logic 9 Sarah St Mascot NSW 2020 T: 8339 8000

Project Address 381 St Andrews Road, Varroville NSW

Checked Status MK, JK Not for Construction 21019

**Cover Sheet** 

Drawing

3

# **Future Proofing**

21st Century learning principles are paramount with the new facilities. The educational principles are:

- **1.** First and foremost, focus on the needs of learners and learning.
- 2. Build community, identity and create a culture of welcome, inclusion and belonging that reflects and respects diversity within the school's community.
- Provide contemporary, sustainable learning environments that: 3.
- Promote learning for students and teachers through collaboration, social • interaction and active investigation.
- Encourage learner self-management and self-direction . •
- Support a full range of teaching strategies from direct explicit instruction • to facilitation of inquiry and authentic project and problem based learning.
- Facilitate learning and connection anywhere, anytime by providing • seamless access to ICT and integration of learning resources throughout the learning spaces.
- Be integrated into, and maximise the use of the natural environment. •
- Enable aspects of the buildings, building design and outdoor spaces to be learning tools in themselves - for example, learning from the ecologically sustainable features of the design and associated energy management systems. Students can see roof rainwater recycling into tanks local to each classroom. Solar collectors on north facing roofs are on display while staff carparking will feature E Charging stations once again in plain view.
- Are age and stage appropriate. ٠
- 4. Embed the potential for re-configurability, both in the present for multipurpose use and over time for changing needs.
- Spatial arrangements and buildings that are aesthetically pleasing. 5.

#### **Community Use**

The school, when complete has the ability to serve the community. The MPH / PAC, the Chapel, library and the sports field and amenities all have potential to engage with the surrounding community.

# **School Facilities**

#### **Existing Facilities (Stage 1)**

Chapel	Year 1
Administration	Year 2
Staff Room	Car Parking
Toilets	Canteen
Kindergarten	Sports Fields

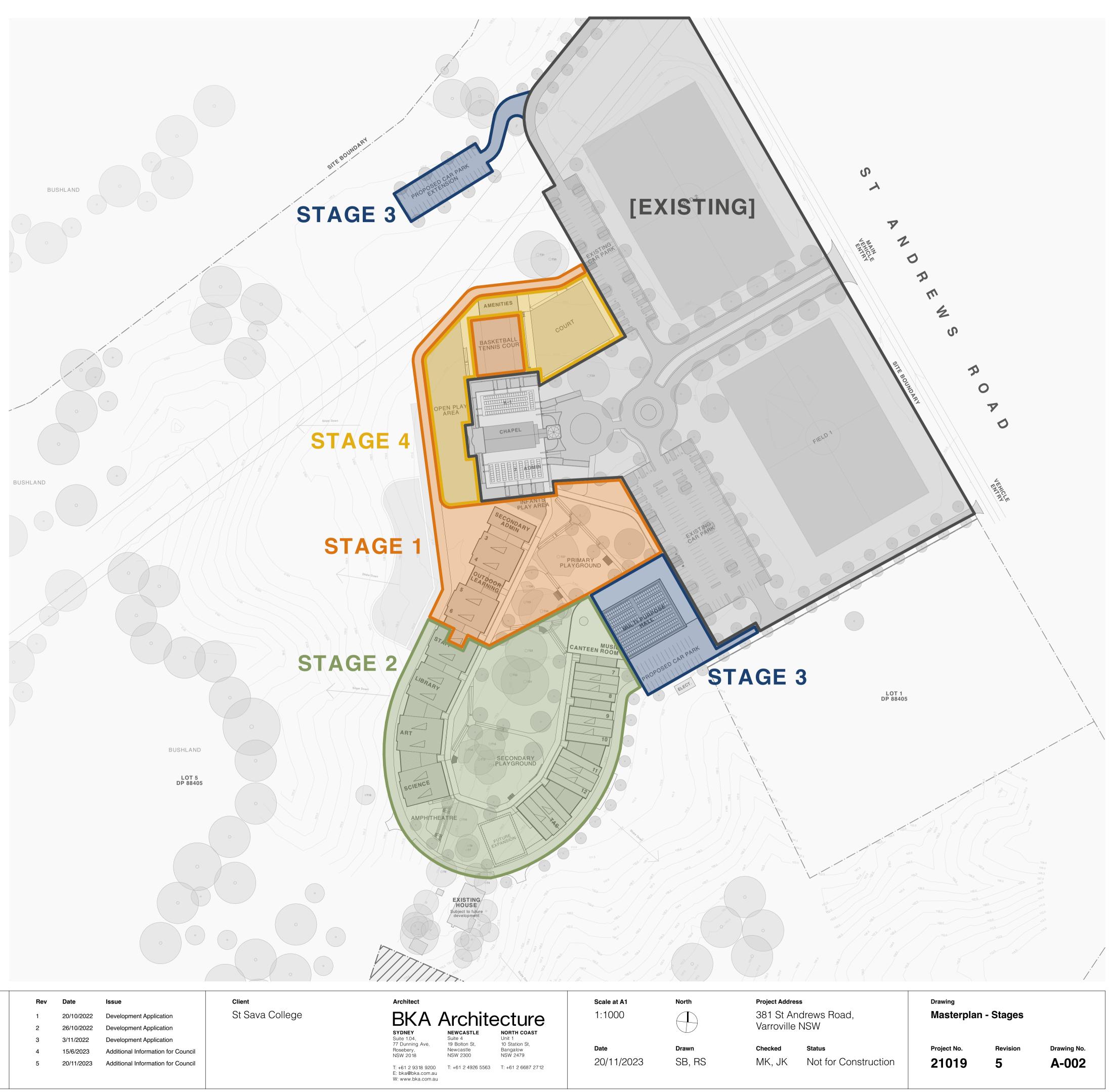
Existing facilities in the Chapel and Administration building will cater for Kindergarten, Year 1, Year 2 classes and staff amenities.

#### **Proposed Facilities**

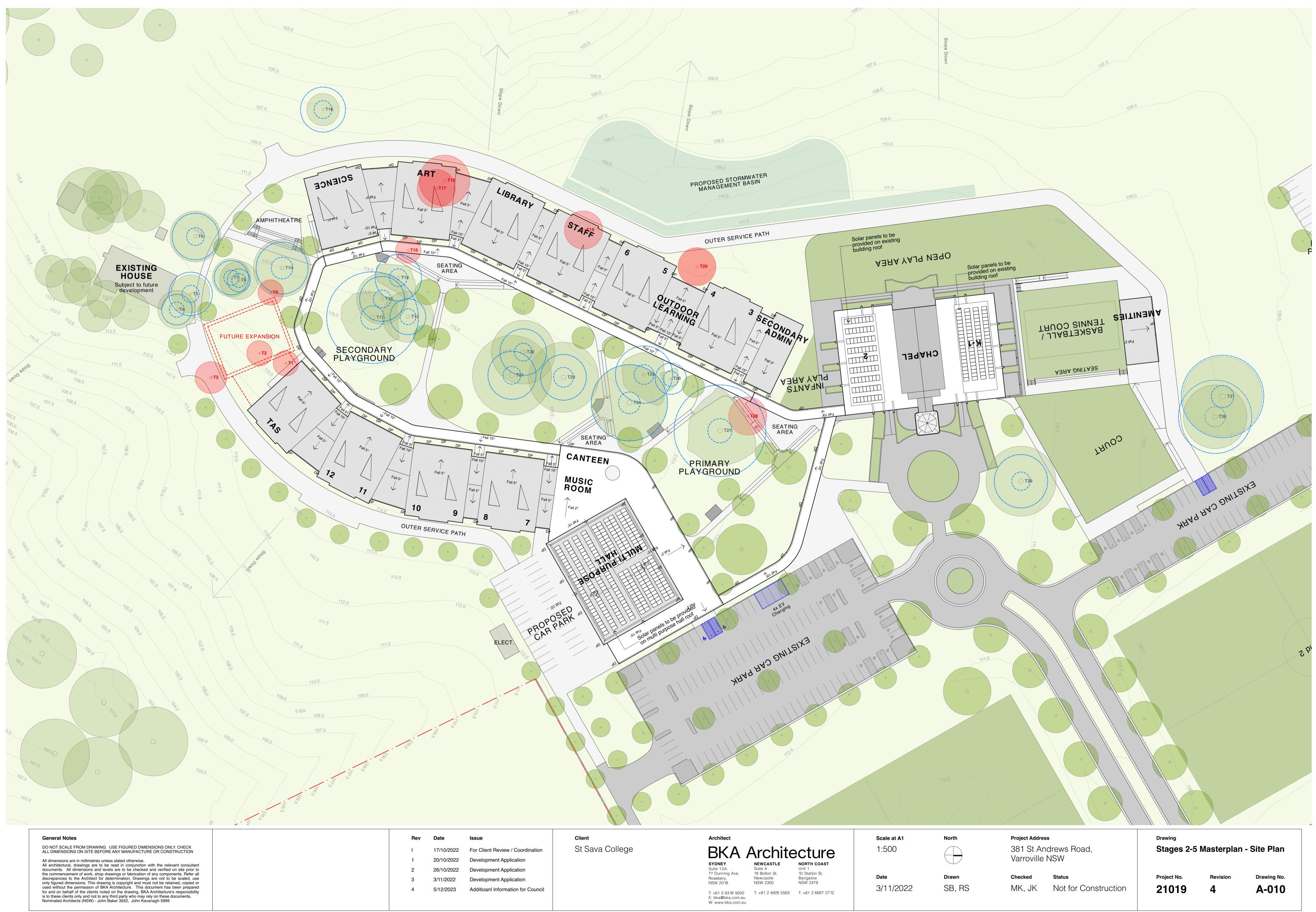
- Primary Campus Years 3 6 •
- (Each year to have 2 General Learning Spaces and Shared Facilities) Secondary School Years 7 - 12 •
- (Each year to have 2 General Learning Spaces and Shared Facilities) Multi Purpose Hall •
- Secondary Administration
- Library, Visual Arts, Science, Technological and Applied Studies
- Outdoor Sports Courts
- Toilet facilities for primary and secondary school students
- New Pedestrian Circulation Spine (Covered)
- Outdoor Amphitheatre
- Covered Outdoor Learning Area
- Outdoor Play Spaces and Secondary Pathways •
- Proposed Carpark Extension •

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	20/10/2022	Dev
	26/10/2022	Dev
	3/11/2022	Dev
	15/6/2023	Add







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**Development Application** Additioanl Information for Council

Newcastle

NSW 2300

Bangalow NSW 2479

Date

3/11/2022

Drawn SB, RS

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#### LEGEND

EXISTING TREES

PROPOSED TREES

TREES TO BE REMOVED

TREE PROTECTION ZONE [TPZ]

STRUCTURAL ROOT ZONE [SRZ]

----- INTERNAL FENCE LINE [STAGE 5]

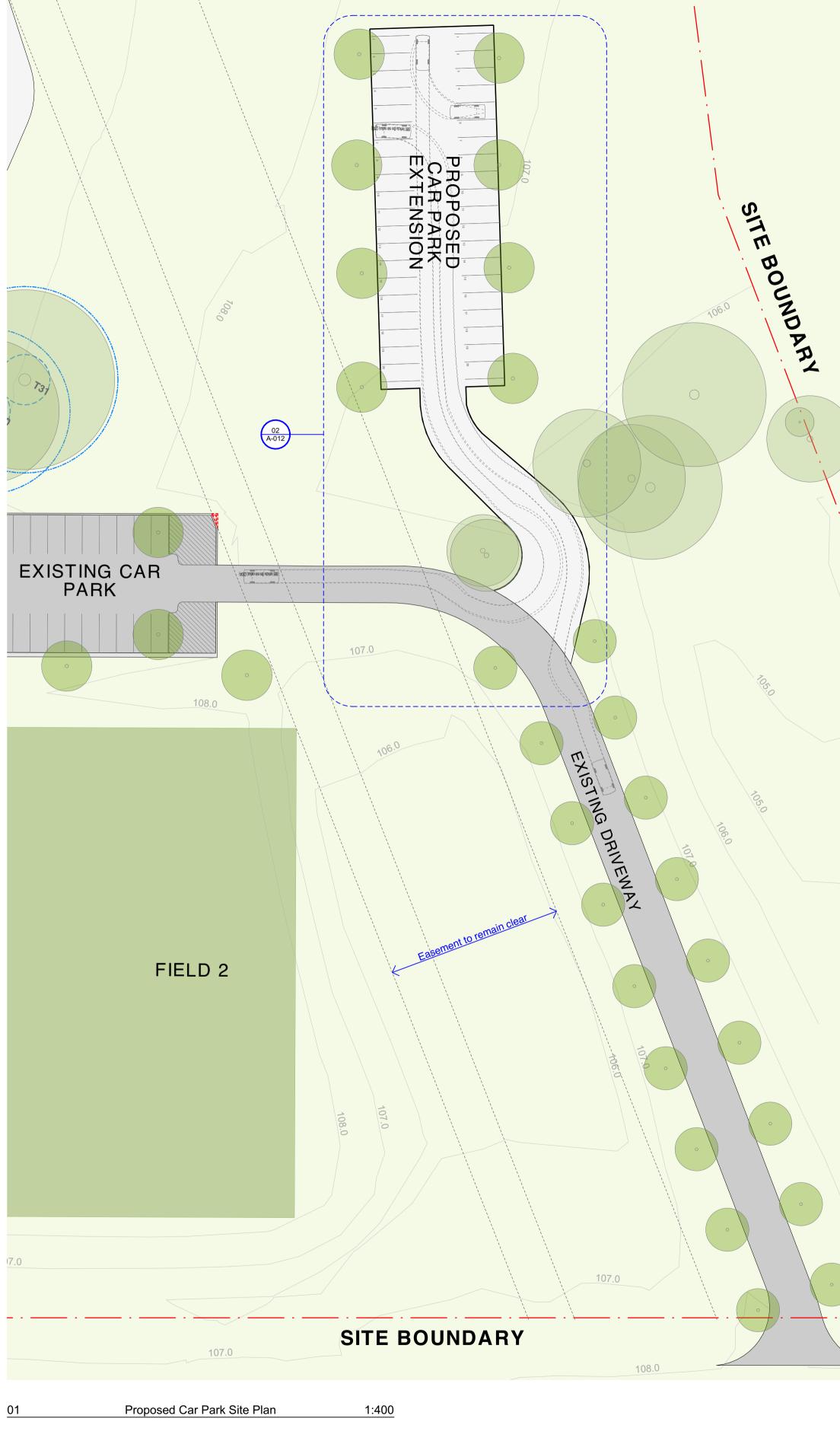
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Project Address 381 St Andrews Road, Varroville NSW

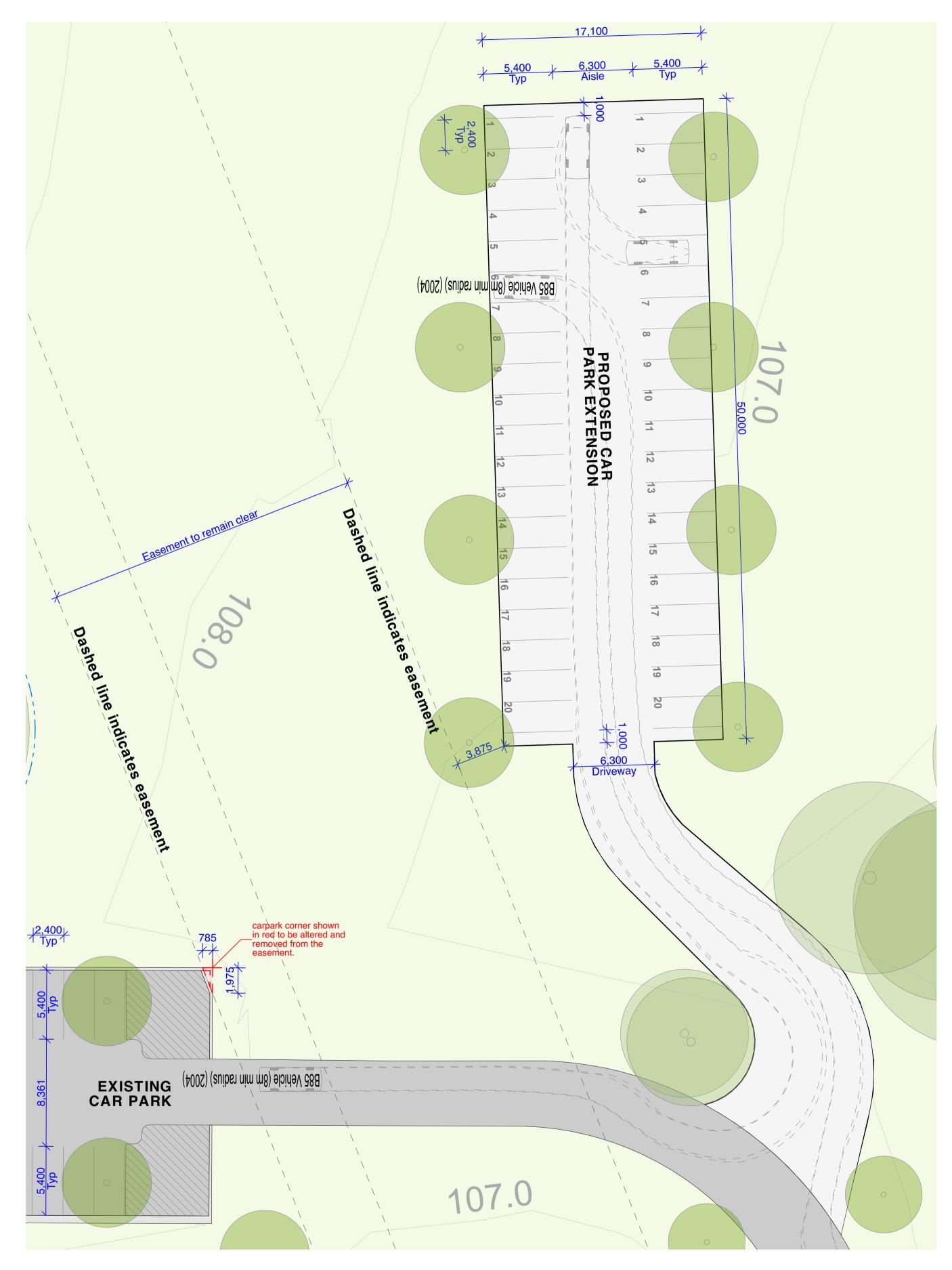
Checked Status MK, JK Not for Construction

Drawing Stage 5 & Car Parking Plan

Project No 21019



General Notes		Rev	Date	Issue
	AWING. USE FIGURED DIMENSIONS ONLY. CHECK BEFORE ANY MANUFACTURE OR CONSTRUCTION	01	15/6/2023	Additional Information for Council
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Proposed Car Park - Typical Detail Plan 1:200 02

> Client St Sava College

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Architect

**BKA** Architecture NEWCASTLE Suite 4 19 Bolton St, Newcastle NSW 2300 NORTH COAST Unit 1 10 Station St, Bangalow NSW 2479

Scale at A1 1:400, 1:200

Date

North  $\bigcirc$ 

15/6/2023

Drawn SB, RS

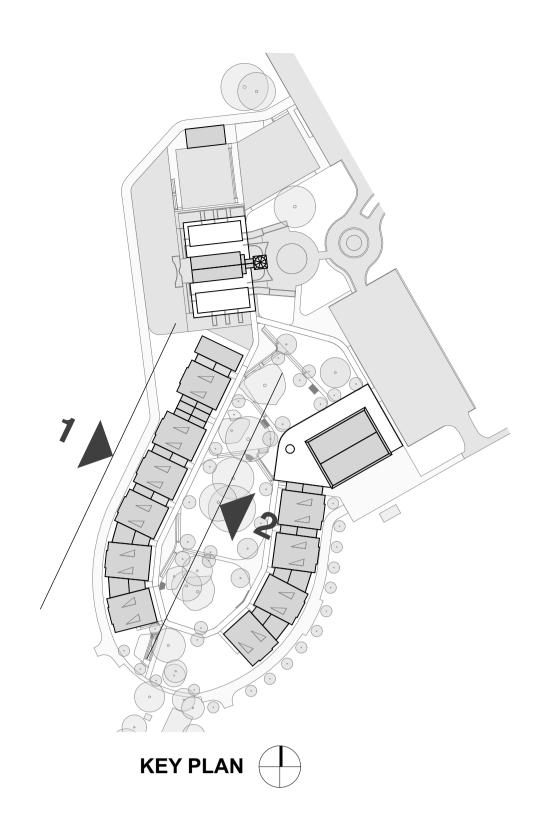
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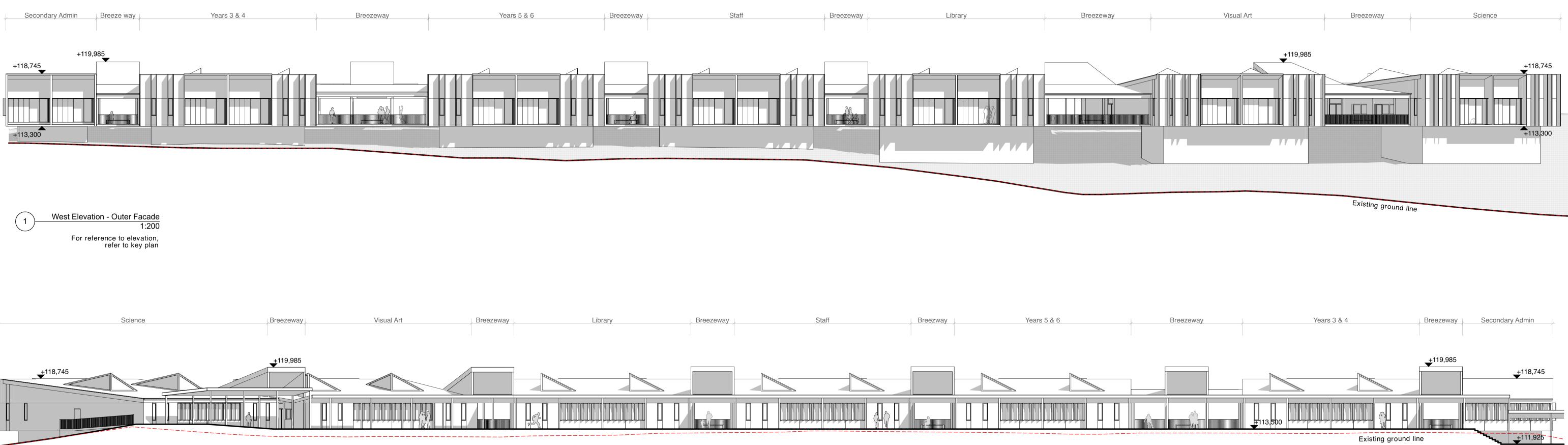
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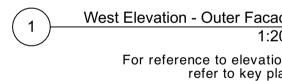
Drawing Car Parking Plan

Project No 21019

Revisior 01









East Elevation - Inner Facade 1:200

2

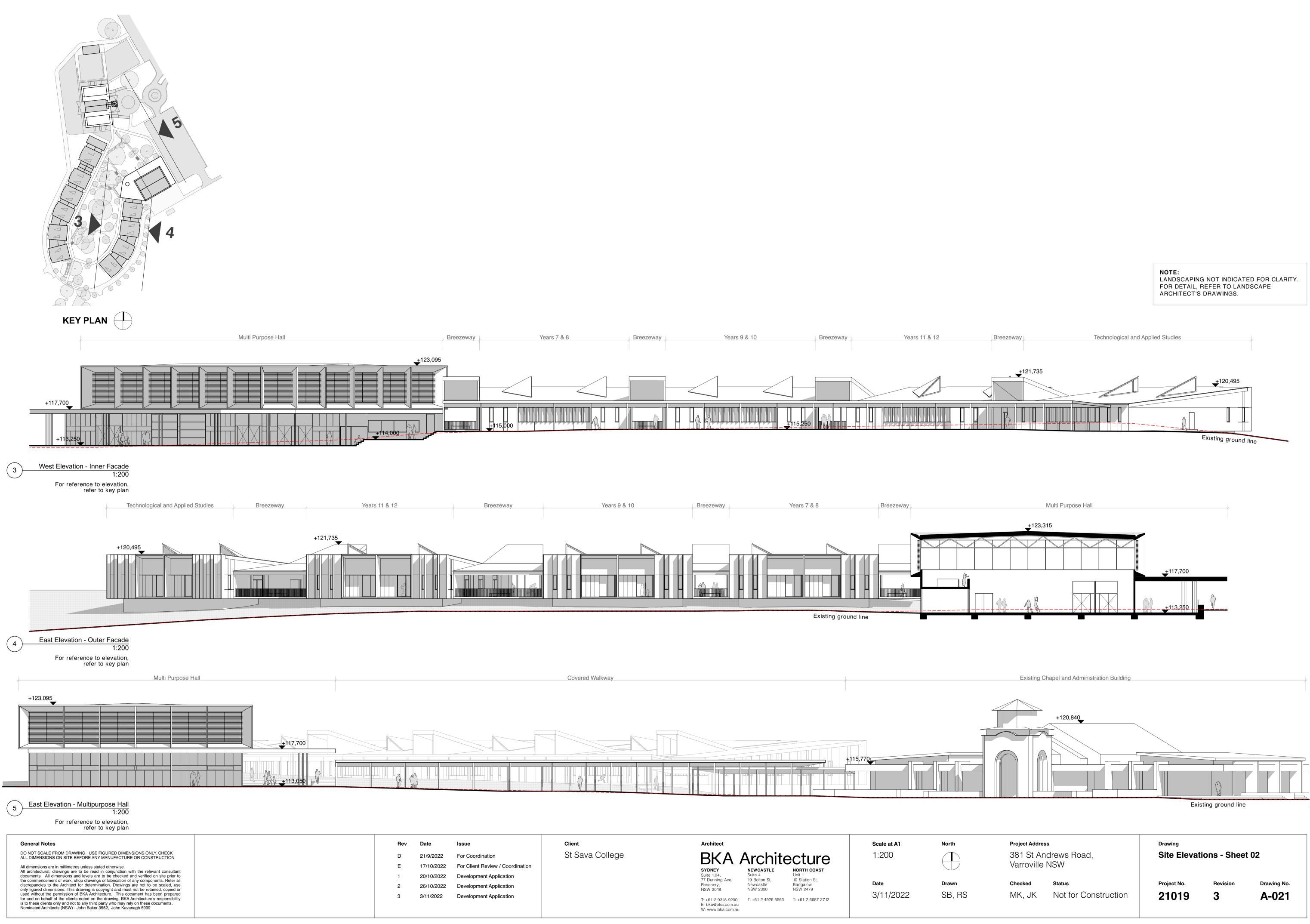
For reference to elevation, refer to key plan

	General Notes	Rev	Date	Issue
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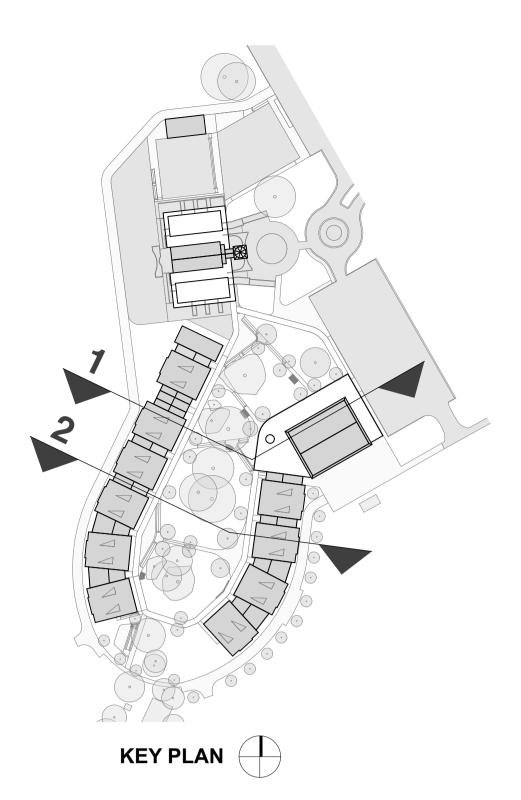


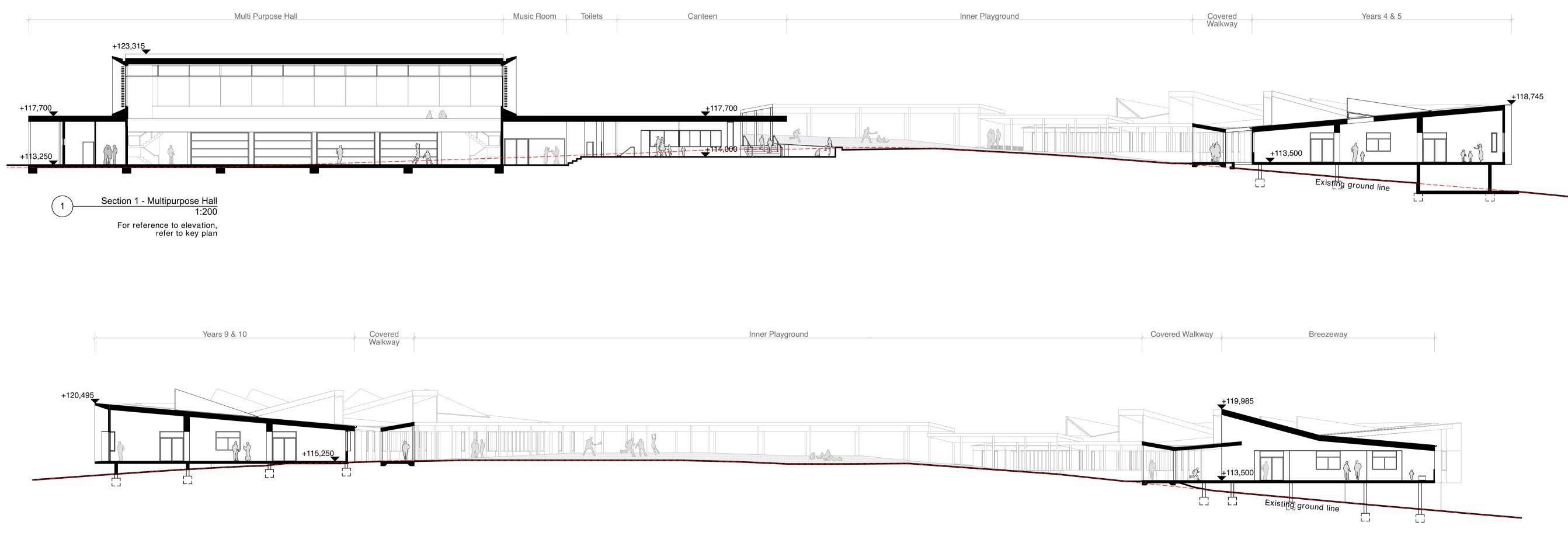
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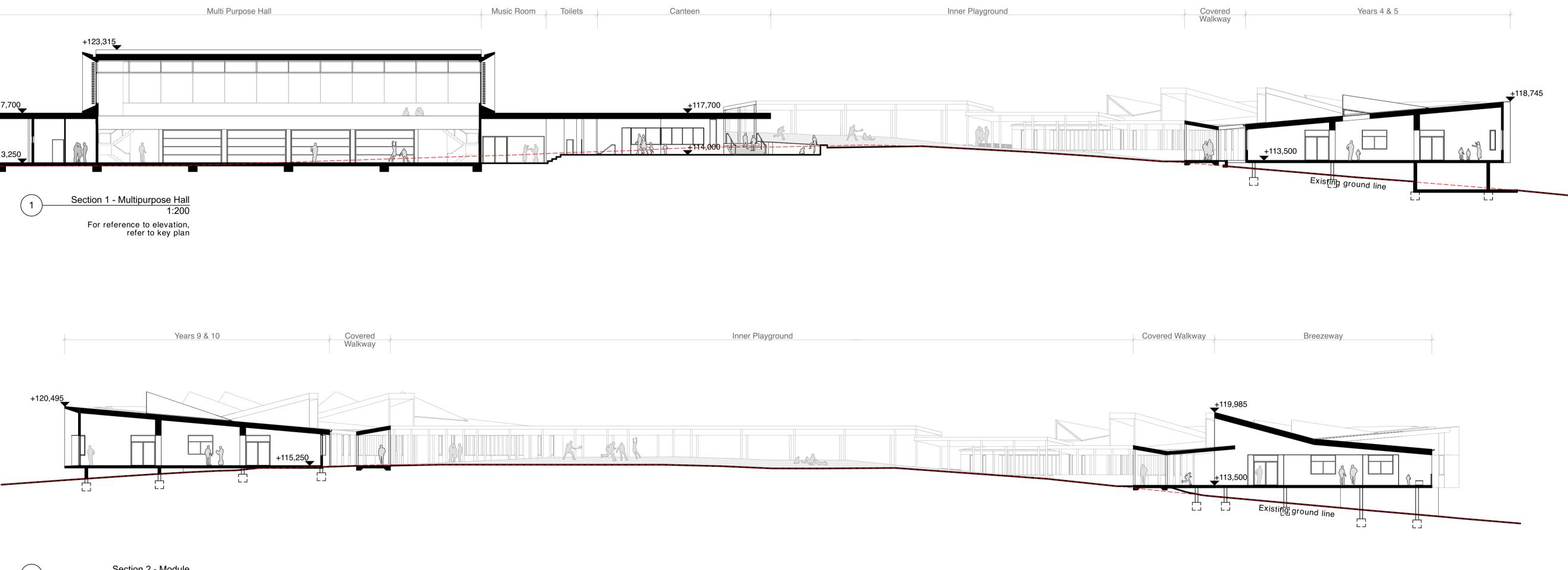
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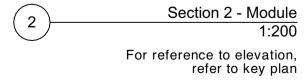


<b>Project Address</b> 381 St Andrews Road, Varroville NSW		Drawing Site Elevations - Sheet 02			
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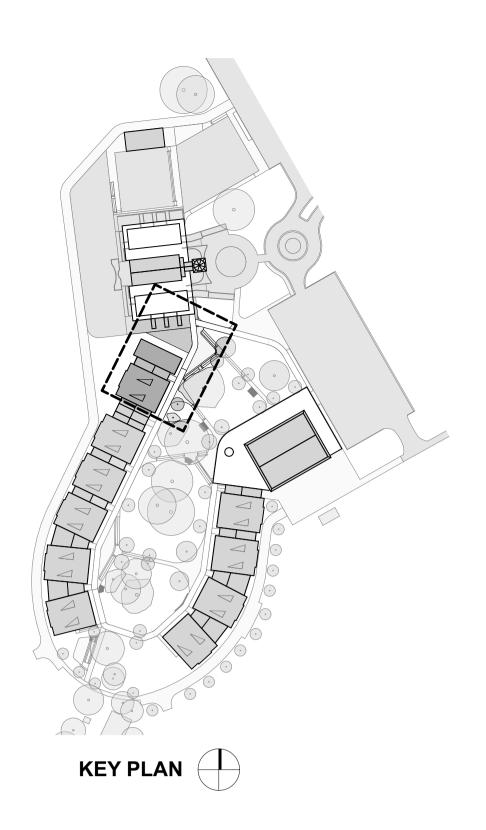


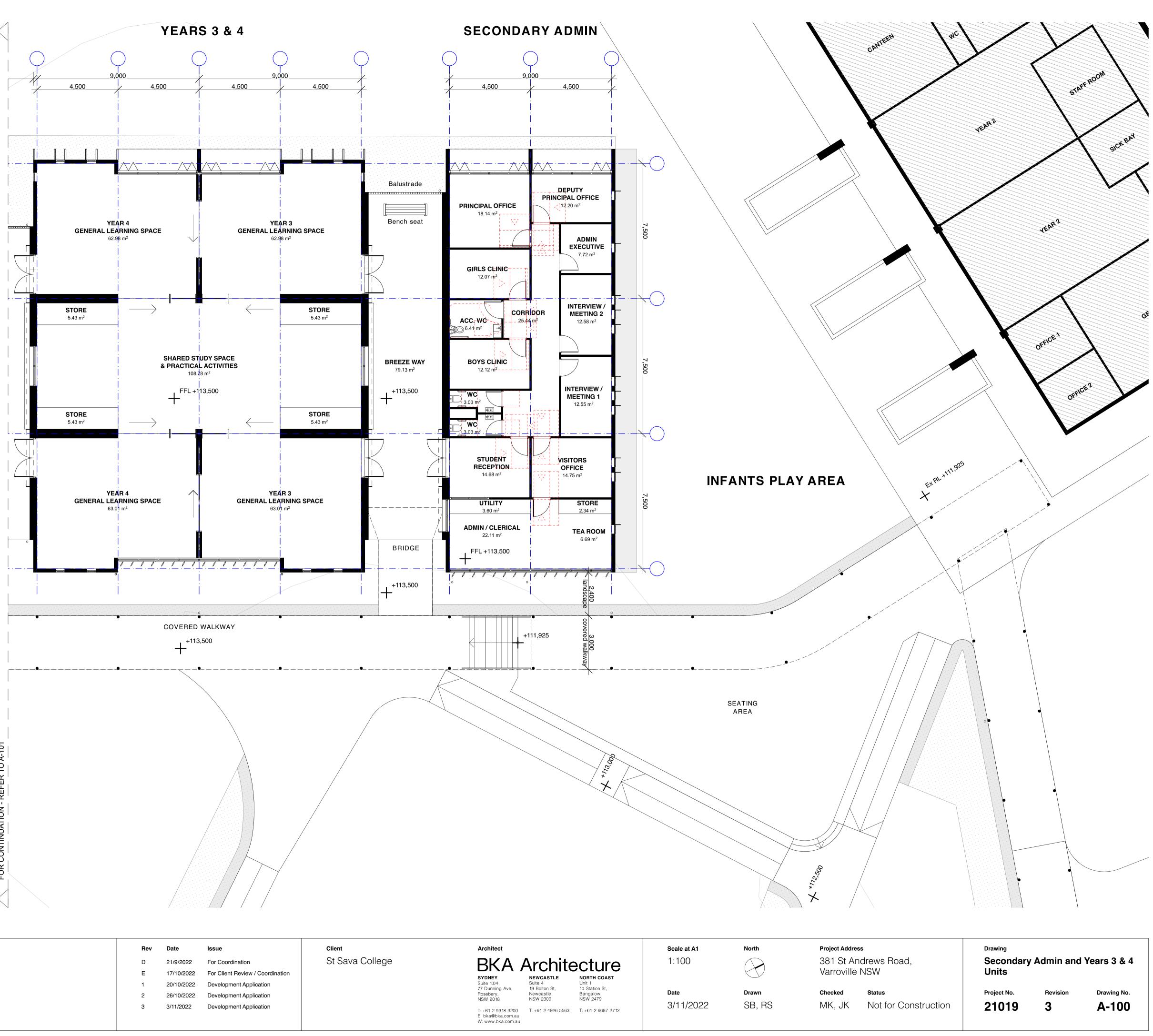


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Project Address Drawing 381 St Andrews Road, Site Sections Varroville NSW Status Drawing No. Checked Project No. Revision MK, JK Not for Construction A-030 21019 3

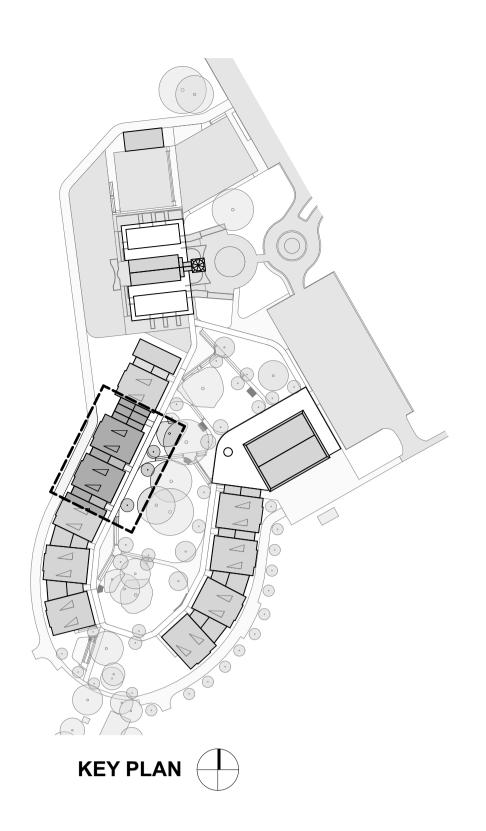


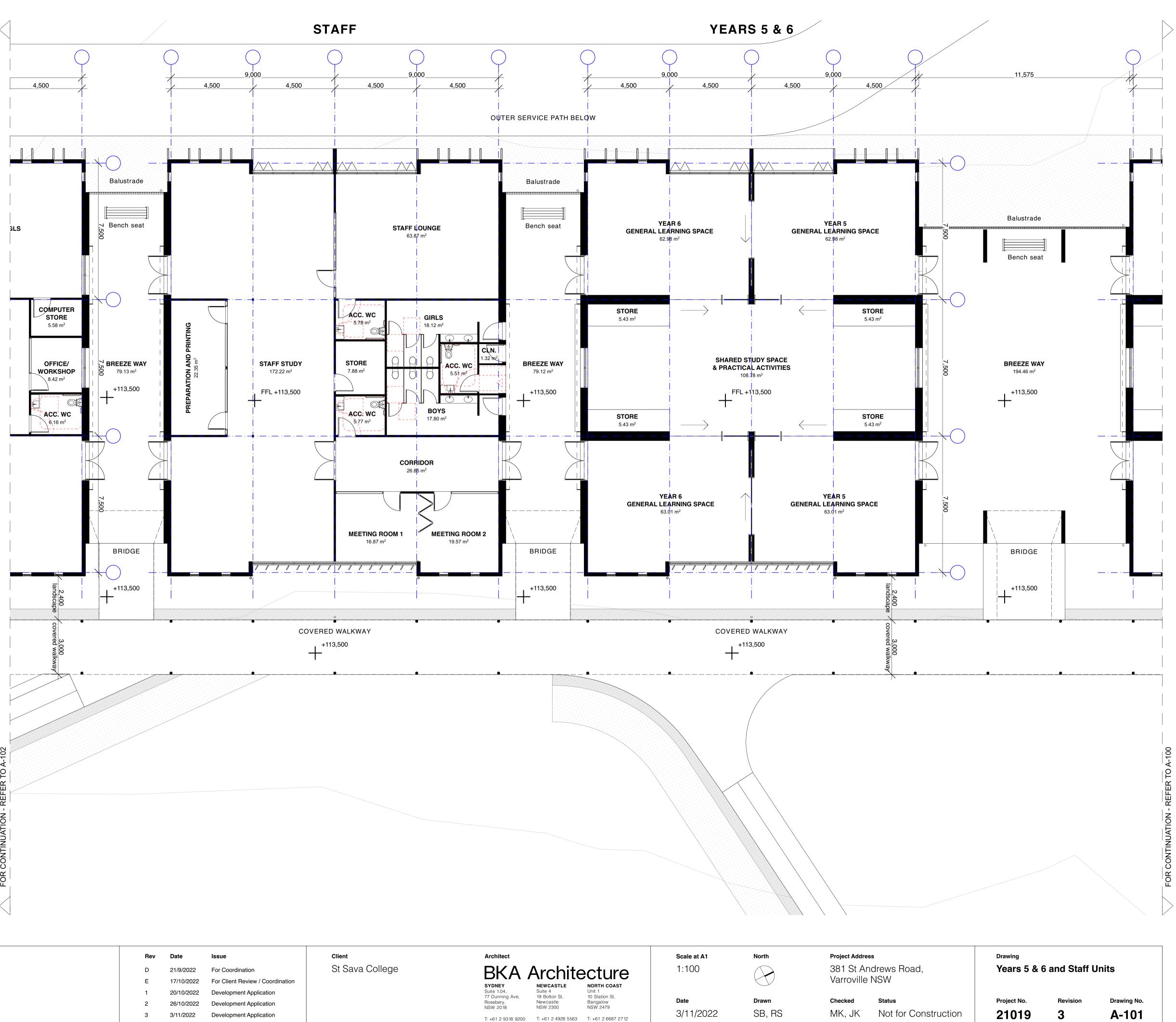


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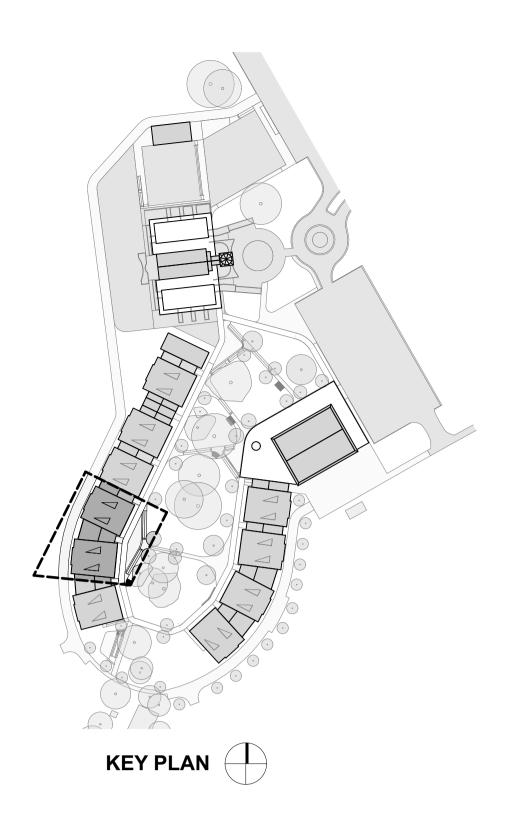
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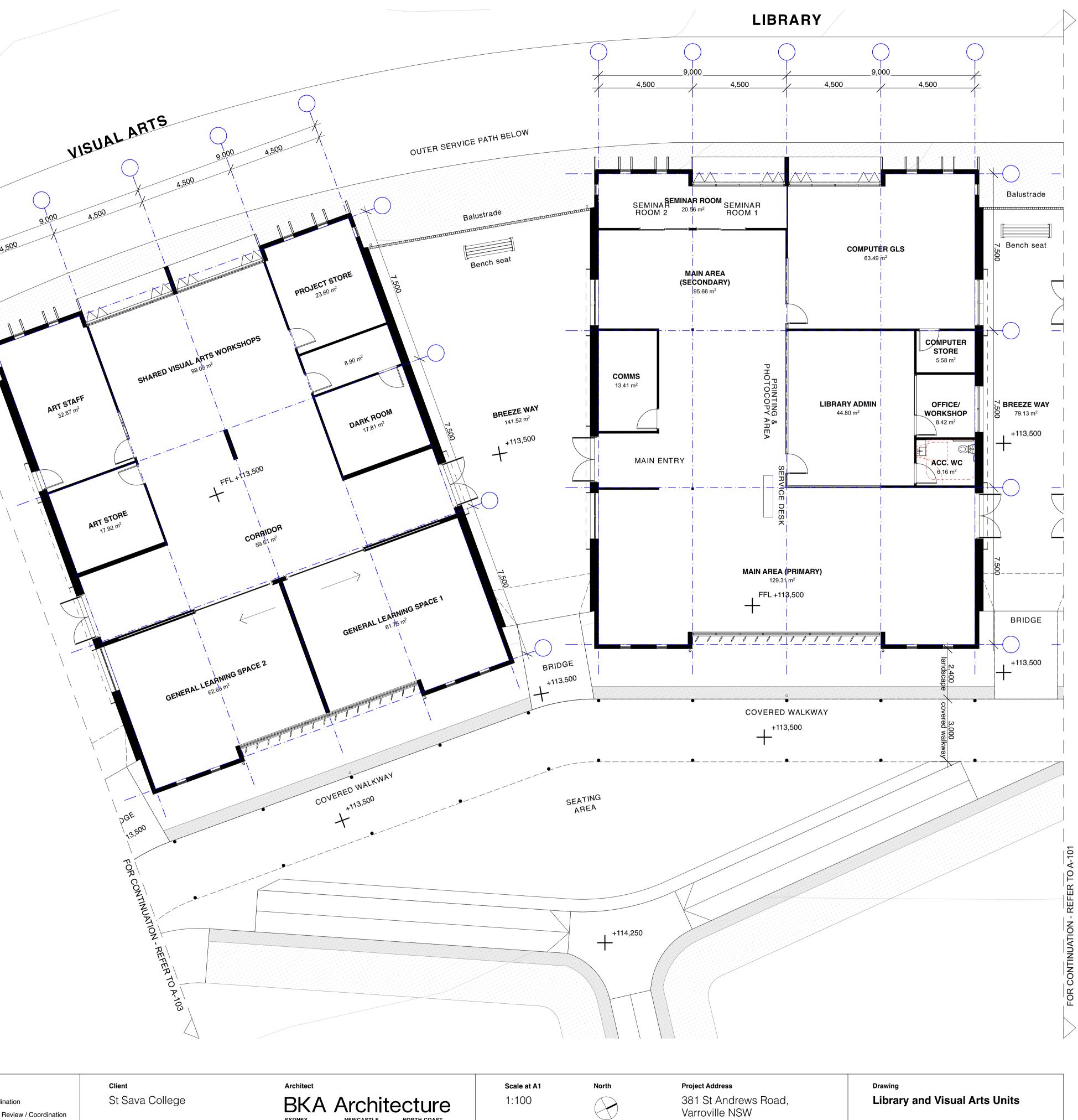
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A-101



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NEWCASTLE Suite 4 19 Bolton St, Newcastle NSW 2300 NORTH COAST

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Unit 1 10 Station St, Bangalow NSW 2479

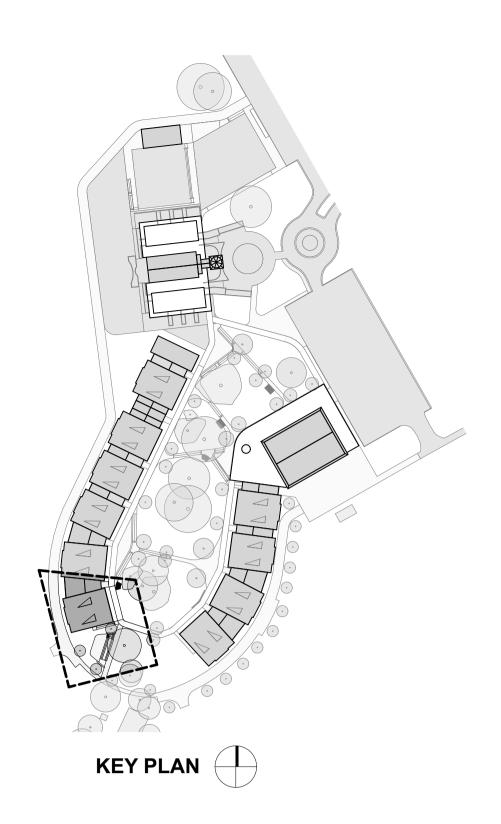
Date 3/11/2022

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Status Checked MK, JK Not for Construction

Project No. 21019

Revision 3



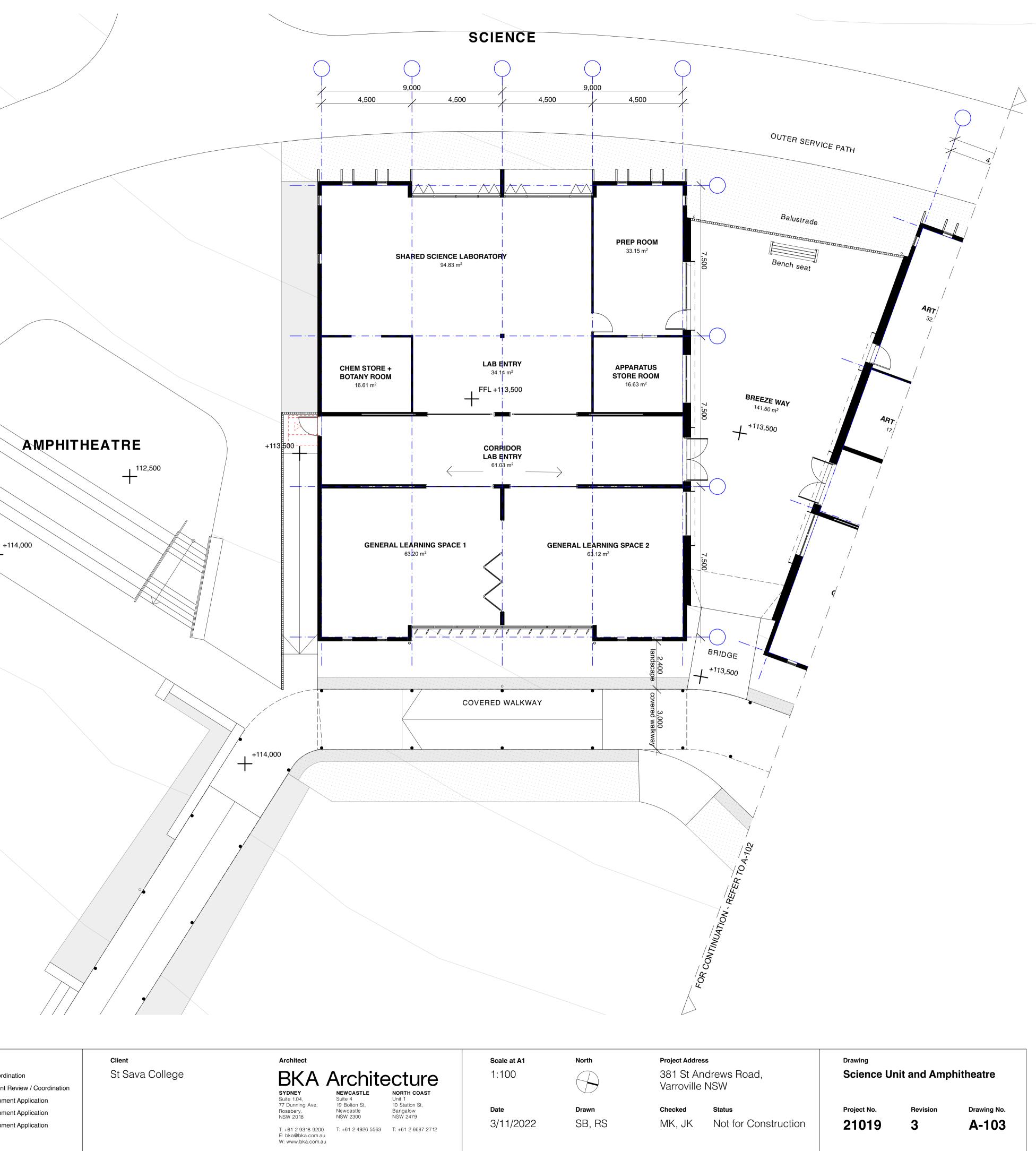
#### General Notes

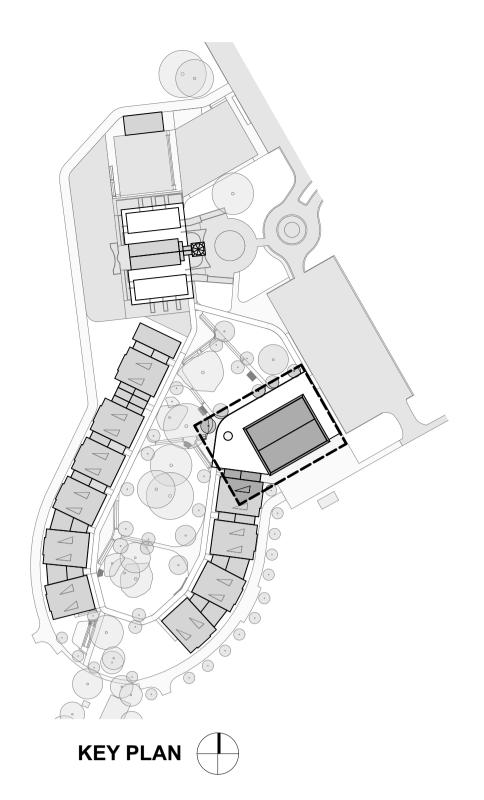
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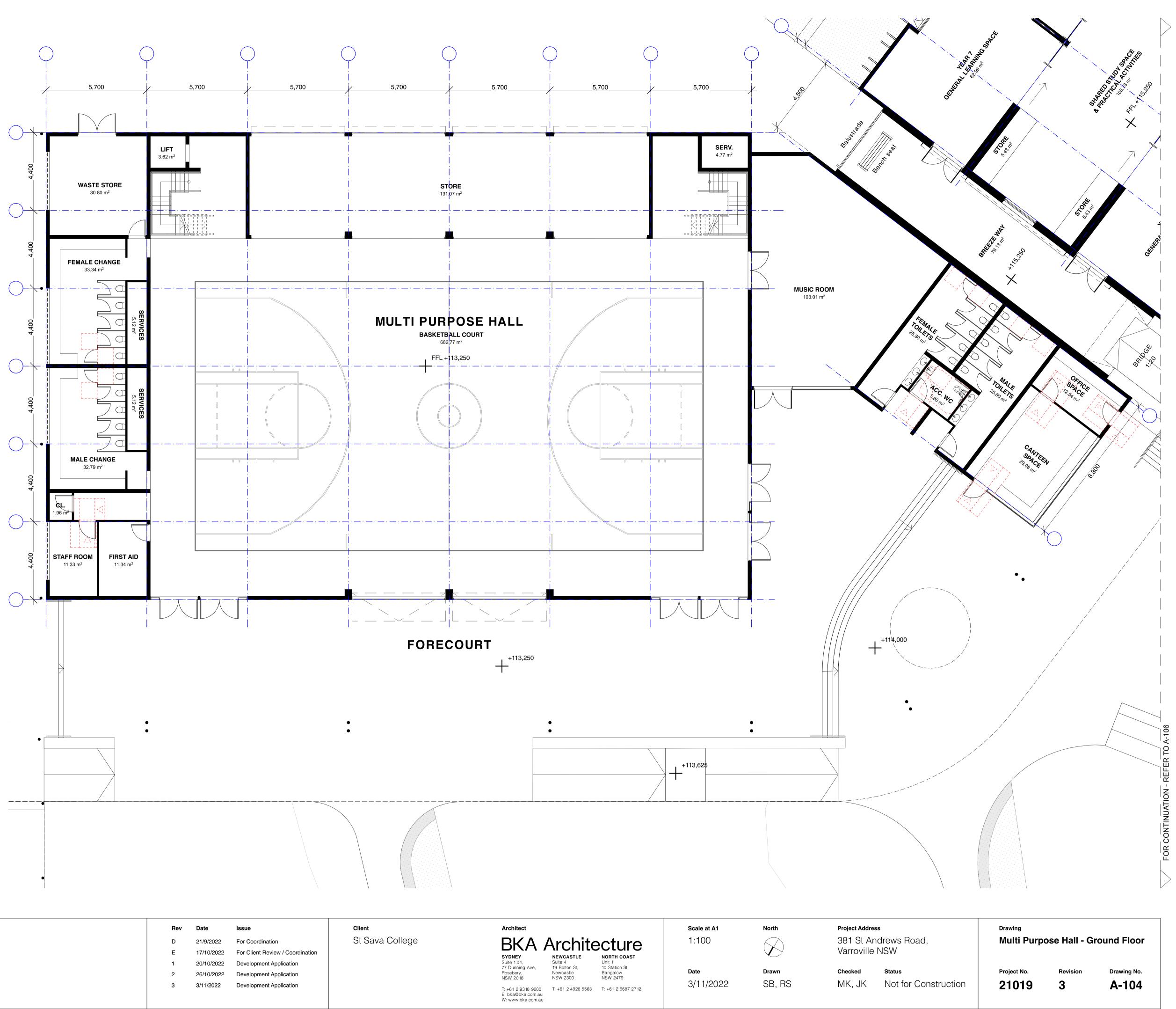
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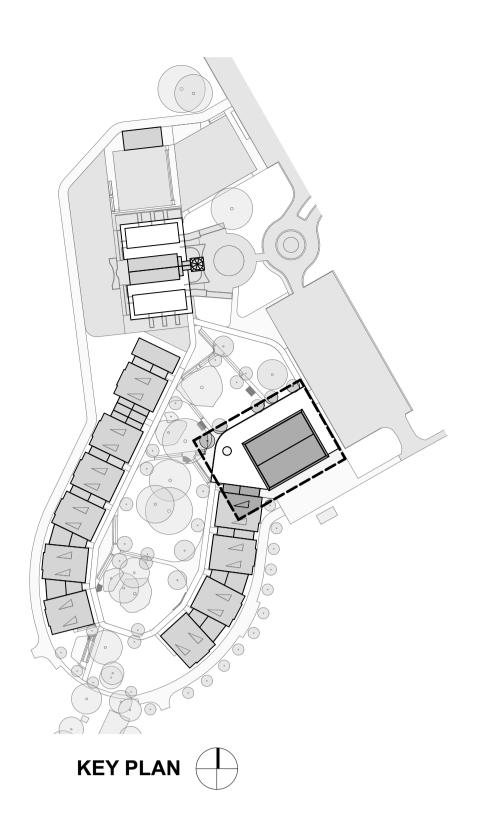
#### General Notes

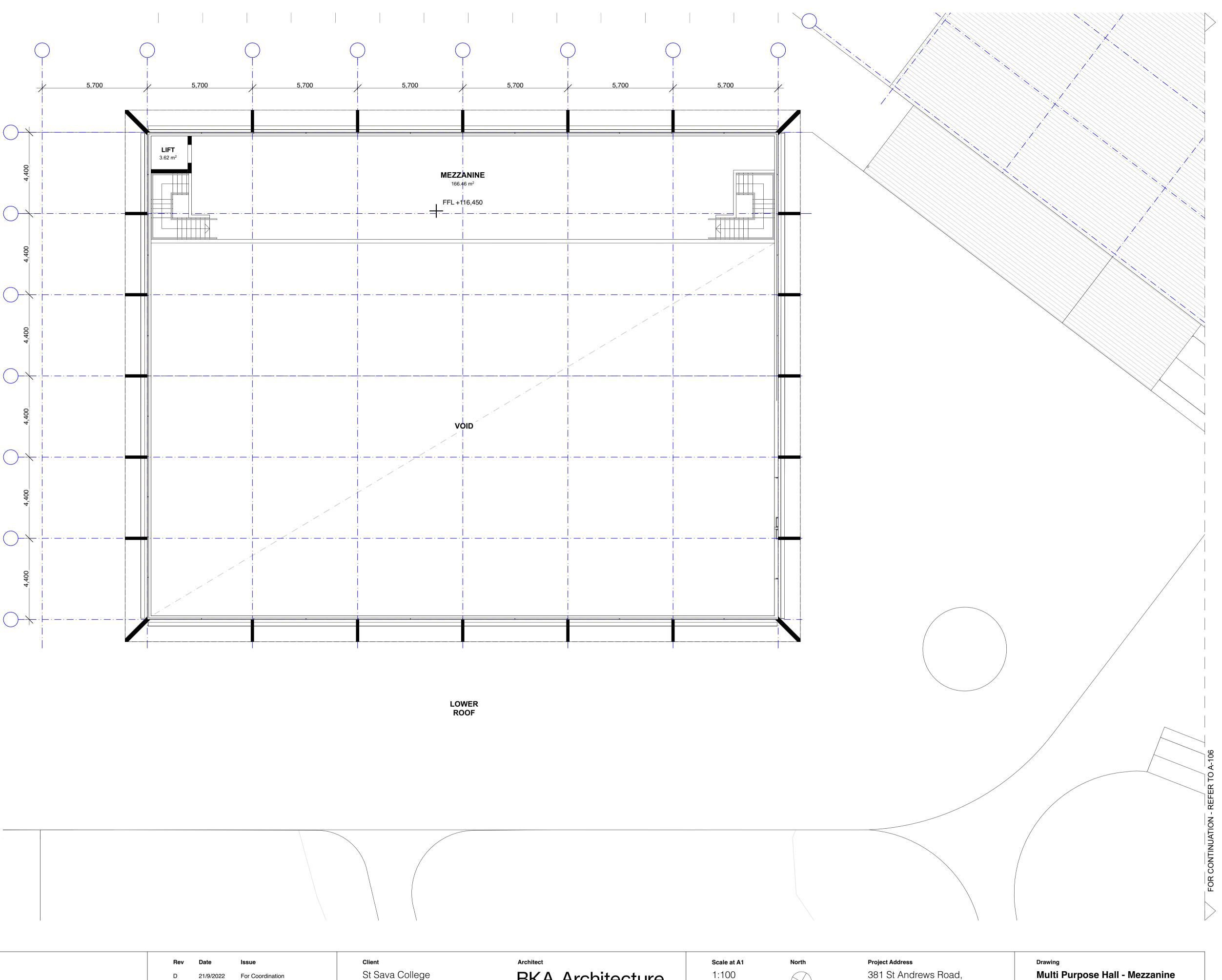
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Project Address	Drawing
381 St Andrews Road, Varroville NSW	Multi

Drawing	
Multi Purpose Hall - Gro	ound Floor





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1	20/10/2022	Deve
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3	3/11/2022	Deve



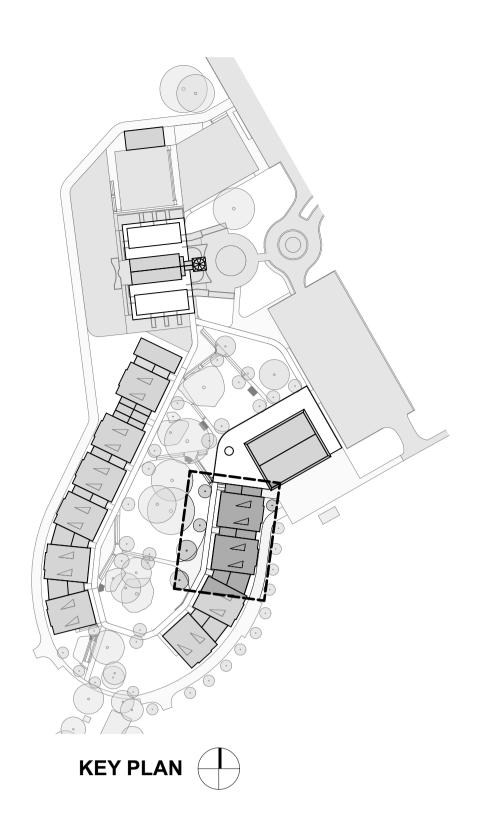
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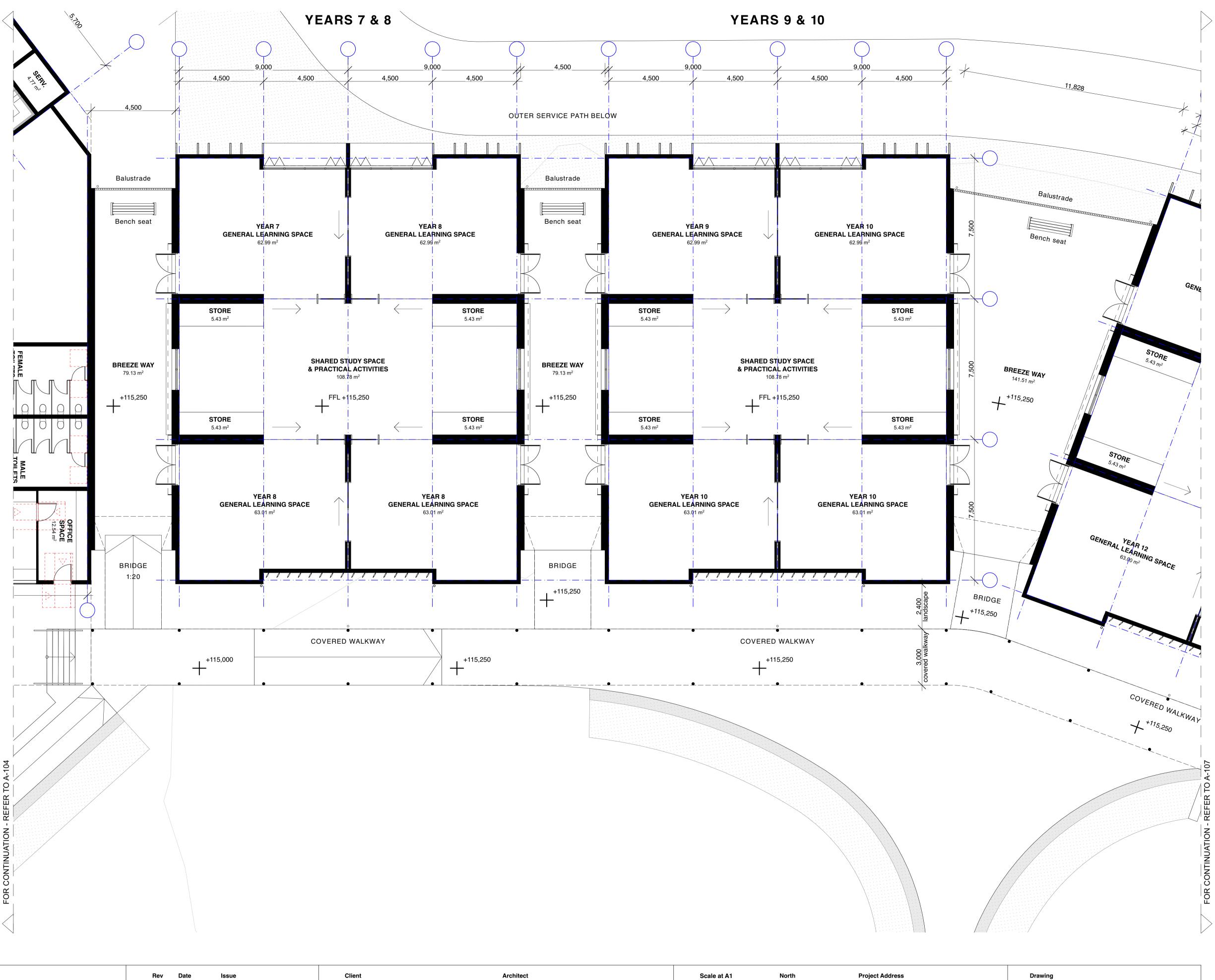
Varroville NSW

Multi Purpose Hall - Mezzanine

Project No. 21019

Revision 3





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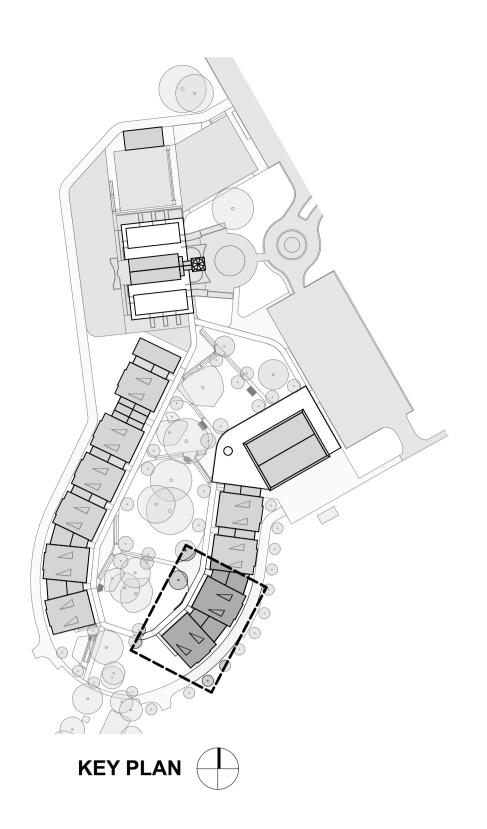


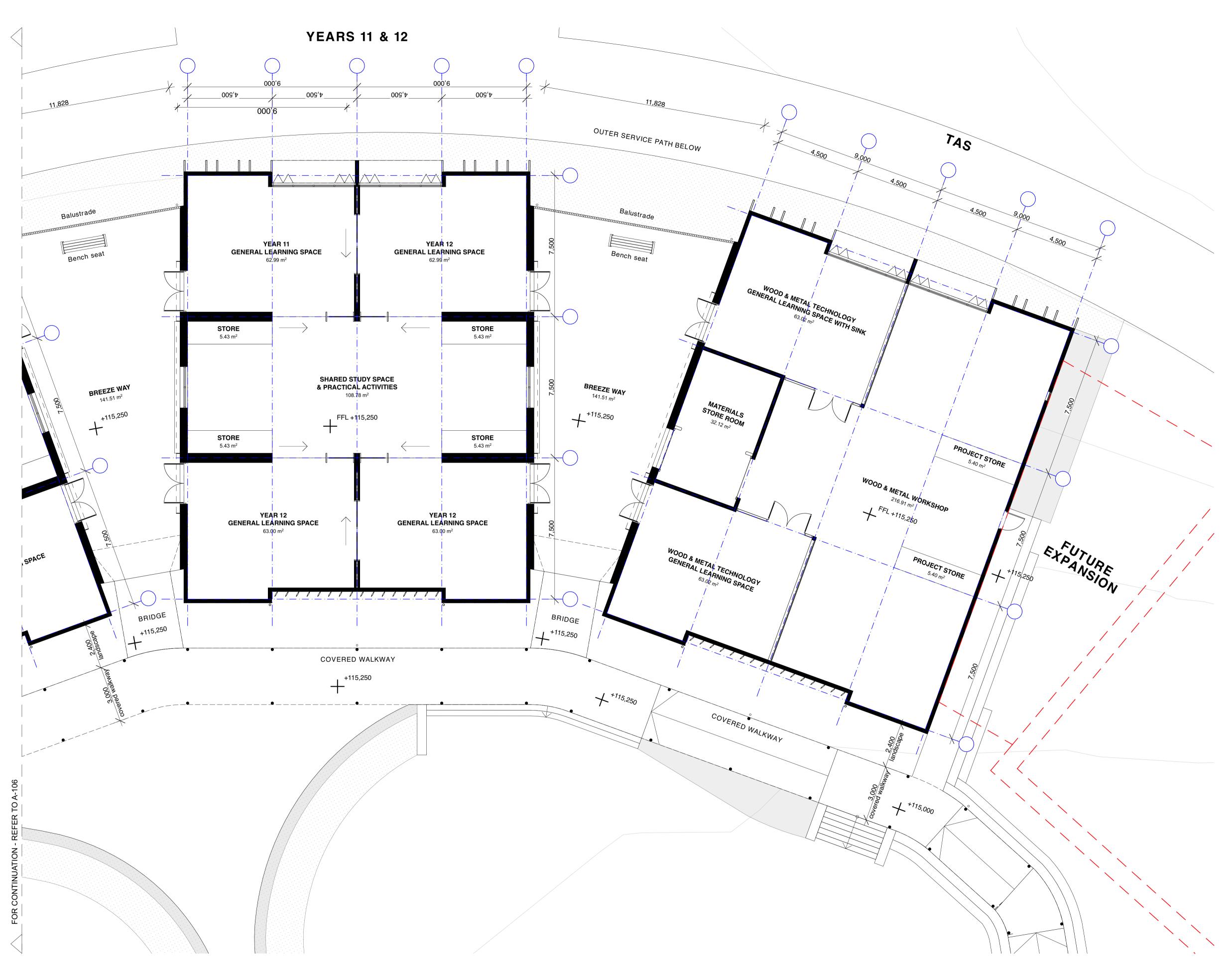
381 St Andrews Road, Varroville NSW

Checked Status MK, JK Not for Construction Years 7-10 Units

Project No 21019

Revision 3





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Date Issue 21/9/2022 17/10/2022 20/10/2022 26/10/2022

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For Coordination For Client Review / Coordination Development Application Development Application 3/11/2022 Development Application

Client St Sava College

**BKA Architecture** SYDNEY NEWCASTLE Suite 1.04, 77 Dunning Ave, Rosebery, Suite 4 19 Bolton St, Newcastle NSW 2018 NSW 2300

E: bka@bka.com.au W: www.bka.com.au

Architect

NORTH COAST Unit 1 10 Station St, Bangalow NSW 2479 T: +61 2 9318 9200 T: +61 2 4926 5563 T: +61 2 6687 2712

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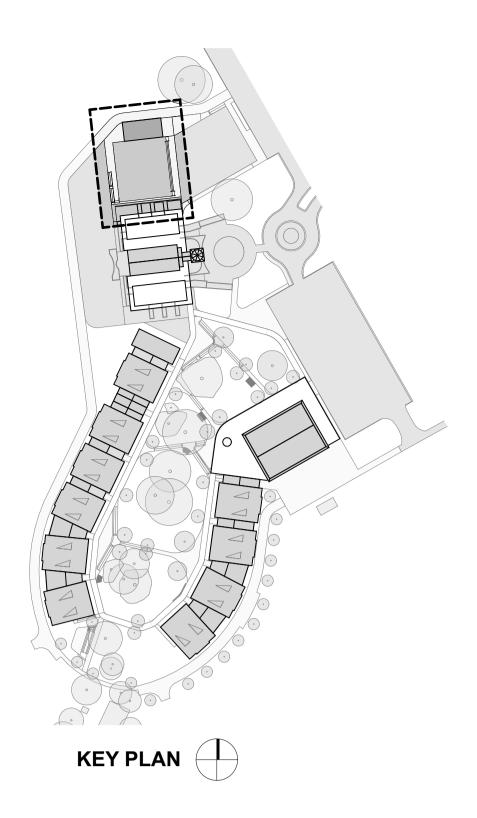
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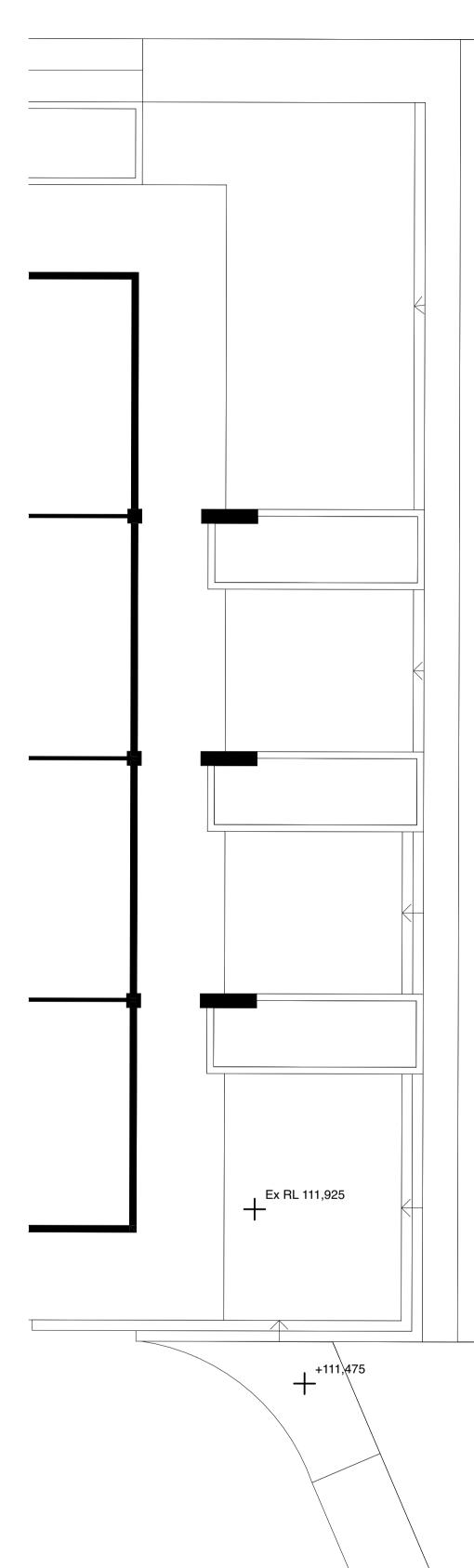
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Project Address 381 St Andrews Road, Varroville NSW		Drawing Years 11 & 12 and TAS Units			
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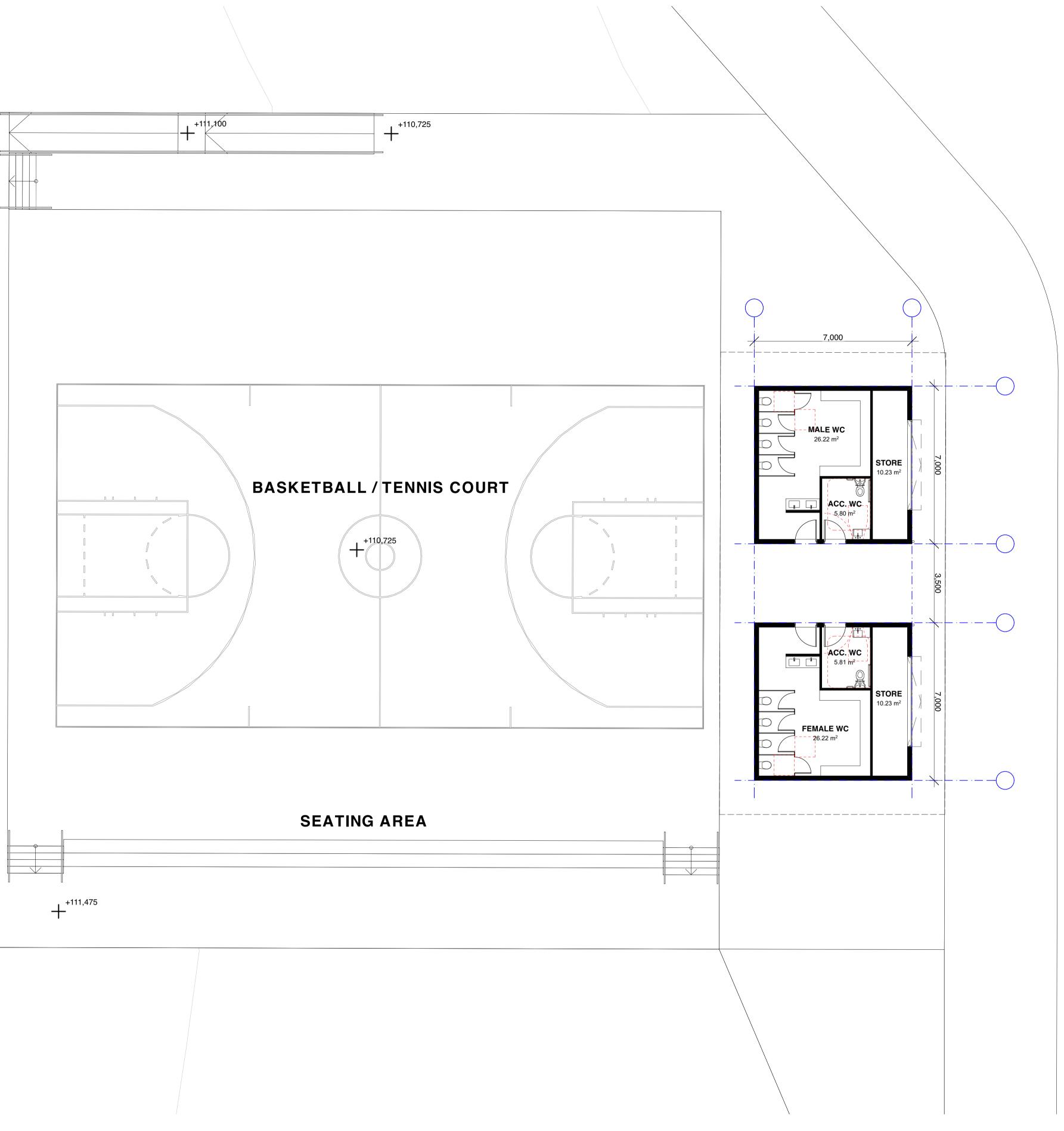


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t Application		T: +61 2 9318 9200 T: +61 2 4926 5563 E: bka@bka.com.au W: www.bka.com.au	T: +61 2 6687 2712	3/11/2022	SB, RS

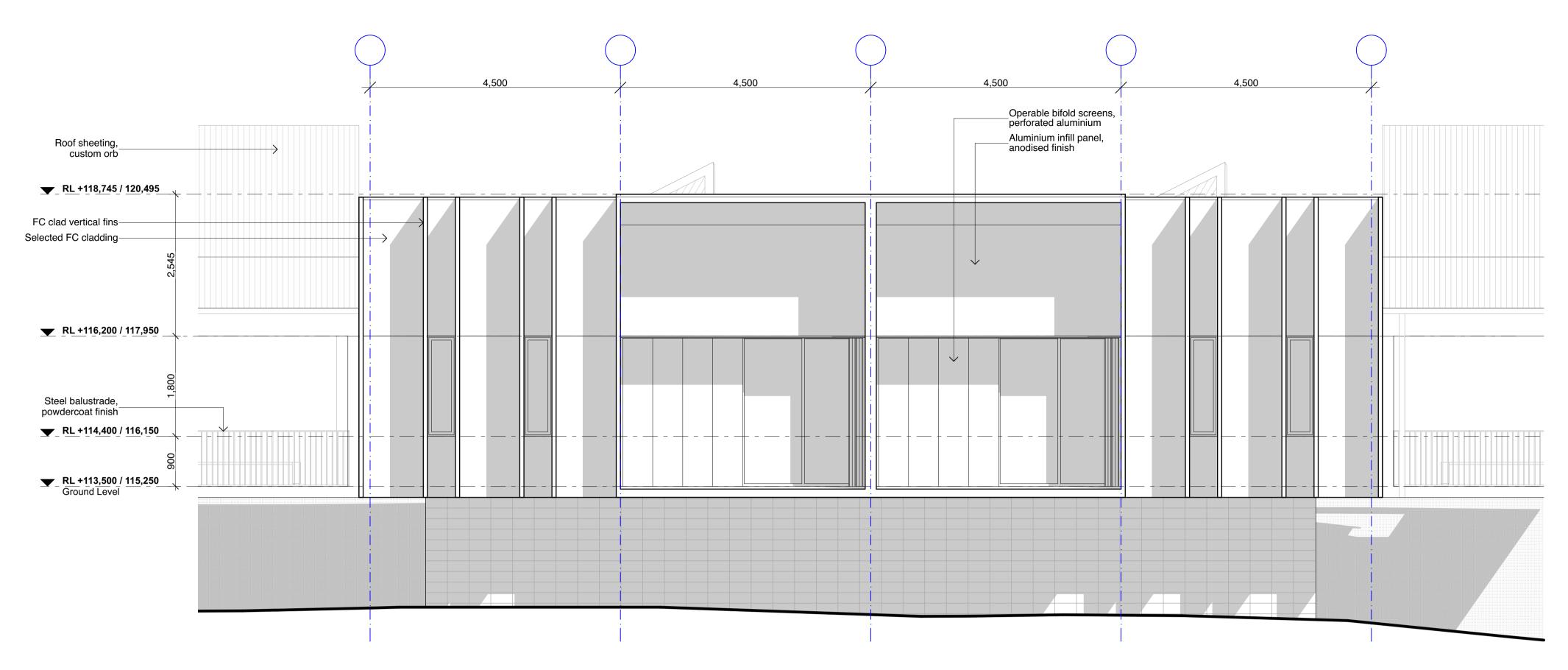
Project Address 381 St Andrews Road, Varroville NSW

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Drawing Amenities Block

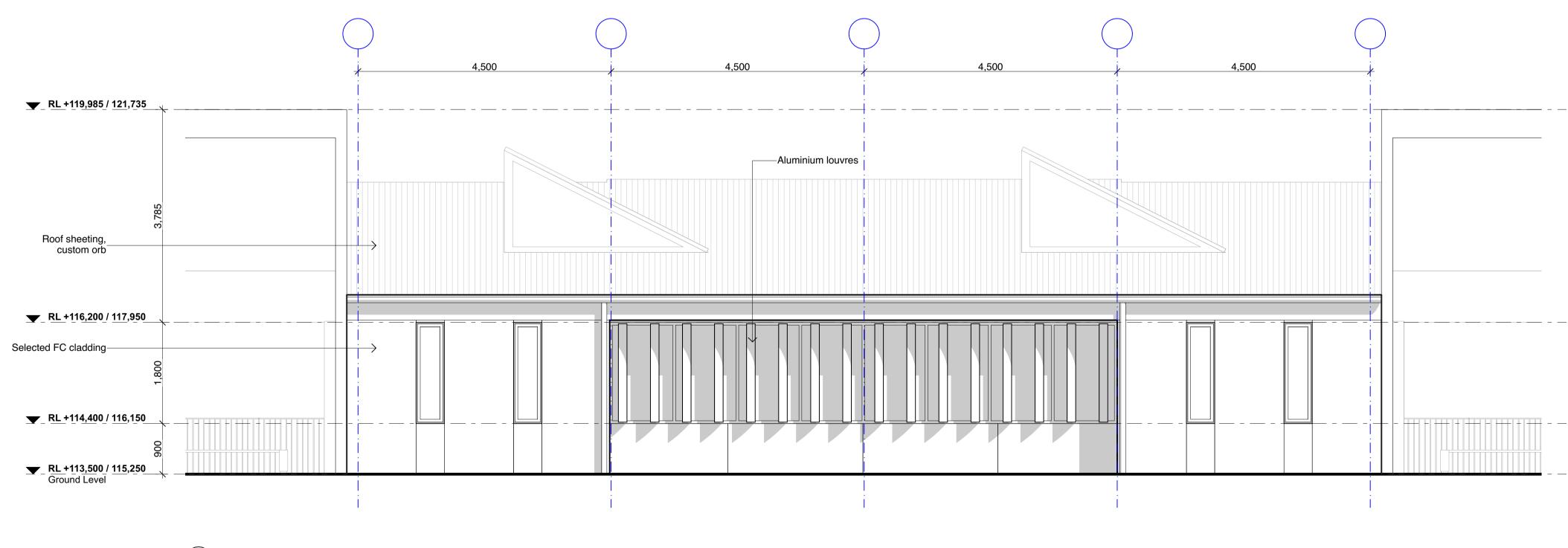
Project No. **21019** 

Revision **3** 



Typical Elevation - Outer Facade 1:50

-



(2) Typical Elevation - Inner Facade

	1.50				
General Notes DO NOT SCALE FROM DRAWING. USE FIGURED DIMENSIONS ONLY. CHECK ALL DIMENSIONS ON SITE BEFORE ANY MANUFACTURE OR CONSTRUCTION All dimensions are in millimetres unless stated otherwise. All architectural, drawings are to be read in conjunction with the relevant consultant documents. All dimensions and levels are to be checked and verified on site prior to the commencement of work, shop drawings or fabrication of any components. Refer all discrepancies to the Architect for determination. Drawings are not to be scaled, use only figured dimensions. This drawing is copyright and must not be retained, copied or used without the permission of BKA Architecture. This document has been prepared for and on behalf of the clients noted on the drawing, BKA Architecture's responsibility is to these clients only and not to any third party who may rely on these documents. Nominated Architects (NSW) - John Baker 3552, John Kavanagh 5999	RevDateIssueD21/9/2022For CoordinationE17/10/2022For Client Review / Coordination120/10/2022Development Application226/10/2022Development Application33/11/2022Development Application	client St Sava College	Architect BKA Architect SYDNEY Suite 1.04, 77 Dunning Ave, Rosebery, NSW 2018 T: +61 2 9318 9200 E: bka@bka.com.au W: www.bka.com.au	<b>Scale at A1</b> 1:50 <b>Date</b> 3/11/2022	North Drawn SB, RS

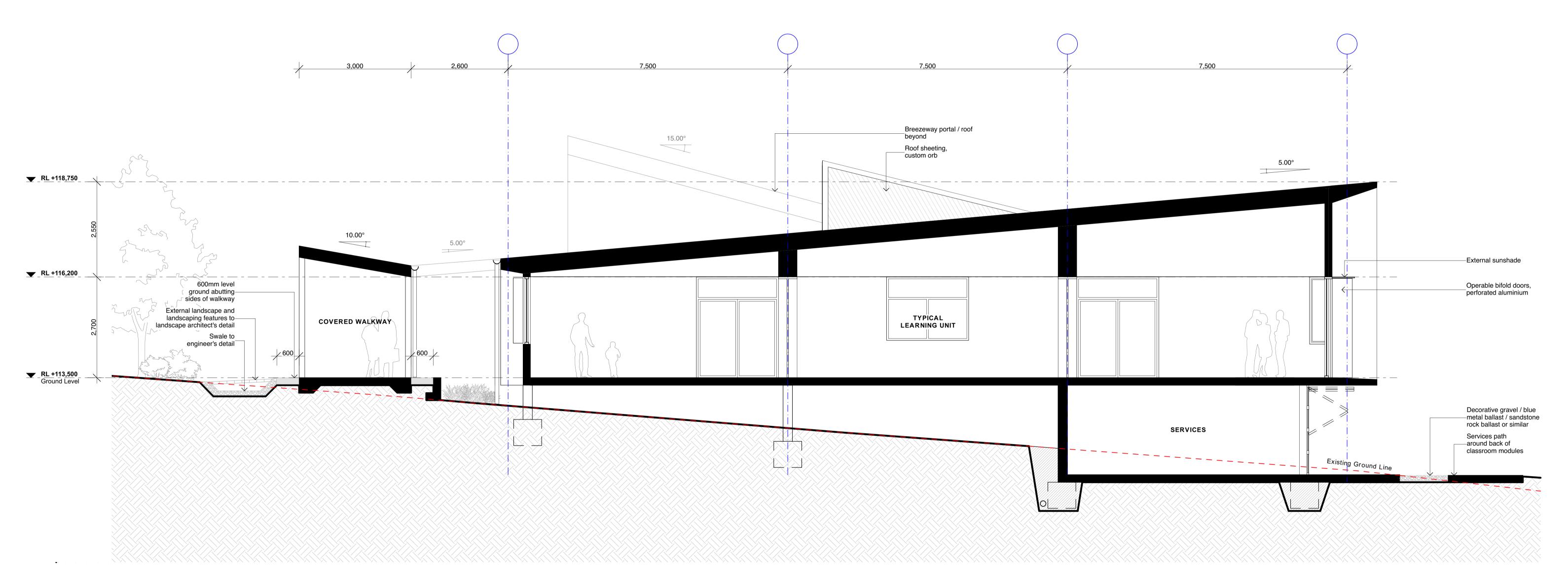
Project Address 381 St Andrews Road, Varroville NSW

Checked Status MK, JK Not for Construction

Drawing **Typical Module - Elevations** 

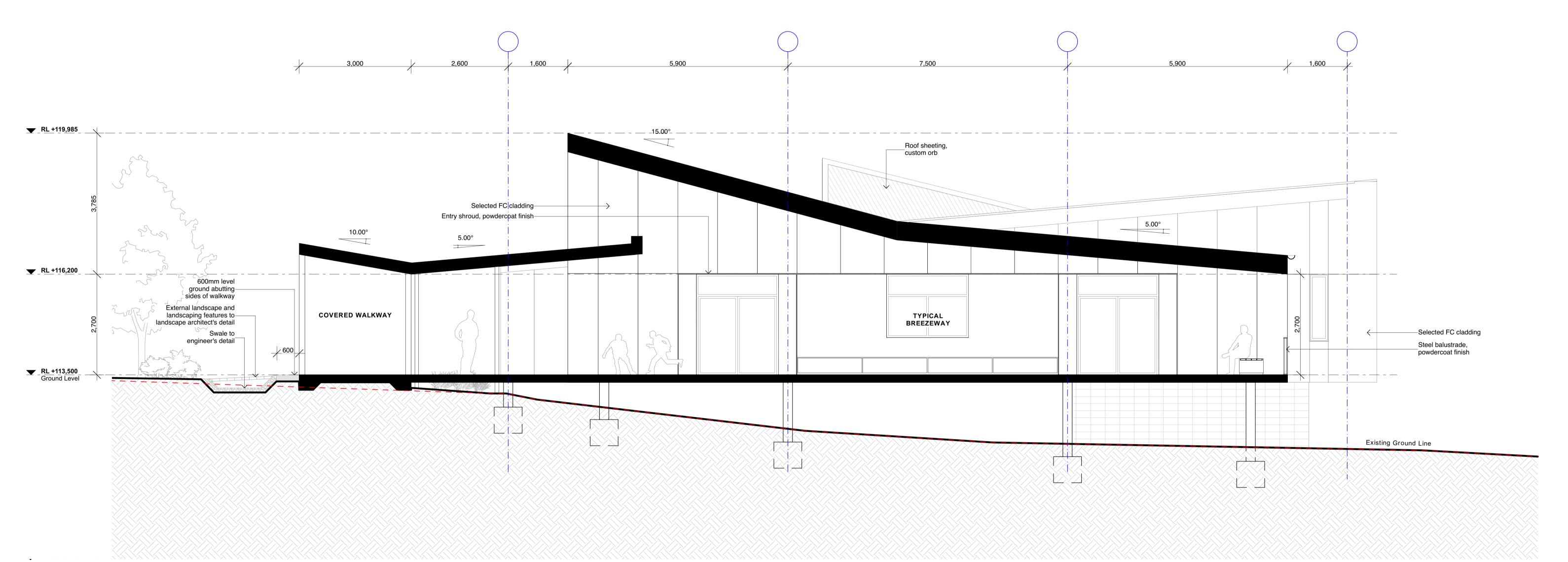
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Revision 3



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discrepancies to the Architect for determination. Drawings are not to be scaled, use only figured dimensions. This drawing is copyright and must not be retained, copied or	2 26/10/2022 Development Application		Rosebery,NewcastleBangalowNSW 2018NSW 2300NSW 2479	Date	Drawn
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# TOTAL CUT = 3,094.83 m<sup>3</sup> TOTAL FILL = 1,019.43 m<sup>3</sup>

## CUT DEPTH



# FILL DEPTH

 A
 0 - 200mm

 B
 200 - 400mm

 C
 400 - 600mm

 D
 600 - 800mm

 E
 800 - 1000mm

 F
 1000 - 1200mm

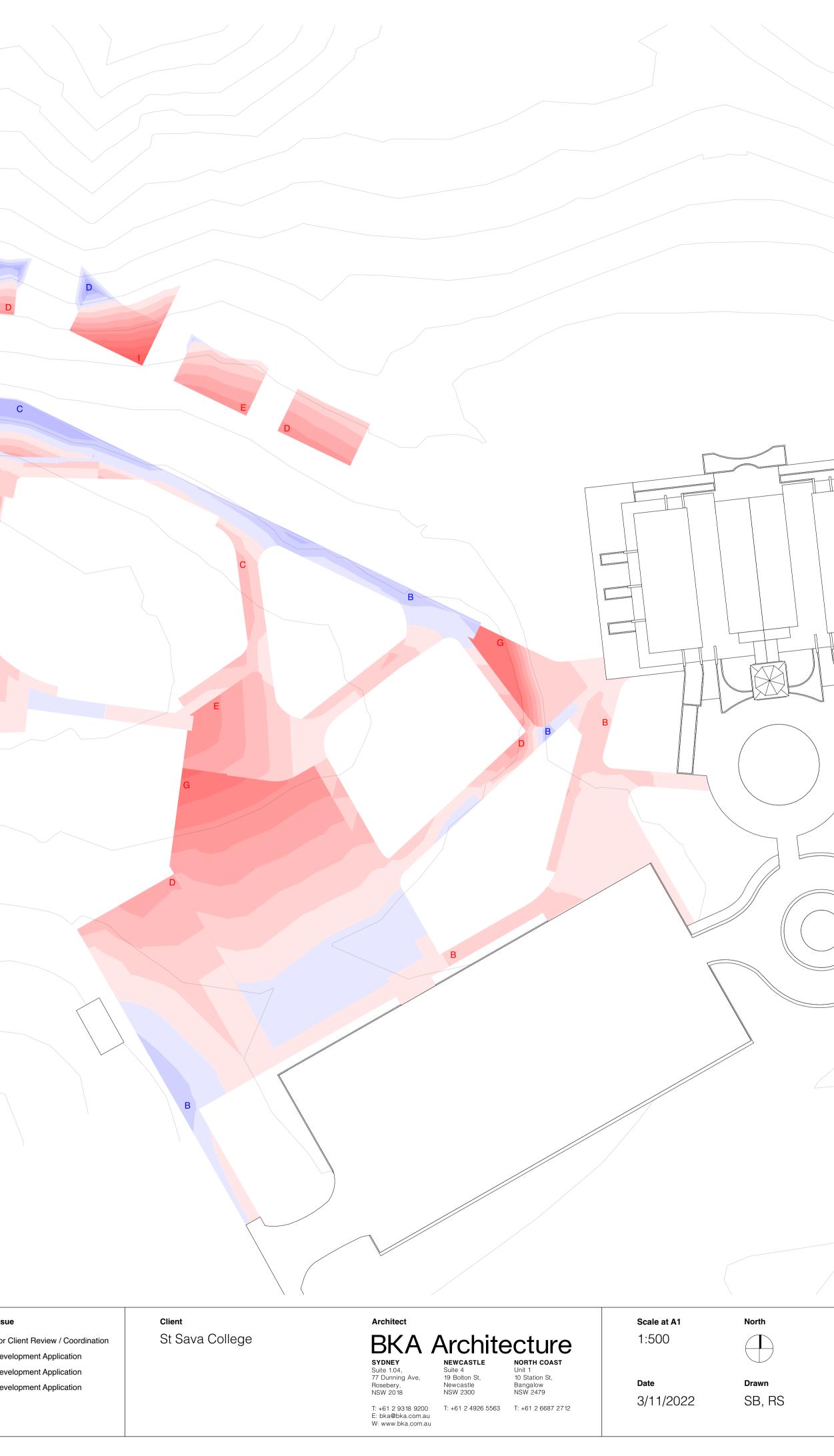
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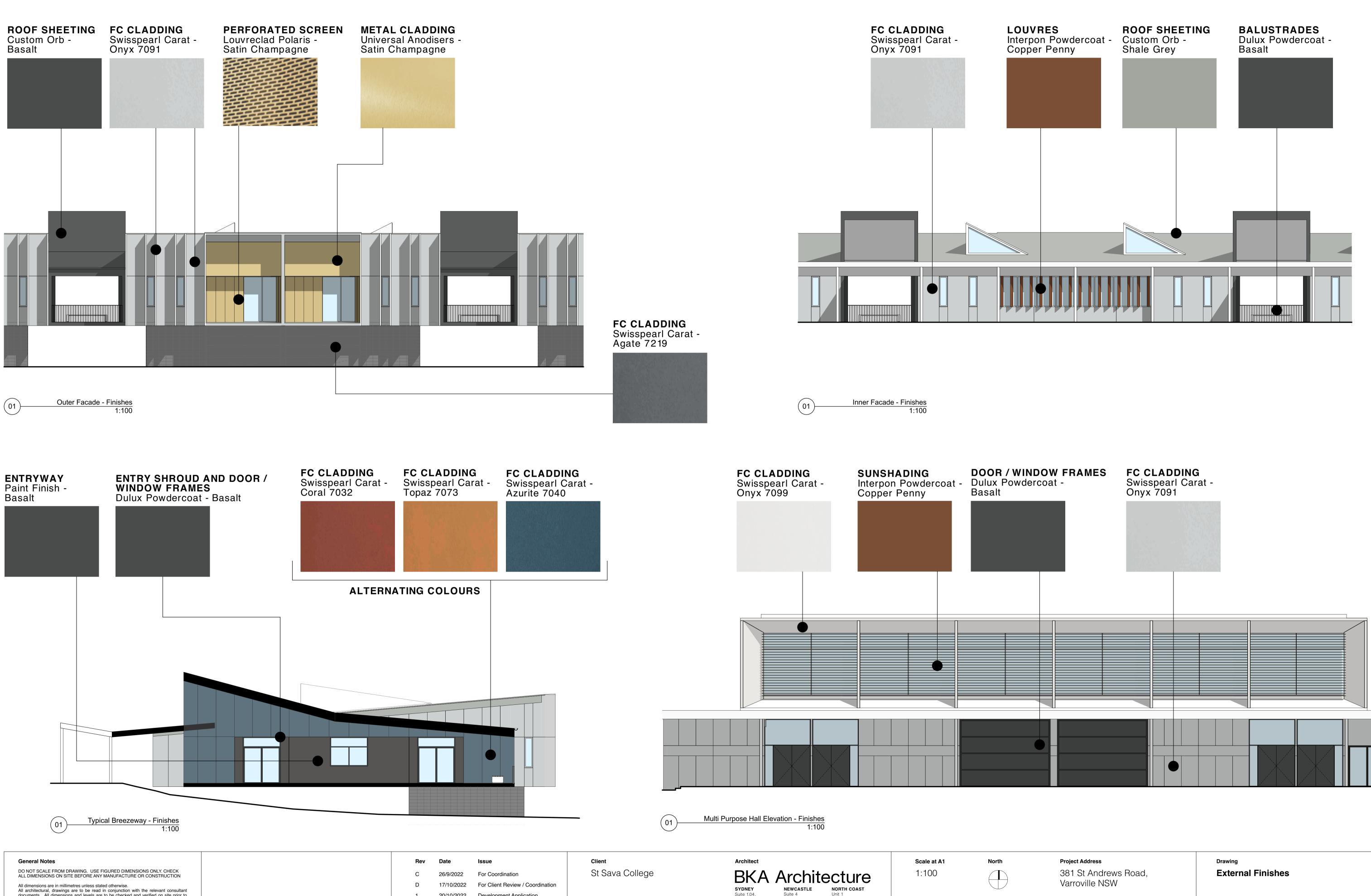
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Project No. **21019** 

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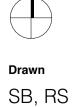
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Unit 1 10 Station St, 19 Bolton St, Bangalow NSW 2479 Newcastle NSW 2300 T: +61 2 9318 9200 T: +61 2 4926 5563 T: +61 2 6687 2712

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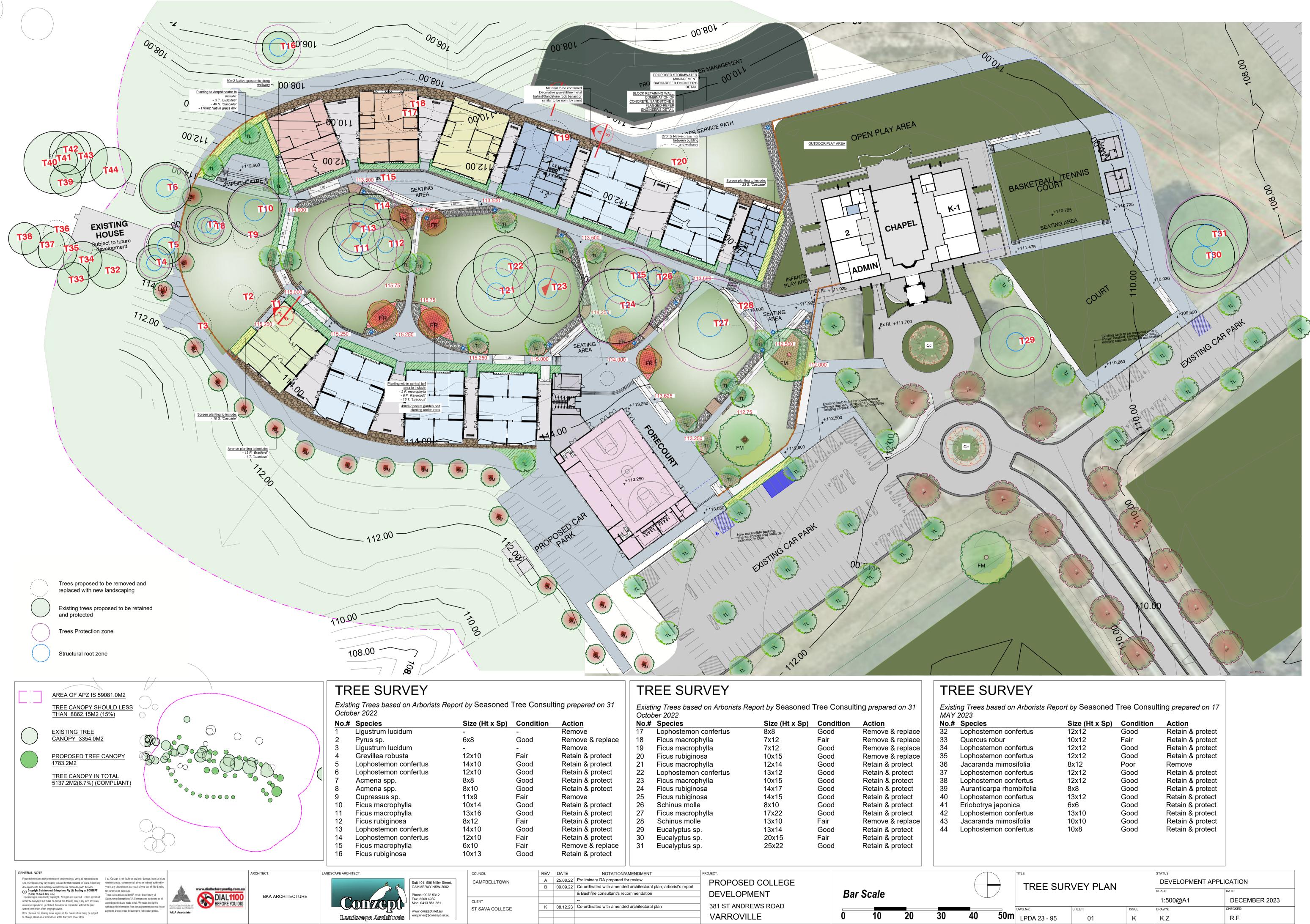
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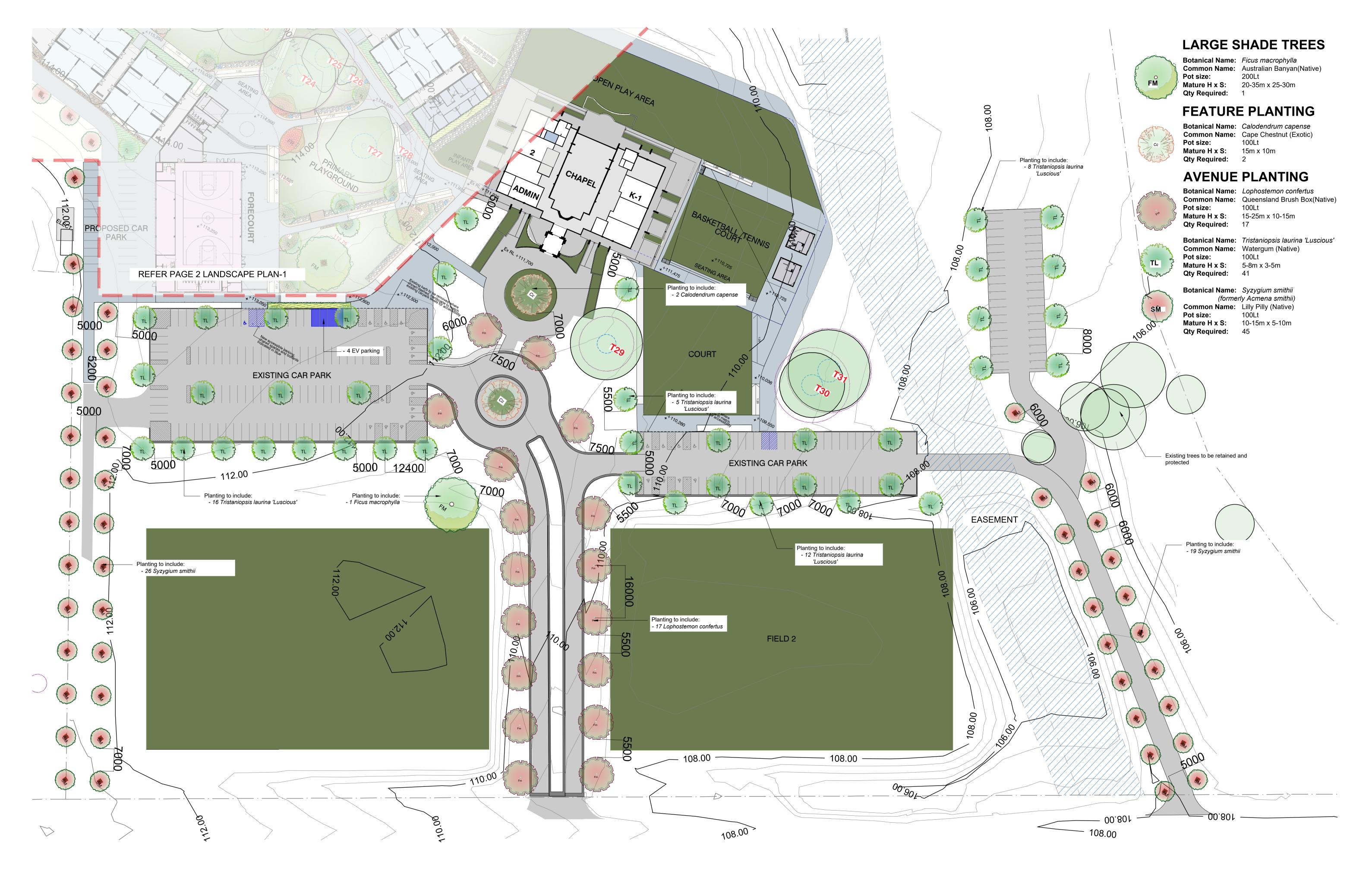


/		TITLE PAGE		Κ			
/	1	TREE SURVEY	PLAN	Κ			
1	2	LANDSCAPE PL	AN 1	Κ			
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/	3	PLANTING IMAGES					
/-	4	DETAILS & SPECIFICATION					
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ned Tree	Consulti	ng prepared on 31	Exist	REE SURVEY ing Trees based on Arborists Rep ber 2022	<i>port by</i> Seasoned	Tree Consul	ting prepared on 31	Exis	REE SURVEY ting Trees based on Arborists Re 2023	<i>port by</i> Seasoned	Tree Consul	ting prepared on 17	
Sp) Coi	ndition	Action		Species	Size (Ht x Sp)	Condition	Action		<sup>2</sup> Species	Size (Ht x Sp)	Condition	Action	
<u> </u>		Remove	17	Lophostemon confertus	8x8	Good	Remove & replace	32	Lophostemon confertus	12x12	Good	Retain & protect	
Goo	bd	Remove & replace	18	Ficus macrophylla	7x12	Fair	Remove & replace	33	Quercus robur	10x12	Fair	Retain & protect	
-		Remove	19	Ficus macrophylla	7x12	Good	Remove & replace	34	Lophostemon confertus	12x12	Good	Retain & protect	
Fair		Retain & protect	20	Ficus rubiginosa	10x15	Good	Remove & replace	35	Lophostemon confertus	12x12	Good	Retain & protect	
Goo		Retain & protect	21	Ficus macrophylla	12x14	Good	Retain & protect	36	Jacaranda mimosifolia	8x12	Poor	Remove	
Goo		Retain & protect	22	Lophostemon confertus	13x12	Good	Retain & protect	37	Lophostemon confertus	12x12	Good	Retain & protect	
Goo	bd	Retain & protect	23	Ficus macrophylla	10x15	Good	Retain & protect	38	Lophostemon confertus	12x12	Good	Retain & protect	
Goo	bd	Retain & protect	24	Ficus rubiginosa	14x17	Good	Retain & protect	39	Auranticarpa rhombifolia	8x8	Good	Retain & protect	
Fair		Remove	25	Ficus rubiginosa	14x15	Good	Retain & protect	40	Lophostemon confertus	13x12	Good	Retain & protect	
Goo	bd	Retain & protect	26	Schinus molle	8x10	Good	Retain & protect	41	Eriobotrya japonica	6x6	Good	Retain & protect	
Goo	bd	Retain & protect	27	Ficus macrophylla	17x22	Good	Retain & protect	42	Lophostemon confertus	13x10	Good	Retain & protect	
Fair		Retain & protect	28	Schinus molle	13x10	Fair	Remove & replace	43	Jacaranda mimosifolia	10x10	Good	Retain & protect	
Goo	bd	Retain & protect	29	Eucalyptus sp.	13x14	Good	Retain & protect	44	Lophostemon confertus	10x8	Good	Retain & protect	
Fair		Retain & protect	30	Eucalyptus sp.	20x15	Fair	Retain & protect						
Fair		Remove & replace	31	Eucalyptus sp.	25x22	Good	Retain & protect						
Goo	bd	Retain & protect											
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**BKA ARCHITECTURE** 

ARCHITECT:



Suit 101, 506 Miller Street, CAMMERAY NSW 2062 Phone: 9922 5312 Fax: 8209 4982 Mob: 0413 861 351 www.conzept.net.au enquiries@conzept.net.au

CAMPBELL CLIENT ST SAVA C

COUNCIL

	REV	DATE	NOTATION/AMENDMENT	PROJECT:						$\overline{}$
LTOWN	Α	07.06.23	Draft landscape plan Co-ordinating with council's comments	PROPOSED COLLEGE						
	B 14.06.23 C		Co-ordinated with bush fire consultant's comments							
	C 13.09.23 Reviewed landscape design		Reviewed landscape design	DEVELOPMENT		Bar Scale			X	У
	D 08.12.23		Co-ordinated with amended architectural plan		Dui	ovaro				_
COLLEGE				381 ST ANDREWS ROAD						
JOLLEOL				VARROVILLE	0	10	20	30	40	
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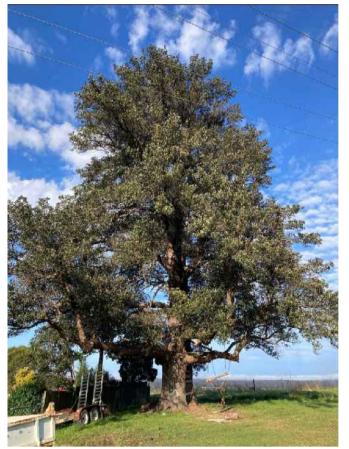
$\overline{\langle}$				STATUS: DEVELOPMENT APPLICATION			
	LANDSCAF	'E PLAN Z		scale: 1:500@A1	DECEMBER 2023		
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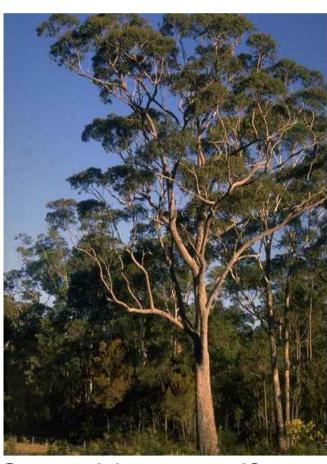


Fraxinus 'Raywoodii'

Ficus macrophylla



Syncarpia glomulifera Corymbia gummifera





Exocarpos cupressiformis



Myoporum parvifolium 'Yareena'



Westringia fruticosa 'Mundi'

LANDSCAPE ARCHITECT:



GENERAL NOTE



**BKA ARCHITECTURE** 

ARCHITECT:





CAMPBEL CLIENT ST SAVA C

COUNCIL



Tristaniopsis laurina 'Luscious'



Grevillea 'Royal Mantle'



Syzygium smithii (formerly Acmena smithii)



Banksia 'Birthday Candles'

Nandina domestica 'Flirt'

Lomandra 'Shara'

	REV	DATE	NOTATION/AMENDMENT	PROJECT:
BELLTOWN	Α	25.08.22	Preliminary DA prepared for review	PROPOSED COLLEGE
	В	09.09.22	Co-ordinated with amended architectural plan, arborist's report	
			& Bushfire consultant's recommendation	DEVELOPMENT
A COLLEGE	К	08.12.23	Co-ordinated with amended architectural plan	381 ST ANDREWS ROAD
				VARROVILLE



Elaeocarpus reticulatus

Syzygium 'Cascade'

Juncus amabilis

TITLE:			STATUS:			
PLANTING	IMAGES		DEVELOPMENT APPLICATION			
I LANTING			SCALE:	DATE:		
			N/A	DECEMBER 2023		
DWG.No:	SHEET:	ISSUE:	DRAWN:	CHECKED:		
LPDA 23 - 95	03	К	K.Z	R.F		

#### LANDSCAPE WORK SPECIFICATION

#### PRELIMINARIES

#### 1.01 GENERAL

The following general conditions should be considered prior to the commencement of landscape works: The landscape plans should be read in conjunction with the architectural plans, project arborist's assessment

- hydraulic plans, service plans and survey prepared for the proposed development All services including existing drainage should be accurately located prior to the commencement of landscape installation. Any proposed tree planting which falls close to services will be relocated on site under the instruction of the landscape architect
- Installation of conduit for required irrigation, electrical and other services shall be completed prior to the commencement of hardscape works and hardstand pours.
- All outdoor lighting specified by architect or client to be installed by qualified electrician Anomalies that occur in these plans should be brought to our immediate attention.
- Where an Australian Standard applies for any landscape material testing or installation technique, that standard shall be followed.

#### 1.02 PROTECTION OF ADJACENT FINISHES

The Contractor shall take all precautions to prevent damage to all or any adjacent finishes by providing adequate protection to these areas / surfaces prior to the commencement of the Works

#### 1.03 PROTECTION OF EXISTING TREES

Existing trees identified to be retained shall be done in accordance with (AS)4970-Protection of trees on development sites as well as in accordance with the tree protection measures prepared by project arborist.

Where general works are occurring around such trees, or pruning is required, a qualified Arborist shall be engaged to oversee such works and manage tree health

Existing trees designated on the drawing for retention shall be protected at all times during the construction period. Any soil within the drip-line of existing trees shall be excavated and removed by hand only. No stockpiling shall occur within the root zone of existing trees to be retained.

#### Any roots larger in diameter than 50mm shall only be severed under instruction by a qualified arborist. Roots smaller than 50mm diameter shall be cut cleanly with a saw

Temporary fencing shall be installed around the base of all trees to be retained prior to the commencement of landscape works. Where possible this fencing will be located around the drip line of these trees, or a minimum of 3m from the trunk. The fencing shall be maintained for the full construction period.

#### **1.04 EROSION & POLLUTION CONTROL**

The Contractor shall take all proper precautions to prevent the erosion of soil from the subject site. The contractor shall install erosion & sediment control barriers and as required by council, and maintain these barriers throughout the construction period. Note that the sediment control measures adopted should reflect the soil type and erosion characteristics of the site.

#### Erosion & pollution control measures shall incorporate the following:

- Construction of a sediment trap at the vehicle access point to the subject site. - Sediment fencing using a geotextile filter fabric in the location indicated on the erosion control plan or as instructed on site by the landscape architect

#### - Earth banks to prevent scour of stockpile - Sandbag kerb sediment traps

Straw bale & geotextile sediment filte

#### - Exposed banks shall be pegged with an approved Jute matting in preparation for mass planting

Refer to "Sitewise Reference Kit" as prepared by DLWC & WSROC (1997) for construction techniques

#### SOIL WORKS

2.01 MATERIALS

#### Specified Soil Conditioner (Generally to improve site soil)

The specified soil conditioner for site top-soil improvement shall be an organic mix, equal to "Botany Humus", as supplied by ANL. Note that for sites where soil testing indicates toxins or extremes in pH, or soils that are extremely poor, allow to excavate and supply 300mm of imported soil mix.

#### New gardens & proposed Planting

New garden and planting areas shall consist of a 50/50 mix of clean site soil (refer d) below) and imported "Organic Garden Mix" as supplied by ANL or approved equal. All mixes are to comply with AS 4419 Soils for landscaping & garden use, & AS 4454 Composts, Soil conditioners & mulches.

#### Specified Soil Mix - Turf

The specified soil mix for all turf areas shall be a min 75mm layer of imported soil mix consisting of 80% washed river sand (reasonably coarse), and 20% composted organic matter equivalent to mushroom compost or soil conditioner, or other approved lawn top dress

#### Site Topsoil

Site topsoil is to be clean and free of unwanted matter such as gravel, clay lumps, grass, weeds, tree roots, sticks, rubbish and plastics, and any deleterious materials and materials toxic to plants. The topsoil must have a pH of between 5.5 and 7. Use 100% imported soil mix when site when site topsoil runs out.

#### 2.02 INSTALLATION (TO GARDEN OUTSIDE OF TREE PROTECTION ZONES OF TREES RECOMMENDED TO BY RETAINED)

Note: No level changes (Cut or Fill), soil ripping within the Tree Protection Zones of trees to be retained a) Testing

ng is to be conducted in accordance with AS 1289 Methods for testing soils for engineering purposes. Site soi shall be given a pH test prior to modifying to ensure conditions are appropriate for planting as stated above. Tests shall be taken in several areas where planting is proposed, and the pH shall be adjusted accordingly with sulphur or lime to

#### Note that a soil test conducted by the "Sydney Soil Lab" or approved equal shall be prepared for all commercial, industrial and multi-unit residential sites. The successful landscape contractor shall implement the recommendations of this test.

#### b) Set Out of Individual Trees & Mass Planting Areas

All individual tree planting positions and areas designated for mass planting shall be set out with stakes or another form of marking, ready for inspection and approval. Locate all services.

#### c) Establishing Subgrade Levels outside of tree protection zones of trees to be retained Subgrade levels are defined as the finished base levels prior to the placement of the specified material (i.e. soil

conditioner). The following subgrade levels shall apply: Mass Planting Beds - 300mm below existing levels with specified imported soil mix. •

Turf areas - 100mm below finished surface level. Note that all subgrades shall consist of a relatively free draining natural material, consisting of site topsoil placed previously by the Civil Contractor. No builders waste material shall be acceptable.

#### d) Subgrade Cultivation

Cultivate all subgrades to a minimum depth of 100mm in all planting beds and all turf areas, ensuring a thorough breakup of the subgrade into a reasonably coarse tilth. Grade subgrades to provide falls to surface and subsurface drains, prior to the placement of the final specified soil mix.

#### e) Drainage Works

Install surface and subsurface drainage where required and as detailed on the drawing. Drain subsurface drains to outlets provided, with a minimum fall of 1:100 to outlets and / or service pits.

#### f) Placement and Preparation of Specified Soil Conditioner & Mixes.

Trees in turf & beds - Holes shall be twice as wide as root ball and minimum 100mm deeper - backfill hole with 50/50 mix of clean site soil and imported "Organic Garden Mix" as supplied by ANL or approved equal.

- Mass Planting Beds Install specified soil conditioner to a compacted depth of 100mm Place the specified soil conditioner to the required compacted depth and use a rotary hoe to thoroughly mix the conditioner into the top 300mm of garden bed soil. Ensure thorough mixing and the preparation of a reasonably fine tilth
- and good growing medium in preparation for planting. Turf Areas - Install specified soil mix to a minimum compacted depth of 75mm.
- Place the specified soil mix to the required compacted depth and grade to required finished soil levels, in preparation for planting and turfing.

#### PLANTING

#### 3.01 MATERIALS

a) Quality and Size of Plant Material

All trees supplied above a 25L container size must be grown and planted in accordance with AS 2303:2018 'TREE STOCK FOR LANDSCAPE USE' Certification that trees have been grown to AS 2303:2018 is to be provided upon request of Council's Tree Management Officer.

#### Above - Ground Assessment:

The following plant quality assessment criteria should be followed: Plant true to type, Good vigour and health, free from pest & disease, free from injury, self-supporting, good stem taper, has been pruned correctly, is apically dominant, has even crown symmetry, free from included bark & stem junctions, even trunk position in pot, good stem structure

#### Below - Ground Assessment:

Good root division & direction, rootball occupancy, rootball depth, height of crown, non-suckering For further explanation and description of these assessment criteria, refer to Ross Clark's book. All Plant material shall be to the type and size specified. No substitutions of plant material shall be permitted without written prior approval by the Landscape Architect. No plant shall be accepted which does not conform to the standards listed above.

#### b) Stakes and Ties

GENERAL NOTE

Provide min. 3 No. Stakes and ties to all plants identified as trees in the plant schedule. Stakes shall be sound, unpainted, straight hardwood, free of knots and pointed at one end. They shall be 1800mm x 50mm x 50mm Hardwood timber, or as per council specification where is available. Ties shall be 50mm wide hessian webbing material.

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payments are not made following the notification period.

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#### c) Fertilisers

Fertilisers shall be approved slow release fertilisers suitable for the proposed planting types. Note that for native plants, specifically Proteaceae family plants including Grevillea species, low phosphorus fertilizers shall be used. d) Mulch

Mulch for general planter bed shall be an approved equal to "FOREST FINE" as supplied by ANL. Mulch shall be completely free from any soil, weeds, rubbish or other debris. Mulch for bio-retention/rain garden area where is required shall be non-floatable materials that could include crushed rock, gravel, coarse river sand, scoria or river pebbles. 4-7mm screenings or similar.

Turf for project site shall be soft leaf Buffalo or Zoysia macrantha 'Nana' or equivalent unless stated otherwise), free from any weeds and other grasses, and be in a healthy growing condition. Re-turfing to nature strip where is required shall use species that match existing on street.

#### 3.02 INSTALLATION

a) Setting Out All planting set out shall be in strict accordance with the drawings, or as directed. Note that proposed tree planting located near services should be adjusted at this stage. Notify Landscape Architect for inspection for approval prior to planting.

#### b) Planting

All plant material shall be planted as soon after delivery as possible. Planting holes for trees shall be excavated as detailed and specified. Plant containers shall be removed and discarded, and the outer roots gently teased from the soil mass. Immediately set plant in hole and backfill with specified soil mix, incorporating the approved quantity of fertiliser for each plant type. Ensure that plants are set plumb vertically and root balls set to the consolidated finished grades detailed on the drawings. Compact the backfilled soil and saturate by hand watering to expel any remaining air pockets immediately after planting.

#### c) Staking and Tying

Staking and tying shall be in strict accordance with the drawings and shall occur immediately following plant placement and soil backfilling. All plants identified as "Trees" on the planting schedule shall be staked with a min. 3 stakes.

#### d) Mulching Mulch for general planter bed shall be an approved equal to "Forest Fine" as supplied by ANL. Mulch shall be completely free from any soil, weeds, rubbish or other debris. Mulch for bio-retention/rain garden area where is required shall be non-floatable materials that could include crushed rock, gravel, scoria or river pebbles. 4-7mm screenings or similar.

#### e) Turfing

Moisten soil prior to the turf being laid. Turf shall be neatly butt jointed and true to grade to finish flush with adjacent surfaces. Incorporate a lawn fertilizer and thoroughly water in. Keep turf moist until roots have taken and sods/rolls cannot be lifted. Keep all traffic off turf until this has occurred. Allow for top dressing of all turf areas. All turf shall be rolled immediately following installation.

#### f) Steel garden edging

Where is required, the Contractor shall install Steel garden edging as detailed on the drawings, to all mass planting beds adjoining turf or gravel mulched areas, and where required. The resultant edge shall be true to line and flush with adjacent surfaces. However, no edging shall be used within the Structural Root Zone (SRZ) of trees to be retained.

#### g) Earth retaining structure

All walls which form part of drainage works must be built as detailed by the hydraulic engineer. All walls exceeding 800mm shall be of **not** timber construction materials, construction details to be provided by a qualified engineer. Install wall to suit site levels and to manufacture's specification.

#### HARDSCAPE WORKS

4.01 GENERAL

#### The Contractor shall undertake the installation of all hardscape works as detailed on the drawing, or where not detailed by manufacturers specification Paving - refer to typical details provided, and applicable Australian Standards. Permeable paving may be used

as a suitable means of satisfying Council permeable surface requirements, while providing a useable, hardwearing, practical surface. In most instances, the client shall nominate the appropriate paving material to be used. Australian Standards shall be adhered to in relation to all concrete, masonry & metal work. Some details are typical and

may vary on site. All hardscape works shall be setout as per the drawings, and inspected and approved by the Landscape Architect prior to installation. All workmanship shall be of the highest standard. Any gueries or problems that arise from hardscape variations should be bought to the attention of the Landscape Architect. Your attention is directed to any obligations or responsibilities under the Dividing Fences Act, 1991 in respect of adjoining property owner/s which may arise from this application. Any enquiries in this regard may be made to the Crown Lands Division on (02) 8836 5332.

#### IRRIGATION WORKS

5.01 GENERAL (PERFORMANCE SPECIFICATION)

New irrigation systems to planting areas shall be a Commercial Grade Irrigation System conforming to all relevant Australian standards, including AS 3500 & the Electrical Safety Act 2002, Workplace Health & Safety Act 2011, & the latest Sydney Water Code

An automated drip-irrigation system is to be installed to all gardens, planters and lawn areas in accordance with the approved Irrigation Desigr

This system shall be designed and installed by a qualified and licensed irrigation specialist, to the highest industry standards and to maximise the efficient usage of water. The Installer is required to obtain all approvals necessary for the completion of works in accordance with the Laws of

#### Australia, Laws of the State of NSW, Campbelltown Council By-Laws and Ordinances.

Drawings: - The Landscape Contractor nominated Licensed Irrigation Specialist shall provide irrigation drawings for approval upon engagement.

#### Design Requirements:

- The irrigation system shall be installed prior to all planting works. It shall incorporate a commercially available irrigation system, with sub-surface dripper lines to irrigate all gardens, planters and lawn areas. - It shall incorporate a suitable back flow prevention device for the scale of works, an in-line filter, check valves, and suitable high and low density poly hose fittings and PVC piping to achieve flow rates suitable for specified planting.

- The irrigation application rate shall not exceed the infiltration rate of the soil or creates run-off. - The landscape contractor shall check the existing pressure available from the ring mains and size irrigation piping to suit. Supply shall be from local hose cock where available

- All piping and fittings shall be buried 50mm below the finished soil levels in garden and lawn areas, and secured in position at 500mm centres with galv wire pins. - Size of pipes shall be selected to ensure the working pressure at the end of the line does not decrease by more than

#### Services Co-ordination

Testing & Defects:

exceed 300Kpa.

immediately rectified.

Further Documentation

6.01 GENERAL

CONSOLIDATION AND MAINTENANCE

The consolidation and maintenance period shall be either

any defects that become apparent in the contracted works.

Clearing litter and other debris from landscaped areas.

• Replacement of damaged, stolen or unhealthy plants.

• Make good areas of soil subsidence or erosion.

Spray / treatment for Insect and disease control.

Fertilizing with approved fertilizers at correct rates.

**BKA ARCHITECTURE** 

• Topping up of mulched areas.

Adjusting ties to Stakes

ARCHITECT

· Removing weeds, pruning and general plant maintenance.

or as specified by Council in the Determination.

• Watering all planting and lawn areas / irrigation maintenance.

• Maintenance of all paving, retaining and hardscape elements.

over a determined length of time.

Co-ordination required by Landscape Contractor or Project Manager to provide required conduit, pipe work and penetration through slabs and planter walls for water and power provisions - The Landscape Contractor shall be engaged with the Irrigation Specialist to co-ordinate with the Project Manager to

identify the preferred service and conduit locations. - Project Manager and Landscape Contractor to establish area suitable for irrigation control system with required area, power provision and water supply.

- Main Line Pressure Test: The main line is pressurised to test for leaks. All valves are shut and the pressure is taken

the manufacturer recommendations. The inlet pressure is then tested under the same conditions to check it does not

- All components are to be satisfactorily functional and operational prior to approval. Should any defect develop, or the

6 months beginning from the approved completion of the specified construction work (Practical Completion)

A qualified landscape maintenance contractor shall undertake the required landscape maintenance works. Consolidation and maintenance shall mean the care and maintenance of Contracted works by accepted landscaping or horticultural

practices, ensuring that all plants are in optimum growing conditions and appearance at all times, as well as rectifying

On the completion of the maintenance period, the landscape works shall be inspected and at the satisfaction of the

ANDSCAPE ARCHITEC

capacity or efficiency of the system decline during the agreed maintenance system, then these faults shall be

- Dripper Pressure Test: Measurement at flushing valves are taken and the pressure gauged to make sure it conforms to

Upon completion of installation, the system shall be tested, including:

- A full 12 month warranty shall be included to cover labour and all parts.

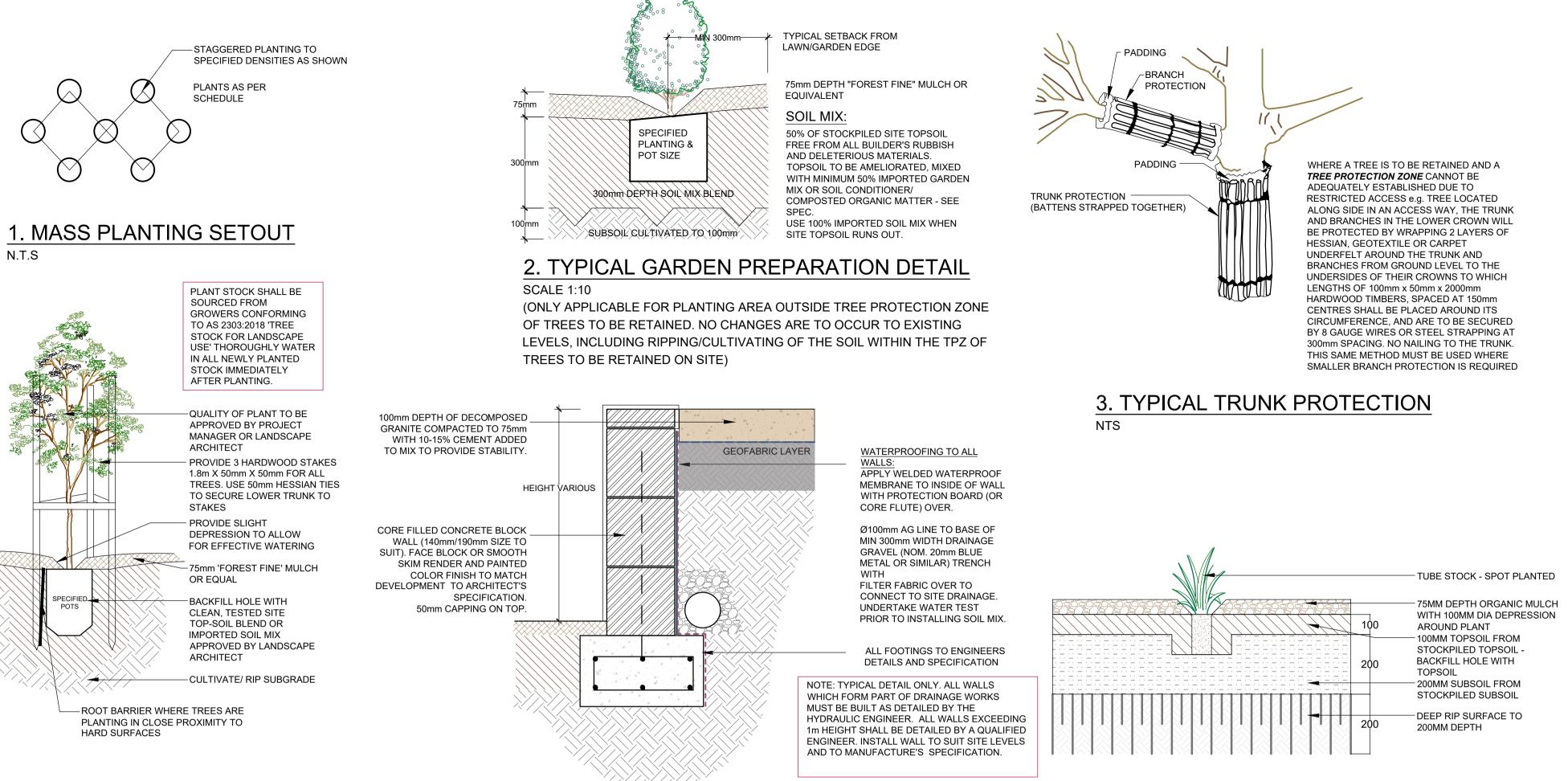
- On request, a detailed irrigation performance specification report can be issued.

as agreed to in the landscape contractors contractual obligations.

This shall include, but not be limited to, the following items where and as required:

• Mowing lawns & trimming edges each 14 days in summer or 18 days in winter

superintendent or landscape architect, the responsibility will be signed over to the client.



#### 4. TREE PLANTING DETAIL

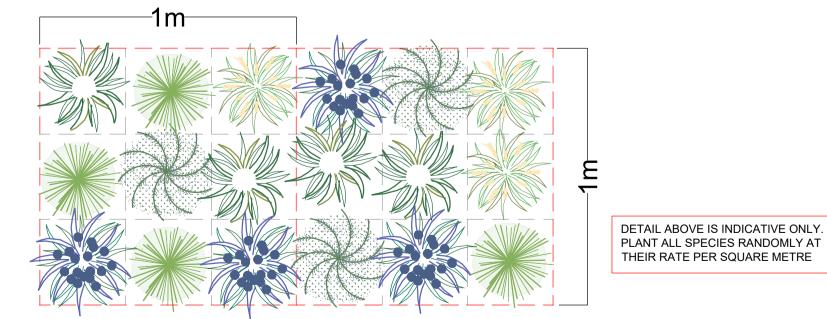
#### SCALE: 1:10

(ONLY APPLICABLE FOR PLANTING AREA OUTSIDE TREE PROTECTION ZONE OF TREES TO BE RETAINED. NO CHANGES ARE TO OCCUR TO EXISTING LEVELS, INCLUDING RIPPING/CULTIVATING OF THE SOIL WITHIN THE TPZ OF TREES TO BE RETAINED ON SITE)

#### **5. CONCRETE BLOCK RETAINING WALL DETAIL** SCALE: 1:10

(ONLY APPLICABLE FOR PLANTING AREA OUTSIDE TREE PROTECTION ZONE OF TREES TO BE RETAINED. NO CHANGES ARE TO OCCUR TO EXISTING LEVELS, INCLUDING RIPPING/CULTIVATING OF THE SOIL WITHIN THE TPZ OF TREES TO BE RETAINED ON SITE)

	POT SIZE: QUANTITY KEY	Tube stock : 9/m <sup>2</sup> Botanical Name	Common Name	Mature Site (Ht x Sp)		POT SIZE: QUANTITY KEY	Tube stock ′: 6/m <sup>2</sup> Botanical Name	Common Name	Mature Site (Ht x Sp)
	Ca	Carex appressa	Tall Sedge	0.8m x 0.8m	<u></u>	BB	Banksia 'Birthday Candles'	Banksia Birthday Candles	0.6m x 0.9m
	Ja	Juncus amabilis	Hollow Rush	0.5m x 0.3m		GRR	Grevillea 'Royal Rambler'	Royal Rambler Grevillea	0.2m x 0.8m
	Lf	Lomandra fluvialtilis 'Shara'	'Shara' Mat Rush	0.5m x 0.4m		Nd	Nandina domestica 'Flirt'	'Flirt' Nandina	0.3m x 0.5m
**	In	Isolepis nodosa	Nobby Club Rush	0.5m x 0.3m		Мр	Myoporum parvifolium 'Yareen	a' Creeping Boobialla	0.15m x spreading
**	Dr	Dianella revoluta 'Revelation'	Flax Lily	0.5m x 0.4m	()) ())	Wf	Westringia fruticosa 'Mundi'	Coastal Rosemery	0.3m x 1 <i>m</i>



# 7. NATIVE GRASS PLANTING MIX

SCALE N.T.S

Suit 101, 506 Miller Street

- 9922 5312

b: 0413 861 351

www.conzept.net.au

ies@conzept.net.au

ax: 8209 4982

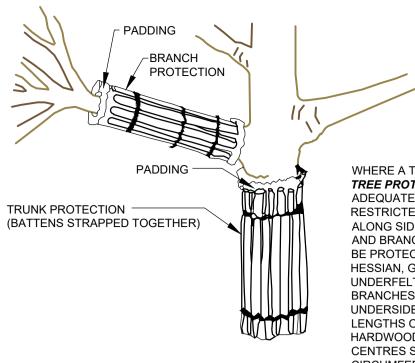
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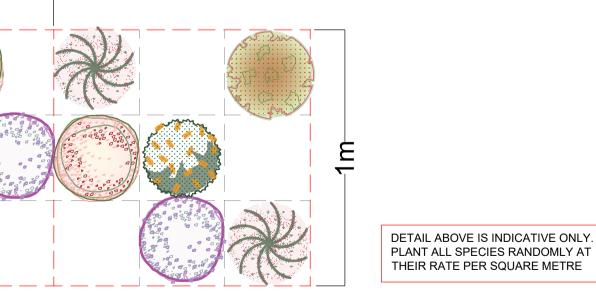
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SCALE N.T.S

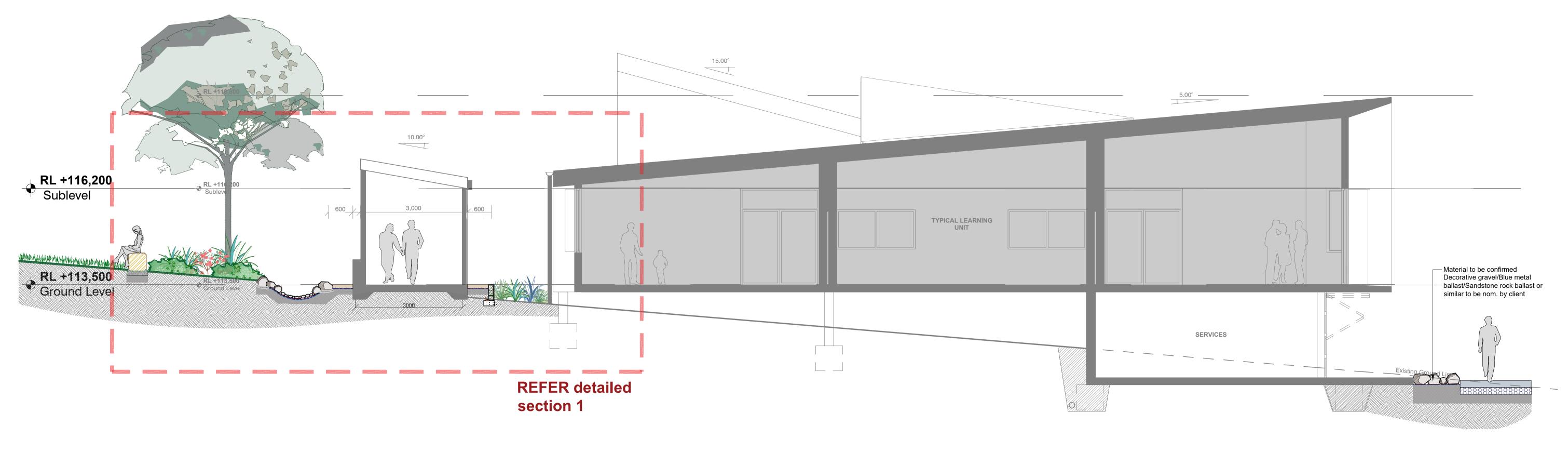
COUNCIL	REV DATE NOTATION/AMENDMENT	PROJECT:	TITLE:	TITLE:			
CAMPBELLTOWN	A25.08.22Preliminary DA prepared for reviewB09.09.22Co-ordinated with amended architectural plan, arborist's report	PROPOSED COLLEGE		<b>DETAILS &amp; SPECIFICATION</b>			T APPLICATION
	& Bushfire consultant's recommendation	DEVELOPMENT	DETAILS &	& SPECIFICATION		SCALE:	DATE:
CLIENT	-					N/A	DECEMBER 2023
ST SAVA COLLEGE	K 08.12.23 Co-ordinated with amended architectural plan	381 ST ANDREWS ROAD	DWG.No:	SHEET:	ISSUE:	DRAWN:	CHECKED:
		VARROVILLE	LPDA 23 - 95	04	к	K.Z	R.F



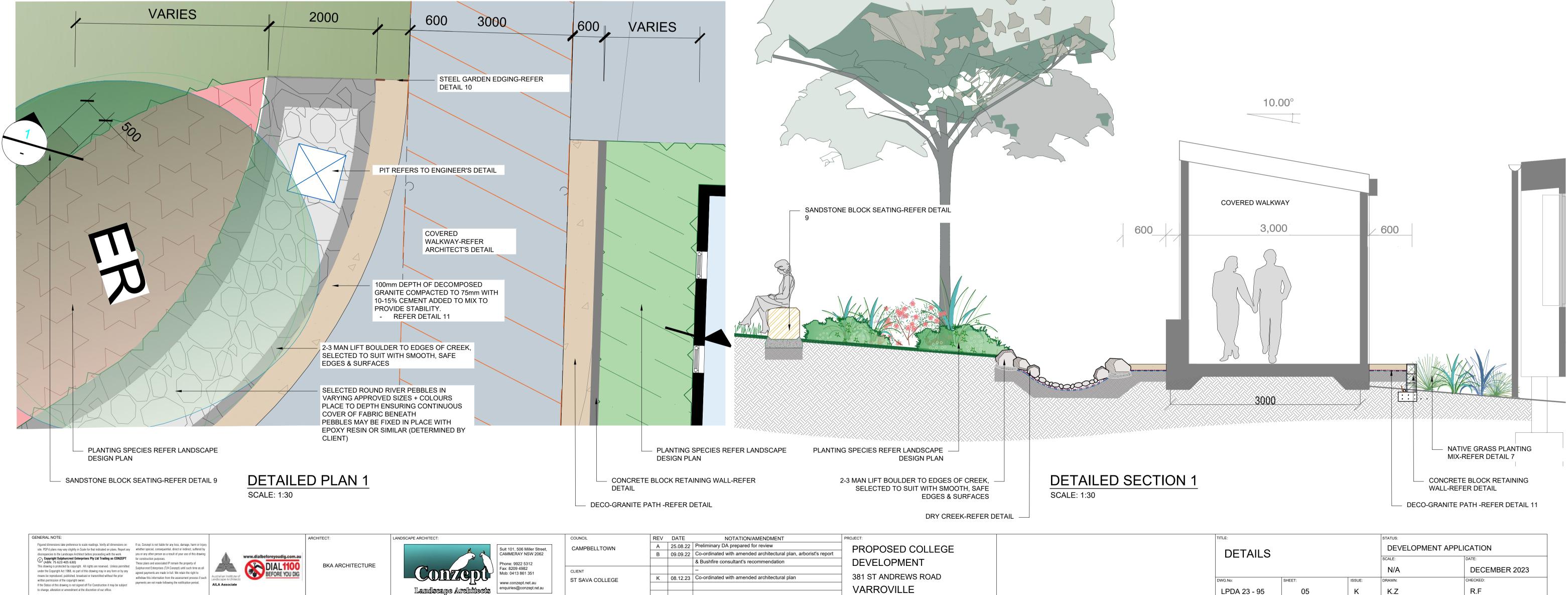
#### 6. TUBE STOCK PLANTING DETAIL **SCALE 1:10**



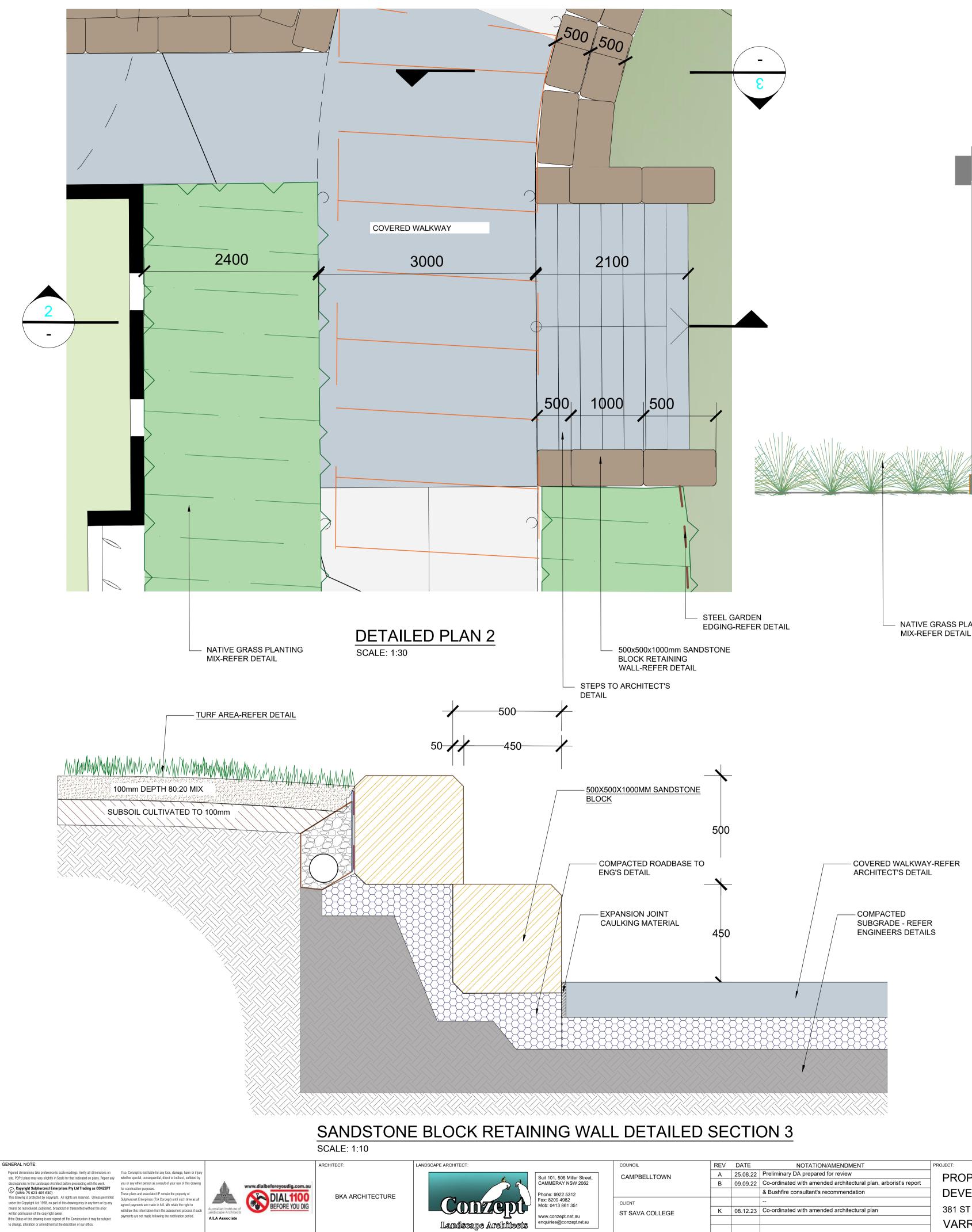
# 8. POCKET GARDEN BED PLANTING MIX



SECTION A-A SCALE: N.T.S



	TITLE:			STATUS:				
	DETAILS			DEVELOPMENT APPLI	CATION			
				SCALE:				
				N/A	DECEMBER 2023			
	DWG.No:	SHEET:	ISSUE:	DRAWN:	CHECKED:			
	LPDA 23 - 95 05 K		K.Z	R.F				



# 115.00

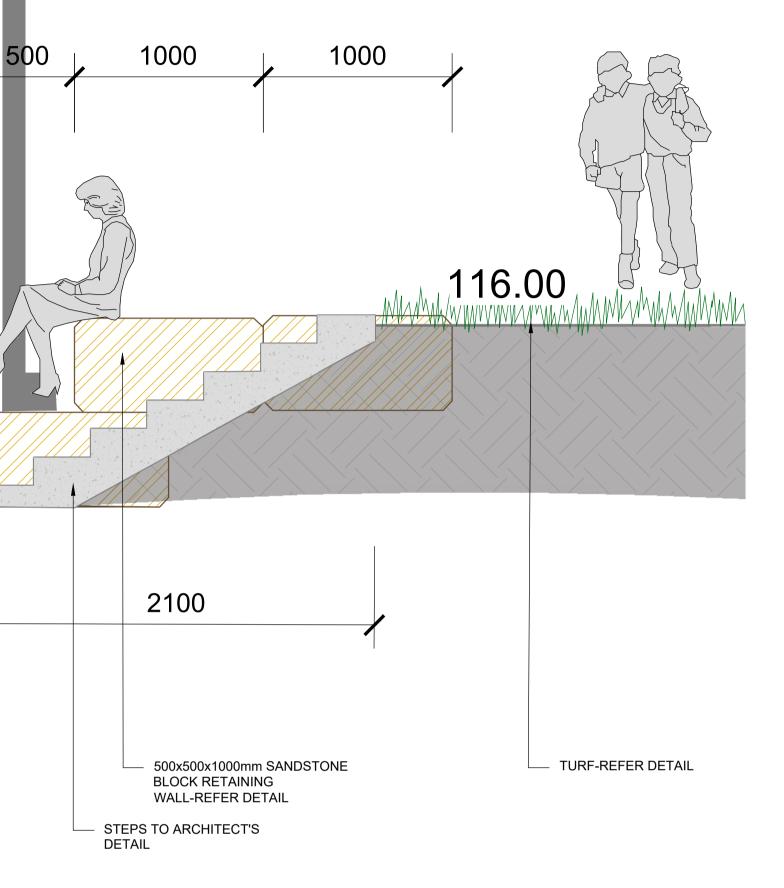
- NATIVE GRASS PLANTING MIX-REFER DETAIL

## **DETAILED SECTION 2** SCALE: 1:20

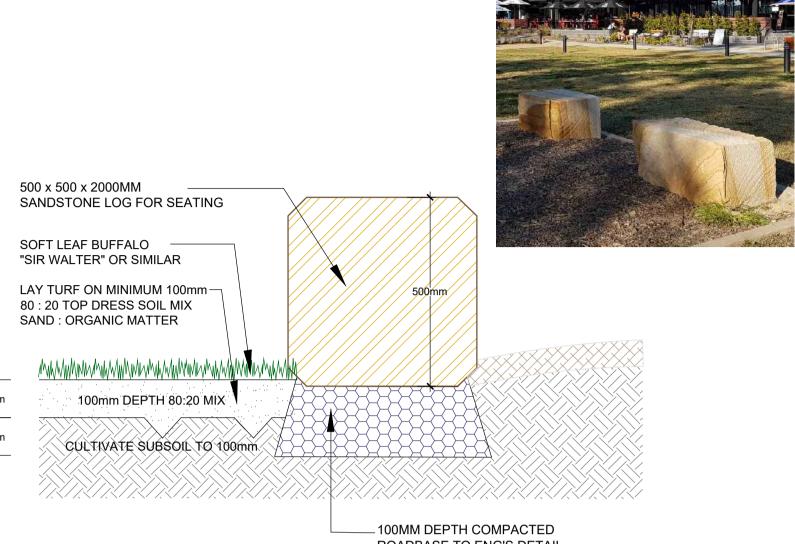
	REV	DATE	NOTATION/AMENDMENT	PROJECT:
BELLTOWN	А	25.08.22	Preliminary DA prepared for review	PF
	В	09.09.22	Co-ordinated with amended architectural plan, arborist's report	
			& Bushfire consultant's recommendation	DE
A COLLEGE	К	08.12.23	Co-ordinated with amended architectural plan	381
				VA

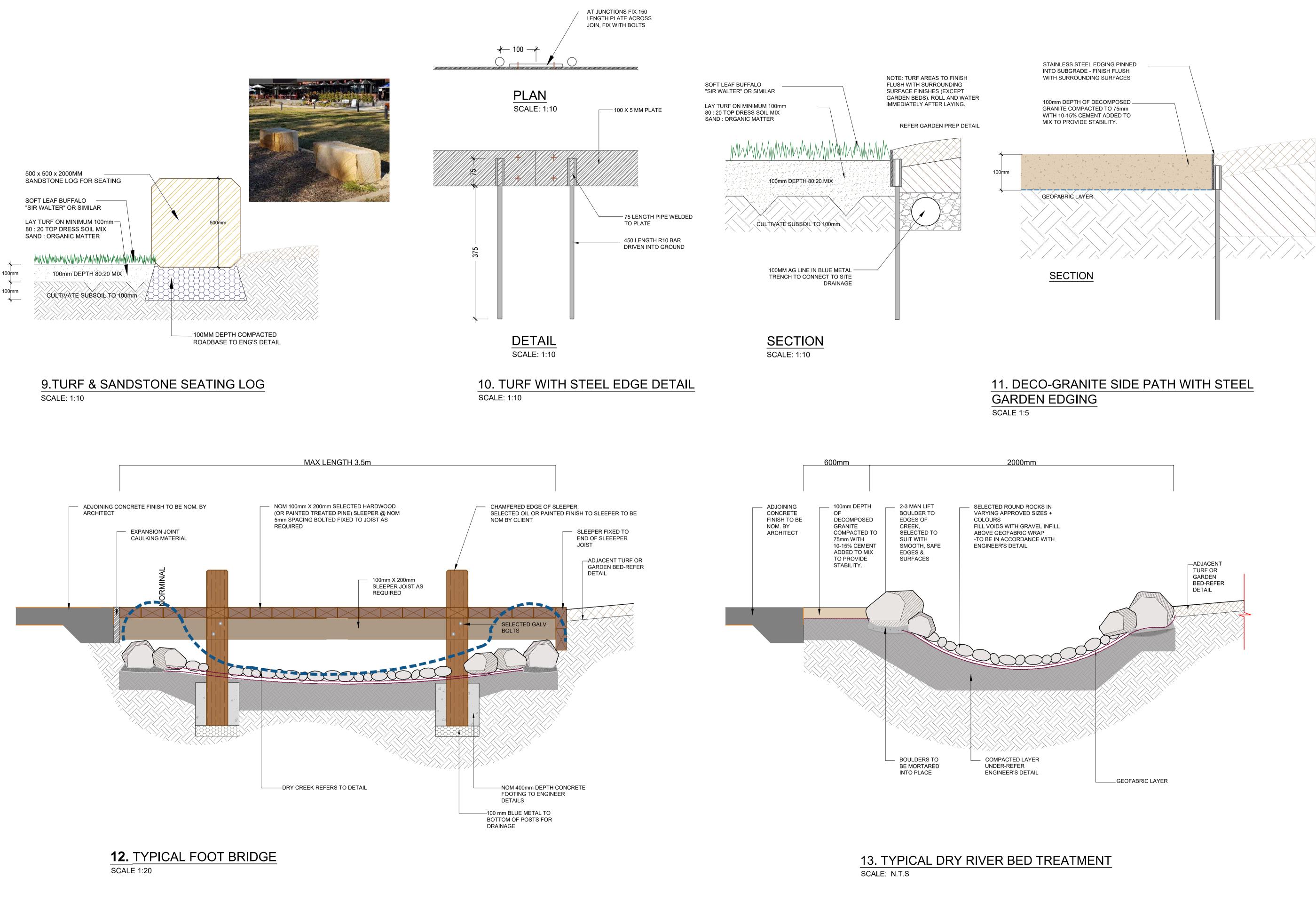
PROPOSED COLLEGE DEVELOPMENT 381 ST ANDREWS ROAD VARROVILLE





TITLE:			STATUS:				
DETAILS			DEVELOPMENT APPLI	CATION			
			SCALE:	DATE:			
			N/A	DECEMBER 2023			
DWG.No:	SHEET:	ISSUE:	DRAWN:	CHECKED:			
LPDA 23 - 95	06	К	K.Z	R.F			





GENERAL NOTE:

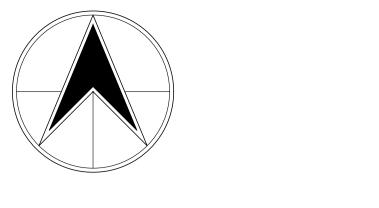




COUNCIL

	REV	DATE	NOTATION/AMENDMENT	PROJECT:
LTOWN	Α	25.08.22	Preliminary DA prepared for review	PROPOSED COLLEGE
	В	09.09.22	Co-ordinated with amended architectural plan, arborist's report	
			& Bushfire consultant's recommendation	DEVELOPMENT
OLLEGE	К	08.12.23	Co-ordinated with amended architectural plan	381 ST ANDREWS ROAD
				VARROVILLE
				VAINOVILLE

TITLE:			STATUS:				
DETAILS		DEVELOPMENT APPLI	ICATION				
DETAILO			SCALE:	DATE:			
			N/A	DECEMBER 2023			
DWG.No:	SHEET:	ISSUE:	DRAWN:	CHECKED:			
LPDA 23 - 95	07	К	K.Z	R.F			



# **381 ST ANDREWS ROAD, VARROVILLE** EDUCATIONAL FACILITY & AMENITI

#### GENERAL NOTES:

D

- THESE DRAWINGS SHALL BE READ IN CONJUNCTION WITH ALL OTHER CONSULTANTS DRAWINGS AND SPECIFICATIONS. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- GN2. ALL LEVELS ARE IN AUSTRALIAN HEIGHT DATUM. GN3. ALL COORDINATES ARE MGA/SCIMS.
- GN4. ALL DIMENSIONS SHALL BE VERIFIED BY THE CONTRACTOR ON SITE. ANY DISCREPANCY SHALL BE REFERRED TO THE ENGINEER BEFORE PROCEEDING WITH THE WORK.
- GN5. ENGINEER'S DRAWINGS SHALL NOT BE SCALED FOR DIMENSIONS AND MEASUREMENTS SHALL BE TAKEN FROM THE FIGURED DIMENSIONS
- ALL LEVELS ARE IN METRES AND ALL DIMENSIONS ARE IN MILLIMETRES.
- GN7. THE RECTIFICATION OF ALL MATTERS ARISING FROM INSUFFICIENT INFORMATION BEING SHOWN ON THE SUBMITTED PLANS IS TO BE CARRIED OUT TO THE ENGINEER'S SATISFACTION.
- LEVELS & ORIENTATION OF DRAINAGE STRUCTURES ARE NOT TO BE ALTERED FROM THAT SHOWN ON THE PLAN AND IS TO BE CHECKED ON COMPLETION BY THE ENGINEER.
- GN9. ALL MATERIAL AND WORKMANSHIP SHALL BE IN ACCORDANCE WITH THE RELEVANT AND CURRENT SAA CODES AND WITH THE BY-LAWS AND ORDINANCE OF THE RELEVANT BUILDING AUTHORITIES. EXCEPT WHERE VARIED BY THE PROJECT SPECIFICATION. GN10. ALL WORK IS TO CONFORM TO THE RELEVANT COUNCIL STANDARDS AND SPECIFICATIONS UNLESS OTHERWISE SHOWN ON THE
- PLANS OR AS DIRECTED BY THE SUPERVISING ENGINEER. ALL WORK MUST BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S OCCUPATIONAL HEALTH AND SAFETY POLICY. COUNCIL'S POLICY SHALL TAKE PRECEDENCE AT ALL TIMES. GN11. COUNCIL'S TREE PRESERVATION ORDER MUST BE OBSERVED AND NO TREE IS TO BE FELLED, LOPPED, OR REMOVED WITHOUT
- PRIOR APPROVAL FROM THE COUNCIL'S ENGINEER.
- GN12. ALL EROSION & SEDIMENTATION CONTROL MEASURES ARE TO BE CARRIED OUT IN ACCORDANCE WITH COUNCIL'S CODE OF PRACTICE FOR EROSION & SEDIMENTATION & MUST BE IMPLEMENTED PRIOR TO THE COMMENCEMENT OF ANY BUILDING OF CIVIL WORKS.THE CONTRACTOR IS RESPONSIBLE FOR THE ONGOING MAINTENANCE OF EROSION & SEDIMENTATION CONTROL MEASURES.
- GN13. THE CONTRACTOR SHALL BE RESPONSIBLE FOR ANY BREACHES OF THE PROTECTION OF THE ENVIRONMENT ACT 1997
- GN14. THE CONTRACTOR IS NOT TO ENTER UPON NOR DO ANY WORKS WITHIN ADJACENT LANDS/PROPERTIES WITHOUT THE WRITTEN PERMISSION OF THE SUPERVISING ENGINEER.
- GN15. PROVISION FOR TRAFFIC DURING CONSTRUCTION TO BE IN ACCORDANCE WITH AS 1742.3.
- GN16. PROVIDE SUITABLE ACCESS FOR PEDESTRIANS PAST THE WORK AREA AT ALL TIMES.
- GN17. PROVIDE AND MAINTAIN SUITABLE VEHICLE ACCESS TO EACH PROPERTY UNLESS ALTERNATIVE ARRANGEMENTS ARE MADE WITH THE OCCUPIER. PROVIDE ROAD BASE TO DRIVEWAYS THAT HAVE NOT BEEN CONSTRUCTED THAT ARE AFFECTED BY THE NEW WORK.
- GN18. UTILITY INFORMATION SHOWN ON THE PLANS IS NOT INTENDED TO DEPICT MORE THAN THE PRESENCE OF ANY SERVICES. PRIOR TO COMMENCEMENT OF WORKS THE CONTRACTOR SHALL SATISFY HIMSELF/HERSELF OF THE CORRECT LOCATIONS OF EXISTING SERVICES WHETHER INDICATED OR NOT ON THE PLANS. ANY DAMAGE TO EXISTING SERVICES IS TO BE RECTIFIED AT THE CONTRACTORS EXPENSE.
- GN19. ANY WORK ON EXISTING SERVICES THAT REQUIRE RELOCATION BY THE RELEVANT AUTHORITY SHALL BE CARRIED OUT IN ACCORDANCE WITH THE RELEVANT AUTHORITY'S REQUIREMENTS AND TO THE SATISIFACTION OF THE UTILITY AUTHORITY, ALL COORDINATED BY THE CONTRACTOR AND WITHIN THE TERMS OF THE CONTRACT.
- GN20. ALL PAVEMENT MATERIAL TO BE PLACED IN LAYERS NOT EXCEEDING 150mm COMPACTED THICKNESS AND COMPACTED TO NOT LESS THAN 98% MAXIMUM DRY DENSITY BY MODIFIED COMPACTION TEST (AS 1289), UNLESS ADVISED OTHERWISE. GN21. ANY EXISTING PAVEMENT MARKINGS OR SIGNPOSTINGS AFFECTED BY THE WORKS MUST BE REPLACED UNLESS SHOWN OTHERWISE ON THE PLANS.
- GN22. ALL DISTURBED AREAS INCLUDING BATTERS AND FOOTPATH AREAS TO BE TOPSOILED AND GRASSED UNLESS OTHERWISE SHOWN. GN23. ALL REGRADED AREAS ARE TO BE GRADED TO THE SATISFACTION OF THE ENGINEER.
- GN24. THE CONTRACTOR SHALL REINSTATE ANY GRASSED AREAS OR FOOTPATHS AFFECTED DURING CONSTRUCTION.
- GN25. ALL STORMWATER CONNECTIONS SHALL BE RECONNECTED TO THE DOWNSTREAM STORMWATER SYSTEM.
- GN26. ALL NEW WORKS TO MAKE SMOOTH JUNCTION WITH EXISTING CONDITIONS TO THE SATISFACTION OF THE ENGINEER. GN27. SUBSOIL DRAINAGE TO BE PROVIDED WHERE REQUIRED BY THE SUPERVISING ENGINEER AND AS SHOWN ON THE PLANS.
- GN28. DURING CONSTRUCTION THE STRUCTURE SHALL BE MAINTAINED IN A STABLE CONDITION AND NO PARTS SHALL BE OVERSTRESSED. TEMPORARY BRACING SHALL BE PROVIDED BY THE CONTRACTOR TO KEEP THE WORKS AND EXCAVATION STABLE AT ALL TIMES. GN29. ENGINEER TO INSPECT SUBGRADE AND COMPACTION OPERATION PRIOR TO ANY CONCRETE BEING POURED FOR APPROVAL. GN30. ENGINEER TO BE NOTIFIED OF ANY WATER IN THE EXCAVATIONS.
- GN31. FILL MATERIAL USED ANYWHERE ON THE SITE IS TO BE APPROVED BY THE ENGINEER.
- GN32. A MINIMUM 50mm APPROVED GRANULAR BEDDING TO BE PROVIDED UNDER ALL CONCRETE.
- GN33. ALL CONCRETE TO HAVE A MINIMUM STRESS GRADE OF N35 UNLESS OTHERWISE NOTED.
- GN34. SURVEY INFORMATION HAS BEEN EXTRACTED FROM BASE INFORMATION SUPPLIED FROM PROUST AND GARDNER.

THIS DRAWING REMAINS THE PROPERTY OF COHORT ENGINEERING AND IS NOT TO BE CIRCULATED, ADDED TO, OR MODIFIED IN OTHER WAYS WITHOUT THE EXPRESS WRITTEN APPROVAL OF COHORT ENGINEERING

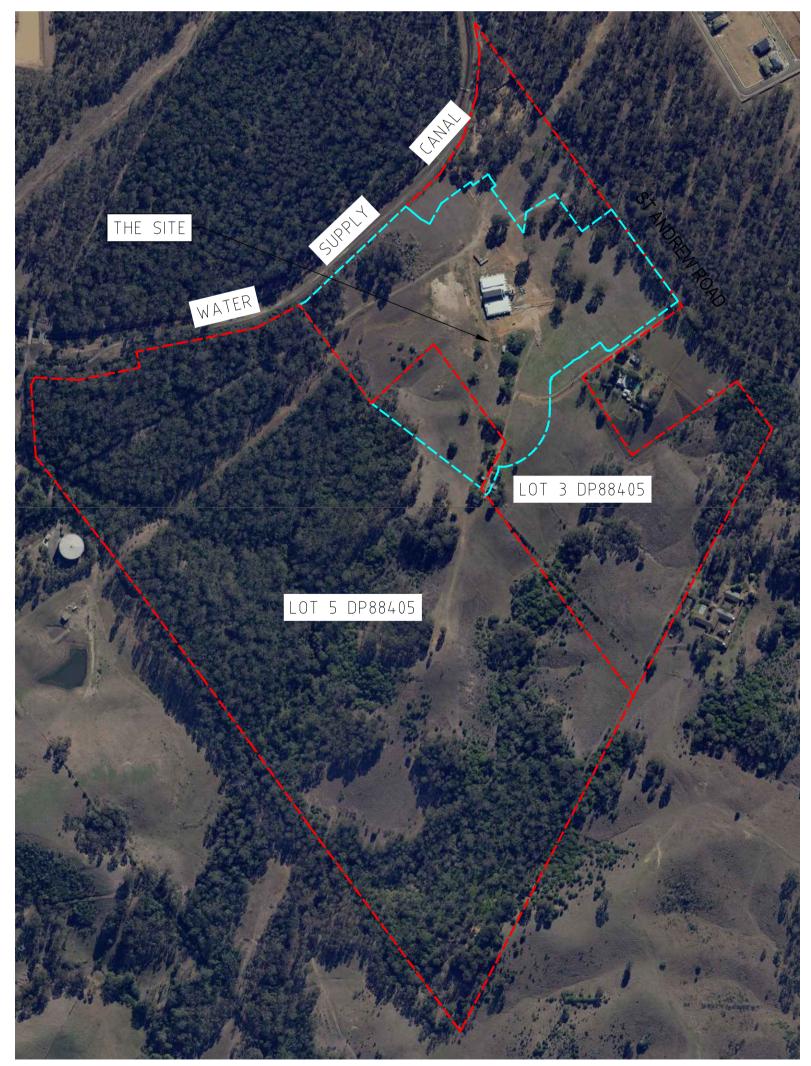
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## HYDROLOGICAL SCENARIO DEFINITIONS

#### **EXISTING SCENARIO**

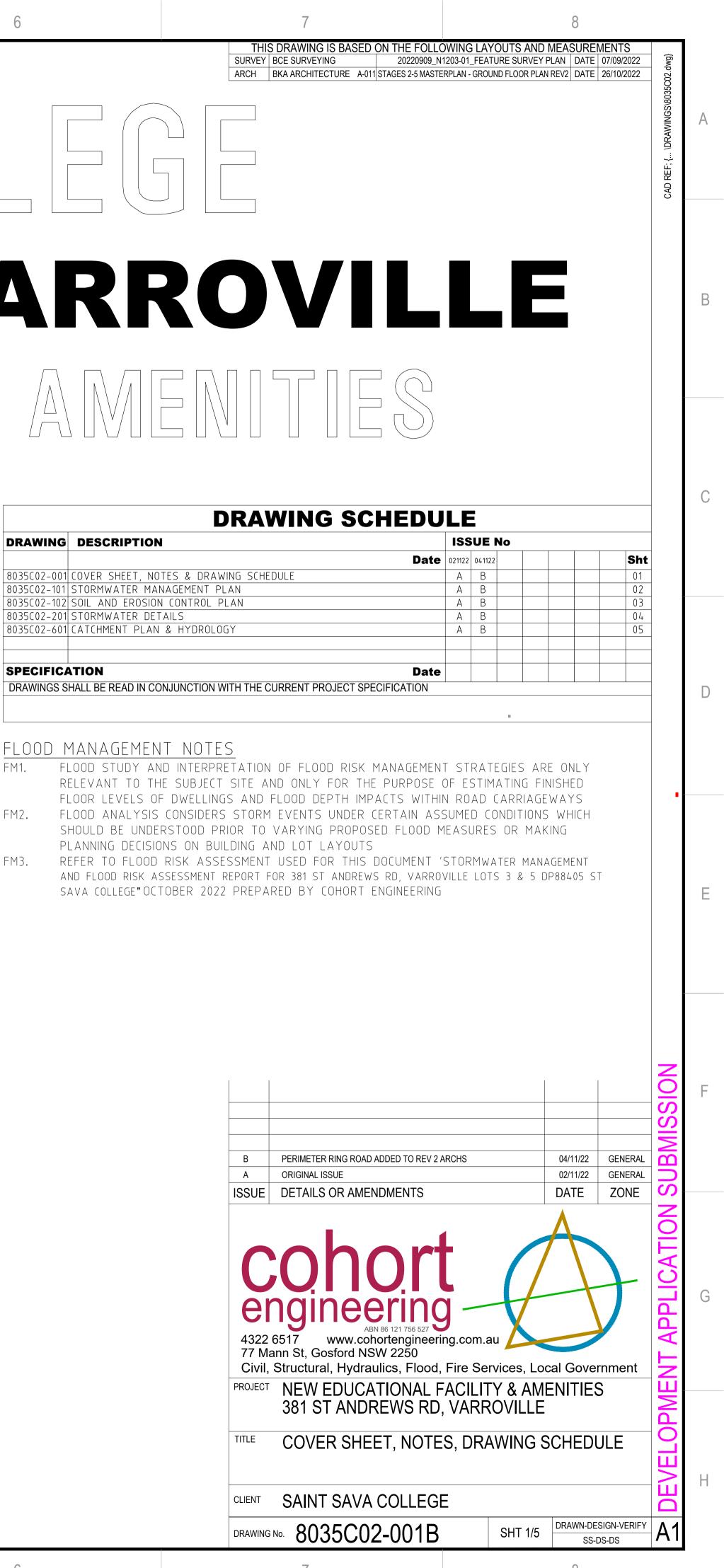
- REPRESENTS THE SITE AND EXTERNAL CATCHMENT TO BE IN THE EXISTING RURAL STATE, HOWEVER, INCLUDES THE CONSTRUCTION OF STAGE 1 INCLUDING CHURCH BUILDING, CARPARKS & PLAYING FIELDS [APPROVED UNDER DA3771/2005]. POST DEVELOPED SCENARIO
- REPRESENTS THE EXTERNAL CATCHMENT TO BE IN IT'S EXISTING RURAL STATE AND THE SITE WITH ALL FIVE STAGES CONSTRUCTED INCLUDING FUTURE BUILDINGS AND RECREATIONAL FACILITIES INDICATED IN ARCHITECTURAL LAYOUT.

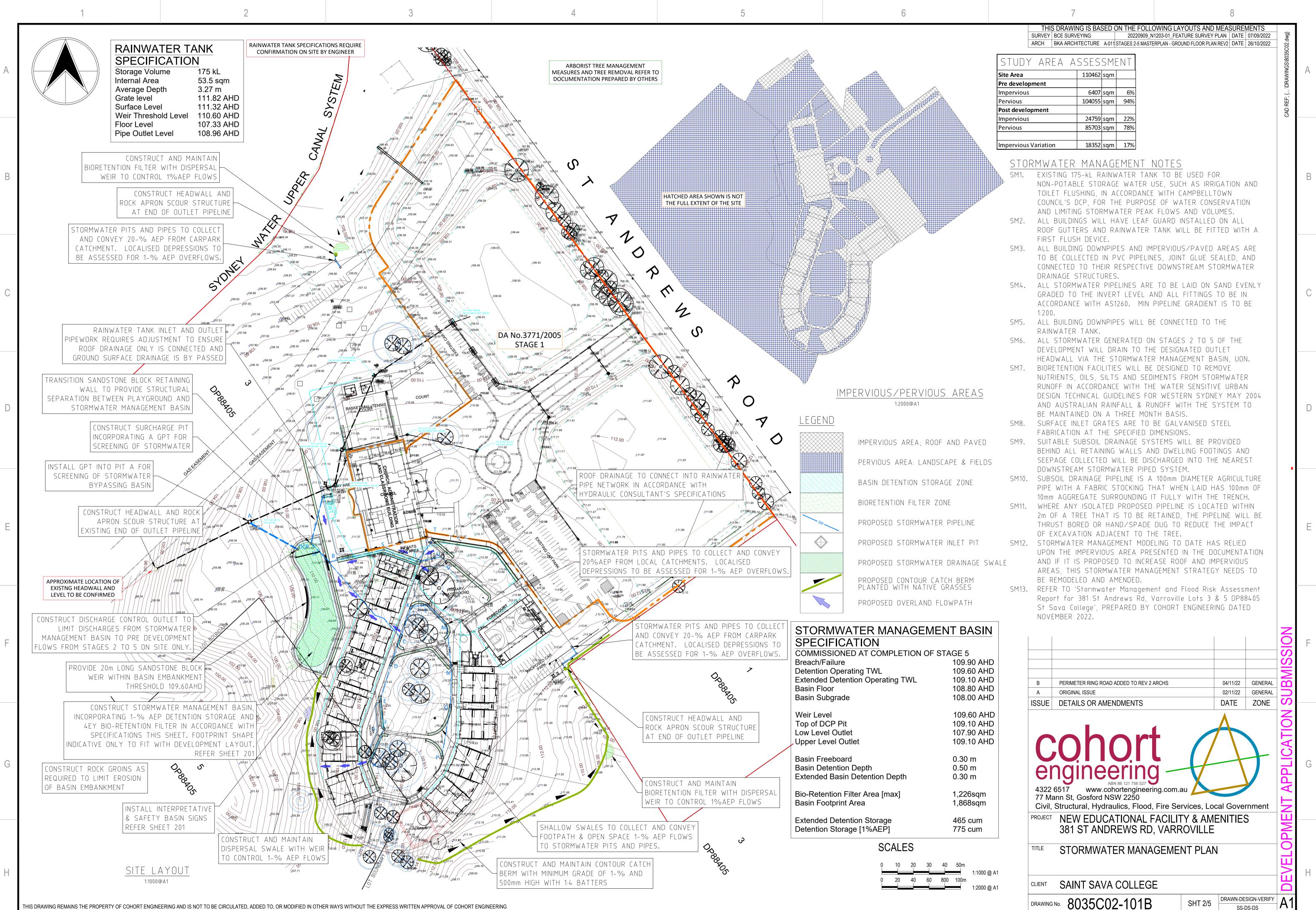


## LOCALITY

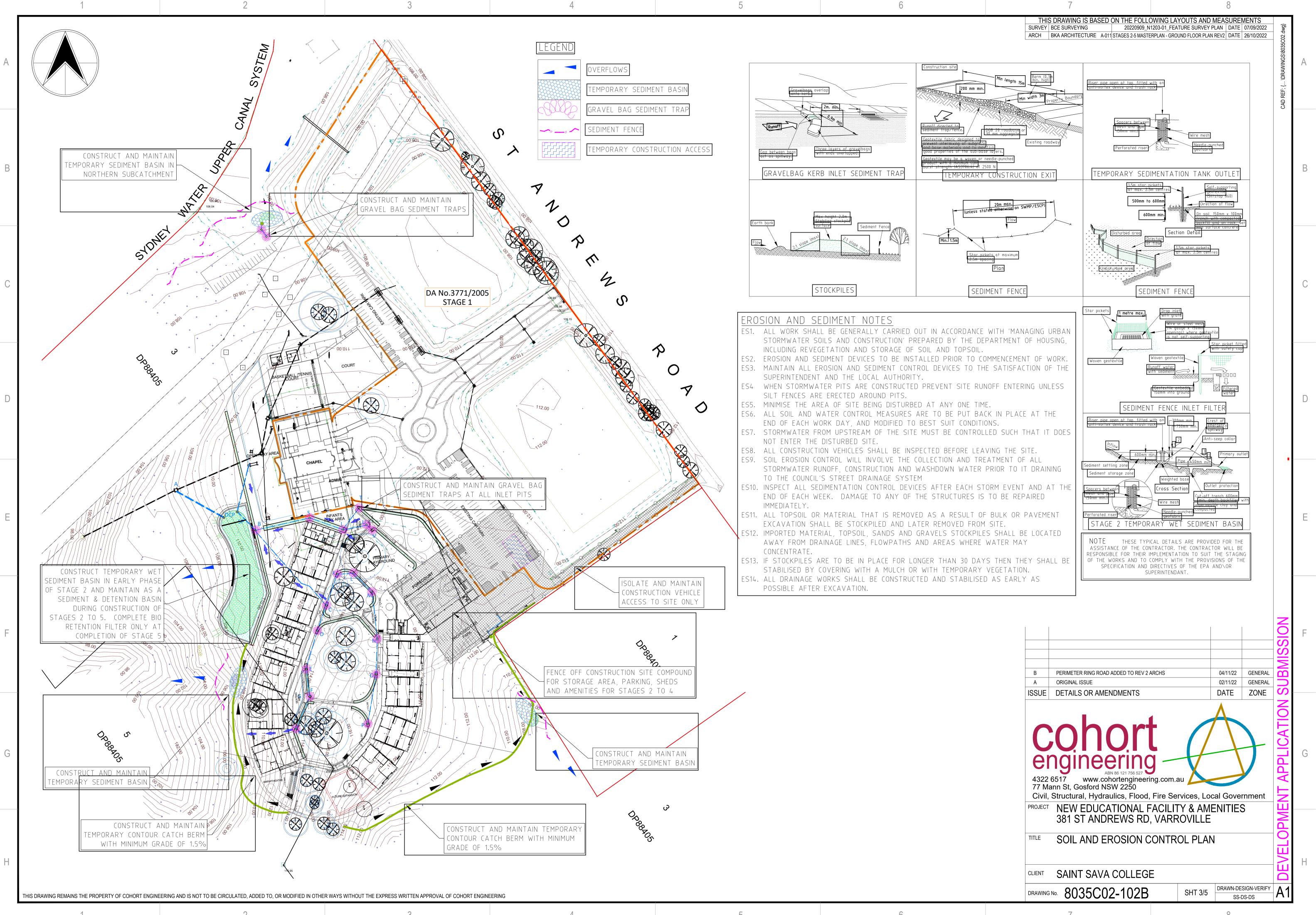
DRAWING DESCRIPTION

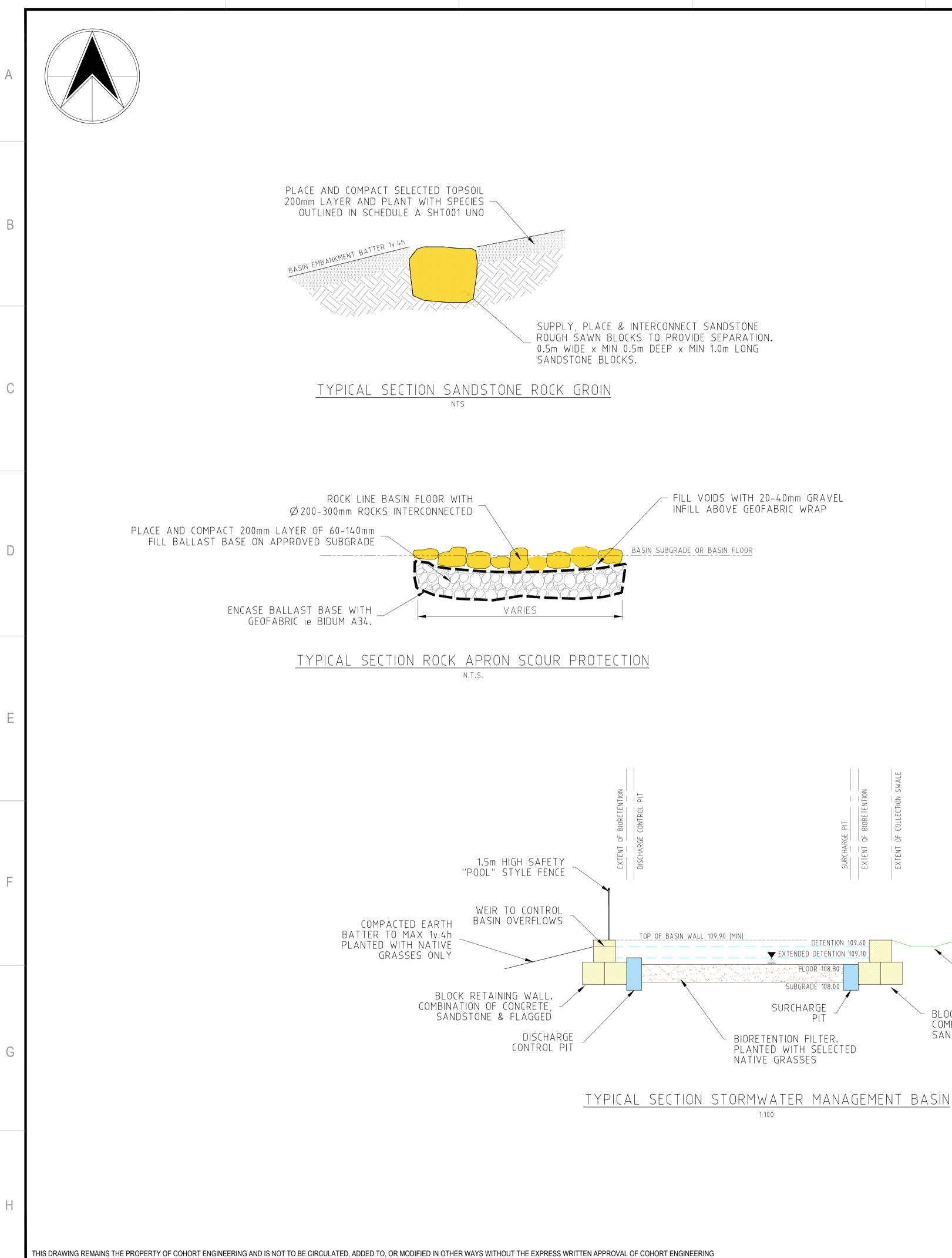
SPECIFICATION





CLIENT SAINT SAVA COLLEGE			
DRAWING No. 8035C02-101B	SHT 2/5	DRAWN-DESIGN-VERIFY SS-DS-DS	A





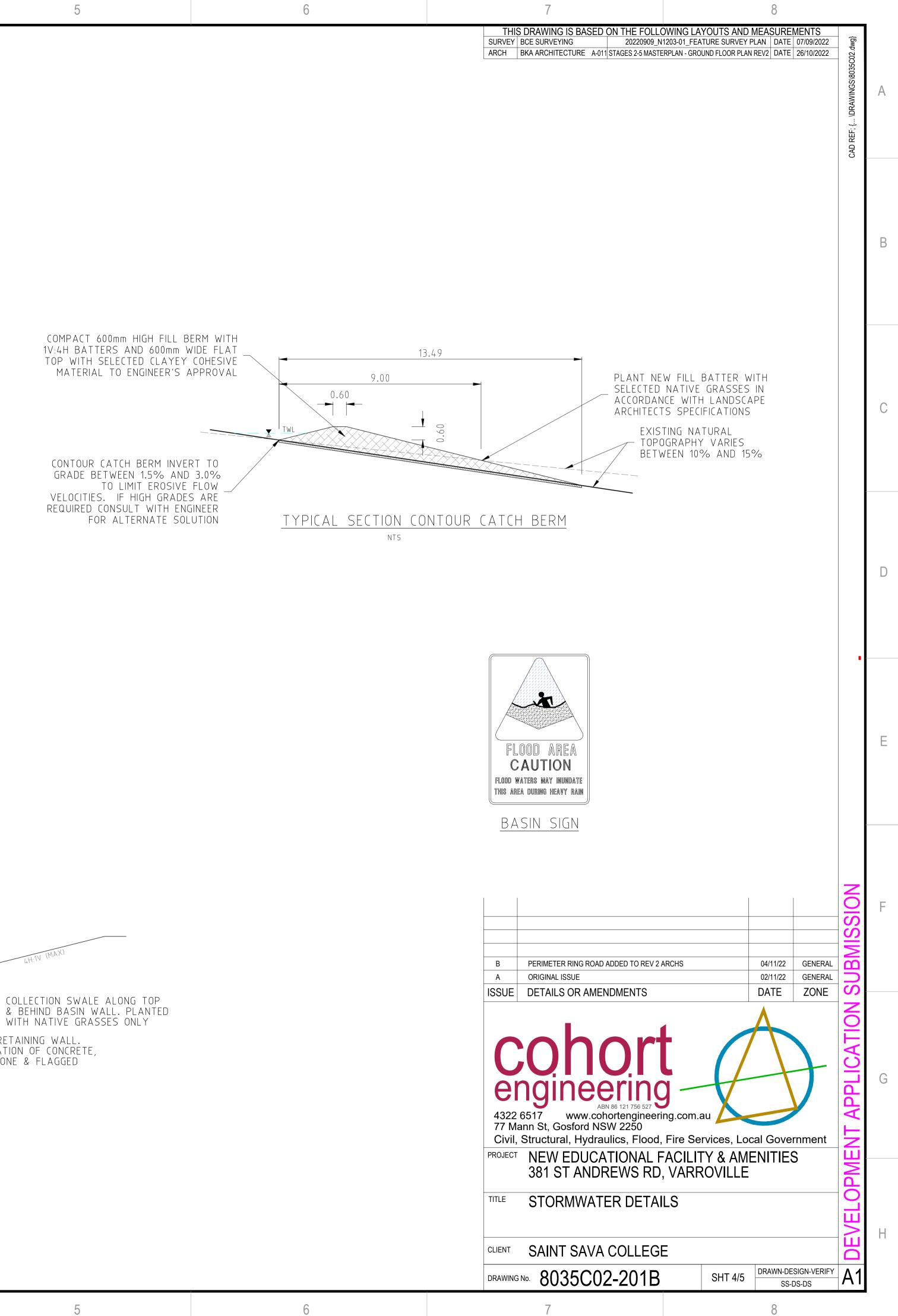
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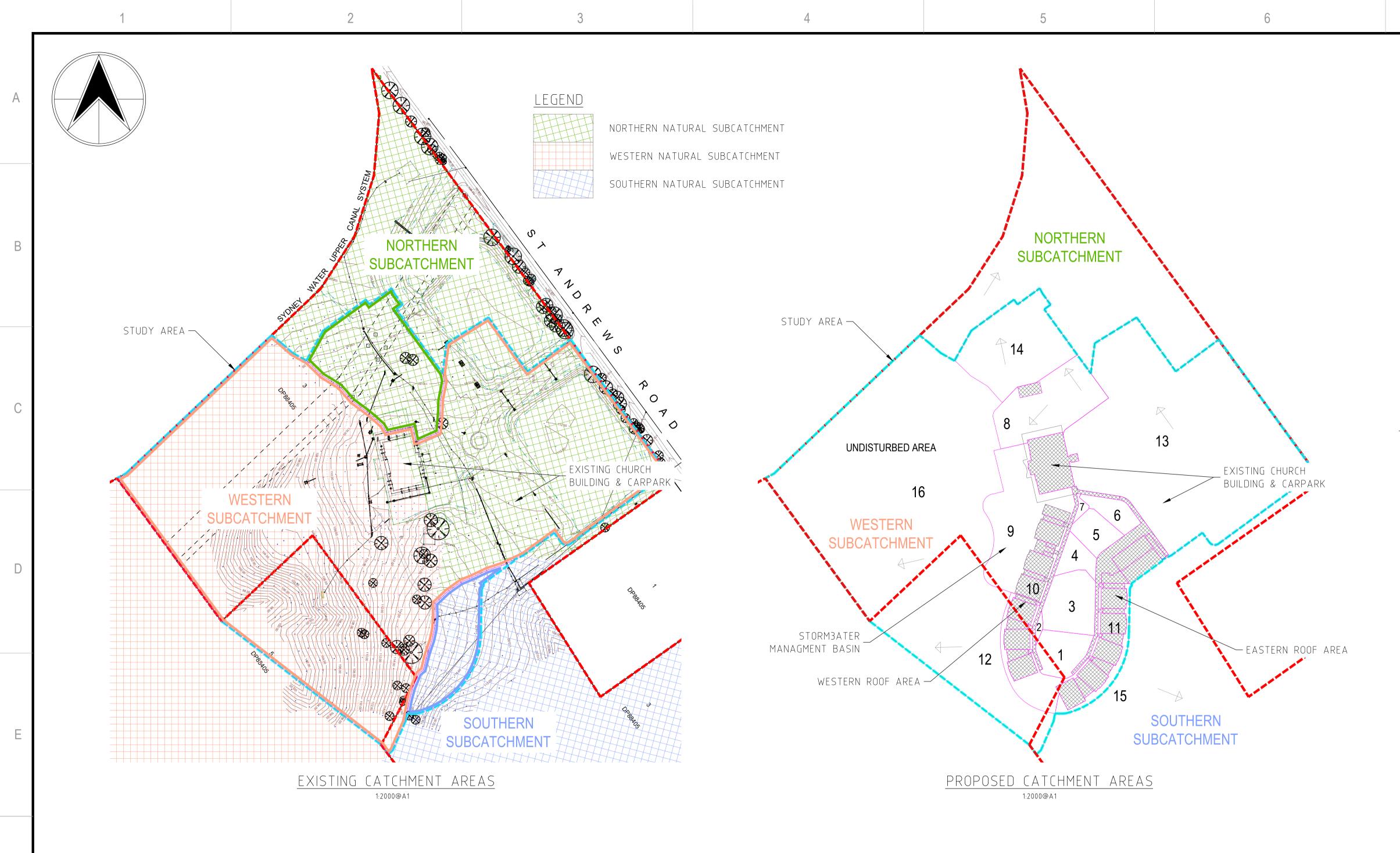


# DETENTION 109.60 ▼ EXTENDED DETENTION 109.10 WITH NATIVE GRASSES ONLY BLOCK RETAINING WALL. COMBINATION OF CONCRETE, SANDSTONE & FLAGGED PLANTED WITH SELECTED

РF

EXTENT





				Annual	Exceed	ance Pr	robabilit	у	
Parameters			1EY	50%	20%	10%	5%	2%	1%
EXISTING CATCHMENT SCENARIO		11.05-1	na @ 10%	- Impervic	JUS			I	
Northern Subcatchment	1.0-ha	cum/s	0.04	0.07	0.16	0.22	0.30	0.60	0.84
Western Subcatchment	9.6-ha	cum/s	0.30	0.52	1.18	1.55	1.91	2.30	2.62
Southern Subcatchment	0.5-ha	cum⁄s	0.03	0.05	0.10	0.14	0.17	0.19	0.23
DEVELOPED CATCHMENT SCENARIO		11.05-1	 1a @ 22%	6 Impervio	ous				
Northern Subcatchment	0.6-ha	cum/s	0.03	0.06	0.12	0.16	0.20	0.24	0.28
Western Subcatchment Basin Inlet		cum/s	0.64	0.88	1.66	2.19	2.67	3.29	3.84
Western Subcatchment with Basin	10.3-ha	cum/s	0.1	0.49	1.06	1.40	1.75	2.23	2.53
Estimated Basin TWL		AHD	109.14	109.15	109.23	109.27	109.34	109.46	109.5
Southern Subcatchment	0.1-ha	cum/s	0.01	0.02	0.03	0.03	0.04	0.05	0.06

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## STORMWATER TREATMENT STRATEGY - MUSIC RESULTS

PROPOSED DEVELOPED CATCHMENT - STAGES 2 TO 5 DEVELOPED SUBCATCHMENT AREA - 38,644 sqm @ 46% IMPERVIOUS CONTRIBUTING CATCHMENTS INTO BASIN 24,499 sqm @ 55% IMPERVIOUS RAINWATER TANK - 175kL PLUMBED TO TOILET FLUSHING & IRRIGATION. BIORETENTION FILTER AREA 1226sqm @ 5% OF IMPERVIOUS CATCHMENT POLLUTION PARAMETER REDUCTIONS - FLOW 11%, TSS 89%, TP 75%, TN 57% GP 100%

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CATCH	IMENT	AREA	S &	IMPERV	OUS	RATIOS
Catchment	Area [sqm]	Imper %	Runoff C	5% AEP [l/s]	Runoff C	1% AEP [l/s]
1	1656	50%	0.64	55	0.73	84
2	114	100%	0.95	8	1.00	11
3	2418	50%	0.64	77	0.73	116
4	894	50%	0.64	32	0.73	48
5	1162	50%	0.64	41	0.73	63
6	957	50%	0.64	34	0.73	52
7	155	100%	0.95	10	1.00	15
8	4553	80%	0.82	185	0.94	282
9	5503	80%	0.82	223	0.94	341
10	6308	100%	0.95	285	1.00	398
11	5332	100%	0.95	250	1.00	351
12	1593	50%	0.64	53	0.73	80
14	6121	20%	0.46	127	0.53	196
15	987	35%	0.55	30	0.63	46

THIS DRAWING IS BASED ON THE FOLLOWING LAYOUTS AND MEASUREMENT

ARCH BKA ARCHITECTURE A-011 STAGES 2-5 MASTERPLAN - GROUND FLOOR PLAN REV2 DATE 26/10/2022

# BASED ON RATIONAL METHOD FOR A QUICK REFERENCE ON POSSIBLE FLOWS

## LEGEND



CATCHMENT ID

SURVEY BCE SURVEYING

STORMWATER DRAINAGE DIRECTION

B A ISSUE	PERIMETER RING ROAD ADDED TO REV 2 A ORIGINAL ISSUE DETAILS OR AMENDMENTS	ARCHS		04/11/22 02/11/22 DATE	GENERAL GENERAL ZONE	SUBMISSION	F
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TITLE	NEW EDUCATIONAL F 381 ST ANDREWS RD CATCHMENT PLAN & SAINT SAVA COLLEGE	, VARF HYDR(	ROVILLE		Sign-verify	DEVELOPME	Н
DRAWING	<sup>№</sup> 8035C02-601B		SHT 5/5	SS-I	DS-DS	A1	
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