APPLICATION ON NOTIFICATION – CROWN DEVELOPMENT

Applicant:	Department for Education
Development Number:	752/V005/20
Nature of Development:	Construction of two classroom buildings, an extension to the existing administration building and performing arts centre, associated ancillary infrastructure and civil works.
Type of development:	State Agency Development
Zone / Policy Area:	District Centre Zone
Subject Land:	12 Stadium Drive, Berri
Contact Officer:	Sarah Elding
Phone Number:	08 7109 7006
Start Date:	1 April 2020
Close Date:	1 May 2020

During the notification period, hard copies of the application documentation can be viewed at the Department of Planning, Transport and Infrastructure, Level 5, 50 Flinders Street, Adelaide during normal business hours. Application documentation may also be viewed during normal business hours at the local Council office (if identified on the public notice).

Written representations must be received by the close date (indicated above) and can either be posted, hand-delivered or emailed to the State Commission Assessment Panel (SCAP). A representation form is provided as part of this pdf document.

Any representations received after the close date will not be considered.

Postal Address:
The Secretary
State Commission Assessment Panel
GPO Box 1815
ADELAIDE SA 5001

Street Address:
Planning and Land Use Services
Department of Planning, Transport and Infrastructure
Level 5, 50 Flinders Street
ADELAIDE

Email Address: scapreps@sa.gov.au

Government of South Australia

Department of Planning, Transport and Infrastructure

DEVELOPMENT ACT 1993

SECTION 49 – STATE AGENCY DEVELOPMENT

NOTICE OF APPLICATION FOR CONSENT TO DEVELOPMENT

Notice is hereby given that an application has been made by the **Department for Education** for the construction of two classroom buildings and an extension to the existing administration building and performing arts centre, associated ancillary infrastructure and civil works. **Development Number 752/V005/20.**

The subject land is situated at the Glossop High School, 12 Stadium Drive, Berri (being a13, DP44298: CT 6144/147).

The development site is located within the District Centre Zone, of the Berri Barmera Council Development Plan (Consolidated 8 December 2016).

The application may be examined during normal office hours at the office of the State Commission Assessment Panel (SCAP), Level 5, 50 Flinders Street, Adelaide. Application documentation may also be viewed on the SCAP website: https://www.saplanningportal.sa.gov.au/public_notices

Any person or body who desires to do so may make representations concerning the application by notice in writing delivered to the Secretary, State Commission Assessment Panel, GPO Box 1815, Adelaide 5001 by **NO LATER THAN 1 MAY 2020.** Submissions can also be emailed to: scapreps@sa.gov.au

Each person or body making a representation should state the reason for the representation and whether that person or body wishes to be given the opportunity to appear before the SCAP to further explain the representation.

Submissions may be made available for public inspection.

Should you wish to discuss the application and the public notification procedure please contact Sarah Elding - Principal Planner on (08) 7109 7006 or sarah.elding@sa.gov.au

Jessie Surace
SECRETARY
STATE COMMISSION ASSESSMENT PANEL

W1577R www.sa.gov.au

W1577R
21x2 (63mm)
Adelaide Advertiser, Murray Pioneer
1 April 2020

DEVELOPMENT ACT, 1993
S49 – CROWN DEVELOPMENT
REPRESENTATION ON APPLICATION

Applicant:	Department for Education
Development Number:	752/V005/20
Nature of Development:	Construction of two classroom buildings and an extension to the existing administration building and performing arts centre, associated ancillary infrastructure and civil works.
Zone / Policy Area:	District Centre Zone
Subject Land:	12 Stadium Drive, Berri
Contact Officer:	Sarah Elding
Phone Number:	08 7109 7006
Close Date:	1 May 2020

My name:_____

My phone number: _____

PRIMARY METHOD(s) OF CONTACT: Email address: _____

Postal address:_____

_____Postcode_____

You may be contacted via your nominated PRIMARY METHOD(s) OF CONTACT if you indicate below that you wish to be heard by the State Commission Assessment Panel in support of your submission.

My interests are:
[ ] owner of local property
[ ] occupier of local property
[ ] a representative of a company/other organisation affected by the proposal
[ ] a private citizen

The address of the property affected is .....Postcode.....

The specific aspects of the application to which I make comment on are: .....

.....

.....

.....

.....

.....

.....

.....

I
[ ] wish to be heard in support of my submission
[ ] do not wish to be heard in support of my submission
(Please tick one)

by
[ ] appearing personally
[ ] being represented by the following person : .....
(Cross out whichever does not apply)

Date: ..... Signature: .....

Return Address: The Secretary, State Commission Assessment Panel, GPO Box 1815, Adelaide, SA 5001 or scapadmin@sa.gov.au

Planning Report.

Glossop High School Redevelopment.

GREENWAY
ARCHITECTS

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PLANNING REPORT.

Glossop High School Redevelopment
for
Department of Planning, Transport and Infrastructure
and
Department for Education

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01: Preamble.

Greenway Architects is pleased to present the following Planning Report in support of the Development Application for the redevelopment works at Glossop High School.

The proposal seeks to provide for much needed additional learning and teaching environments to suit a growing cohort of students and staff. It also seeks to provide improved and contemporary environments in which to undertake these activities.

For clarification of any matter in this proposal please contact:

Simon Frost, Director
Greenway Architects SA
Tel: 08 8232 1888
Mob: 0411 864 795
Email s.frost@greenwayarchitects.com.au

02: Documentation.

Please find attached the following documentation:

- Crown Development Application Form.
- Electricity Infrastructure Declaration Form.
- Certificate of Title and Ownership.

SECTION 49 & 49A – CROWN DEVELOPMENT
DEVELOPMENT APPLICATION FORM

PLEASE USE BLOCK LETTERS

COUNCIL: BERRI BARMERA

APPLICANT: GREENWAY ARCHITECTS

ADDRESS: 207 ANGAS ST. ADELAIDE

CROWN AGENCY: DPTI

FOR OFFICE USE

DEVELOPMENT No: _____

PREVIOUS DEVELOPMENT No: _____

DATE RECEIVED: / /

CONTACT PERSON FOR FURTHER INFORMATION

Name: SIMON FROST

Telephone: 82321888 [work] 0411864795 [Ah]

Fax: – [work] – [Ah]

Email: s.frost@greenwayarchitects.com.au

☐ Complying	Decision: _____
☐ Merit	Type: _____
☐ Public Notification	Finalised: / /
☐ Referrals	

NOTE TO APPLICANTS:

(1) All sections of this form must be completed. The site of the development must be accurately identified and the nature of the proposal adequately described. If the expected development cost of this Section 49 or Section 49A application exceeds $100,000 (excl. fit-out) or the development involves the division of land (with the creation of additional allotments) it will be subject to those fees as outlined in Item 1 of Schedule 6 of the *Development Regulations 2008*. Proposals over $4 million (excl. fit-out) will be subject to an advertising fee. (2) Three copies of the application should also be provided.

	Decision required	Fees	Receipt No	Date
Planning:				
Land Division:				
Additional:				
Minister's Approval				

EXISTING USE: SCHOOL

DESCRIPTION OF PROPOSED DEVELOPMENT: TWO NEW CLASSROOM BUILDINGS AND EXTENSION/REFURBISHMENT OF EXISTING ADMINISTRATION AND PERFORMING ARTS BUILDINGS WITH ASSOCIATED SERVICES AND SITE WORKS

LOCATION OF PROPOSED DEVELOPMENT: ALLOTMENT 13, DP 44298

House No: 12 Lot No: ___ Street: STADIUM DRIVE Town/Suburb: BERRI, SA 5343

Section No [full/part] _____ Hundred: _____ Volume: 6144 Folio: 147

Section No [full/part] _____ Hundred: _____ Volume: _____ Folio: _____

LAND DIVISION:

Site Area [m²] _____ Reserve Area [m²] _____ No of existing allotments _____

Number of additional allotments [excluding road and reserve]: _____ Lease: **YES** ☐ **NO** ☐

DEVELOPMENT COST [do not include any fit-out costs]: $ $13,150,000

POWERLINE SETBACKS: Pursuant to Schedule 5 (2a)(1) of the *Development Regulations 2008*, if this application is for a building it will be forwarded to the Office of the Technical Regulator for comment unless the applicant provides a declaration to confirm that the building meets the required setback distances from existing powerlines. The declaration form and further information on electricity infrastructure and clearance distances can be downloaded from sa.gov.au.

I acknowledge that copies of this application and supporting documentation may be provided to interested persons in accordance with the *Development Act 1993* and meet the requirements for lodgement under s.49 of the Development Act 1993.

SIGNATURE: _____ Dated: 16 / 01 / 2020

DEVELOPMENT REGULATIONS 2008
Form of Declaration (Schedule 5 clause 2A)

Government of South Australia

To:

From:

Date of Application: 16 / 01 / 2020

Location of Proposed Development: GLOSSOP HIGH SCHOOL

House No: 12 Lot No: [redacted] Street: STADIUM DR

Town/Suburb: BERRI

Section No (full/part): _____ Hundred: _____

Volume: 6144 Folio: 147

Nature of Proposed Development: 2 x NEW BUILDINGS AND REFURBISHMENT/ EXTENSION OF ADMINISTRATION AND PERFORMING ARTS BUILDINGS INCLUDING SERVICES WORK AND SITE WORKS.

I SIMON FROST **being the applicant/ a person acting on behalf of the applicant (delete the inapplicable statement) for the development described above declare that the proposed development will involve the construction of a building which would, if constructed in accordance with the plans submitted, not be contrary to the regulations prescribed for the purposes of section 86 of the Electricity Act 1996. I make this declaration under clause 2A(1) of Schedule 5 of the Development Regulations 2008.**

Signed: _____ **Date:** 16 / 01 / 2020

Government
of South Australia

Note 1

This declaration is only relevant to those development applications seeking authorisation for a form of development that involves the construction of a building (there is a definition of 'building' contained in section 4(1) of the Development Act 1993), other than where the development is limited to –

a) an internal alteration of a building; or
b) an alteration to the walls of a building but not so as to alter the shape of the building.

Note 2

The requirements of section 86 of the Electricity Act 1996 do not apply in relation to:

a) an aerial line and a fence, sign or notice that is less than 2.0 m in height and is not designed for a person to stand on; or
b) a service line installed specifically to supply electricity to the building or structure by the operator of the transmission or distribution network from which the electricity is being supplied.

Note 3

Section 86 of the Electricity Act 1996 refers to the erection of buildings in proximity to powerlines. The regulations under this Act prescribe minimum safe clearance distances that must be complied with.

Note 4

The majority of applications will not have any powerline issues, as normal residential setbacks often cause the building to comply with the prescribed powerline clearance distances. Buildings/renovations located far away from powerlines, for example towards the back of properties, will usually also comply.

Particular care needs to be taken where high voltage powerlines exist; or where the development:

- is on a major road;
- commercial/industrial in nature; or
- built to the property boundary.

Note 5

An information brochure: 'Building Safely Near Powerlines' has been prepared by the Technical Regulator to assist applicants and other interested persons.

This brochure is available from council and the Office of the Technical Regulator. The brochure and other relevant information can also be found at **sa.gov.au/energy/powerlinesafety**

Note 6

In cases where applicants have obtained a written approval from the Technical Regulator to build the development specified above in its current form within the prescribed clearance distances, the applicant is able to sign the form.

REAL PROPERTY ACT, 1886
South Australia

The Registrar-General certifies that this Title Register Search displays the records maintained in the Register Book and other notations at the time of searching.

Certificate of Title - Volume 6144 Folio 147

Parent Title(s) CT 5385/609

Creating Dealing(s) TG 12162566

Title Issued 03/09/2014 **Edition** 1 **Edition Issued** 03/09/2014

Estate Type

FEE SIMPLE

Registered Proprietor

MINISTER FOR EDUCATION AND CHILD DEVELOPMENT
OF ADELAIDE SA 5000

Description of Land

ALLOTMENT 13 DEPOSITED PLAN 44298
IN THE AREA NAMED BERRI
BERRI IRRIGATION AREA

Easements

SUBJECT TO EASEMENT(S) OVER THE LAND MARKED E AND F ON FP 58501 (TG 12162566)

SUBJECT TO SERVICE EASEMENT(S) OVER THE LAND MARKED B ON FP 58501 FOR DRAINAGE PURPOSES TO THE COUNCIL FOR THE AREA (223LG RPA)

Schedule of Dealings

NIL

Notations

Dealings Affecting Title NIL

Priority Notices NIL

Notations on Plan NIL

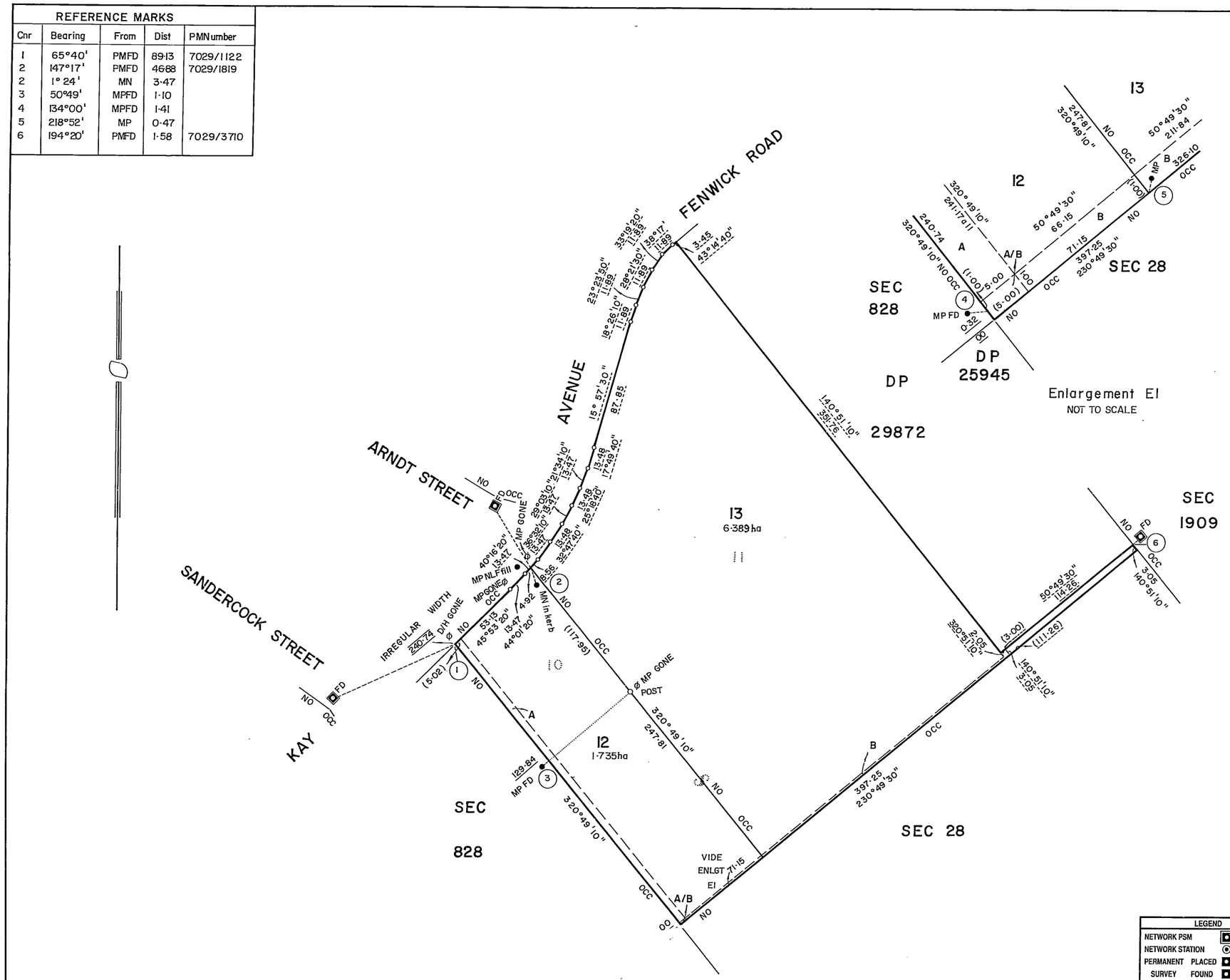
Registrar-General's Notes NIL

Administrative Interests NIL

9179 DO3

D44298

REFERENCE MARKS				
Cnr	Bearing	From	Dist	PM Number
1	65°40'	PMFD	89·13	7029/1122
2	147°17'	PMFD	46·88	7029/1819
2	1°24'	MN	3·47	
3	50°49'	MPFD	1·10	
4	134°00'	MPFD	1·41	
5	218°52'	MP	0·47	
6	194°20'	PMFD	1·58	7029/3710



PLAN NUMBER
DP 44298

THIS IS SHEET 1 OF 1 SHEETS

DEPOSITED 5/9/1996 PRO REGISTRAR GENERAL

~~ACCEPTED FOR FILING~~

MAP REF. 7029/29/j DEV. No. 756/D002/95

TITLE SYSTEM REAL PROPERTY ACT

TITLE REFERENCE Cs.T. 4397/193 and 194

O.B./LAST PLAN REF. TOTAL AREA

DOCKET No.

FIELD BOOK No.

CLOSURE CHECKED	PLAN EXAMINED	PLAN APPROVED	P.M.S. APPROVED
N.P.	V.M.S.	1-12-95	26-10-95

IRRIGATION AREA BERRI DIVISION —

HUNDRED —

TOWNSHIP/AREA —

COUNCIL DISTRICT COUNCIL OF BERRI

PLAN OF DIVISION

ALLOTMENTS 10 and 11 in DP 29743 of SECTION 22

SCALE 0 25 50 100 METRES 150

STATEMENTS CONCERNING EASEMENTS ANNOTATIONS AND AMENDMENTS

PORTION OF ALLOTMENT 12 MARKED A IS SUBJECT TO AN EASEMENT FOR DRAINAGE PURPOSES VIDE SED 29743 A

PORTION OF ALLOTMENTS 12 and 13 MARKED B IS SUBJECT TO AN EASEMENT FOR DRAINAGE PURPOSES VIDE SED 29743 B

LEGEND		
NETWORK PSM	FD	
NETWORK STATION	FD	
PERMANENT MARK	PLACED	
SURVEY MARK	FOUND	FD
	GONE	GONE
REFERENCE MARKS	PLACED	MP OR RM
	FOUND	SPK FD
	GONE	BT GONE
DRILL HOLE & WING		
DIRECTION CHANGE		
PART DISTANCES		(20·32)
CALCULATED DATA		20·85 CALC.
COPIED DATA		100·85

ALL DISTANCES ARE GROUND DISTANCES

COMBINED SCALE FACTOR 0·99961 ZONE 54 AMG 84

BEARING DATUM 92° 51' 38" DISTANCE 433·69

DERIVED FROM PSM 7029/1122 to PSM 7029/3710

I MALCOLM JOHN BEDDOME
licensed surveyor of South Australia do hereby certify —

(1) That this plan has been made from surveys carried out by me or under my personal supervision and in accordance with the Survey Act 1992

(2) That the field work was completed on the 27th day of APRIL 1995
~~- excepting for the final placement of survey marks.~~
~~(strike out if not applicable)~~

Date 30/5/95 Licensed Surveyor

FYFE SURVEYORS PTY LTD
ACN 062 592 465

143 Fullarton Road, ROSE PARK SA 5067
Telephone: 364 1000 Fax: 364 0904
File Reference 9179

DRG No.: 09179D03 Date: 29/5/1995

DOL-A

03: Supporting information.

The following information is provided in support of this Development:

1) Planning Assessment and Design Statement.
2) Traffic, Parking and Pedestrian Impact Statement.
3) Public Use of School Facilities.
4) Crime Prevention Through Environmental Design.
5) Statement of Energy Efficiency.
6) Locality Plan and Detailed Context Analysis.
7) Drawings / Plans.

03.1: Planning Assessment and Design Statement.

Planning Assessment.

The site for Glossop High School is formally described as Allotment 13, in Deposited Plan 44298 in the Area named Berri as shown on Certificate of Title Volume 6144, Folio 147.

The site is located within the "District Centre Zone" of the Berri Barmera Council Development Plan. "Educational establishment" is an envisaged land use within the zone, as evidenced by the existing School campus and the adjacent TAFE facilities. The Development Plan places importance on the frontages to Kay Avenue within the zone, noting that "Development at the centre site on Kay Avenue should:

a) be developed comprehensively by integrating with the existing development
b) providing co-ordinated access and parking
c) of a complementary style of built development.

The overlay maps within the Berri Barmera Council Development Plan show no flood risk, gas pipelines, or any other items of concern. The site is also excluded from bushfire planning provisions.

There are no known Heritage and Cultural considerations for the site. The Berri Barmera Council Development Plan does not indicate any identified Aboriginal Lands or areas of Wetlands of National Importance. There is no reference to the site in the State Heritage Register.

The site, with its existing frontage to Kay Avenue provides good opportunity to provide improved street presences and connectivity of the community in line with the key project objectives, however the natural contours of the land, and its topography locate the School on the "low side" of the street. Its existing infrastructure is in relatively good condition and will support adaptive reuse and modification. The site itself also has enough space to allow for growth of the campus to meet the desired need, and to make provisions for the transition of year 7 onto the site.

Sharing the site with the current Glossop High School Senior Campus is a shared Community Library Resource Centre, and also the Riverland Special School located in the southwest corner of the site. Immediately adjacent to the northeast is the TAFE SA Berri Campus, and further south is a sporting complex including a gymnasium to which Glossop High School has access. Refer Appendix A for context and functional relationship diagrams.

The existing entry point to the School is from Stadium Drive and is shared with the adjacent Riverland Special School. This has been identified by the School as an issue they wished addressed. The site is relatively flat, ramping up slightly and quite sharply to Kay Avenue at the west. There is good pedestrian access through the school site, with students requiring accessibility to the shared Community Library to the northwest, the TAFE College to the north, and the sporting facilities (fields and stadium/gym) to the east and southeast. The site is currently configured with the administration building centrally located with a carpark located in the middle of the School accessed by a tree lined roadway from Stadium Drive. The School have expressed a desire to remove the vehicle movement from the middle of the School campus. Beyond the courtyard space between the School and the Community Library, there is limited functional outdoor areas beyond a single grassed area, a sand volleyball court and a hard-surfaced basketball court in moderate condition.

The existing landscaping to the site varies from a well-established existing quadrangle/courtyard space within the existing School's building configurations, and a tree lined driveway from Stadium Drive. The two areas proposed for the location of the new Hub Buildings are sparsely vegetated with grass and limited smaller 20-year-old plane trees planted during the School's creation. There are a number of sizeable trees on the site that could be considered regulated/significant but these are not affected by the proposed works.

Design summary.

The various Concept Designs investigated a number of site Master Planning and Planning options, and explored a number of arrangements of new vs. refurbished facilities. Options included exploring funded and unfunded works to determine a best for project outcome, whilst maintaining opportunities for the future. In total 6 site planning options were investigated as reflected following. They explored the following key program elements:

- "Schools within Schools" – creating an identity for various student cohorts. Options included investigating two "schools within schools" (Year 7 – 9, and Year 10 – 12) and three "schools within schools" (Year 7/8, 9/10 and 11/12) (as the site currently supports Years 11/12).
- Movement, traffic and parking – investigating locations for driveways, carparking and opportunities for movement of students and others on and around the site, the relationship with Kay Avenue and the adjacent Riverland Special School.
- New Administration Building – or Not…… - this was a contentious issue as it was not funded, nor provided for in the allocation schedule, but required as part of the Brief.
- Opportunities for future expansion, future landscaping and outdoor amenity.

Ultimately the arrangement of the existing facilities on the site, the spatial entitlements and the allocated funding drove the final site planning solution.

The final site planning arrangement has resulted in two new "Hub" Buildings – one for the Year 7/8 cohort, and one for the Year 9/10 cohort supported by the existing facilities that currently house the Year 11/12 student group. This arrangement provides for a separate, identifiable facility for each group, however allows for each to interact with the other.

The amount of refurbishment has been reduced across the site as the existing facilities are in reasonable condition, and priority was placed on ensuring enough footprint for the additional Year 7 student group, and the relocated Years 8 – 10 from the Glossop Campus.

The new Hub buildings, provide a flexible open learning environment, with a range of open and closed spaces, general and technical learning areas and the like. Each of the two Hub's final Concept Design's vary slightly to suit their location within the School, the nature of the proposed curriculum delivery within each one, and the suit the learning needs and activities of the various aged users.

The final location of each Hub has been determined to suit the natural travel paths of the students across the campus, and to align with existing covered walkways and pavements that cross the site.

The final design of the Hub buildings realises a single larger open central space supporting 2 x GLA and 2 x SLA. These will be able to be broken up by operable walls, but big enough to sit a whole year level should it be required. For the "Middle Hub" (Year 7 – 8) the central space is flanked each wide with GLA's to the north and the technical areas to the south, while the "Intermediate Hub" (Year 9 – 10) locates all its technical areas to the east, and its learning areas to the west. This allows for maximum connection of the GLA facilities of the Middle Hub to the Outdoor Learning Area, and the Home Ec. Spaces of the Intermediate Hub to service functions in their newly created Outdoor Learning/Courtyard space.

A central "spine" like element contains the smaller withdrawal and "think tank" spaces, along with storage and toilet amenities through the middle of each Hub. The buildings will contain a mix of physically and visually open and closed spaces, allowing for withdrawal and retreat, or group and interactive learning communities to be established. All circulation will be external to the building, allowing for the maximum use of the internal floor area for teaching and learning.

Internal refurbishment and minor extensions to the west and east of the existing Administration facility (Building 6) are proposed to meet the School's need. These will provide a more obvious entry point to the Administration facilities from the car parking area, and for more staff accommodation within the "staff room" area.

To further improve the Performing Arts capabilities on the site, a small Performance Space is proposed for the western side of the existing Performing Arts Building (Building 8). This space will be formed by extending the existing roof line to create a taller more dramatic shape for the building, providing for both enhanced accommodation and performance opportunities within, but also providing an interesting and dramatic presence for the School along Kay Avenue.

External Form.

The proposed two new buildings are rectilinear in form, simply detailed, and restrained in their nature to mirror, in a contemporary way, the existing building forms and fabrics on the site.

The buildings feature large amounts of north and south glazing, opening up to large verandahs and outdoor learning areas. Raked roofs and ceilings integrating south/north lights will allow light penetration and ventilation to be achieved in the middle of the buildings, and provide visual interest. For the Intermediate Hub this form will also create a taller connection to Kay Avenue and provide clear direction as to the importance of this site to the community, while the Middle Hub will be the first building visible upon entrance off Stadium Drive. The roof line of the existing Performing Arts Building (Building 8) will be also extended to provide vaulted and taller space for performance, whilst also addressing and presenting an interesting and engaging face to Kay Avenue, an important part of the Project Brief.

The existing Administration Building (Building 6) will have improvements and extensions made to it to cater for the larger number of Teaching Staff, and also to provide a more contemporary façade to show school pride and a clearer engagement with the community. The elements of this are designed in such a way to make the facility more identifiable to visitors to the site.

The external forms of the buildings will be elegantly detailed and of a contemporary design complementary to the existing school facilities. They will be reflective of a modern, rural vernacular, while at the same time be dynamic and representative of the School's position within the community. The design will incorporate:

- Steel framed new buildings, with lightweight cladding of various types (pre-finished profiled steel sheeting, polycarbonate sheeting (not "twin wall" type) and painted fibre cement sheeting with thermal insulation and sarking.
- Roofs will be clad in prefinished profiled steel sheeting, with prefinished gutters, capping, and flashings.
- Aluminium framed doors and windows will be anodized finished, while all exposed steelwork structures will be paint finished.
- Verandahs will typically be unlined.
- Covered areas of Outdoor Learning Areas will be prefinished profiled steel cladding with timber internal linings and will be illuminated.

Where the two new extensions to the existing Buildings 6 and 8 are proposed, the materials for the extensions will be profiled sheet metal cladding to be complementary to the existing masonry cladding, but to provide a sensitive juxtaposition to the cream concrete masonry elements. Care will be paid to the junctions of these materials to highlight the differences between them. The form and shape of these elements will harmonise with the existing rectilinear and angular nature of the existing structures.

Interior Design.

The interior design of the proposed development will create contemporary, flexible, engaging spaces for learning. They will be furnished with fittings and equipment to support this learning. The design will incorporate:

- Steel framed, lined (plasterboard, fibre cement, plywood) partitions with differing types of insulation and varying numbers of linings for acoustics and thermal performance.
- Ceilings – mix of suspended grid & acoustic tile and flush plasterboard where and as appropriate.
- Mixed floor coverings – carpet, vinyl, tiling as appropriate.
- Limited fixed joinery (typically only where "wet" services are located) and fixed pinboards and whiteboards.
- FF&E to include loose furniture (chairs, tables, etc.), loose storage units, AV, etc. Where possible existing FF&E will be salvaged and reused where appropriate/suitable.
- Lighting, power, data, communications, security, mechanical ventilation and exhaust, toilet exhausts, fire detection and hydraulic services.

Building Materials.

The following summarises the proposed building materials for the Development:

Element.	Material.
Roof cladding – generally	Profiled metal sheet – Colourbond "Surfmist".
Wall cladding – generally	Profiled metal sheet – Colourbond "Evening Haze" or "Surfmist".
Wall cladding – shade structure	Profiled metal sheet – Colourbond "Woodland Grey" or "Monument".
Wall cladding – portion of Performing Arts Extension	Painted fibre cement sheet, final colour to be determined.
New external masonry – Administration Building Extension	Concrete masonry units to match or complement existing adjacent (cream/off white colour).
Gutters and downpipes	Colorbond steel – to be determined (dark colour similar to "Monument" or "Woodland Grey").
Door and window frames	Natural anodised aluminium.
End panel feature cladding	Profiled polycarbonate sheet – semi opaque "Frost"
Minor elements of wall cladding and shade elements	Painted fibre cement sheet, colour to be determined, neutral colours.
Internal face of shade structure – Hub Buildings	Timber lining
Internal face of entry canopy to Administration Building	Painted fibre cement sheet, "White".
External steelwork (columns, etc)	Painted – to be determined (dark colour)
External paving	Concrete unit paving – natural/charcoal grey.

Site services infrastructure.

There are upgrades required to the site's Electrical, Hydraulic and Fire Protection Services infrastructure in support of the Development. These include:

Electrical Services.

- Access provisions for SA Power Networks high voltage (HV) supply from to a new SA Power Networks pad-mounted transformer sized to accommodate the additional load required by the construction of the new buildings.
- Associated SA Power Networks standard services and fees for network access permits for connection of consumers mains cabling to the new transformer.
- Supply and installation of low voltage consumers mains cabling from the new SA Power Networks pad mounted transformer to the new site main switchboard.
- New Site Main Switchboard (SMSB) located adjacent to the new transformer incorporating SA Power Networks meter panel enclosure, retailer metering, energy sub-metering and cable entry vault.
- Low voltage submains cabling from the new Site Main Switchboard (SMSB) to the existing Main Switch Board (M\DB-1) via underground conduits and pit network.
- Submains and distribution switchgear and control gear assemblies (SCA) serving the new and building extensions buildings.
- Underground conduits, pits and associated trenching, back filling and making good of surfaces for reticulation of new electrical, communications and security cabling.

Hydraulic Services.

- A new septic tank is required to meet the wastewater demands of the school's expansion, as well as a new submersible pump set.
- The location of the existing hot water plant serving building 8 clashes with the new extension. The plant is approaching the end of its service life and will be replaced in a new location.
- A new neutralising pit will be required to the Middle Hub to serve the wet lab sinks. The Intermediate Hub will require a new grease arrestor to serve the food technology rooms.

Fire Protection Services.

- New connection to the SA Water main within Kay Avenue to provide fire water for the school's fire hydrant system.

03.2: Traffic, Parking and Pedestrian Impact Statement.

Please refer to Appendix A for a copy of the supporting Traffic study, assessment and recommendations. The study addresses the proposal to allow the co-location of the School's Middle School onto the existing Senior School campuses as well as the accommodation of Year 7 students. The redevelopment will result in a student enrolment capacity of 800 students.

The site is currently serviced by 41 parking spaces, provided within two parking areas. The proposed redevelopment will result in the construction of an additional 49 parking spaces as well as removal of the site's internal 'loop road' (currently used by chartered and government school bus services). Accordingly, bus set-down and pick-up movements are proposed to be relocated to Stadium Drive. Vehicle access to the School will be retained via the existing crossover on Stadium Drive.

Based upon DfE parking requirements, Glossop High School would have a theoretical requirement for 91 parking spaces (this requirement allows for both staff and visitor parking). In comparison, Berri Barmera Council's Development Plan has a theoretical requirement for 90 spaces. Accordingly, the provision of 90 spaces will satisfy Council's parking requirements and result in a shortfall of one space when assessed against the DfE's requirements. However, the shortfall of one space may be attributed to a Library staff member (given the shared use of the Library facilities) and would be readily accommodated within the Berri Library parking area.

With regard to bicycle parking, the DfE requires that bicycle parking provisions be provided for 10% of the student population. On the basis of a 510-student increase, the redevelopment would require an additional 51 spaces to be provided. While no additional spaces have been identified, adequate area is available to accommodate such parking. Specific locations can be identified during the detailed design stage of the project.

The proposed redevelopment will generate in the order of 153 to 255 additional peak hour trips. Due to the high portion of students utilising school bus services, it is expected that such additional volumes will not be realised by the proposed redevelopment. Nonetheless, such movements will readily be accommodated on Stadium Drive, Burgess Drive, Fernwick Road and Kay Avenue within the vicinity of the site. On-site observations indicate that adequate capacity is available on the adjacent road network and its associated intersections to accommodate the forecast additional movements.

In summary the site's existing safe and efficient pedestrian and bicycle access to, through and from the site will remain unchanged. The site is already exceptionally permeable for these types of traffic movement and will remain so. There is no provision within the Development for secure, undercover bicycle parking, but this will continue to be investigated as part of the ongoing realisation of the project. Existing roadways will be able to accommodate the expected volume and movement of traffic, and the Development shall have limited and negligible impact on traffic, parking and pedestrian movements and activities around itself.

03.3: Public Use of School Facilities.

The School currently has limited public access of facilities and the site outside of normal school hours.

As the site does not have a Gymnasium or Performing Arts Theatre space, the two facilities that typically have a reasonable amount of “out of hours” use by the public. It is quite a unique in this regard.

The School itself has a shared use arrangement with the Berri Barmera Council for access to the Alan Glassey Park facility, the Region’s main sporting facility, which supports its sporting requirements.

The proposed Development incorporates an extension to the School’s existing performing arts classroom/performance space, but this is not a facility of the type that would typically be used by the public.

Historically the School has had a close relationship with the neighbouring TAFE SA facilities and shares a number of spaces and functions with them.

The main public interface point between the School and the Community is the shared joint use library. Opened in 1999, this joint use facility provides for the needs of both the community and the Glossop High School staff and students. Despite the increasing numbers of students being added to the Berri campus as part of the Development, it is not envisioned that there will be an increased pressure put upon the Library facilities with the increase in online, digital and virtual learning resources.

It is not envisioned that there will be a dramatic change in the public use of facilities within the School’s campus as a result of the nature of the elements of the Development.

03.4: Crime Prevention Through Environmental Design.

The Development has been designed to maximise the benefits of solutions found through prevention of crime and other nefarious behaviours through the design of the built form and the environment within which it sits.

The School currently has a prominent position within the Berri township and is located on a main road. It is an open and transitable campus, and the new Development maintains this configuration. There have been no notable incidents on the campus in the 30 years of its being.

Utilising opportunities for natural surveillance the buildings are both inward and outward looking, providing clear sight lines and transparency. There are no fences or barriers, and limited blind corners or opportunities for hiding.

The landscape design will provide low lying shrubs and high canopy solutions to again minimise opportunities for hiding or surprise.

The lighting design, especially with regards to external lighting, will provide for suitable illumination of new walkways and the perimeter of the new built form. This lighting design will accommodate well placed lighting to ensure any problem areas are well lit, and will consider glare control and illumination levels to provide a suitable solution.

The new buildings will have multiple entry points, to suit the integration of internal and external learning opportunities. They will however be fitted with intrusion detection and access control. All entrances will be clearly illuminated and will provide clear sight lines.

The building envelope has been designed to limit roof access throughout the Development.

There is no CCTV coverage on the existing site, and it has not been considered for the Development.

The existing site is very well maintained and there are no parts that appear unkempt or unmonitored.

03.5: Statement of Energy Efficiency.

Ecologically sustainable development (ESD) statement.

ESD principles are to be incorporated to reduce energy consumption and associated greenhouse gas emissions, water, materials and waste over the life of the project. ESD principles also consider impact of projects on physical environment and ecosystem bio-diversity.

Feasible sustainable opportunities for energy efficiency as identified in the Government Building Energy Strategy 2013-2020, and with DPTI guide notes Ecologically Sustainable Development – Planning, Design and Delivery (G44) and Ecologically Sustainable Development – Sustainment of Existing Buildings (G45) will be incorporated.

ESD Initiatives included in this project:

Building ESD Initiatives.

The following elements have been and will continue to considered with the design and delivery of the project. They will align with the Government of South Australia's 'Government Buildings Energy Strategy 2013-2020' and the associated DPTI Guide Notes. Issues that have been and will continue to be actioned within the projects design, documentation detail and delivery will include:

- Taking a "whole of life cycle" approach to design, construction, maintenance and building management.
    - The design of the buildings has been created to be as efficient, flexible and adaptable as possible.
    - The construction of the new buildings will be done in such a manner to ease their construction, ongoing maintenance and ultimate demolition.
- Maximise the adaptive reuse and strategic redevelopment of existing buildings, building fabric and infrastructure.
    - Where possible and necessary, existing buildings and infrastructure have been reused and only supplemented with new where existing facilities do not exist to support the new requirements.
- Maximise use of passive design principles e.g. natural daylight, natural ventilation, solar and thermal mass.
    - Building designs are based on passive design measures to provide optimum comfort conditions with minimum energy input where practical.
    - The design of the new buildings orients to north to maximise access for natural daylight, and incorporates high level windows facing both north and south to bring light into the centre of the deep floor plates.
    - The high-level windows will also provide opportunities for good natural and cross flow ventilation.
    - The lightweight nature of the building fabric supported with an on-ground concrete slab will provide for excellent thermal massing opportunities.
    - The landscape Architect will grade-to-fall all landscaped areas to allow stormwater to naturally flow and provide passive irrigation to garden beds where possible. Drought tolerant plant species are selected for understory plantings.
- Design solutions for ease of future adaptability.
    - The design solution for the new buildings provides for minimal internal structural elements, providing excellent future adaptability of the environment contained within the building envelope.
- Maximising the use of existing, renewable, recyclable resources and locally sourced resources where suitable.

- Selection of materials and finishes when finalised will contribute to the use of existing, renewable, recyclable and locally sourced resources.
- Material selections will include consideration for Low VOC/pollutant options in materials and finishes to reduce air pollution/emissions from buildings, e.g. ozone depleting [Chlorofluorocarbons (CFC) and Hydro chlorofluorocarbons (HCFC)], greenhouse warming gases [Carbon Dioxide (CO2) and Oxides of Nitrogen (NOx)] and Volatile Organic Compounds (VOC's).
- Minimise resource consumption e.g. water, material and energy over the building life cycle.

- Minimise waste to landfill from construction, modification/refurbishment and maintenance activities where possible.
  - The Contractor will be required to submit a waste management plan and carry out waste management in accordance with the plan, and verify that waste has been disposed accordingly. Reports on a monthly basis will be produced by the contractor at monthly intervals. For recycling, submit details of the proposed recycling facility and submit evidence of delivery of recycled materials.
  - The Building Contractor shall reuse or handover materials and fixtures as specified.
  - Contractor to nominate the method of transport between the site and point of re-use, recycling, stockpiling, treating or disposal.
  - Contractor shall submit off-site disposal locations and provide details of the proposed locations for the disposal of material required to be removed from the site, and evidence of conformance with the requirements of relevant authorities.
  - For recycling, submit details of the proposed recycling facility and submit evidence of delivery of recycled materials including off-site disposal locations and evidence of conformance with the requirements of relevant authorities.

Building Services ESD Initiatives.

The following Building Services ESD initiatives are to be incorporated into the development.

- All air conditioning systems will be high efficiency type to minimise energy consumption and therefore CO2 emissions.
- Refrigerants used in the air conditioning systems will be CFC and HCFC free.
- All lighting to the new buildings will be LED type luminaries to minimise power consumption. Lighting will be fitted with occupant sensing technologies to only function when spaces are being used.
- Low flow tapware and sanitaryware used throughout the new buildings.
- Tanks and pump sets for rainwater re-use in irrigation and toilet flushing have been allowed for both the new Middle and Intermediate Hub buildings.
- Water harvesting strategies for the site will include rain water tanks. Water captured, and retained on site, will be used for garden irrigation where relevant.

The school currently supports an existing Photovoltaic (PV) Solar System consisting of 303 x 330w Jinko photovoltaic panels installed on the roof of Building 3 (Technical Studies and Home Economics) producing 99.9kW of solar energy. As such, it is understood that there will be no additional PV solar system provisions required as part of this project.

The whole of the works will be designed for compliance with NCC Section J requirements.

03.6: Locality Plan and Detailed Context Analysis.

We provide the following two drawings in support of the Locality Plan and Detailed Context Analysis:

- Glossop HS Feeder Schools.
- Locality Plan and Context Analysis.

Feeder Schools.

The Development has come about as a result of the requirement to consolidate Glossop High School onto a single site in Berri, and to support the State Government initiative of placing Year 7 students into High School sites. Whilst the bulk of the additional student cohort will come from the Glossop High School site in Glossop, the following sites will provide Year 7 students into the Berri Campus:

- Barmera Primary School.
- Berri Primary School.
- Glossop Primary School.
- Monash Primary School.
- Cobdogla Primary School.
- St Joseph's Primary School, Barmera (Private).
- Our Lady of the River Primary School, Berri (Private).

Locality Plan and Context Analysis.

The Development is occurring on the site of the existing Glossop High School campus in Berri.

The existing campus is located in the eastern part of Berri township, with its driveway access from Stadium Drive, but a frontage to Kay Avenue which is one of the main thoroughfares through Berri.

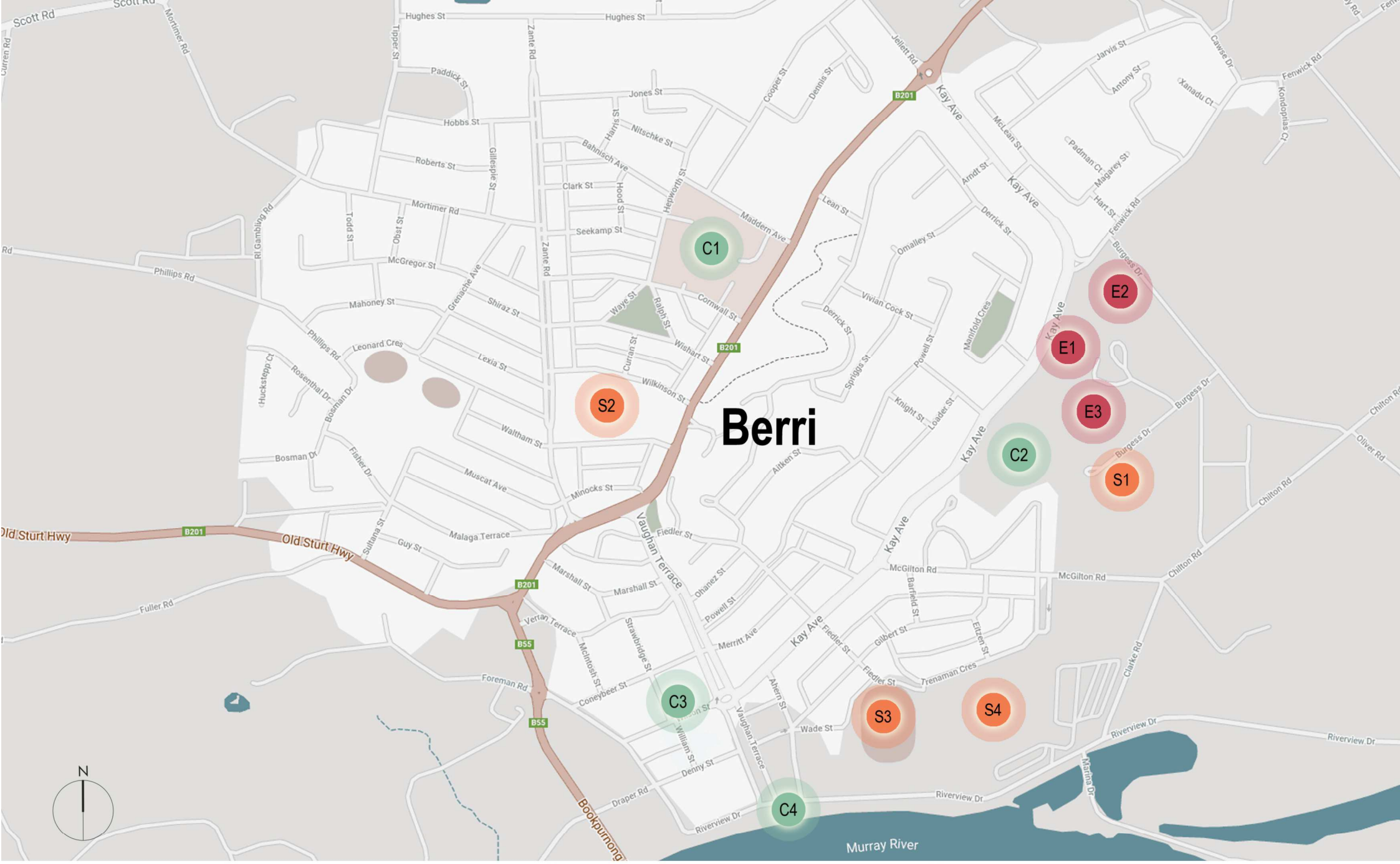
The existing campus is immediately adjacent to the Berri TAFE campus (to the north), Alan Glassey Park (Sports facilities) and the Berri Sports Stadium (to the east), and the Riverland Special School (to the south). The existing campus also supports a shared Community/School Library facility accessed from Kay Avenue.

The existing campus is also nearby to Riverland Central Plaza, Berri's main retail precinct, and 1.2kms from the Berri Barmera Council Chambers and Town Hall.

As an established part of the Berri community, the Glossop High School campus is already the main educational focus of the town, and the proposed Development will further enhance this position.

Legend

- education
  - E1 - Glossop High School
  - E2 - Our Lady of the River School
  - E3 - Berri Primary School
  - E4 - Glossop Primary School
  - E5 - Monash Primary School
  - E6 - Barmera Primary School
  - E7 - St. Joseph School
  - E8 - Cobdogla Primary School



Legend

- education
  - E1 - Glossop High School
  - E2 - Tafe
  - E3 - Riverland Special School
- community / retail
  - C1 - Riverland General Hospital
  - C2 - Riverland Central Plaza
  - C3 - Berri Barmera Council
  - C4 - Berri Visitor Information Centre
- sporting
  - S1 - Berri Sports Stadium
  - S2 - Hayden Stoeckel Swimming Pool
  - S3 - Berri Memorial Oval
  - S4 - Berri Cricket Grounds

03.7: Drawings / Plans.

The following Drawings / Plans form part of this Development Application:

Drawing Reference.	Drawing Title.
Greenway Architects.	
PD.01	Site Plan – Demolition.
PD.02	Site Plan – Proposed.
PD.03	Floor Plan – New Middle (Year 7-8) Hub.
PD.04	Floor Plan – New Intermediate (Year 9-10) Hub.
PD.05	Floor Plan – Building 6 – Administration Building Extension. Floor Plan – building 8 – Performing Arts Building Extension.
PD.06	Elevations – New Middle (Year 7-8) Hub.
PD.07	Elevations – New Intermediate (Year 9-10) Hub.
PD.08	Elevations – Administration Building Extension.
PD.09	Elevations – Performing Arts Extension.
PD.10	Sections – New Middle (Year 7-8) Hub.
PD.11	Sections – New Intermediate (Year 9-10) Hub.
PD.12	Sections – Performing Arts Extension.
PD.13	Site Perspective – Looking from North.
PD.14	Perspectives – New Middle (Year 7-8) Hub.
PD.15	Perspectives – New Intermediate (Year 9-10) Hub.
PD.16	Perspectives – Performing Arts Extension.
PD.17	Perspectives – Administration Building Extension.
Birdseye Studios. (Landscape)	
	Landscape Concept Plan – Cover sheet
19028 – SK01	Intermediate Hub Outdoor Learning.
19028 – SK02	Middle Hub Outdoor Learning.
Bestec. (Services)	
56382 – E-02	Electrical Services – Proposed Site Plan.

04: Appendices.

The following documents are provided as Appendices to this report.

a) Traffic and Parking Report.
b) Stormwater Management Plan.
c) Drawings (as listed in Section “03.7: Drawings / Plans”).

GLOSSOP HIGH SCHOOL REDEVELOPMENT
12 STADIUM DRIVE, BERRI

TRAFFIC AND PARKING REPORT

CIRQA™

DISCLAIMER

DOCUMENT CONTROL

Report title:	Glossop High School Redevelopment, 12 Stadium Drive, Berri Traffic and Parking report
Project number:	19177
Client:	Greenway Architects (SA) Pty Ltd
Client contact:	Simon Frost

Version	Date	Details/status	Prepared by	Approved by
Draft	17 Jan 20	For review	TAW	BNW
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CIRQA Pty Ltd
ABN 12 681 029 983
PO Box 144, Glenside SA 5065
150 Halifax Street, Adelaide SA 5000
(08) 7078 1801
www.cirqa.com.au

1. INTRODUCTION

CIRQA has been engaged to provide design and assessment advice for the amalgamation of Glossop High School's Senior and Middle School Campuses at 12 Stadium Drive, Berri. Specifically, CIRQA has been engaged to provide advice in respect to traffic and parking aspects of the proposal.

This report provides a review of the subject site, the proposed development, its access and parking provisions and the associated traffic impact on the adjacent road network. The traffic and parking assessments have been based upon plans prepared by Greenway Architects (SA) Pty Ltd (drawing no. DA.72A, dated 8 November 2019, refer Appendix A).

2. BACKGROUND

2.1 SITE LOCATION

The subject site is located on the south-eastern side of Kay Avenue, Berri. The site is bound by TAFE SA's Berri Campus to the north-east, Stadium Drive to the south-east, the Riverland Central Plaza to the south-west and Kay Avenue to the north-west. The Berri Barmera Council's Development Plan identifies that the site is located within a District Centre Zone.

The subject site is primarily occupied by Glossop High School's Senior Campus. However, it should be noted that the Berri Library is co-located on the subject site (northern corner), with Glossop High School sharing the library's facilities. Furthermore, the Riverland Special School is also co-located on the subject site adjacent the south-western boundary, sharing Glossop High School's driveway and circulation roadways.

2.2 EXISTING OPERATION

A total of 680 students are enrolled at Glossop High School across two campuses, namely:

- Middle School Campus (535 Old Sturt Highway, Glossop) – accommodating approximately 370 Years 8 to 10 students; and
- Senior School Campus (12 Stadium Drive, Berri) – accommodating approximately 290 Year 11 and 12 students.

In the order of 68 Full-Time Equivalent (FTE) staff are currently employed across both sites (based upon data obtained from the MySchool website).

It should be noted that Glossop High School is currently in partnership with The Berri Barmera Council in relation to the shared use of its Sporting Complex within the adjacent Alan Glassey Recreational Park (Regional Innovation and Sports Precinct).

2.3 ADJACENT ROAD NETWORK

Kay Avenue is a collector road under the care and control of The Barmera Berri Council. Adjacent the site, Kay Avenue comprises two traffic lanes in each direction, separated by a raised central median. On-street (unrestricted) parking is permitted on both sides of Kay Avenue. A paved footpath is provided on the south-eastern side of Kay Avenue, while a gravel path is located on the north-western side. Bicycle movements are accommodated on the adjacent pedestrian paths as well as on Kay Avenue under a standard shared arrangement. A 50 km/h speed limit applies on Kay Avenue.

Fernwick Road is a local road under the care and control of The Barmera Berri Council. Within the vicinity of the site, Fernwick Road comprises an 8.5 m wide carriageway (approximate), accommodating two-way traffic movements. On-street parking is accommodated on the south-eastern side within unrestricted angled (45-degree) parking spaces. The north-western side is subject to 'No Stopping' restrictions from 8:00 am to 9:00 am and from 3:00 pm to 4:00 pm, Monday to Friday. Unrestricted (parallel) parking is facilitated outside of these periods. Gravel footpaths are provided on both sides of Fernwick Road, accommodating both pedestrian and bicycle movements. Bicycle movements are also accommodated on-street under a standard shared arrangement. Traffic data collected by Council (November 2019) indicates that Fernwick Road has an Annual Average Daily Traffic (AADT) volume in the order of 1,900 vehicles per day (vpd). A 50 km/h speed limit applies on Fernwick Road in the vicinity of the site.

Kay Avenue and Fernwick Road intersect at a priority controlled (Give Way) T-intersection, at which Kay Avenue forms the priority approaches. It should be noted that Fernwick Road intersects with Kay Avenue on a large bend, around which the Kay Avenue carriageways are cambered. Left-turn movements from Kay Avenue are accommodated via a high-angle left-turn treatment, while right-turn movements (from Kay Avenue) are accommodated via a separated right-turn deceleration lane. All turning movements are permitted at the intersection.

Burgess Drive is a local road under the care and control of The Barmera Berri Council. Within the vicinity of the site, Burgess Drive comprises a 7.6 m wide carriageway (approximate) facilitating two-way traffic movements. Unrestricted (parallel) parking is permitted on both sides of Burgess Drive. A sealed shared path is provided on the south-western side of Burgess Drive, facilitating both pedestrian and cyclist movements. Bicycle movements are also accommodated

on Burgess Drive under a standard shared arrangement. Traffic data collected by Council (November 2019) indicates that Burgess Drive has an AADT volume in the order of 1,000 vpd. Burgess Drive is subject to a 50 km/h speed limit.

Fernwick Road and Burgess Drive intersect at a priority controlled (Give Way) T-intersection, at which Fernwick Road forms the priority approaches. All turning movements are permitted at the intersection.

Stadium Drive is a 370 m long local road (terminating in a cul-de-sac) under the care and control of The Barmera Berri Council. Adjacent the site, Stadium Drive comprises a 7.8 m wide carriageway (approximate) facilitating two-way traffic movements. Angled (90-degree) parking is provided on both sides of Stadium Drive for approximately 145 m (accommodating in the order of 110 vehicles). Concrete footpaths are provided adjacent the angled parking spaces, facilitating both pedestrian and bicycle movements. The Burgess Drive shared path also continues adjacent Stadium Drive for approximately 100 m (north-western side). Bicycle movements are also accommodated on Stadium Drive under a standard shared arrangement. Traffic data on Stadium Drive was not collected by Council, however it is expected that AADT volumes (east of the School's access) would be in the order of 500 to 600 vpd. Stadium Drive is subject to a 50 km/h speed limit.

Stadium Drive forms the continuation of Burgess Drive at a 90-degree bend. An access to an informal gravel parking area intersects on the bend (this is the sole access to the gravel parking area). All turning movements are permitted to/from the gravel parking area.

It should be noted that approximately 50 m from the eastern end (beginning) of Stadium Drive, an access road (through the Alan Glassey Recreation Park) provides a 'cut-through' to Chilton Road.

Figure 1 illustrates the location of the subject site and associated access with respect to the adjacent road network.

Figure 1 – Location of the subject site and existing access with respect to the adjacent road network

Figure 2 illustrates the location of Glossop High School in relation to the site's internal roadways, Riverland Special School and Berri Library.

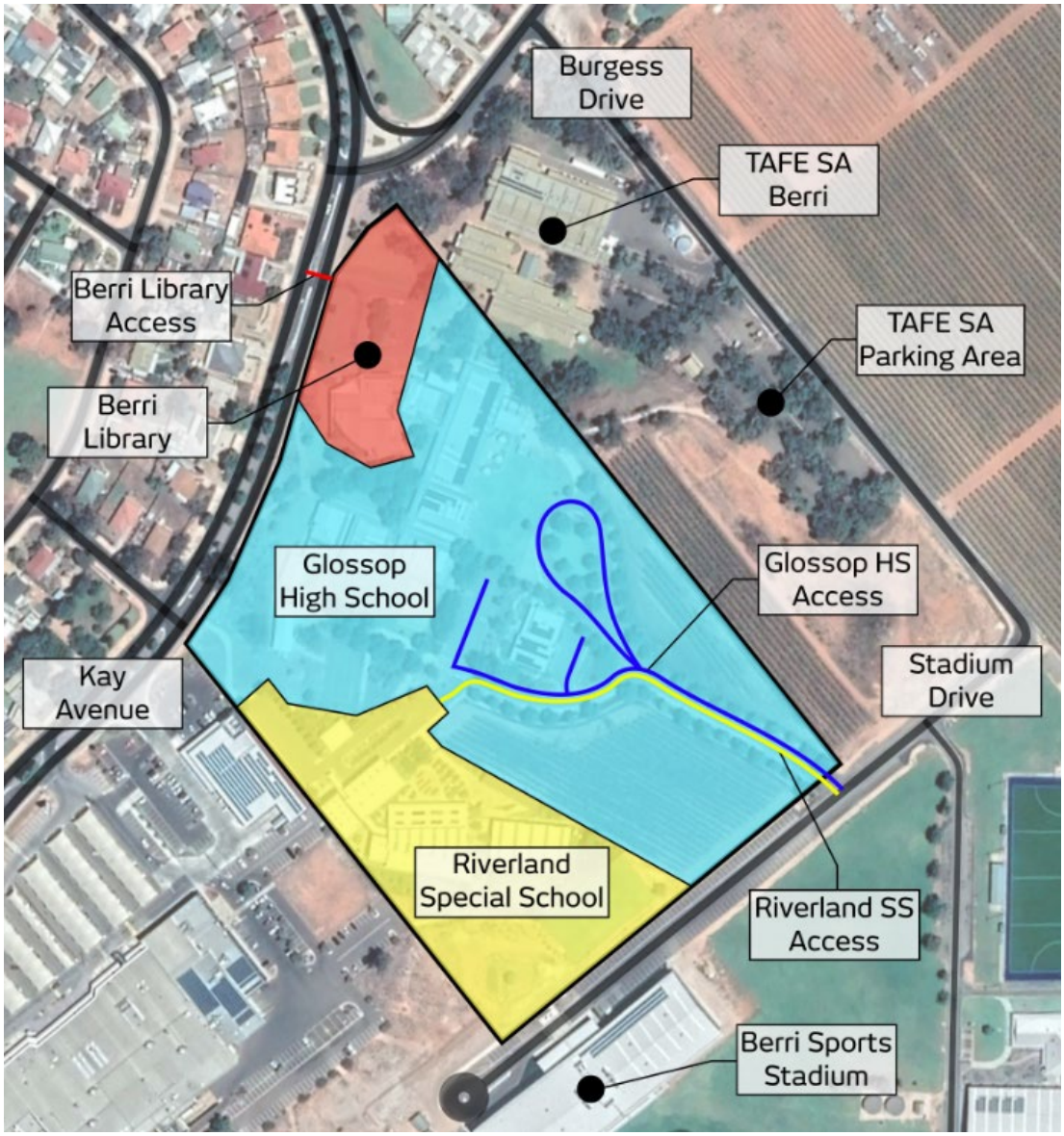


Figure 2 – Location of Glossop High School in relation to the site's internal roadways, Riverland Special School and Berri Library

2.4 ACTIVE TRANSPORT

Footpaths are provided on Kay Avenue, Fernwick Road and Stadium Drive, accommodating both pedestrian and bicycle movements. It should also be noted that a shared path is provided adjacent Burgess Drive, also accommodating such movements. Pedestrian access to the School is provided via Kay Avenue and Stadium Drive, as well as via the adjacent TAFE Campus.

It should be noted that pedestrian refuge is provided on Kay Avenue adjacent the site. The refuge facilitates two-stage pedestrian crossing movements across the dual-carriageway roadway.

2.5 PUBLIC TRANSPORT

The School is serviced by numerous School Bus routes operating in and around Berri and the broader Riverland region. Services also currently operate between the two Glossop High School campuses.

2.6 SITE ACCESS AND PARKING

Glossop High School (Senior Campus) is serviced by two primary parking areas, (both of which are located centrally within the site) providing a total of 41 parking spaces. On-site parking is currently provided for staff and visitors associated with Glossop High School. Senior school students are not permitted to park on the subject site (due to DfE policy).

Vehicle access to the School's parking areas are provided via the School's common driveway, which obtains access to the broader road network via Stadium Drive. All turning movements are permitted at the School's common driveway access, however the majority of movements are right-in and left-out movements due to Stadium Drive being a cul-de-sac.

It should be noted that an additional parking area is located in the northern corner of the site. This parking area services the Berri Library and is not used by Glossop High School (parents and caregivers are encouraged to use the School's Stadium Drive access for set-down and pick-up movements as well as generally accessing the School). Vehicle access to this parking area is provided via a left-in/left-out only access on Kay Avenue.

Due to the School having a single access on Stadium Drive, all vehicle movements associated with the School's operation are required to access the site via Stadium Drive (i.e. light and service/commercial vehicle movements).

School bus movements (both chartered and government services) are currently accommodated on-site within a large ring-road at the centre of the site. Access to the ring-road is obtained from the site's common driveway.

2.7 SITE OBSERVATIONS

Site observations of set-down and pick-up movements were undertaken at both the Senior School Campus and Middle School Campus during set-down and pick-up.

With regard to the Middle School Campus (Year 8 to Year 10 students), the vast majority of students were observed to utilise School Bus services to travel to and from school. A small portion of students were observed arriving and departing school via private vehicle, with a maximum demand in the order of 15 vehicles associated with such movements.

A number of 'P Plate' drivers were also observed collecting students from the Middle School Campus. It is assumed that such drivers are older siblings and are students at Glossop High School's Senior School Campus (as some students were observed wearing the same uniform).

The peak set-down and pick-up periods at the Middle School Campus were observed to operate in an orderly manner and were readily accommodated immediately adjacent the site.

With regard to the Senior School Campus (Year 11 and 12 students), a large portion of students were also observed utilising School Bus services, with a maximum of five buses observed on-site at once. Negligible set-down/pick-up movements (in the order of three to four at any one time) were observed via private vehicle.

However, a number of students were observed arriving and departing the site as the driver of a private vehicle, with students parking within the adjacent TAFE campus. It is understood that Glossop High School has an informal agreement with Berri TAFE Campus to allow such parking to occur.

Specifically, in the order of 50 vehicles were estimated to be associated with students of Glossop High School, with additional parking spaces available. As such, it is considered that adequate parking is available to accommodate existing demands associated with TAFE SA's Berri campus as well as student demands associated with Glossop High School

Several students were also observed walking to/from the Senior School Campus. Such movements predominantly occurred via Kay Avenue to the east and west of the site, while a number of students were also observed crossing Kay Avenue to access the residential area north-west of the site.

In addition to the above, the broader road network within the vicinity of Glossop High School's Senior School Campus was also observed. These observations were undertaken as a result of numerous comments received relating to existing issues on the adjacent road network. It should be noted that road network observations were not undertaken within the vicinity of the Middle School Campus due to the campus relocating to Berri (further detail is provided in Section 3.0).

The road network observations identified the following key areas of concern within the vicinity of the site:

- As identified in Section 2.3, Stadium Drive forms the continuation of Burgess Drive around a 90-degree bend. Buses associated with the School were observed using the entire width of Burgess Drive to negotiation the bend, due to inadequate localised widening. As such, this creates a potential for conflict between oncoming vehicles (it is understood that a low-speed incident involving a School Bus has already occurred in this location). In order to mitigate the conflict risk, it is recommended that localised widening of the Burgess Drive/Stadium Drive bend be undertaken (by the relevant road authority) to allow simultaneous movements. Figure 3 illustrates a chartered School Bus negotiating the Burgess Drive/Stadium Drive bend.

Figure 3 – A chartered School Bus negotiating the Burgess Drive/Stadium Drive bend

- As noted in the Section 2.3, Fernwick Road intersects with Kay Avenue on a large bend. In this location (i.e. through the intersection), the carriageways of Kay Avenue are both superelevated in a 'saw tooth' configuration (Figure 4 illustrates the camber of the carriageways in a 'saw tooth' configuration). Due to the configuration of the superelevation, large vehicles (such as 12.5 m School Buses) scrape with the pavement when turning right from Fernwick Road. In order to avoid this, drivers were observed turning left from Fernwick Road and using the adjacent residential area (Derrick Street and Ardnt Street) in order to travel in the desired direction. To address this, it is recommended that the 'saw tooth' configuration of the superelevation be altered by the relevant road authority to accommodate the ground clearance requirements of 19.0 m general access vehicles (the largest vehicle legally permitted to use the intersection).

Figure 4 – The separately cambered 'saw tooth) carriageways (emphasised in yellow) of Kay Avenue at its intersection with Fernwick Road

- The shared path adjacent the southern portion of Burgess Drive is provided at the same level as the roadway pavement. The shared path was observed to be constructed of the same material as the adjacent roadway and poorly delineated from the vehicle travel lanes. Observations also identified vehicles (including buses) parking on the shared path while waiting for the school period to finish (Figure 5 illustrates a bus parked on the shared path). Typically, shared paths are provided such they are easily delineated from the adjacent traffic lanes via a raised median treatment or the path raised altogether. Accordingly, it is recommended that a treatment be installed to prevent vehicle access to the shared path (directly from the road carriageway) and to provide further delineation.

Figure 5 – A chartered School Bus parked on the shared path adjacent the south portion of Burgess Drive

- Numerous vehicles (both directly related to Glossop High School and the Berri TAFE campus) were observed using Alan Glassey Recreation Park as a 'cut-through' in order to gain access to Chilton Road. Vehicles observed

using the 'cut-though' included both private vehicles as well as chartered bus services. However, it is considered that thought would have been given to such movements occurring when constructing the access road and that Council would be aware that such movements are currently occurring.

3. PROPOSED DEVELOPMENT

3.1 LAND USE AND YIELD

The proposal comprises the redevelopment of Glossop High School's Senior School Campus to enable to co-location of the Middle School Campus and additional accommodation of Year 7 students. The redevelopment will result in the site's student capacity increasing to 800 students and 80 Full-Time Equivalent (FTE) staff.

The increased student population will be facilitated via the construction of new general learning areas, a performing arts studio, home economics and technology areas. Extensions to the site's administration facilities are also proposed.

The proposed redevelopment will be serviced by a total of 90 parking spaces located throughout the site. Specifically, 41 spaces will be constructed adjacent the site's common driveway while one of the site's central parking areas will be extended to provide an additional eight spaces.

The additional facilities proposed to be constructed as part of the redevelopment will result in the removal of the site's internal ring-road and associated bus set-down/pick-up area. This is due to the ring-road occupying a large portion of land centrally within the site.

Bus set-down/pick-up movements are proposed to be relocated to Stadium Drive, southwest of the site's Stadium Drive access. Students will be required to walk on a pedestrian path located on the southern side of the site's driveway, to Stadium Drive. It is proposed that buses store across approximately 60 m of angled parking spaces (capacity for four to five buses) while setting down and picking up students. In order to facilitate such an arrangement, it is proposed that 'Bus Zone' parking controls be implemented on the subject section of Stadium Drive (from 8:00 am to 9:00 am, and from 2:30 pm to 4:00 pm). A plan illustrating the proposed bus movements is attached in Appendix B.

On-site observations identified negligible parking demands on Stadium Drive during the proposed 'Bus Zone' time periods (a maximum demand for three vehicles, which were observed parking immediately adjacent the Berri Sporting Complex). Accordingly, the proposed 'Bus Zone' is considered to have minimal impact on parking availability during set-down and pick-up periods.

It should be noted that a similar arrangement (with the same linemarking) has been installed by the City of Onkaparinga at Port Noarlunga. Specifically, angled (90 degree) parking are subject to 'Bus Zone' parking restrictions between 9:00 am and 3:30 pm on school days to allow student access to Port Noarlunga Beach (for uses such as excursions etc.).

Furthermore, it is not uncommon for bus set-down and pick-up movements to be accommodated on-street adjacent a school site (i.e. bus set-down/pick-up movements not accommodated on-site). Similar arrangements are in place at numerous metropolitan and rural schools around South Australia including (but limited to) Nuriootpa High School, Balaklava High School, Murray Bridge High School and Whyalla High School. On this basis, it is considered that similar arrangements to the proposal are commonplace throughout South Australia and that such arrangements are acceptable to the DfE and regional Councils.

3.2 ACCESS AND PARKING DESIGN

The site's access points will remain as per their existing configuration. Detailed design of the new parking areas will be undertaken in accordance with the requirements of the relevant Australian Standards including the Australian/New Zealand Standards for "*Parking Facilities Part 1: Off-street car parking*" (AS/NZS 2890.1:2004) and "*Parking Facilities – Part 6: Off-street parking for people with disabilities*" (AS/NZS 2890.6:2009).

Pedestrian and bicycle connectivity to and from the site will remain unchanged. Within the site, footpaths will be constructed around new buildings, providing pedestrian connectivity to existing footpaths and the external network.

3.3 REFUSE COLLECTION, SERVICES AND EMERGENCY VEHICLES

Emergency, service and refuse collection vehicle access will be retained via the existing access point on Stadium Drive. Such vehicles will access and service the site as per the existing scenario.

4. PARKING ASSESSMENT

4.1 CAR PARKING

The Department for Education (DfE) identifies the following requirement applicable to Glossop High School:

- one parking space per FTE staff member; PLUS
- two spaces for use by persons with disabilities; PLUS
- an additional 10% of the above total for use by visitors.

It should be noted that the Berri Barmera Council's Development Plan identifies a parking rate of "*one space per full time employee plus one space for wheelchair users plus an additional 10 per cent* [sic] *of the total for visitors*". Given that this rate is almost identical to that of the DfE (albeit marginally lower), the DfE rate has been adopted.

On the basis of the above rate (and assuming 80 FTE staff), Glossop High School would have a requirement for 90.2 (rounded up to 91) parking spaces to be provided on-site. Given that 90 parking spaces are proposed, the redevelopment will result in a theoretical shortfall of one parking space. However, given the shared use of the Berri Library (i.e. used by Glossop High School and the broader community), it is considered that an 'overlap' of staff would occur. As such, the one space shortfall could be attributed to a library staff member and would be accommodated within the Berri Library parking area.

However, it should be noted that neither the DfE nor The Berri Barmera Council's parking rates take into consideration demands associated with set-down and/or pick-up movements. Given that neither rate specifies a requirement for such demands, it is considered that both parties acknowledge that short-term parking demands associated with set-down and pick-up movements are able to be accommodated on-street within the vicinity of the site.

In order to ensure that adequate on-street capacity is available within the vicinity of the site, an assessment to determine the forecast increase to set-down/pick-up demands has been undertaken. Surveys undertaken by CIRQA at school sites indicate a parking rate of one space per seven to ten students (i.e. 0.1 to 0.14 spaces per student) as appropriate for use in determining set-down/ pick-up demands. Actual rates realised are dependent on a variety of factors including site location, active and public transport facilities/provisions, and socio-economic considerations (with private schools typically generating at the higher end of the observed rates than public schools).

However, due to the rural location of Glossop High School, the site is considered to have a comparatively higher portion of students utilising chartered and government buses. As noted in Section 2.7, minimal private vehicle set-down and pick-up movements were observed (particularly at the Senior School Campus). On this basis, it is considered that adoption of the above rate would result in a significant over-estimation of the School's set-down and pick-up demands.

By way of a first principles assessment, Glossop High School's Middle School Campus was observed to have a peak set-down/pick-up demand in the order of 15 vehicles (associated with 370 students). If the increase in student population (120 students) is assumed to be solely within the middle school year levels (i.e. Years 8 to 10), the site's peak set-down/pick-up demand could be assumed to be

25 vehicles once the proposed redevelopment is complete (inclusive of existing demands associated with both the Middle and Senior School campuses). Such demands would be readily accommodated on Stadium Drive within the existing angled parking spaces (as verified by site observations).

4.2 BICYCLE PARKING

The DfE identifies that adequate bicycle parking should be provided on-site to allow for 10% of the School's student enrolment. On the basis of an additional 510 students located at Glossop High School's Berri Campus, the proposed redevelopment would have a theoretical requirement for an additional 51 bicycle parking spaces. Such provisions can be readily accommodated on-site (given that there is ample room available across the site) and can be identified during the detailed design stage of the project.

5. TRAFFIC ASSESSMENT

Traffic generation associated with public high schools is typically in the order of 0.3 to 0.5 trips per student (inclusive of trips associated with staff and visitors). On this basis, it is forecast that the co-location of the two campuses and additional student and staffing populations (i.e. 510 additional students located at Glossop High School's Berri Campus) could generation in the order of 153 to 255 additional vehicle movements during the morning and afternoon set-down and pick-up periods (respectively).

However, as noted in Section 2.7, Glossop High School was observed to have a small portion of set-down and pick-up movements occurring via private vehicle, with the majority of students arriving and departing from the site via chartered or government bus services. Accordingly, the above traffic forecasts are considered to be high and would likely not be realised.

Nonetheless, the forecast traffic volumes would be readily accommodated on Stadium Drive, Burgess Drive, Fernwick Road and Kay Avenue with minimal impact upon their operation and performance. Importantly, the additional volumes would be within that typically envisaged of a local road and are not expected to alter the hierarchy or function of the adjacent road network.

Observations of conditions on Stadium Drive, Burgess Drive, Fernwick Road and Kay Avenue identified that the School's set-down and pick-up movements were readily accommodated, with additional capacity available to accommodate the forecast additional movements. Accordingly, it is forecast that the additional movements generated by the redevelopment of Glossop High School would be accommodated with minimal impact upon the adjacent road network's operation.

6. SUMMARY

The proposal comprises the redevelopment of Glossop High School to allow the co-location of the School's Middle School and Senior School campuses as well as the accommodation of Year 7 students. The redevelopment will result in a student enrolment capacity of 800 students. The increase in the on-site student population will be accommodated via the construction of a new general learning areas, performing arts, home economics and technology areas as well as administration facilities.

The site is currently serviced by 41 parking spaces, provided within two parking areas. The proposed redevelopment will result in the construction of an additional 49 parking spaces as well as removal of the site's internal 'loop road' (currently used by chartered and government school bus services). Accordingly, bus set-down and pick-up movements are proposed to be relocated to Stadium Drive. Vehicle access to the School will be retained via the existing crossover on Stadium Drive.

Based upon DfE parking requirements, Glossop High School would have a theoretical requirement for 91 parking spaces (this requirement allows for both staff and visitor parking). In comparison, Berri Barmera Council's Development Plan has a theoretical requirement for 90 spaces. Accordingly, the provision of 90 spaces will satisfy Council's parking requirements and result in a shortfall of one space when assessed against the DfE's requirements. However, the shortfall of one space may be attributed to a Library staff member (given the shared use of the Library facilities) and would be readily accommodated within the Berri Library parking area.

With regard to bicycle parking, the DfE requires that bicycle parking provisions be provided for 10% of the student population. On the basis of a 510-student increase, the redevelopment would require an additional 51 spaces to be provided. While no additional spaces have been identified, adequate area is available to accommodate such parking. Specific locations can be identified during the detailed design stage of the project.

The proposed redevelopment will generate in the order of 153 to 255 additional peak hour trips. Due to the high portion of students utilising school bus services, it is expected that such additional volumes will not be realised by the proposed redevelopment. Nonetheless, such movements will readily be accommodated on Stadium Drive, Burgess Drive, Fernwick Road and Kay Avenue within the vicinity of the site. On-site observations indicate that adequate capacity is available on the adjacent road network and its associated intersections to accommodate the forecast additional movements.

APPENDIX A

PLAN PREPARED BY GREENWAY ARCHITECTS DATED 8 NOVEMBER 2019

NEW PROPOSAL

REF. DESCRIPTION

- ADMINISTRATION BUILDING UPGRADE & EXTENSION
- NEW MIDDLE LEARNING HUB (Yr 7- 8)
- NEW INTERMEDIATE LEARNING HUB (Yr 9 -10)
- NEW PERFORMING ARTS
- REFURBISHED LEARNING SPACES
- NEW LANDSCAPING
- NEW CARPARK (BITUMEN/ GRAVEL)
- NEW RUBBLE ACCESS ROAD
- EXISTING TO REMAIN
- EXISTING COVERED WAY/ NEW FOOTPATH
- RELOCATED/ NEW SHED
- SCHOOL MOVEMENT

EXISTING CONDITIONS

1	LIBRARY	SH2	COLORBOND STORE
2	AMENITIES BLOCK	SH3	COLORBOND STORE
3	TECH STUDIES & HOME EC	SH4	TIMBER PERGOLA
4	TECHNOLOGY STUDIES	SH5	TIMBER SHADE STRUCTURE
5	ENVIRONMENTAL STUDIES	SH6	TIMBER SHELTER
6	ADMINISTRATION	SH7	TIMBER SHELTER
7	GENERAL TEACHING	SH8	TIMBER SHELTER
8	DRAMA STUDIES	SH9	STEEL BBQ SHELTER
9	STORE	SH11	TIMBER PERGOLA
10	LANGUAGE CENTRE	SH12	GALV IRON SHELTER
11	TRADE TRAINING CENTRE		

TAFE

SPECIAL OPTIONS
110m2

RELOCATED
SHED 9

RUBBLE ROAD

NEW RUBBLE ACCESS ROAD

NEW
BUS
ENCLOSURE

NEW CARPARK
41 SPACES

EXISTING SIGN
TO REMAIN

STADIUM DRIVE

OUTDOOR
LEARNING
AREA

NEW
MIDDLE
HUB
1020m2

NEW
SEPTIC

septic
tank

SH12

EX
CARPARK
24 SPACES

NEW CARPARK
8 SPACES

EX
CARPARK
10 SPACES

ADMINISTRATION
EXTENSIONS
135m2

EX
CARPARK
31 SPACES

EX
VBALL

KAY AVENUE

NEW
PERF
ARTS
270m2

OUTDOOR
LEARNING
AREA

NEW
INTERMEDIATE
HUB
1020m2

POTENTIAL
FUTURE
SHED

EX
CONCRETE
COURT

RIVERLAND
SPECIAL
SCHOOL

STADIUM

PRELIMINARY

GREENWAY
ARCHITECTS

PROJECT NO: G19049

SCALE 1:500 @ A1

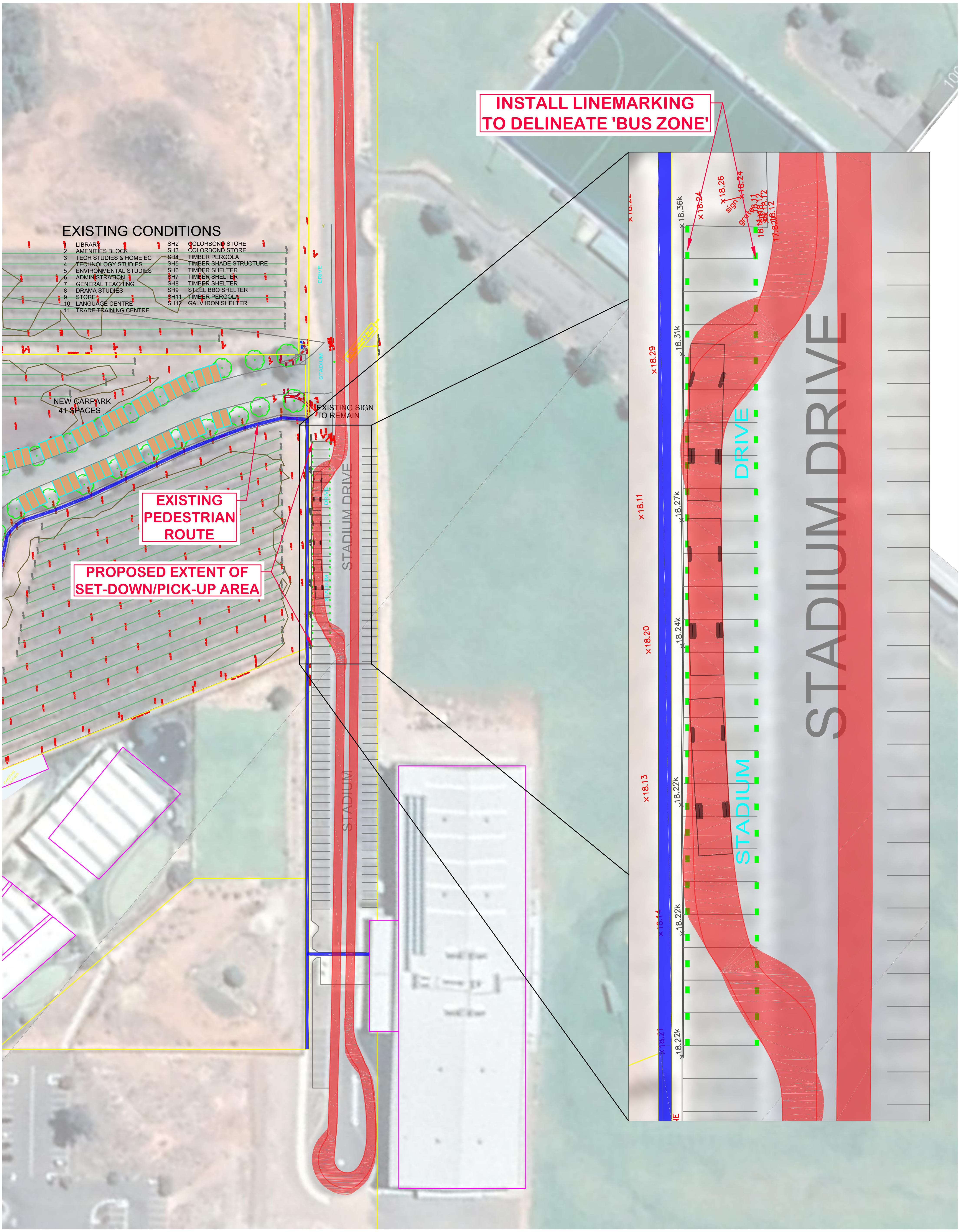
0 5 10 25m

GLOSSOP HIGH SCHOOL REDEVELOPMENT
3 KAY AVENUE BERRI SA

PROPOSED SITE PLAN
SD.72A
ISSUE DATE: 8.11.2019

APPENDIX B

PROPOSED BUS SET-DOWN/PICK-UP MOVEMENTS



DRAWING AMENDMENTS				
REV	DATE	DESCRIPTION	DWN	CHK
A	17/01/2020	CONCEPT DESIGN	TAW	BNW

C19177_02.DWG 17/1/2020 2:14 PM

CIRQA™

ABN: 12 681 029 983 | PO Box 144, Glenside SA 5065 | E: info@cirqa.com.au

N
1:1,000
@ A3

GLOSSOP HIGH SCHOOL

12 STADIUM DRIVE, BERRI

BUS SET-DOWN/PICK-UP ZONE

PROJECT # 19177 SHEET # 02_SH01

CONSULTING
ENGINEERS

15th January 2020 **Reference:** 2019-9034

Simon Frost
Greenway Architects
207 Angas Street,
Adelaide SA 5000
Email: s.frost@greenwayarchitects.com.au

Dear Mr. Frost,

PRELIMINARY STORMWATER DRAINAGE ANALYSIS REPORT FOR DEVELOPMENT AT GLOSSOP HIGH SCHOOL, BERRI

MLEI have been engaged to assess the implications of a potential development at the Glossop High School Berri campus site.

Site Description

The site is noted to generally have been constructed in 1997, however there have been various alterations across the site, both to the grounds themselves and the structures up to present date – particularly separation and creation of a new Riverland Special School on site.

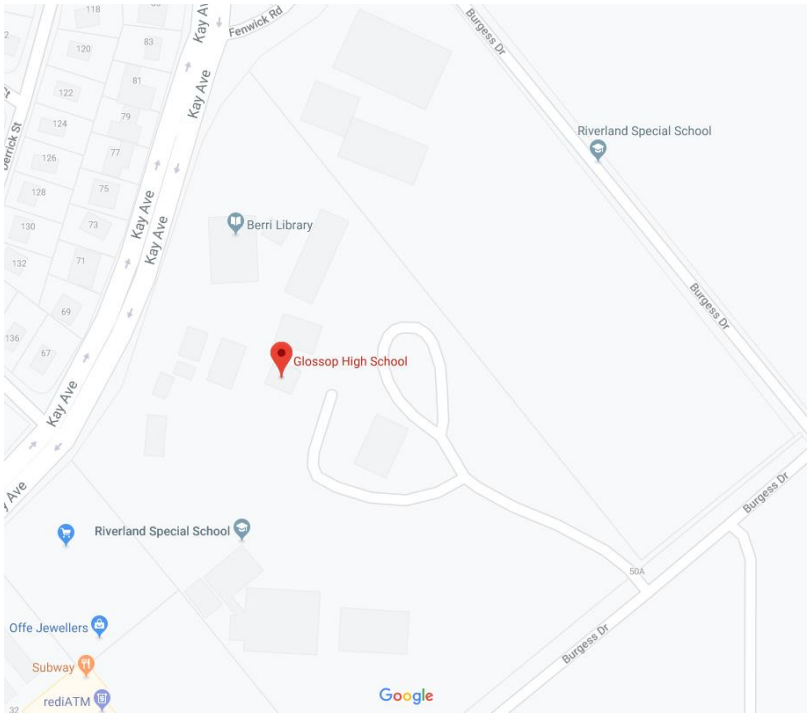


Figure 1: Location SA Viewer Topographical Map of Site

There are landscaping elements including retaining walls, raised and level garden beds, basketball courts, volleyball court and awnings, The awnings around the site were both standalone timber framed as well as steel framed construction which was connected to the main building structures throughout the site.

Figure 2: Location SA Viewer Satellite Map of Site

The site was generally found to fall from Kay Avenue to the west back to Stadium Drive in the east. The initial 15 meters from Kay Avenue has a typical fall of approximately 1:7.5 (or 2 meters over 15 meters). However after this point, the typical fall across the site is 1:500 for approximately 50 m where there are steps and low height retaining, after which the fall is approximately 1:800. There was noted to be local low points in paving promoting drainage to grated inlet pits throughout the site, with no evidence of water damage as a result of ponding water. During the initial site visit, there were no issues raised with local drainage of water on the site from the school personnel present.

The site stormwater overland flow path runs from west to east following the natural lay of the land – though there is some north to south crossfall additionally. Typically landscaping areas separate paving and buildings which would be assumed as permeable area. To the east of the school building site there is a large expanse of landscaped (grass) area which has local falls to the pits here, which is the point which the final underground stormwater system is fed prior to exiting the site.

The school area of the site is currently typically covered with a combination of asphalt surface, segmental paving and jointed concrete paving where not landscaped.

Civil & Stormwater

Cross referencing the site condition versus the existing drawings received, the site was found to be as documented, with surface water generally directed underground towards the east of the site. This stormwater is directed towards junction boxes at the end of the current traffic round about before

being funnelled through the site where it connects to an existing system on the neighbouring site. Based on the existing documentation, the stormwater system is comprised of underground reinforced concrete pipes which run to grated inlet pits typically 600 mm square (though both 300 mm and 450 mm pits area also used). The stormwater exits the High School site over the adjacent TAFE SA site.
From discussion with the school representative it has been ascertained that there are currently no main issues with surface drainage for the school.

Proposed Development

The proposed changes to the site include:

- Locally demolish existing carparking to the south of site near the current administration building;
- Locally remove two sheds on site to the south west of site;
- Create two new buildings to the south west and south east of site;
- Locally amend the driveway to the east of site, and;
- Locally remove perimeter paving to the current administration building and performing arts building for minor additions.

Pre-development Hydrology

All current site stormwater is discharged through various to the north east of site. This is achieved through both overland flow and underground piping systems.

Catchment Analysis

For the proposed works MLEI have determined that new building works will have a restricted flow to match that of the existing so as to not increase overall pressure on the surrounding council infrastructure.
Through discussion with council, the roof water system of the proposed buildings will be designed for the 5% AEP event as per AS3500, whilst it is assumed that the existing stormwater system has been designed to facilitate the 18.13% AEP (1 in 5 year ARI) rainfall event

Detention tanks will be provided to create a total volume of 30 kL to ensure that the pre and post development flow conditions are equal and do not increase pressure on the surrounding council or site infrastructure.

The internal on-site stormwater system will be utilised wherever possible such to minimise new works, and upgraded if necessary. Existing overland flow paths will be maintained and re-directed if obstructed by the proposed works.

On site the only concerns raised during the initial inspection were in relation to the separation of the existing buildings to the existing awnings in relation to during rain events. As such it is suggested that there are no negative pre-existing stormwater conditions on site requiring address through this scope of works.

As part of a water sensitive design review of the system we suggest that additional permanent storage capacity be incorporated in the new water tanks capturing roof runoff –with the intention to also be used on site for irrigation for garden beds - for the proposed new hub buildings are considered, with overflow into the existing stormwater system which is assumed to be performing adequately in its current state. It is noted that the stormwater system does flow onto the TAFE SA lot immediately north of the school site.

Australian Standards & Design Guides

- NCC 2019
- AS 1428 Series – Design for access and mobility
- AS 2890 Series – Parking facilities
- AS 3500 Series – Plumbing and Drainage
- DPTI Master Specification
- CCA T48 – Pavement Design

As shown in the Conceptual Stormwater Management Plan, the existing pit and pipe drainage system will be maintained and utilised where possible. Where practical, existing rainwater tanks will also be maintained and utilised on site, and if required, additional rainwater storage capacity can be provided to facilitate increases in reuse and bush firefighting requirements.

We trust that the preliminary stormwater drainage advice has demonstrated an acceptable stormwater management strategy, and ensures the receiving stormwater drainage system is not adversely affected by the potential development at Glossop High School, Glossop. If you have any queries regarding this letter, please contact the undersigned on 8231 2832 or by email agiannini@mlei.com.au.

Kind Regards,

MLEI Consulting Engineers

Anthony Giannini B.E Hons. (Civil & Structural)
Civil Engineer

Enc:

- *Conceptual Stormwater Management Plan*

Chris O'Callaghan

From: Dave Degrancy <ddegrancy@bbc.sa.gov.au>
Sent: Thursday, 31 October 2019 5:15 PM
To: Anthony Giannini
Cc: Myles Somers; Dylan Grieve
Subject: RE: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

Thank you Anthony

Dave de Grancy | Manager of Infrastructure Services

Office: (08) 8582 1922 | Fax: (08) 8582 2618
Web: www.berribarmera.sa.gov.au

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From: Anthony Giannini [mailto:agiannini@mlei.com.au]
Sent: Thursday, 31 October 2019 3:35 PM
To: Dave Degrancy
Subject: RE: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

Thanks Dave.

As per below and in the absence of downstream system available capacity information we will adopt the following design requirements;

- Stormwater leaving the site shall not surpass pre-development flows for the 1:5 & 1:100 year rainfall events

Kind regards
Anthony Giannini
B.E Hons. (Civil & Structural)
Civil/Structural Engineer

mlei
CONSULTING ENGINEERS

MLEI Consulting Engineers
452 Pulteney Street
Adelaide SA 5000
P 08 8231 2832
mlei@mlei.com.au
mlei.com.au

ADELAIDE + SYDNEY + MILDURA + PORT LINCOLN

From: Dave Degrancy [mailto:ddegrancy@bbc.sa.gov.au]
Sent: Wednesday, 30 October 2019 1:33 PM
To: Anthony Giannini
Subject: FW: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

G'day Anthony,
Sorry for the late reply, I have asked Dylan who is our town planner for his advice and he has replied with the below email, I concur with his advice.
Thank you

Dave de Grancy | Manager of Infrastructure Services

Office: (08) 8582 1922 | Fax: (08) 8582 2618
Web: www.berribarmera.sa.gov.au

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From: Dylan Grieve
Sent: Tuesday, 29 October 2019 3:18 PM
To: Dave Degrancy
Subject: RE: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

Hi Dave

I use 1:100 as that is what is referred to in the Development Plan:

General Section
Hazards
Principles of Development Control
Flooding
3 Development should not occur on land where the risk of flooding is likely to be harmful to safety or damage property or the environment.
4 Development should not be undertaken in areas liable to inundation by tidal, drainage or flood waters or in areas as defined by the *River Murray Act 2003*, unless the development can achieve all of the following:
(a) it is developed with a public stormwater system capable of catering for a 1-in-100 year average return interval flood event
(b) buildings are designed and constructed to prevent the entry of floodwaters in a 1-in-100 year average return interval flood event and the buildings are not an obstruction to water flows.

Please also find below some examples of conditions that I use for flood mitigation.

- NON-STD – That stormwater leaving the site shall not exceed pre-development flows. All stormwater infrastructure must comply with the plans and calculations provided in documentation provided by bca engineers (Ref 5492-H02) dated 21/02/2019

- NON-STD – That post development flows shall not exceed the requirements of the downstream infrastructure.

- NON-STD – That major storm flows (ARI 100 year event) shall be safely conveyed without causing flooding.

Happy to discuss

Cheers
Dylan

From: Dave Degrancy
Sent: Tuesday, 29 October 2019 3:01 PM
To: Dylan Grieve
Subject: FW: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

Hey mate when planning do you use the 1:5 & 1:100 for storm water catchment please? So I can answer below??
Thanks man

Dave de Grancy | Manager of Infrastructure Services

Office: (08) 8582 1922 | Fax: (08) 8582 2618
Web: www.berribarmera.sa.gov.au

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From: Anthony Giannini [mailto:agiannini@mlei.com.au]
Sent: Tuesday, 29 October 2019 1:10 PM
To: Dave Degrancy
Cc: Matthew Reade
Subject: RE: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

Thanks Dave.

With regards to the controlled flow into the downstream Council stormwater system, are you able to advise of a maximum permissible flow rate? This will ultimately determine the size of the pond.

If a permissible flow rate is unknown, are Council satisfied with flow restrictions in which the post-development flow is restricted to the pre-development flow for the 1:5 & 1:100 year rainfall events?

Kind regards
Anthony Giannini
B.E Hons. (Civil & Structural)
Civil/Structural Engineer

mlei
CONSULTING ENGINEERS

MLEI Consulting Engineers
452 Pulteney Street
Adelaide SA 5000
P 08 8231 2832
mlei@mlei.com.au
mlei.com.au

ADELAIDE + SYDNEY + MILDURA + PORT LINCOLN

From: Dave Degrancy [mailto:ddegrancy@bbc.sa.gov.au]
Sent: Tuesday, 29 October 2019 10:39 AM
To: Anthony Giannini
Cc: Matthew Reade
Subject: Re: 2019-9034 - Glossop High School Redevelopment - Stormwater Requirements

G'day Anthony,
Sorry mate I'm flat out, I'm interviewing over the next two days too. We will require on site water detention as the stormwater is heading towards capacity for that area. I have suggested a surge pond at the bottom of the vacant area. This could be in the form of a depression to take initial flow then a controlled flow into our stormwater. This would be a simple design requiring less cost than the proposed rainwater tanks.
Thank you and so sorry for the delay.
Dave

Sent from my iPhone

On 29 Oct 2019, at 10:17, Anthony Giannini <agiannini@mlei.com.au> wrote:

> Hi Dave,
>
> I've been trying to get in touch with you over the last few weeks just to confirm some stormwater requirements for the Glossop High School redevelopment. You had previously spoken to my colleague Matt however I am now taking this project.
>
> Just looking to confirm whether there will be any requirements for on-site stormwater detention for the proposed development and if so, Council's pre/post development flow restriction requirements.
>
> Thanks.
>
> Kind regards
> **Anthony Giannini**
> B.E Hons. (Civil & Structural)
> Civil/Structural Engineer
>
> <image001.png>
>
> MLEI Consulting Engineers
> 452 Pulteney Street
> Adelaide SA 5000
> P 08 8231 2832
> mlei@mlei.com.au
> mlei.com.au
>
> ADELAIDE + SYDNEY + MILDURA + PORT LINCOLN
> <image002.png>
>
>

21/02019

2019-9034

EX. U/GROUND SYSTEM MARKED.

LEGEND

EXISTING STRUCTURE DEMOLITION

EXISTING TREES DEMOLITION

EXISTING CONDITIONS

1	LIBRARY	SH2	COLORBOND STORE
2	AMENITIES BLOCK	SH3	COLORBOND STORE
3	TECH STUDIES & HOME EC	SH4	TIMBER PERGOLA
4	TECHNOLOGY STUDIES	SH5	TIMBER SHADE STRUCTURE
5	ENVIRONMENTAL STUDIES	SH6	TIMBER SHELTER
6	ADMINISTRATION	SH7	TIMBER SHELTER
7	GENERAL TEACHING	SH8	TIMBER SHELTER
8	DRAMA STUDIES	SH9	STEEL BBQ SHELTER
9	STORE	SH11	TIMBER PERGOLA
10	LANGUAGE CENTRE	SH12	GALV IRON SHELTER
11	TRADE TRAINING CENTRE		

TAFE

PIPEWORK CONTINUES ON TAFE LOT.

RUBBLE ROAD

NEW BUILD.

LIGHT/ MEDIUM DUTY RUBBLE ALLESS DRIVE

EXISTING SIGN

STADIUM DRIVE

PRELIMINARY

FFL: 18.925

TOTAL OF +500 m² IMPERVIOUS AREA ADDED

EX CARPARK 24 SPACES

EX CARPARK 10 SPACES

EX CARPARK 31 SPACES

EX VBALL

EX CONCRETE COURT

RIVERLAND SPECIAL SCHOOL

septic tank

450 RCP

375 RCP

225 RCP

NET 0m²

FL: MATCH EX.

KAY AVENUE

DEMO

NEW GIP CONNECT TO EX.

FFL: 19.45

TOTAL OF +270m² IMPERVIOUS AREA ADDED

THESE BATTERS WILL BE STEEP 1:4

270+500 − 130 = 640 m² total added impervious area

TOTAL OF −130 m² OF IMPERVIOUS AREA REMOVED.

Detention Required

30kL

GREENWAY ARCHITECTS

PROJECT NO: G19049

SCALE 1:500 @ A1 (0 5 10 25m)

PROPOSED SITE DEMOLITION PLAN

GLOSSOP HIGH SCHOOL REDEVELOPMENT

3 KAY AVENUE BERRI SA

SD.71

ISSUE DATE: 27.09.2019

NEW PROPOSAL

REF. DESCRIPTION

- ADMINISTRATION BUILDING UPGRADE & EXTENSION
- NEW MIDDLE LEARNING HUB (Yr 7- 8)
- NEW INTERMEDIATE LEARNING HUB (Yr 9 -10)
- NEW PERFORMING ARTS
- REFURBISHED LEARNING SPACES
- NEW LANDSCAPING
- NEW CARPARK (BITUMEN/ GRAVEL)
- NEW RUBBLE ACCESS ROAD
- EXISTING TO REMAIN
- EXISTING COVERED WAY/ NEW FOOTPATH
- RELOCATED/ NEW SHED
- SCHOOL MOVEMENT

EXISTING CONDITIONS

1	LIBRARY	SH2	COLORBOND STORE
2	AMENITIES BLOCK	SH3	COLORBOND STORE
3	TECH STUDIES & HOME EC	SH4	TIMBER PERGOLA
4	TECHNOLOGY STUDIES	SH5	TIMBER SHADE STRUCTURE
5	ENVIRONMENTAL STUDIES	SH6	TIMBER SHELTER
6	ADMINISTRATION	SH7	TIMBER SHELTER
7	GENERAL TEACHING	SH8	TIMBER SHELTER
8	DRAMA STUDIES	SH9	STEEL BBQ SHELTER
9	STORE	SH11	TIMBER PERGOLA
10	LANGUAGE CENTRE	SH12	GALV IRON SHELTER
11	TRADE TRAINING CENTRE		

TAFE

SPECIAL OPTIONS
110m2

RELOCATED SHED 9

RUBBLE ROAD

NEW RUBBLE ACCESS ROAD

NEW SEPTIC

septic tank

OUTDOOR LEARNING AREA

NEW MI...

FL: 18.425

BL: 18.2

NEW BUS ENCLOSURE

NEW CARPARK
41 SPACES

EXISTING SIGN TO REMAIN

STADIUM DRIVE

EX CARPARK
24 SPACES

SH12

FH

RWT

PMT

GM

WM

1

2

3

4

5

6

7

8

10

11

ADMINISTRATION EXTENSIONS
135m2

NEW CARPARK
8 SPACES

EX CARPARK
10 SPACES

Approx 0m3

ROUGH EARTHWORKS.
-270 m3

KAY AVENUE

EX CARPARK
31 SPACES

EX VBALL

NEW PERF ARTS

FL: 19.45

OUTDOOR LEARNING AREA

NEW INT...

FL: 19.42

POTENTIAL FUTURE SHED

EX CONCRETE COURT

RIVERLAND SPECIAL SCHOOL

STADIUM

19.5 19.6 19.7 19.9 20.5 20.9 21.0

BL: 19.23

-270 m3 APPROX.

IF BUILDING LIFTED TO 19.4 BL (FL: 19.62)
THEN -100 m3

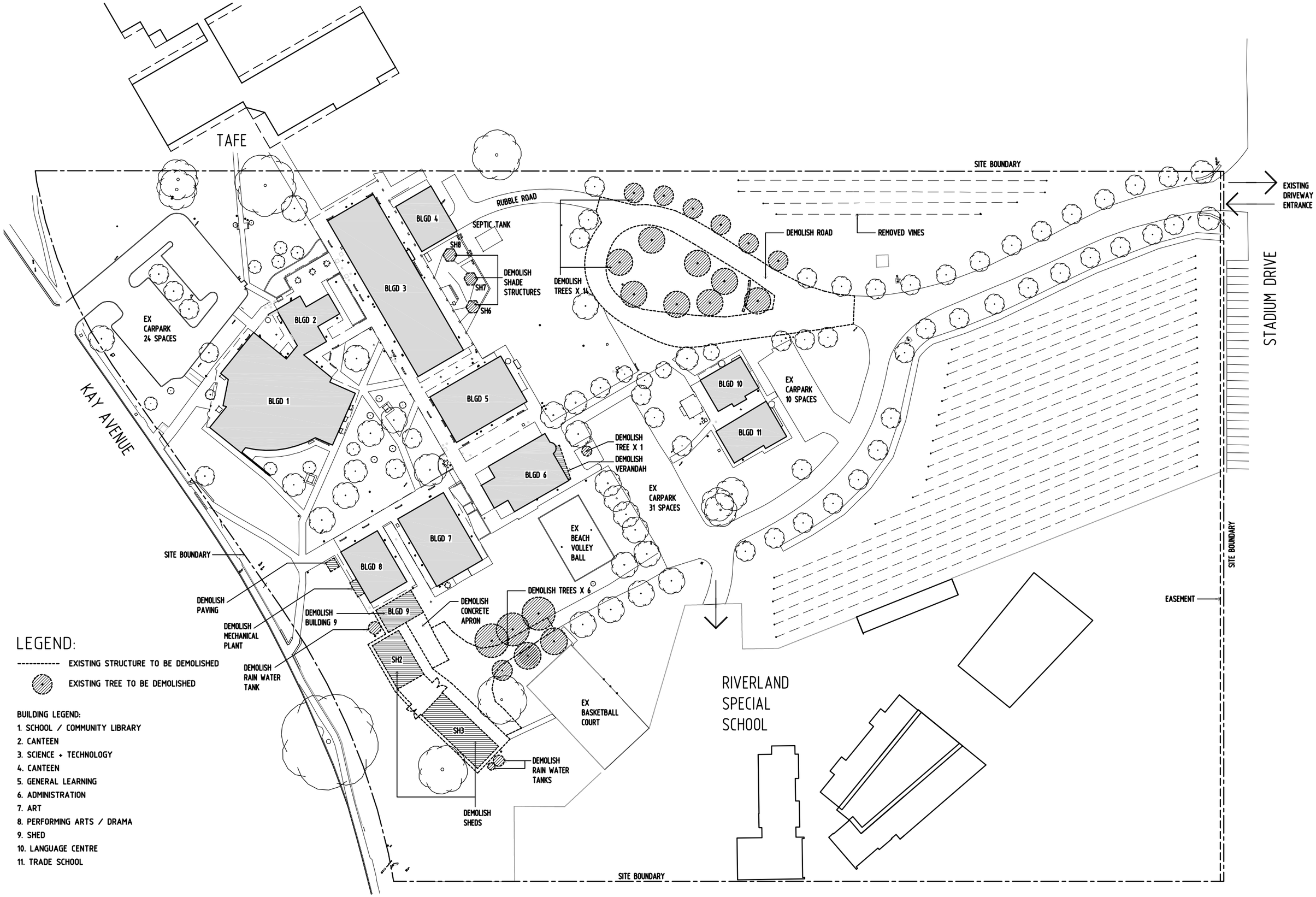
PRELIMINARY

GREENWAY
ARCHITECTS
PROJECT NO: G19049

SCALE 1:500 @ A1 0 5 10 25m

GLOSSOP HIGH SCHOOL REDEVELOPMENT
3 KAY AVENUE BERRI SA

PROPOSED SITE PLAN
SD.72
ISSUE DATE: 27.09.2019



LEGEND:

---------- EXISTING STRUCTURE TO BE DEMOLISHED

EXISTING TREE TO BE DEMOLISHED

BUILDING LEGEND:

1. SCHOOL / COMMUNITY LIBRARY
2. CANTEEN
3. SCIENCE + TECHNOLOGY
4. CANTEEN
5. GENERAL LEARNING
6. ADMINISTRATION
7. ART
8. PERFORMING ARTS / DRAMA
9. SHED
10. LANGUAGE CENTRE
11. TRADE SCHOOL

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:500 @ A1 0 5 10 25m

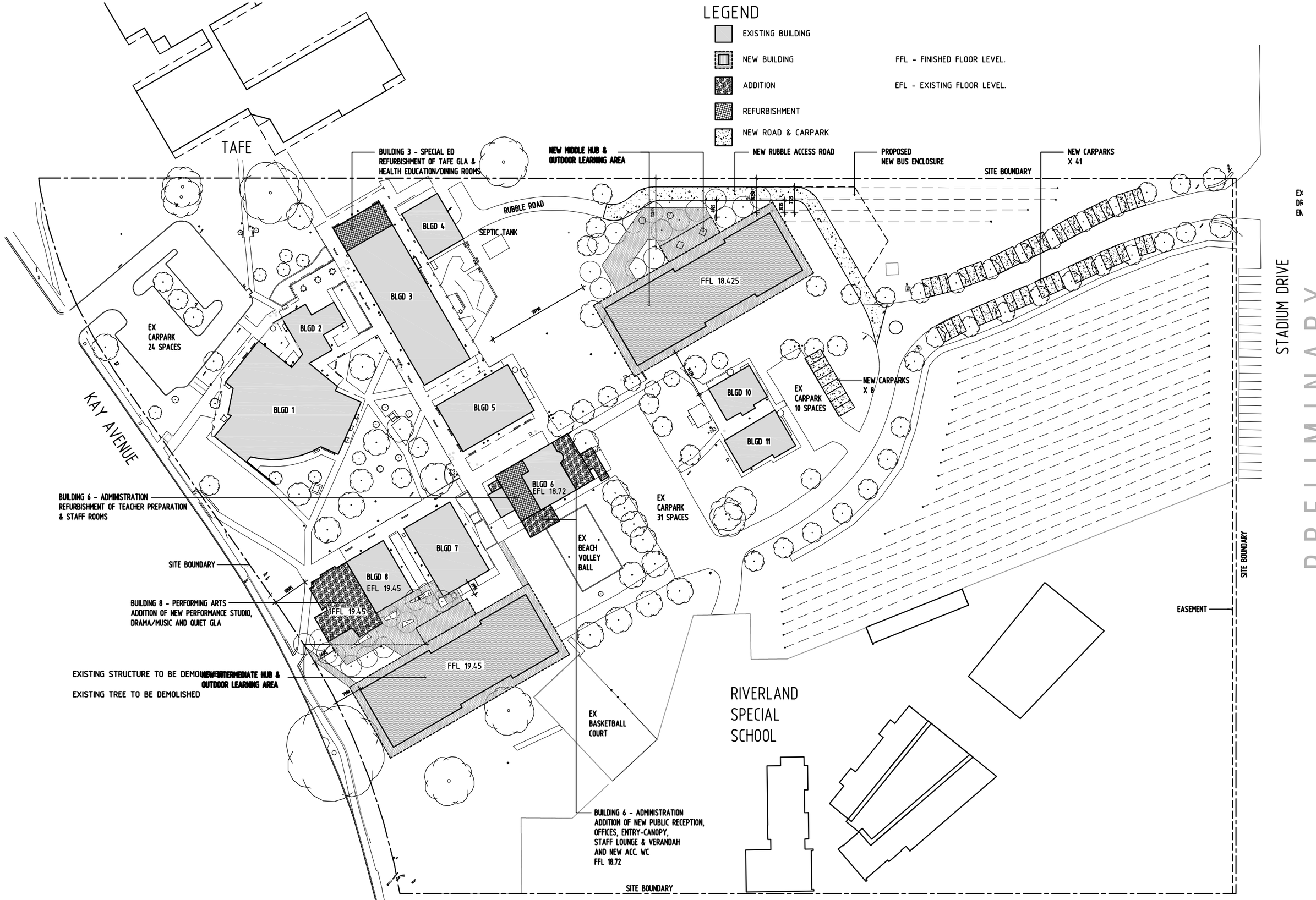
SITE PLAN - DEMOLITION

GLOSSOP HIGH SCHOOL REDEVELOPMENT

3 KAY AVENUE BERRI SA

PD.01

ISSUE DATE: 24.01.2020

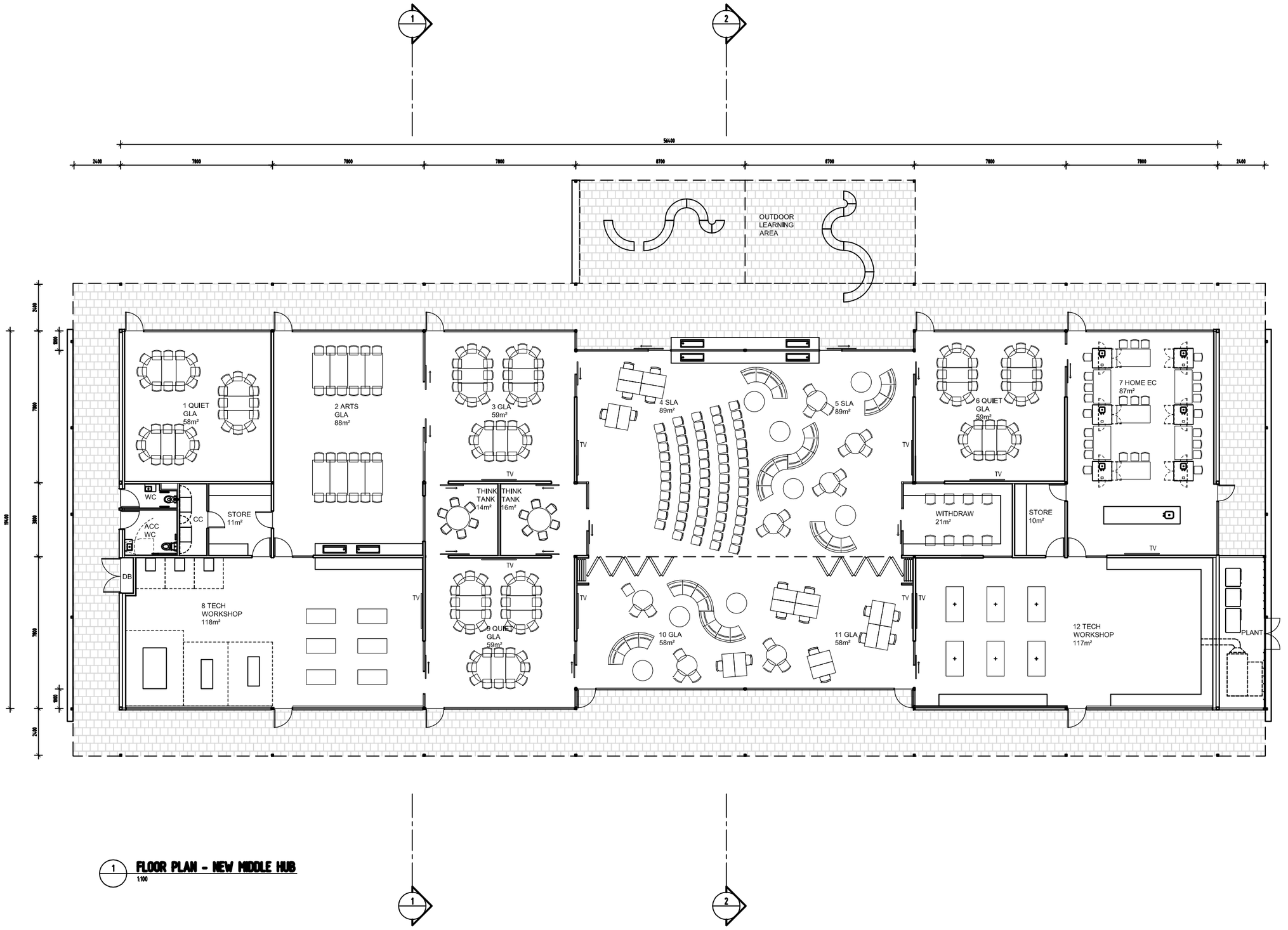


GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:500 @ A1 0 5 10 25m

GLOSSOP HIGH SCHOOL REDEVELOPMENT
3 KAY AVENUE BERRI SA

SITE PLAN - PROPOSED
PD.02
ISSUE DATE: 24.01.2020



1 FLOOR PLAN - NEW MIDDLE HUB
1:100

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049

SCALE 1:100 @A1

0 1 2 5m

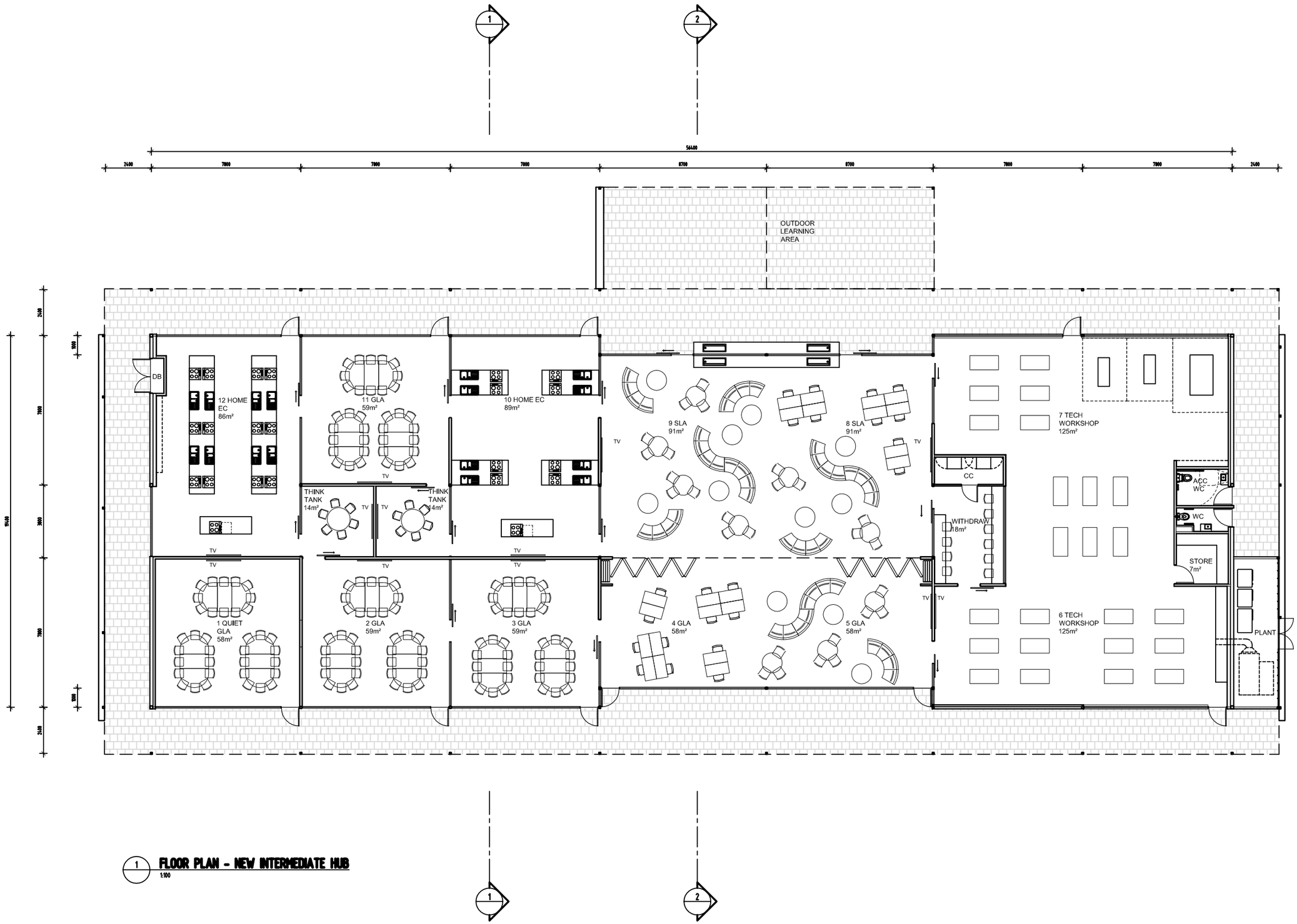
FLOOR PLAN - NEW MIDDLE (YEAR 7-8) HUB

GLOSSOP HIGH SCHOOL REDEVELOPMENT

3 KAY AVENUE BERRI, SA

PD.03

ISSUE DATE 24.01.2020



1 **FLOOR PLAN - NEW INTERMEDIATE HUB**
1:100

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:100 @ A1 0 1 2 5m

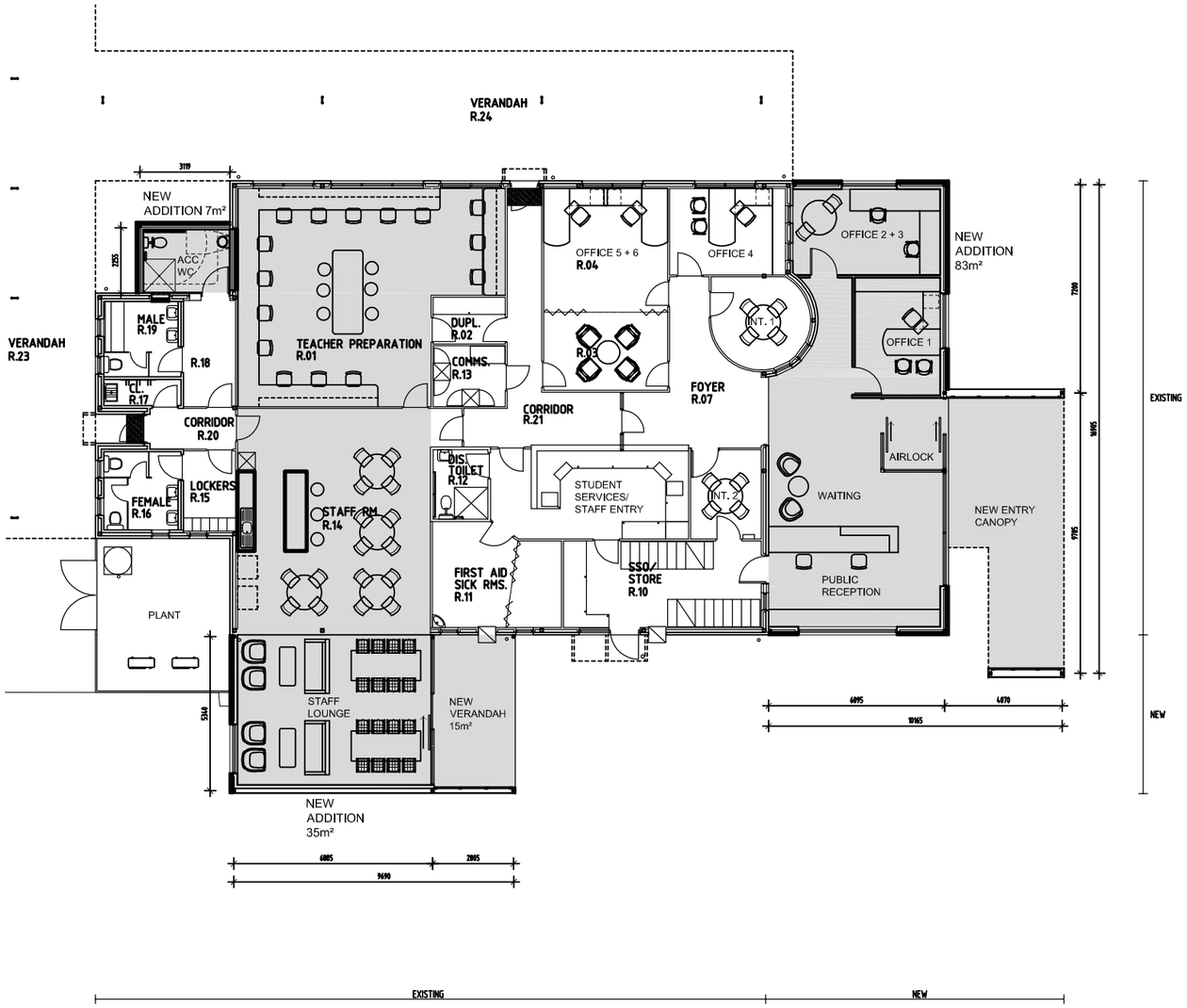
FLOOR PLAN - NEW INTERMEDIATE (Year 9 - 10) HUB

GLOSSOP HIGH SCHOOL REDEVELOPMENT

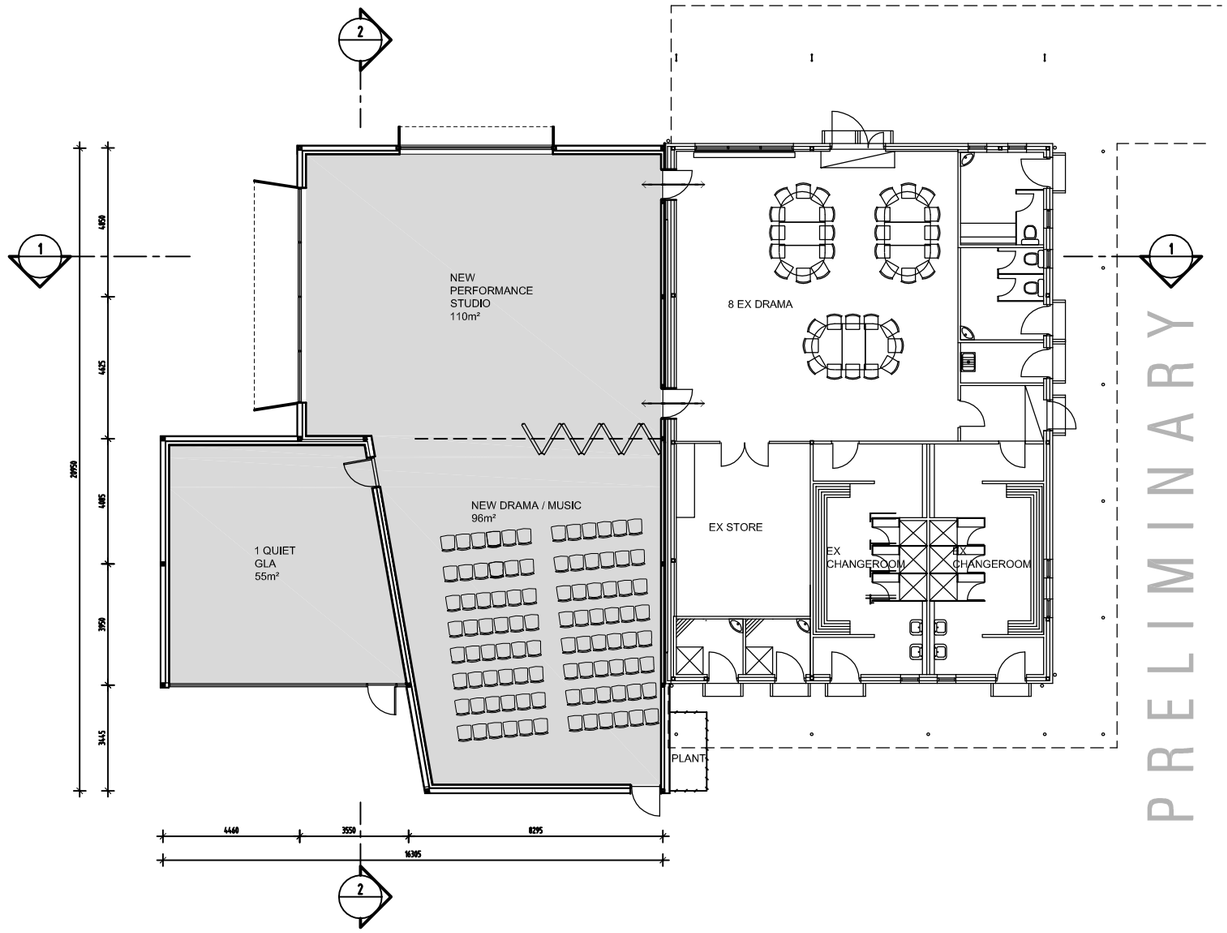
3 KAY AVENUE BERRI SA

PD.04

ISSUE DATE: 24.01.2020



1 **FLOOR PLAN - ADMINISTRATION BUILDING**
1:100



2 **FLOOR PLAN - PERFORMING ARTS**
1:100

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049

SCALE 1:100 @ A1

0 1 2 5m

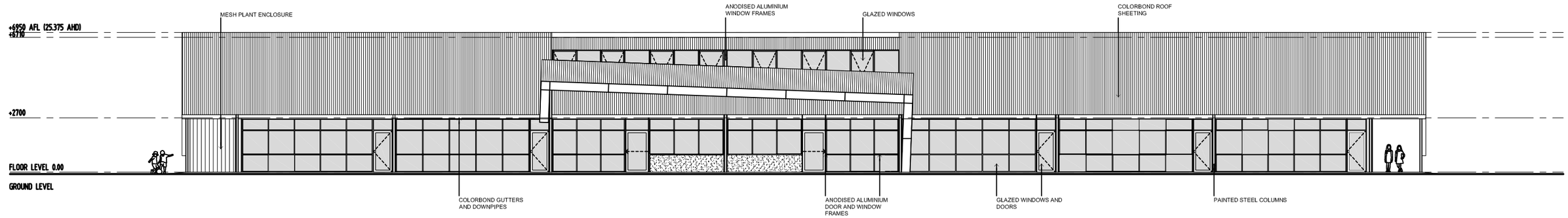
FLOOR PLAN - BUILDING 6 - ADMINISTRATION BUILDING EXTENSION
FLOOR PLAN - BUILDING 8 - PERFORMING ARTS BUILDING

GLOSSOP HIGH SCHOOL REDEVELOPMENT

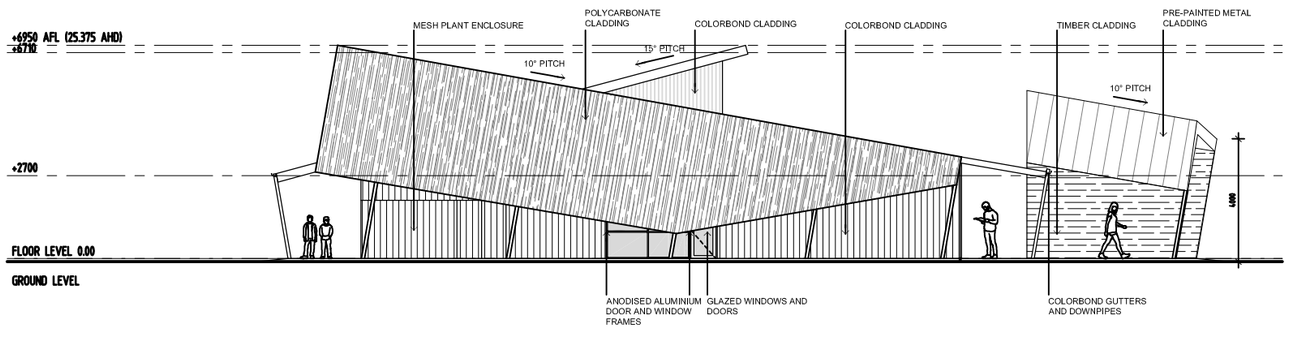
3 KAY AVENUE BERRI SA

PD.05

ISSUE DATE: 24.01.2020



1 NORTH ELEVATION



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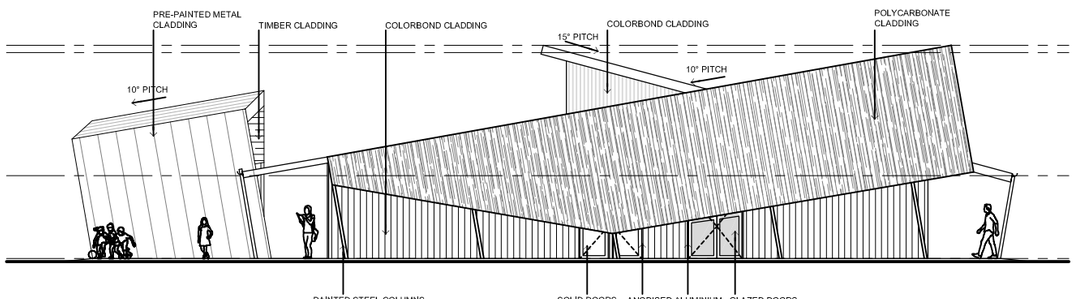

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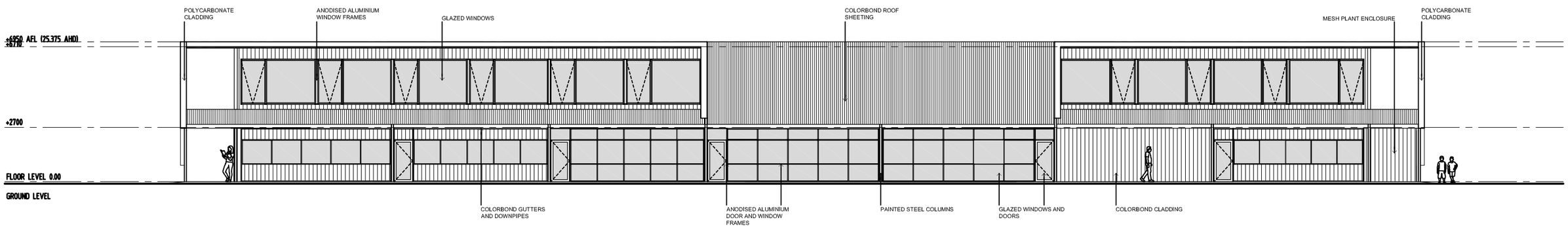


4 SOUTH ELEVATION

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:100 @ A1 0 1 2 5m

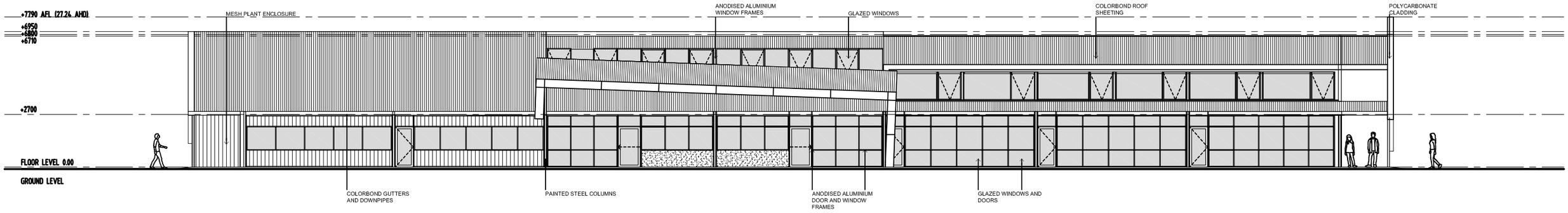
ELEVATIONS - NEW MIDDLE (YEAR 7-8) HUB

GLOSSOP HIGH SCHOOL REDEVELOPMENT

3 KAY AVENUE BERRI SA

PD.06

ISSUE DATE: 24.01.2020



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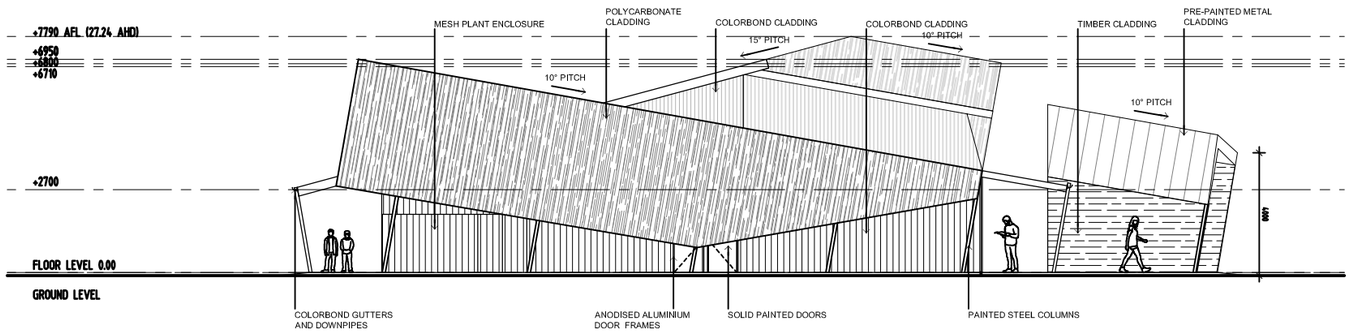

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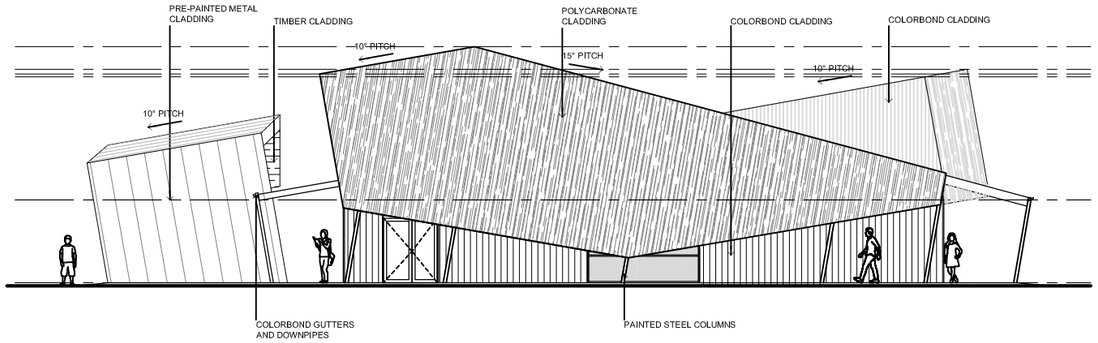
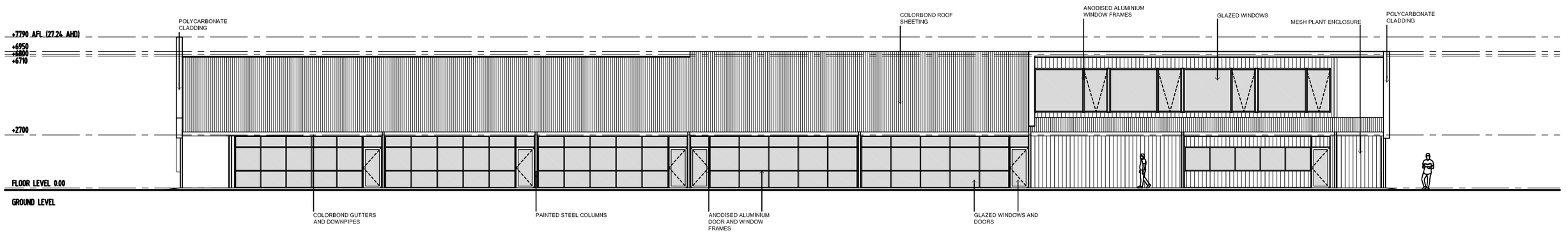


3 WEST ELEVATION



4 SOUTH ELEVATION

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049

SCALE 1:100 @ A1 (1) 0 1 2 5m

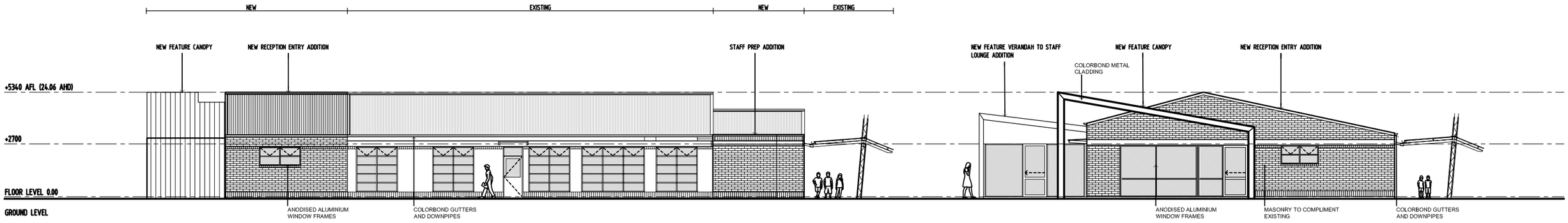
ELEVATIONS - NEW INTERMEDIATE (Year 9 - 10) HUB

GLOSSOP HIGH SCHOOL REDEVELOPMENT

3 KAY AVENUE BERRI SA

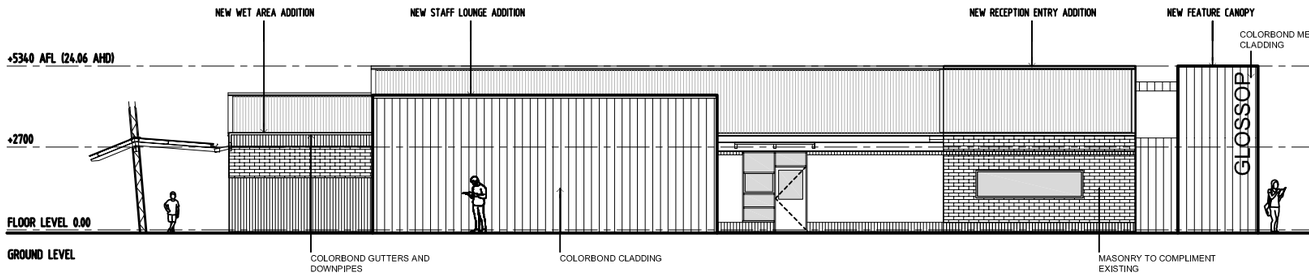
PD.07

ISSUE DATE: 24.01.2020

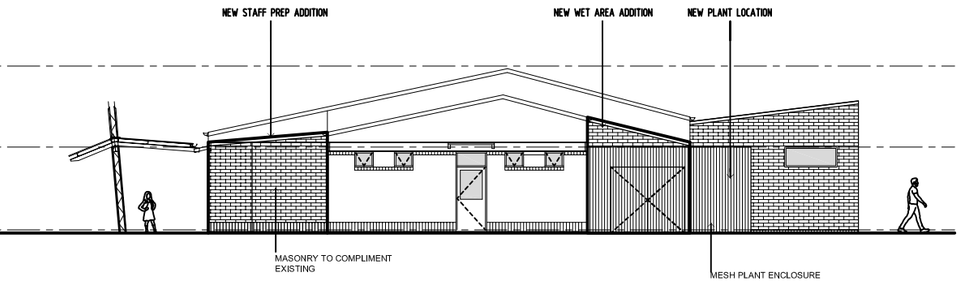


1 NORTH EAST ELEVATION

2 SOUTH EAST ELEVATION



3 SOUTH WEST ELEVATION



4 NORTH WEST ELEVATION

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049

SCALE 1:100 @ A1 0 1 2 5m

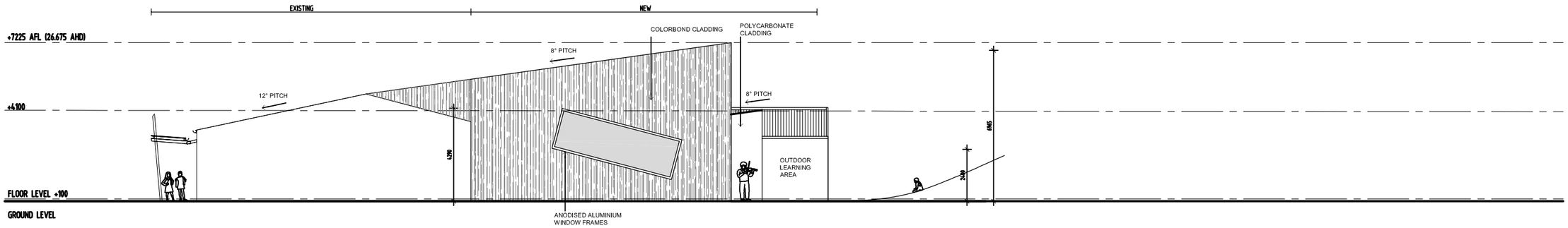
ELEVATIONS - ADMINISTRATION BUILDING EXTENSION

GLOSSOP HIGH SCHOOL REDEVELOPMENT

PD.08

3 KAY AVENUE BERRI, SA

ISSUE DATE 24.01.2020



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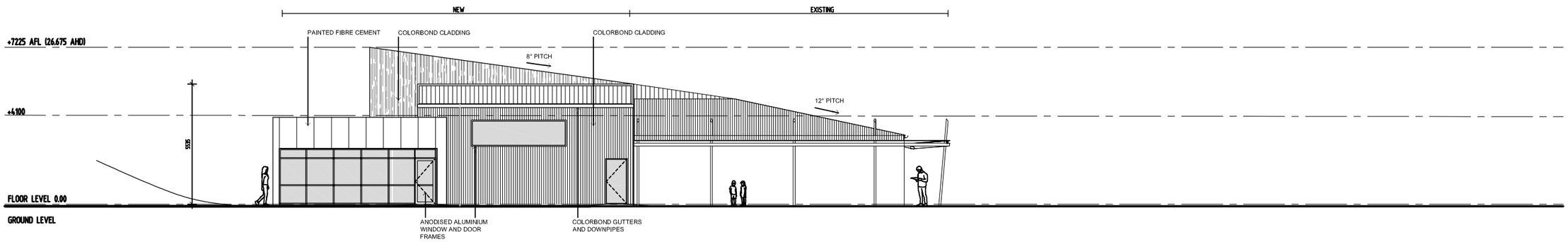

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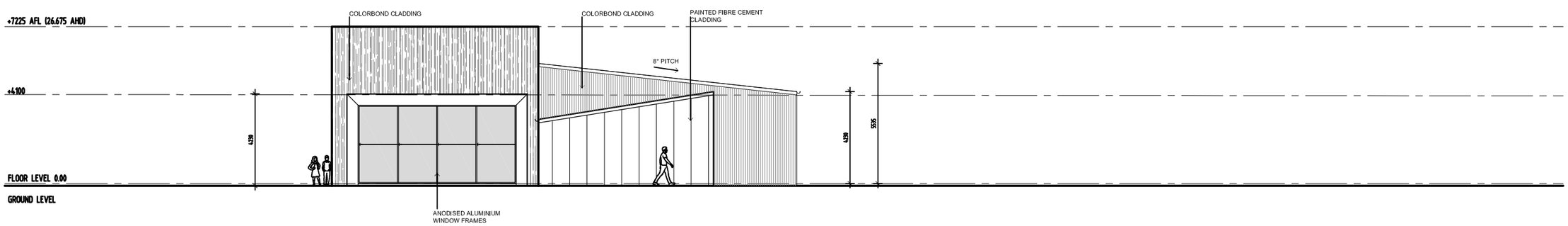


3 WEST ELEVATION

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049

SCALE 1:100 @ A1 0 1 2 5m

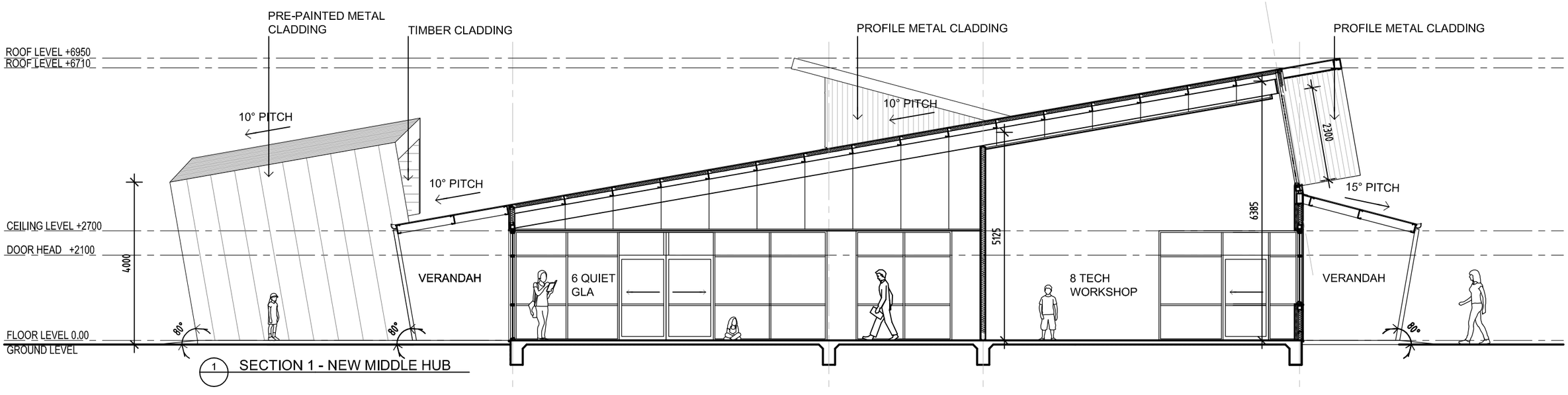
ELEVATIONS - PERFORMING ARTS EXTENSION

GLOSSOP HIGH SCHOOL REDEVELOPMENT

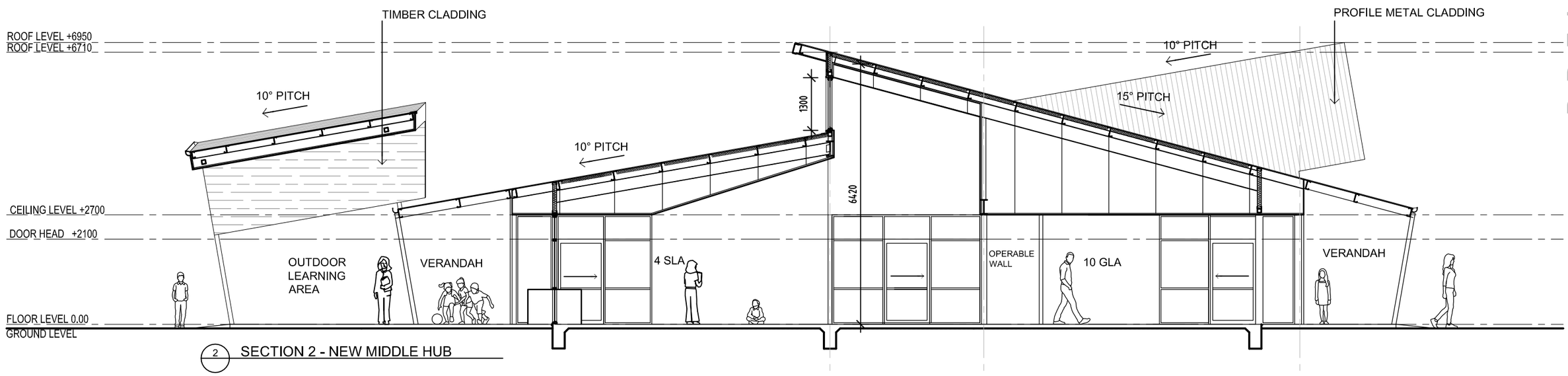
PD.09

3 KAY AVENUE BERRI, SA

ISSUE DATE 24.01.2020



1 SECTION 1 - NEW MIDDLE HUB



2 SECTION 2 - NEW MIDDLE HUB

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:50 @ A1 0 0.5 1 2m

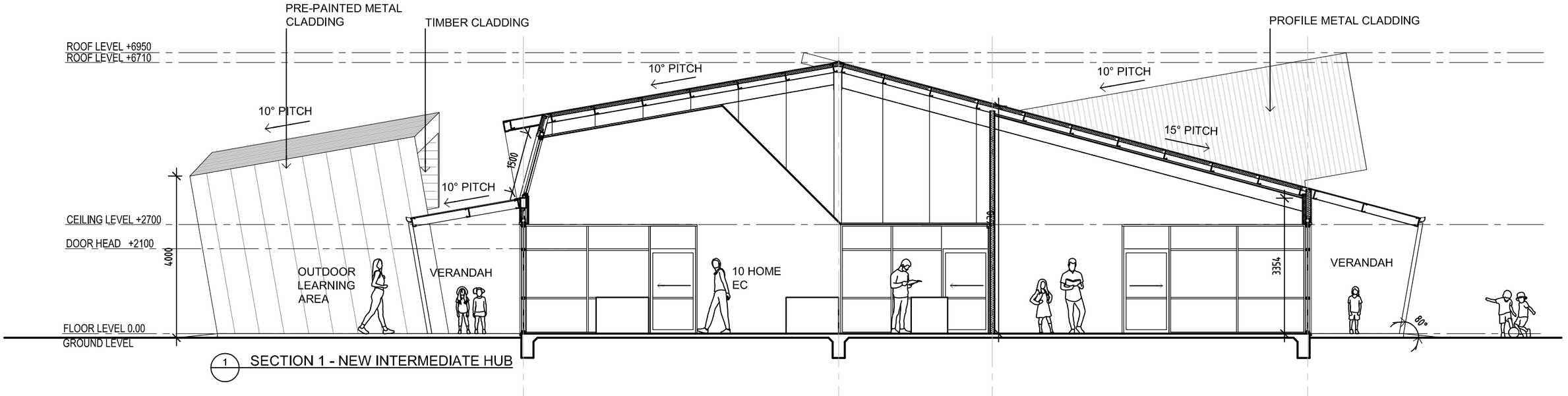
SECTIONS - NEW MIDDLE (YEAR 7-8) HUB

GLOSSOP HIGH SCHOOL REDEVELOPMENT

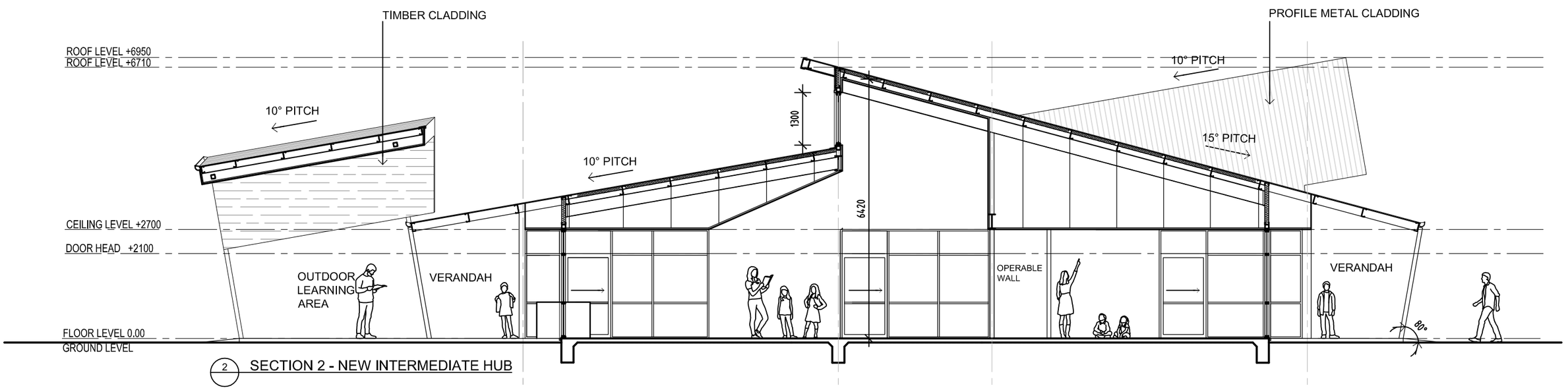
3 KAY AVENUE BERRI, SA

PD.10

ISSUE DATE 24.01.2020



1 SECTION 1 - NEW INTERMEDIATE HUB



2 SECTION 2 - NEW INTERMEDIATE HUB

PRELIMINARY

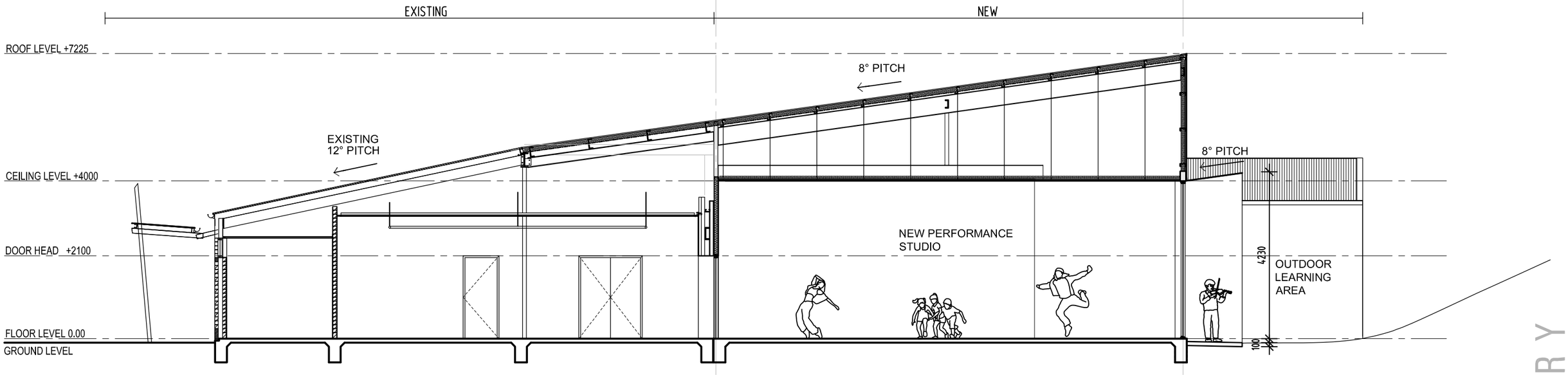
GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:50 @ A1 0 0.5 1 2m

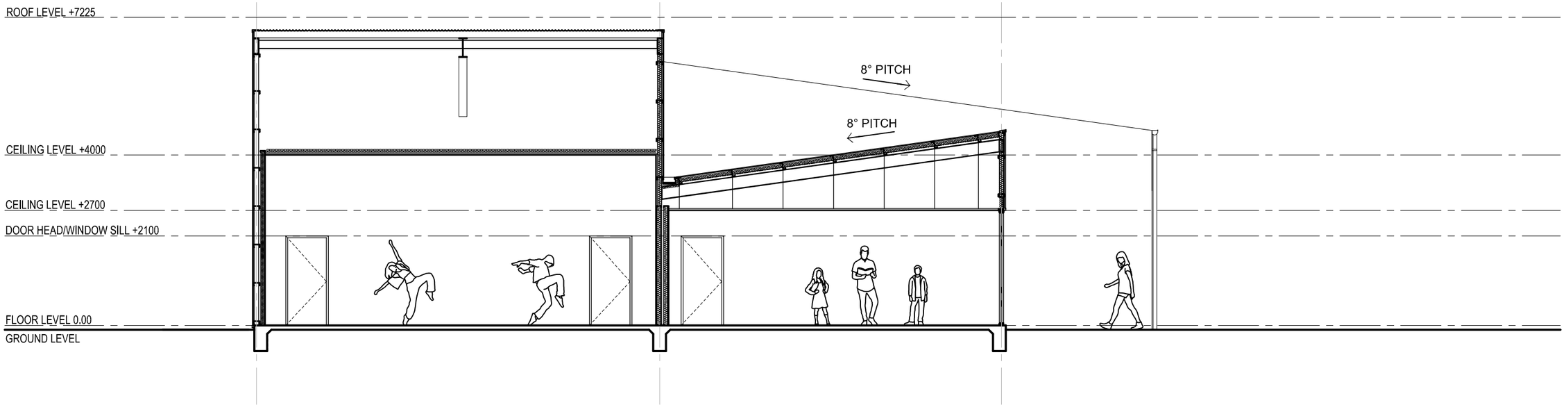
SECTIONS - NEW INTERMEDIATE (Year 9 - 10) HUB

GLOSSOP HIGH SCHOOL REDEVELOPMENT PD.11

3 KAY AVENUE BERRI, SA ISSUE DATE 24.01.2020



1 - SECTION 1 - PERFORMING ARTS EXTENSION



2 - SECTION 2 - PERFORMING ARTS EXTENSION

PRELIMINARY

GREENWAY ARCHITECTS

PROJECT NO: G19049 SCALE 1:50 @ A1 0 0.5 1 2m

SECTIONS - PERFORMING ARTS EXTENSION

GLOSSOP HIGH SCHOOL REDEVELOPMENT PD.12

3 KAY AVENUE BERRI, SA ISSUE DATE 24.01.2020

VIEW 01 - SITE AERIAL VIEW

GREENWAY
ARCHITECTS

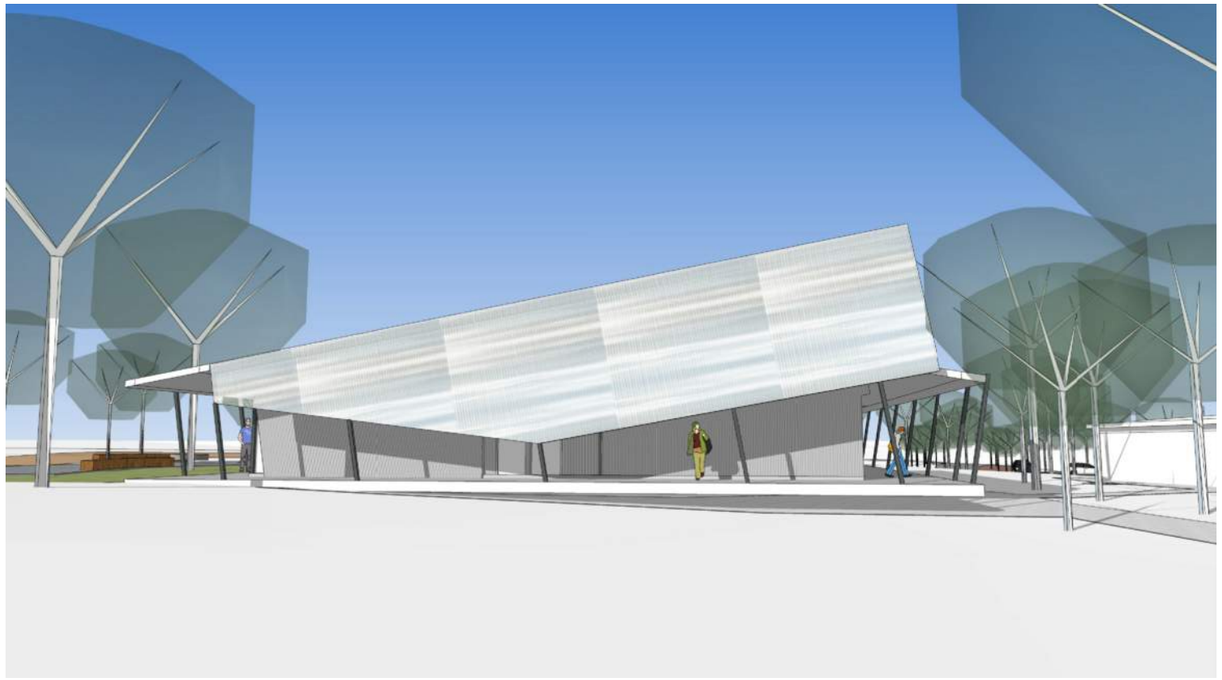
PROJECT NO: G19049 NTS

SITE PERSPECTIVE - LOOKING FROM NORTH

GLOSSOP HIGH SCHOOL REDEVELOPMENT PD.13

3 KAY AVENUE BERRI SA ISSUE DATE: 22.01.2020

VIEW 01 - AERIAL VIEW



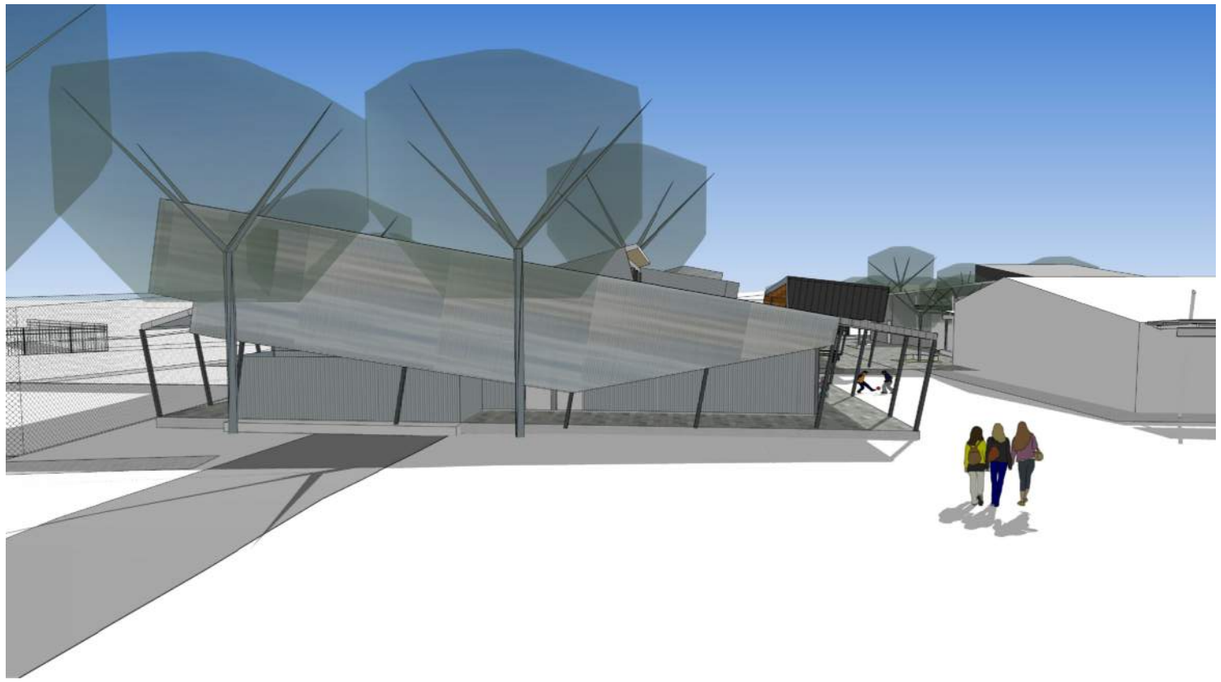
VIEW 02 - WESTERN FACADE

VIEW 03 - NORTHERN VERANDAH

VIEW 04 - INTERNAL

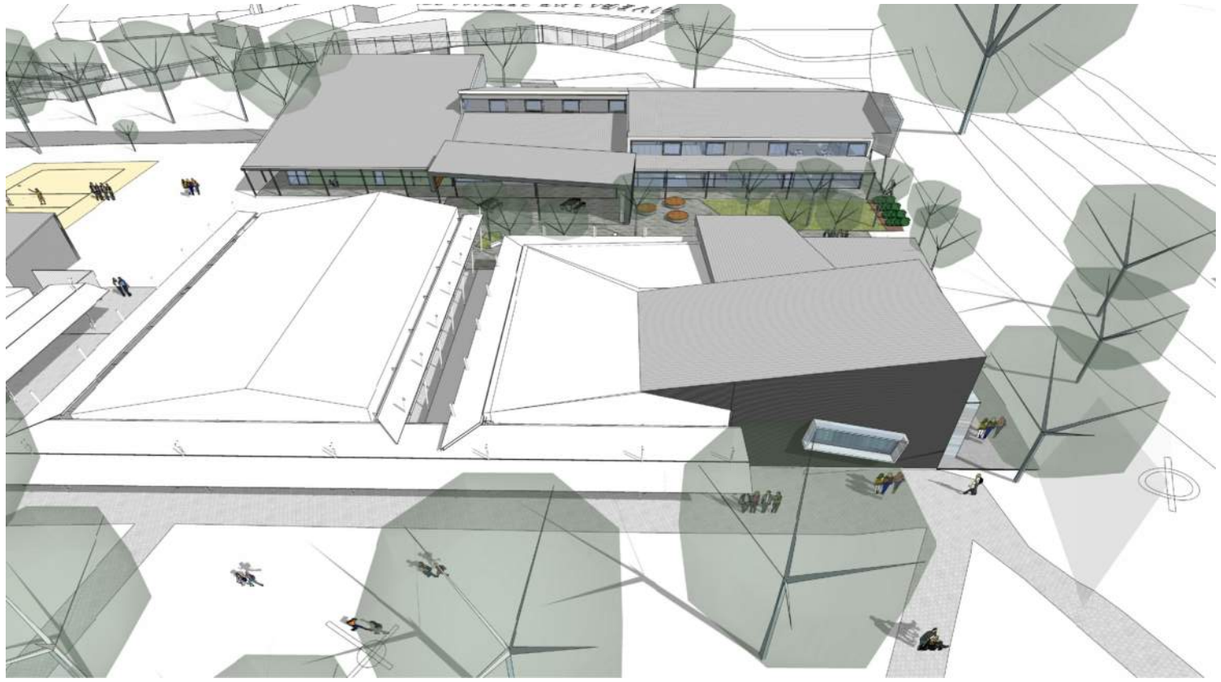
VIEW 05 - NORTHERN FACADE

VIEW 01 - VIEW FROM KAY AVENUE



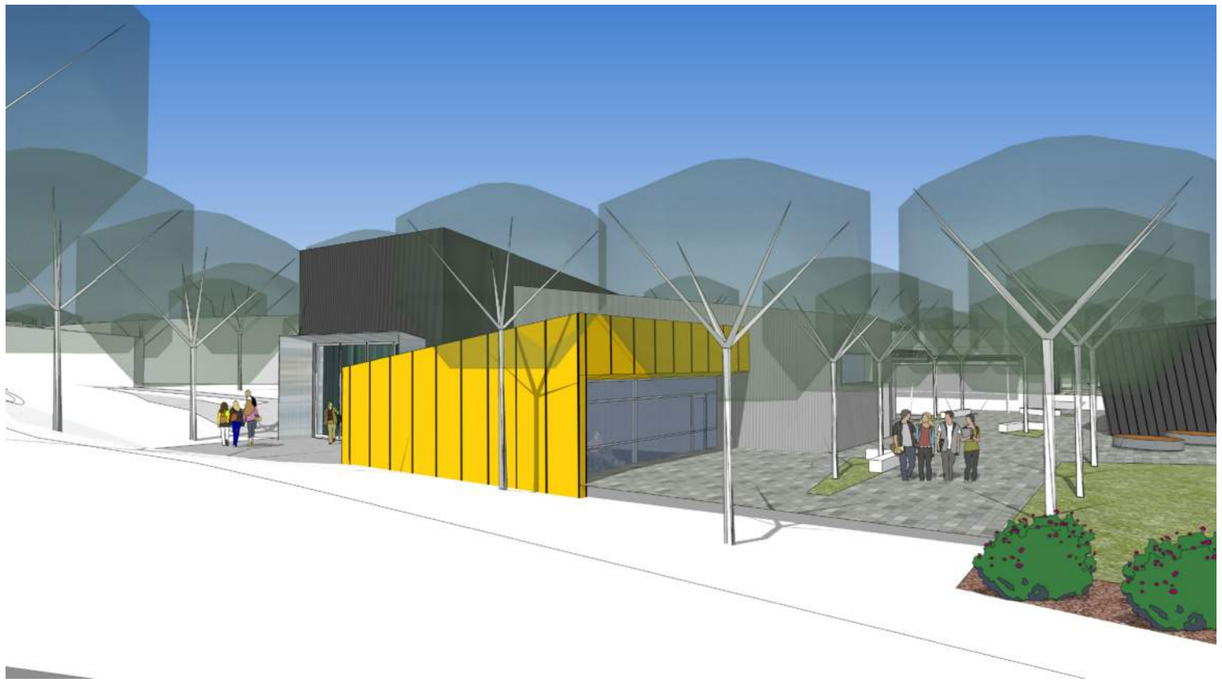
VIEW 02 - EASTERN FACADE

VIEW 03 - SOUTHERN AERIAL VIEW



VIEW 04 - NORTHERN VIEW WITH PERFORMING ARTS EXTENSIONS IN FRONT

VIEW 01 - AERIAL VIEW FROM KAY AVENUE



VIEW 02 - STREET VIEW FROM KAY AVENUE

VIEW 03 - VIEW INTO PERFORMANCE SPACE

VIEW 04 - VIEW FROM QUADRANGLE LOOKING SOUTH

VIEW 01 - MAIN ENTRY VIEW FROM CARPARK

VIEW 02 - SOUTHERN FACADE VIEW

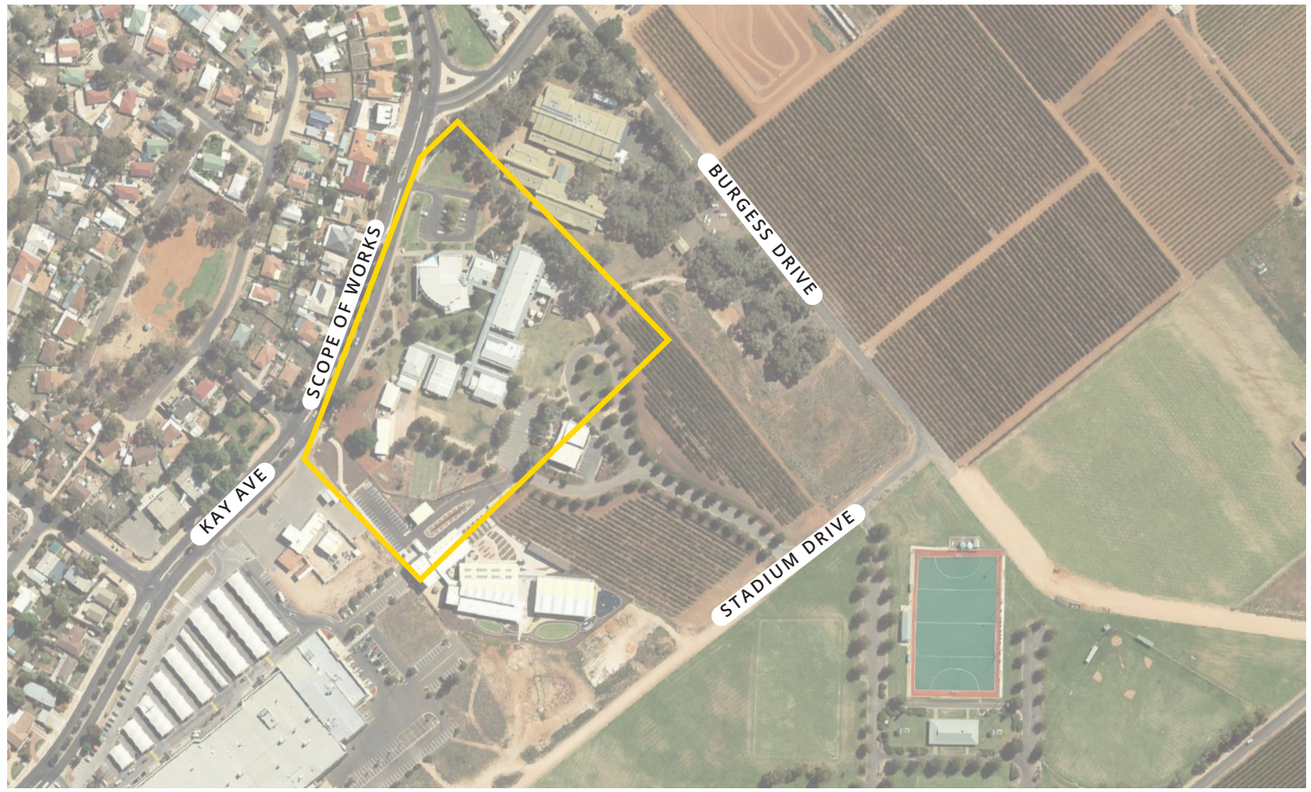
VIEW 03 - AERIAL VIEW

VIEW 04 - NORTH EASTERN VIEW WITH THE EXISTING VERANDAH

GLOSSOP HIGH SCHOOL
24 JANUARY 2020 REV B

LANDSCAPE CONCEPT PLAN

19028 SK01 INTERMEDIATE HUB OUTDOOR LEARNING
19028 SK02 MIDDLE HUB OUTDOOR LEARNING



GREENWAY ARCHITECTS

Government of South Australia
Department of Planning, Transport and Infrastructure

BIRDSEYE : STUDIOS

LEGEND

- PROPOSED TREES REFER PLANTING SCHEDULE
- PROPOSED SEATING PODS
- PROPOSED TURF
- PROPOSED PICNIC SETTING
- PROPOSED UNIT PAVING
- PROPOSED GARDEN BEDS WITH SEATING WALLS REFER PLANTING SCHEDULE
- PROPOSED SEEDED TO DISTURBED AREAS

PLANTING SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME
TREES		
Up	Ulmus parvifolia	Chinese Elm
Pc	Pistacia chinensis	Chinese Pistachio
PLANTING		
Dlj	Dianella 'Little Jess'	Flax lily
Ds	Dianella 'Streetscape'	Flax lily
Lt	Lomandra 'Lime Tuff'	Mat rush

NOTE: THIS PLAN IS FOR LANDSCAPE REFERENCE ONLY. REFER OTHER CONSULTANTS DRAWINGS FOR ALL OTHER INFORMATION.

GLOSSOP HIGH SCHOOL
INTERMEDIATE OUTDOOR LEARNING HUB - CONCEPT PLAN

BIRDSEYE STUDIOS LANDSCAPE ARCHITECTS ACN 603 475 332 contact@birdseyestudios.com.au birdseyestudios.com.au

BIRDSEYE : STUDIOS

0 2 4 6 8 10M

1:200 @ A3

19028 SK01 REV B
24 JANUARY 2020

NOT FOR CONSTRUCTION

LEGEND

- PROPOSED TREES
  REFER PLANTING SCHEDULE
- PROPOSED SEATING PODS
- PROPOSED TURF
- PROPOSED PICNIC SETTING
- PROPOSED UNIT PAVING
- PROPOSED SCREENING
  HEDGE
  REFER PLANTING SCHEDULE
- PROPOSED GARDEN BED
  AND TIMBER ARBOUR
  STRUCTURE
- PROPOSED SEATING
  WALL AND AT GROUND
  CONCRETE EDGE STRIP
- PROPOSED SEEDED TO
  DISTURBED AREAS

PLANTING SCHEDULE

KEY	BOTANICAL NAME	COMMON NAME
TREES		
Up	Ulmus parvifolia	Chinese Elm
Pc	Pistacia chinensis	Chinese Pistachio
PLANTING		
Ds	Dianella ‘Streetscape’	Flax lily
Lt	Lomandra ‘Lime Tuff’	Mat rush
Ss	Syzygium smithii	Lily pily
Tj	Trachleospermum jasminoides	Star Jasmine

NOTE: THIS PLAN IS FOR LANDSCAPE REFERENCE ONLY. REFER OTHER CONSULTANTS DRAWINGS FOR ALL OTHER INFORMATION.

GLOSSOP HIGH SCHOOL
MIDDLE OUTDOOR LEARNING HUB - CONCEPT PLAN

BIRDSEYE STUDIOS LANDSCAPE ARCHITECTS ACN 603 475 332 contact@birdseyestudios.com.au birdseyestudios.com.au

BIRDSEYE : STUDIOS

0 2 4 6 8 10M

1:200 @ A3

19028 SK02 REV B
24 JANUARY 2020

NOT FOR CONSTRUCTION