

State Significant Development Application Proposed Sikh Grammar School, Rouse Hill

Preliminary Construction Traffic Management Plan

Prepared for: Sikh Grammar School

April 2019

Report No: PT18022r02_V1

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1. Introduction

This Preliminary Construction Management Plan (PCMP) has been prepared as required by the SEARs issued for the SSDA for the proposed development of the Sikh Grammar School, Rouse Hill behalf of the Sikh Grammar School Australia. This report presents a preliminary Construction Traffic Management Plan (CTMP) (including Preliminary Construction Traffic & Pedestrian Management Plan) for the staged construction of the Sikh Grammar School, Rouse Hill.

The SSDA submission (9472) is a State Significant Development Application under Section 4.12(8) of the Environmental Planning and Assessment Act & Schedule 2 of the Environmental Planning and Assessment Regulation 200083B of the EP&A Act, and addresses the SEARs issued by the Department of Planning on 6 August 2018 for the staged development of Sikh Grammar School, Rouse Hill.

The SSDA seeks consent for the staged development of the Sikh Grammar School based on:

- Multiple staged construction of school facilities including buildings, open space, car parking areas and bus facilities.
- Early Learning Centre
- Boarding House with capacity for 110 students
- Gurdwara & Langer Worship Centre

A presentation of each stage is provided in Section 3.1 of this report.

This PCMP is intended to describe the Project's key construction characteristics as requested in the SEARS, including

- *assessment of cumulative impacts associated with other construction activities (if any)*
- *an assessment of road safety at key intersection and locations subject to heavy vehicle construction traffic movements and high pedestrian activity*
- *details of construction program detailing the anticipated construction duration and highlighting significant and milestone stages and events during the construction process*
- *details of anticipated peak hour and daily construction vehicle movements to and from the site*
- *details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site,*
- *emergency vehicles and service vehicle*
- *details of temporary cycling and pedestrian access during construction.*



2. Existing Development / Conditions

The following presents a summary of existing site and traffic conditions.

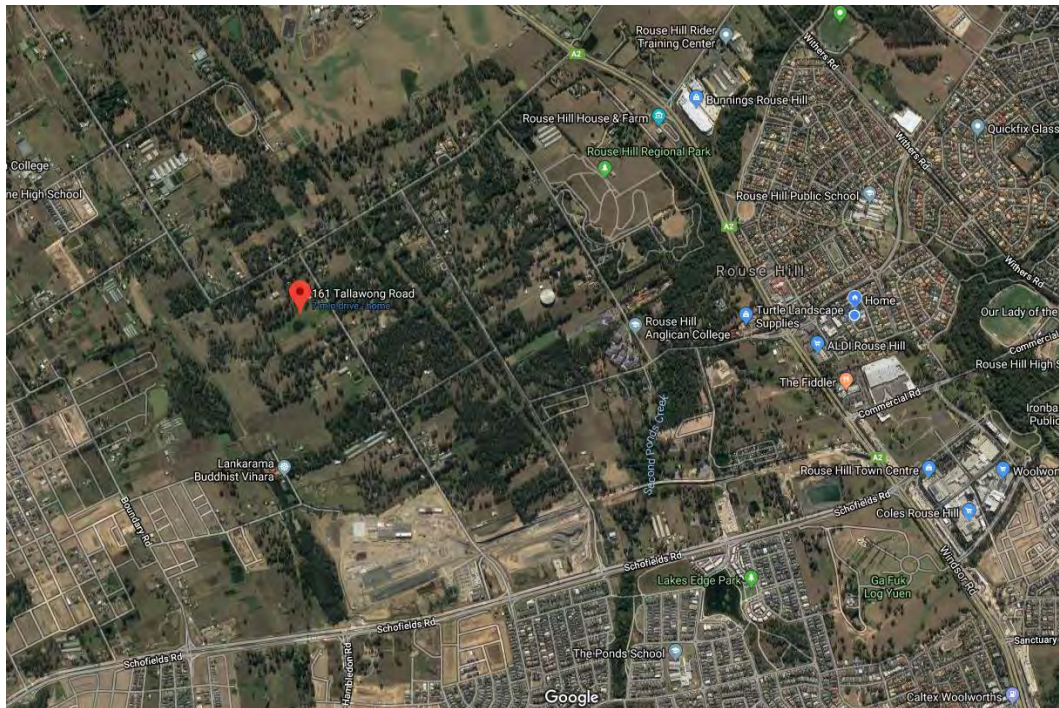
2.1 Site Location

The proposed school is located within the Riverstone East release area which is currently under development. Many of the existing properties include rural residential dwellings which would be converted into low – medium density residential development, recreational facilities, education and retail.

The precinct is part of the North Western Sydney Growth Area. At the time of preparing this report only Tallawong Road was in place of which would be subject to a future upgrade to provide additional capacity. The local streets surrounding the proposed school site are currently not constructed with only the southern boundary road under half road construction to serve an adjacent residential development. The formal address of the subject site is 151 – 161 Tallawong Road, Rouse Hill. The Riverstone East Precinct has been subject to extensive traffic modelling to underpin the approval of the release area. This is discussed further below.

The location of the development site is shown in [Figure 1](#).

Figure 1 - Site Location



Source: Google maps

The context of the subject site within the local environment is shown in [Figure 2](#).

Figure 2 – Local Environment of Subject Site



2.2 Existing Road Network

Tallawong Road – is a local street which links Guntawong Road in the north with Schofields Road in the south. The nature of the existing area with limited route choice, Tallawong Road functions as a local collector road. Across the frontage of the site, the road includes a single travel lane in each direction with unformed road shoulders and a posted speed limit of 50km/hr. The existing nature of the road environment is presented below in [Figure 3](#).

Figure 3 – Tallawong Road Existing Environment

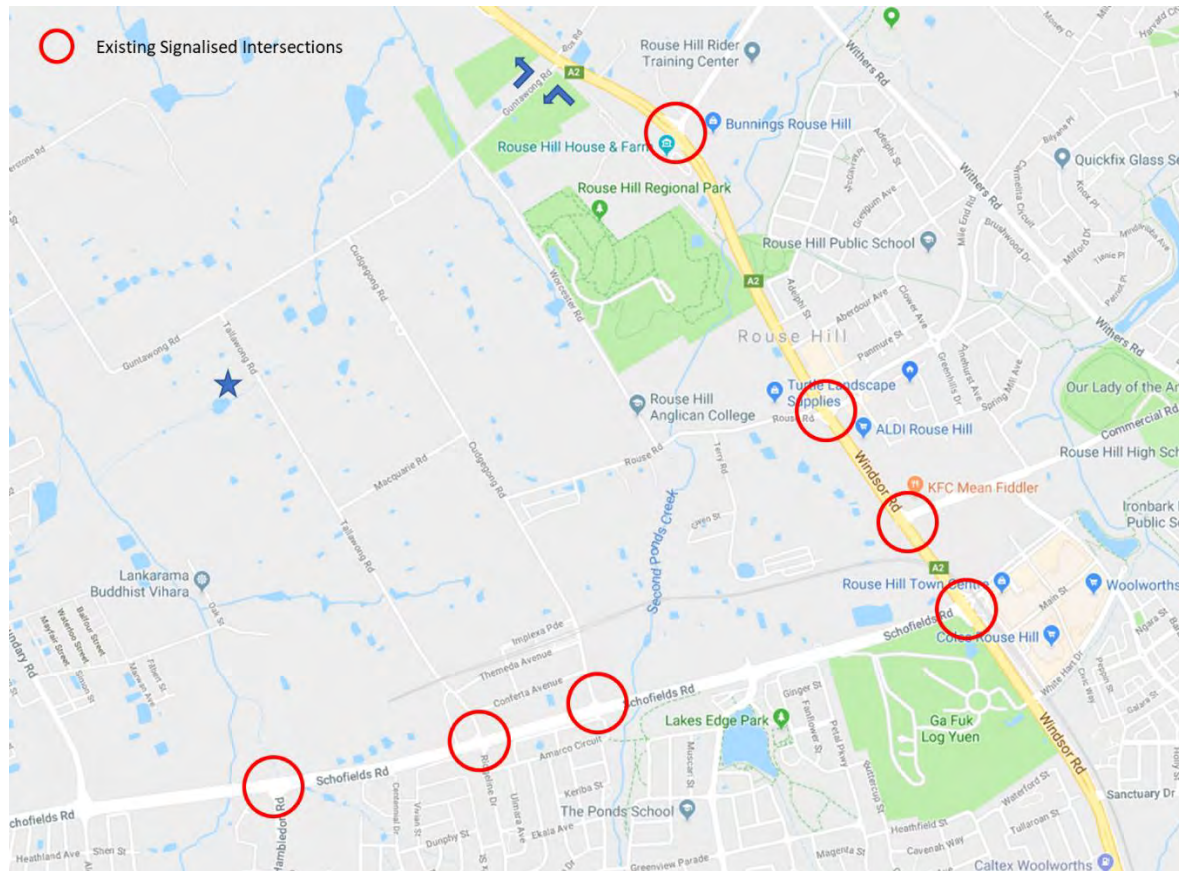


Guntawong Road – is of a similar nature to Tallawong Road with a single travel lane in each direction, unformed road shoulders and a posted speed limit of 50km/hr. The road provides a left in / left out intersection access with Windsor Road, the main north-south arterial road through the area.

Schofields Road – is the main east-west sub arterial road through the area and has recently been subject to extensive upgrades and direct connection to Richmond Road in the west. The road now consists of two travel lanes in each direction with the majority of intersections controlled by traffic signals including Schofields Road / Tallawong Road and Schofields Road / Gudgegong Road.

The existing traffic controls at intersections in the vicinity of the proposed Sikh Grammar School, Rouse Hill is presented in

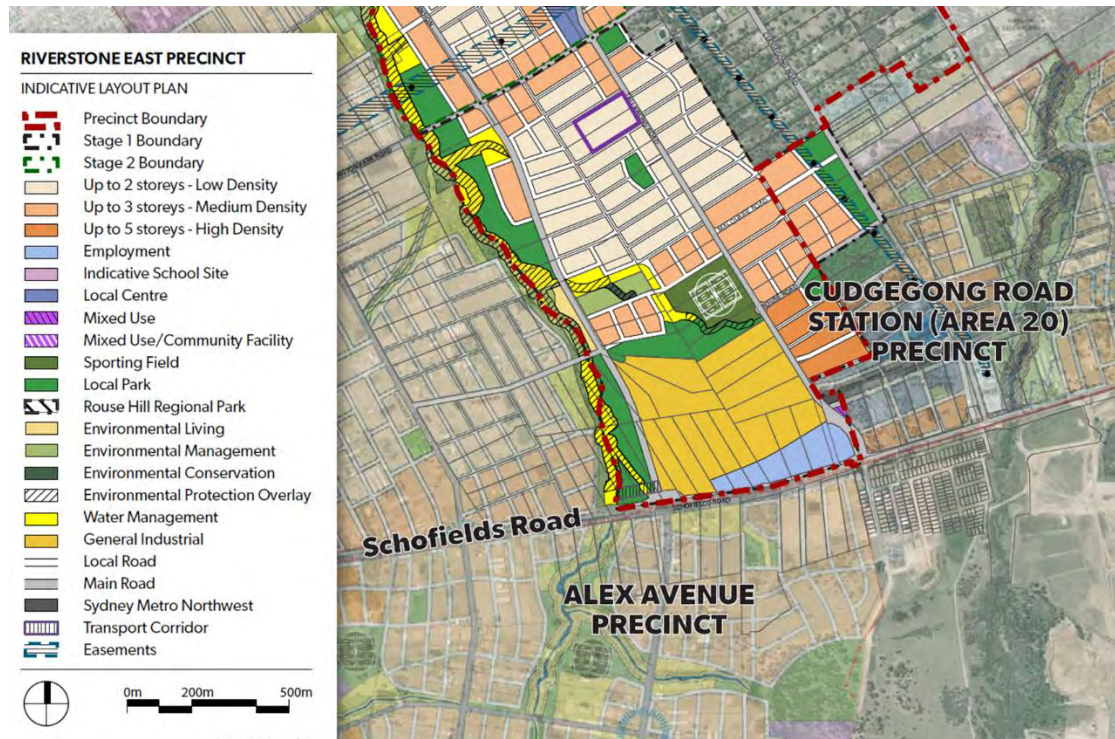
Figure 4 – Existing Intersection Traffic Controls



2.3 Future Road Network

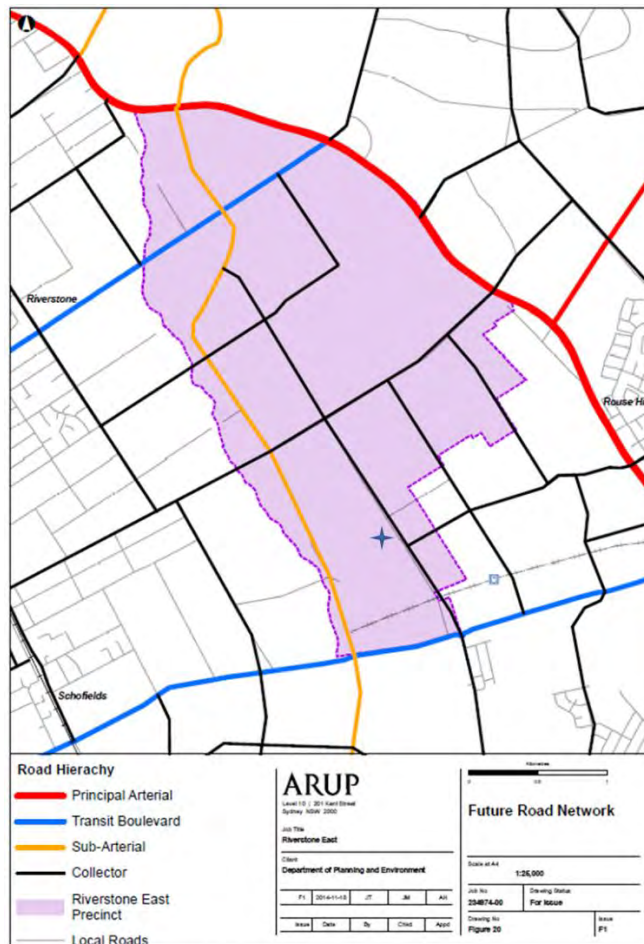
The site is located within the Riverstone East Precinct which is currently experiencing growth in development including improvements to some of the road networks. The location of the proposed school site within the context of the Riverstone East ILP is shown below in [Figure 5](#).

Figure 5 – Proposed Site Location within Riverstone East ILP



The delivery of the Riverstone East Precinct will include upgrades to key roads in the area including Tallawong Road / Gundgegong Road as the precinct evolves. The proposed future road network in the vicinity of the site is shown below in [Figure 6](#):

Figure 6 – Future Road Network in vicinity of development site



As shown in Figure 6, Tallawong Road will be upgraded to a 'collector road' classification for its entire length between Schofields Road and Guntawong Road.

3. The Proposed Development

The key components of the proposed development and associated public works are described below.

- A staged construction of a Kindergarten to High School which would achieve a potential capped student population of 1,260 students and total Gross Floor Area of 21,125m² of floorspace
- Basement car park with ultimate provision for 162 parking spaces with entry / exit access via the northern and southern local roads which form the boundaries of the site. This car park would also include a 11 space Kiss and Drop facility.
- Early Learning Centre with capacity for 86 children and a 33-space car park with entry / exit access via the southern boundary local street.
- Student accommodation for up to 110 students, 6 staff with 13 space basement car park
- Temporary 43 space car park on the north – western corner of the site which would be removed upon construction of the 162-space basement car park.
- Gurdwara and Langar Worship Centre with a Gross Floor Area of 2,710m² (maximum capacity for 700 persons)
- Langer ancillary food preparation area internal to the Gurdwara and Langar Worship Centre
- Indented bus bay with capacity for three (3) full sized buses in Tallawong Road along the eastern boundary of the school.
- A construction program of approximately 10 years.

A summary of the number of persons / staff for each component of the project is presented below in [Table 1](#).

Table 1 - Estimated Student / Staff Numbers by Use

Item	Details
Early Learning Centre	86 place / 18 staff
Primary School	588 students (based on 28 per class) + 30 staff
Secondary School - 4 Stream	672 students (based on 28 per class) + 47 staff
Administration & Staff	25 staff

It should be noted that the proposed large basement car park would serve both school and worship uses on the site. However, to ensure the total available on-site parking is available for each use, the Gurdwara and Langar Worship Centre would not be opened during school hours on any weekday.

3.1 Development Staging

Detailed staging plans of each component of the development included expected student population is presented in [Appendix A](#) of this report.

For ease of reference, the following summary presents the anticipated student population

Table 2 – Summary of Proposed Staging

Stage	Items	Max No. Students	No. Parking Spaces
1	<ul style="list-style-type: none"> Tallawong Rd Upgrade New northern local road half construction Relocatable primary school building Open space 	168	19
2	<ul style="list-style-type: none"> Permanent private school building Open space 	420	47
3	<ul style="list-style-type: none"> Additional primary school buildings Half western boundary road construction Southern boundary road future car park access 	680	75
3B	<ul style="list-style-type: none"> Early learning centre Early learning centre car park 	680 school / 86 early learning centre	75 school / 36 early learning centre
4	<ul style="list-style-type: none"> Secondary school Additional parking 	900 school / 86 early learning centre	111 school / 36 early learning centre
5	<ul style="list-style-type: none"> Additional Secondary School buildings At Grade Kiss & Drop facilities 	1,150 school / 86 early learning centre	139 school / 36 early learning centre
6	<ul style="list-style-type: none"> Additional Secondary School buildings 	1,260 school / 86 early learning centre	162 school / 36 early learning centre
7	<ul style="list-style-type: none"> Multi purpose hall for school Gurdwara / Langer Worship building Basement car park with northern and southern boundary road connections 	1,260 school / 86 early learning centre	162 school / 36 early learning centre
8	<ul style="list-style-type: none"> Administration building Boarding house (110 students) Staff accommodation (6 dwellings) 	1,260 school / 86 early learning centre	162 school / 36 early learning centre / 13 space boarding house

4. Preliminary Construction Traffic Management Plan

4.1 Introduction

At this stage of planning and without a construction company formally commissioned to undertake any stage of the proposal, finer grain details of expected construction traffic demands are not known. These details include volumes of materials removed and taken to the site for each stage, number of construction workers and all relevant information which would underpin traffic demand forecasts.

Thus, it is expected that for each stage of the development a separate Construction Traffic Management Plan / Pedestrian Management Plan would be prepared accordingly and submitted for approval.

The anticipated construction program for the school as a whole is 10years. The time for each stage of the project is not available at the time of preparing this preliminary CTMP.

4.2 Vehicle Access

- No vehicle access would be permitted via the Tallawong Road site frontage at any stage of the construction program.
- It is anticipated that the construction contractor(s) will update the construction traffic & pedestrian management plan for each stage of the project prior to obtaining a construction certificate.
- The contractor will monitor and coordinate all vehicles entering and exiting the Construction sites.
- Not road closures of any kind is envisaged throughout the life of the construction of the school.
- Appropriate traffic controls will be put in place during construction to separate construction activities from the public. In addition, traffic controllers will be engaged to manage the interface between pedestrians and to direct vehicles entering and leaving the site.
- Any work from neighbouring properties will be managed and coordinated with these stakeholders to maintain access and amenity.
- The number and path of vehicle movements will vary during the construction period of the project. The majority of construction vehicles will access directly onto the work sites.

4.3 Construction Vehicle Routes of Travel

The existing and enhanced road network of the Riverstone East Precinct enables larger vehicles to travel to / from the school without the need to do so via a local street network to any great extent.

The northern and southern local street boundary roads of the school would be utilised throughout the development of the school. The placement of the bus facilities directly in Tallawong Road enables construction activities to occur around school operations without the need to impact on pedestrian access to bus operations.

All heavy vehicles involved in the demolition, excavation and construction of the proposed development would approach and depart the site as shown in Figure 7 and Figure 8.

Figure 7 – Proposed Inbound Truck Routes

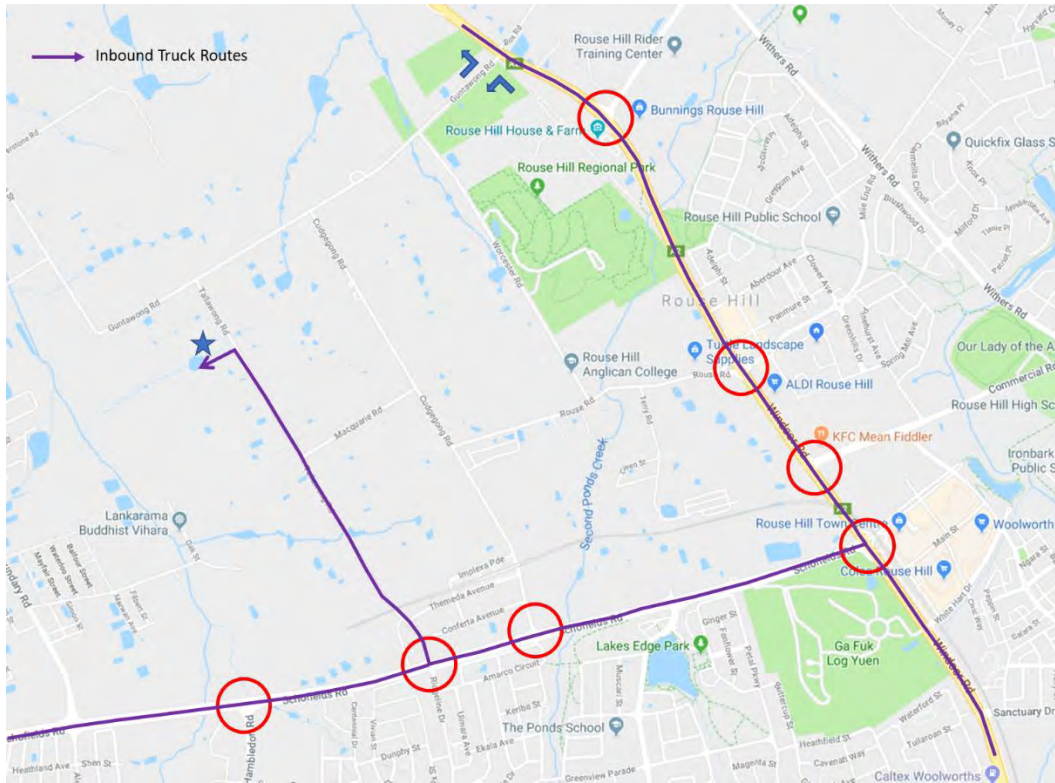
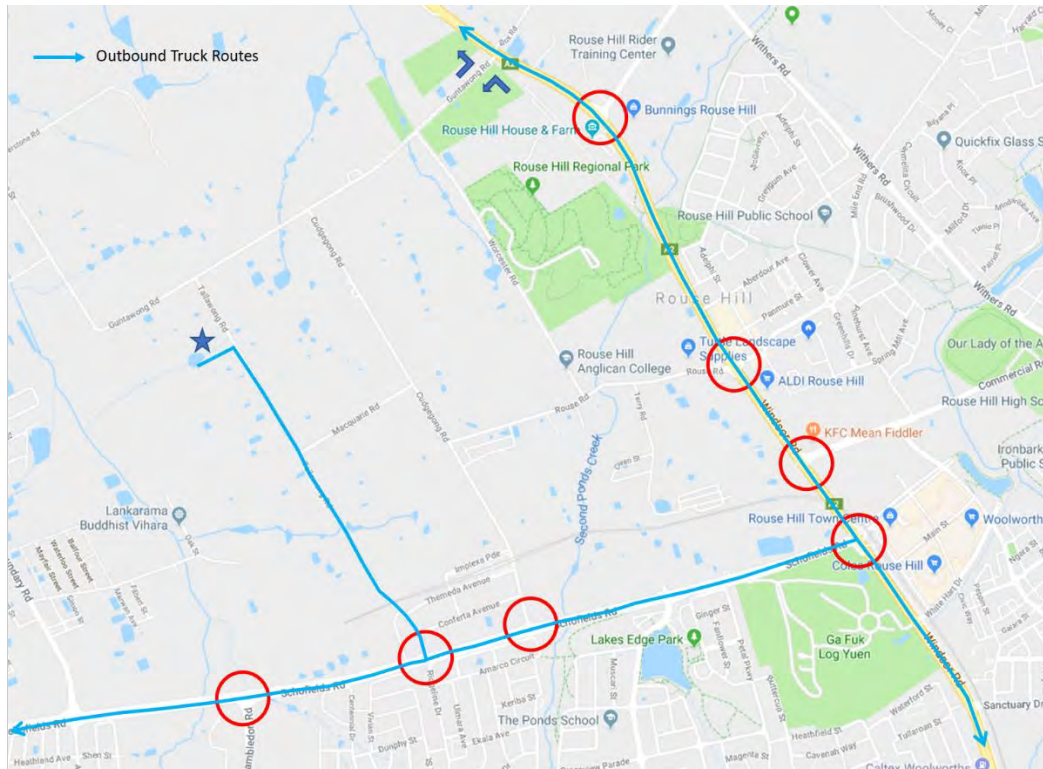


Figure 8 – Proposed Outbound Truck Routes



- The site manager will ensure that the route map is prominently displayed on the site and that all contractors and employees are given a copy of the route map and understand their obligations as part of their site induction procedure.
- Light traffic roads and those subject to load or height limits will be avoided as well as minimising heavy vehicle movements during school peak periods.

4.4 Loading / Unloading

- No loading or unloading of any vehicle would occur via the Tallawong Road frontage during any stage of the construction project.
- Whilst working on site can occur during the abovementioned construction hours, the site manager will endeavour to restrict truck loading/unloading outside peak school drop-off/pick-up periods.
- Construction material delivery trucks, including concrete pumping, will occur within the site where possible or from potential Works Zones typically using small and medium rigid trucks.
- As necessary, RMS-accredited traffic controllers will be in place at all times during truck movements to ensure the safety of pedestrians and minimise disruption to local traffic.
- The site manager will co-ordinate the work such that two deliveries do not occur at the same time, unless they can be both accommodated on site or within the potential Works Zones.
- All materials are to be stored on site. At no time are materials to be stored on any road or Council property unless prior approval is granted by Blacktown City Council.

4.5 Neighbouring Properties

- All neighbouring properties are to have their access maintained at all times.
- All nearby residents and businesses will be updated on a regular basis and at key construction stages with respect to the construction process, particularly in relation to construction vehicles movements, and be provided with a phone number to contact the site manager.
- Furthermore, the site manager must liaise with the site managers of any nearby construction sites to ensure that appropriate measures are in place to prevent the combined impact of construction activities, such as (but not limited to) concrete pours, crane lifts and spoil truck routes.
- Along with Council's and other statutory requirements, a minimum seven (7) days notification should be provided to adjoining property owners prior to the implementation of any temporary traffic control measures.

4.6 General Matters

4.6.1 Site Fencing, Hoardings and Accommodation

- Temporary Site fencing and gates will be installed around all internal and external construction site areas.
- Temporary B-Class hoardings and scaffold systems will be installed to boundaries adjoining the Demolition and overhead Construction site areas.
- Site accommodation will be established subject to the amount of personnel working on site by stage.

- Temporary hoardings and signage will be adopted in working areas at all times during construction.

4.6.2 Temporary Utilities and Services

- All existing services in the construction area will be identified and located to minimise disruption to the construction works and to adjacent facilities. Thorough investigation and staging of works will be undertaken to ensure that any capping and removal of services does not affect other Stages of the School.
- All existing services and utilities shall be disconnected and /or diverted around building work areas prior to demolition or construction works commencing. These services works will be carried out with the relevant utilities or services provider.
- Reticulated power and lighting installations will comply to the requirements of the WH&S Regulations, Electricity Supply Authority and the Code of Practice for Temporary Electrical Installations on Building and Construction Sites.
- Noise, air and vibration monitoring units will be established to manage air quality and vibration movement during the demolition and construction of the Project.

4.6.3 Cranage and Materials Handling

- It is expected that Mobile cranes will also be intermittently required to facilitate some of the loading of materials on to the sites.
- Although lifting will most likely be from construction delivery vehicles and contractor laydown areas within the site, in some instances, crane(s) will need to be capable of lifting from construction vehicles from approved work zones.
- Demolition and Excavation material disposal and delivery of small items will be undertaken via designated gates at site boundaries for each stage of construction.
- Delivery of Structural Steel frames and beams will most likely occur using a table top semi-trailer, prime mover.
- Smaller building elements can be lifted from within the site or approved work zones, delivered via smaller table top trucks.

4.6.4 Site Safety Management and Work Method Statements

- A Site Safety Plan and safe work method statements will be developed by the Construction Contractor to demonstrate the commitment to Work Health & Safety (WH&S) prior to construction of any stage of the project.
- The site safety plan is required to identify the scope of work to be undertaken, the hazards associated with the work and the risk assessment processes and risk control measures to be used in the execution of the project activities.
- Objectives for a Site Safety Plan include the following:
 - a) maintain lost time injury reporting and review positive performance indicators,
 - b) report all incidents and near misses and develop corrective action plans,
 - c) conduct Senior Management and WH&S Group reviews,
 - d) develop required WH&S resources,

- e) formalise regular senior management reviews of WH&S systems and implement relevant improvements,
- f) continually develop WH&S systems, policies, procedures and WH&S Plans to comply with statutory requirements and industry best practice,
- g) **maintain an Audit Programme to comply with system's requirements,**
- h) ensure all corrective actions and Non-Conformances are closed out,
- i) meet or exceed the requirements of AS 4801 certification and Federal Safety commission accreditation,
- j) adopt a zero tolerance safety philosophy,
- k) provide Safety Awareness and other appropriate WH&S training,
- l) continue to implement ongoing induction procedures on all Projects,
- m) hold regular Consultative Committee meetings, maintain minutes and record actions,
- n) issue Safety Alerts to all staff and other stakeholders according to requirements,
- o) conduct and record regular toolbox meetings on site.
- A Site Safety Plan would also outline the key responsibilities for achieving the above objectives. A statement of responsibilities by the Construction Contractor would identify who will be responsible for the following:
 - a) undertake audits to ensure appropriate implementation of the WH&S Plan occurs,
 - b) coordinate WH&S training,
 - c) establish, implement and maintain procedures for controlling all relevant documents and data required,
 - d) implement WH&S matters in construction design and planning,
 - e) make all reasonable endeavours to ensure that the WH&S management system is established, implemented and maintained on the Project,
 - f) monitor and constantly review risk management to the site,
 - g) ensure all Work Method Statements have been received on site prior to the commencement of work.
- 72 The Site Safety Plan would also address the following requirements, as required:
 - a) Working with Children legislation and school policies.
 - b) WH&S training – identification of WH&S training needs of all personnel, induction training, refresher training, attendance of WH&S committee personnel at consultation training etc;
 - c) incident management – identifies who will be available during and outside normal working hours to prevent, prepare for, respond to and recover from illness/ injury and incidents;
 - d) site safety rules – As a minimum will include induction and safety training, PPE, Site access and security, emergency procedures, illness and injury, protection of personnel and the public, work at elevated areas, safe working, hazardous materials and dangerous goods etc;
 - e) Safe Work Method Statements – All activities assessed as having WH&S risks require a SWMS to be prepared and implemented.

5. Appendix A – Proposed Development Detailed Staging Plans



Half Road construction subject to separate DA

CONSTRUCTION:

- Play space (becomes part of Village Green)
- Tallawong Road upgrade
- Stormwater infrastructure to north-east corner
- North-east corner on-grade carpark

- Relocatable primary school building
- Multi purpose hall
- On-ground parking

- Existing house
- Existing on-ground carpark

Bus Layby to Civil Engineer's detail

Half Road construction subject to separate DA

Maximum students	168	GFA	1085sqm
Outdoor space	1680sqm	Roof area	1140sqm
Total Parking spaces	83	Hardscape	2000sqm



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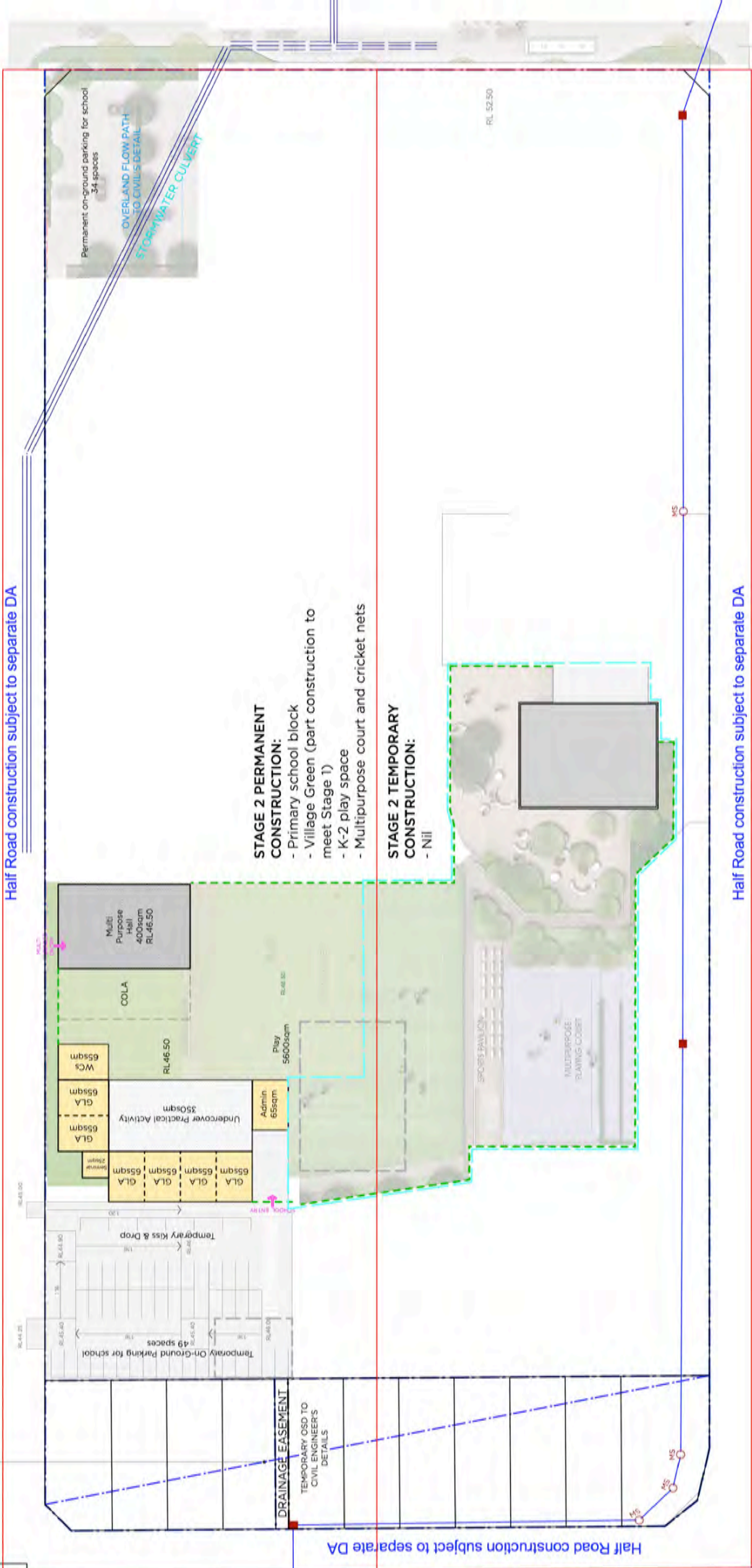
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DA131



Residential subdivision
subject to separate DA

Half Road construction subject to separate DA



STAGE 2 PERMANENT CONSTRUCTION:

- Primary school block
- Village Green (part construction to meet Stage 1)
- K-2 play space
- Multipurpose court and cricket nets

STAGE 2 TEMPORARY CONSTRUCTION:

- Nil

Half Road construction subject to separate DA

STAGE 2: PRIMARY SCHOOL

	Maximum students	420	GFA	2763sqm
	Outdoor space	4200sqm	Roof area	1795sqm
	Total Parking spaces	83	Hardscape	4840sqm

- Existing boundary
- New boundary
- Extent of current Stage
- Future construction
- Temporary school fence

Stage 2

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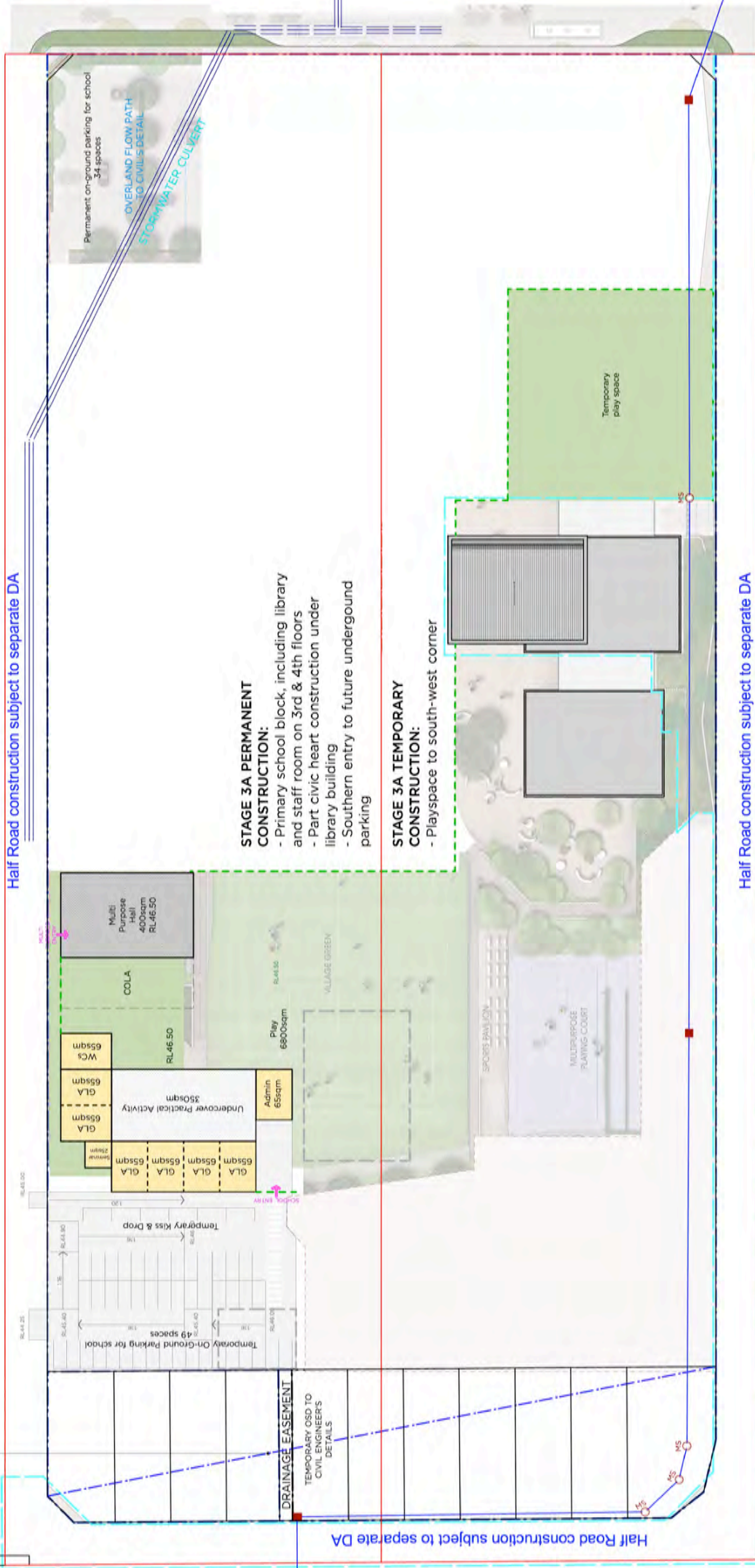
Sikh Grammar School

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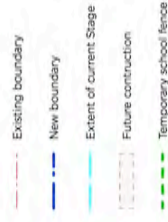


Half Road construction subject to separate DA



Half Road construction subject to separate DA

Maximum students	680	GFA	5668sqm
Outdoor space	6800sqm	Roof area	2860sqm
Total Parking spaces	83	Hardscape	5410sqm



Stage 3A

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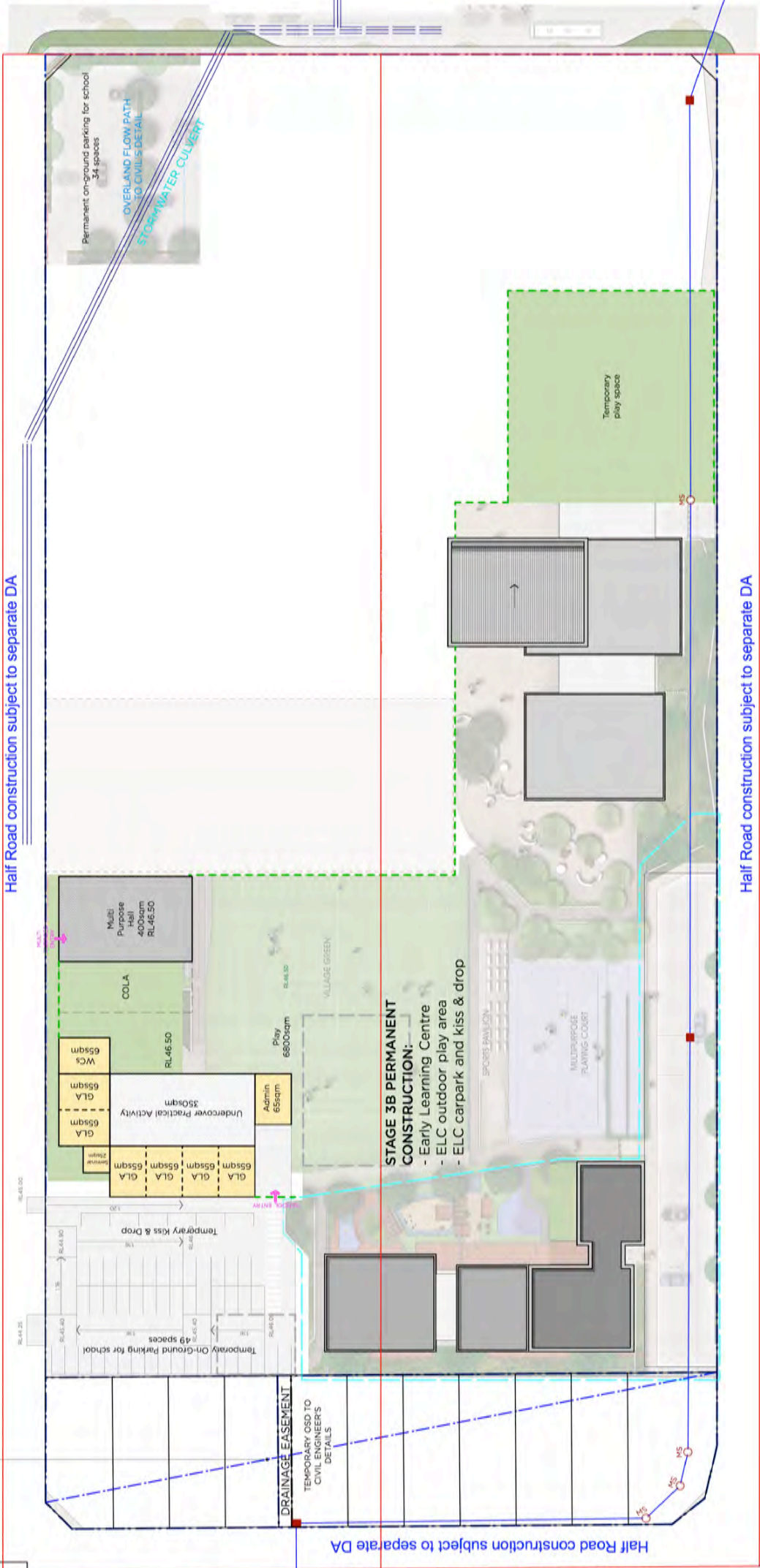
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Residential subdivision
subject to separate DA

Half Road construction subject to separate DA



Half Road construction subject to separate DA

Half Road construction subject to separate DA

STAGE 3B: EARLY LEARNING CENTRE

	Maximum students	86	GFA	7403sqm
	Outdoor space	860sqm	Roof area	3840sqm
	Parking spaces		Hardscape	6670sqm
	Total Parking Spaces:	115		



- Existing boundary
- New boundary
- Extent of current Stage
- Future construction
- Temporary school fence



Stage 3B

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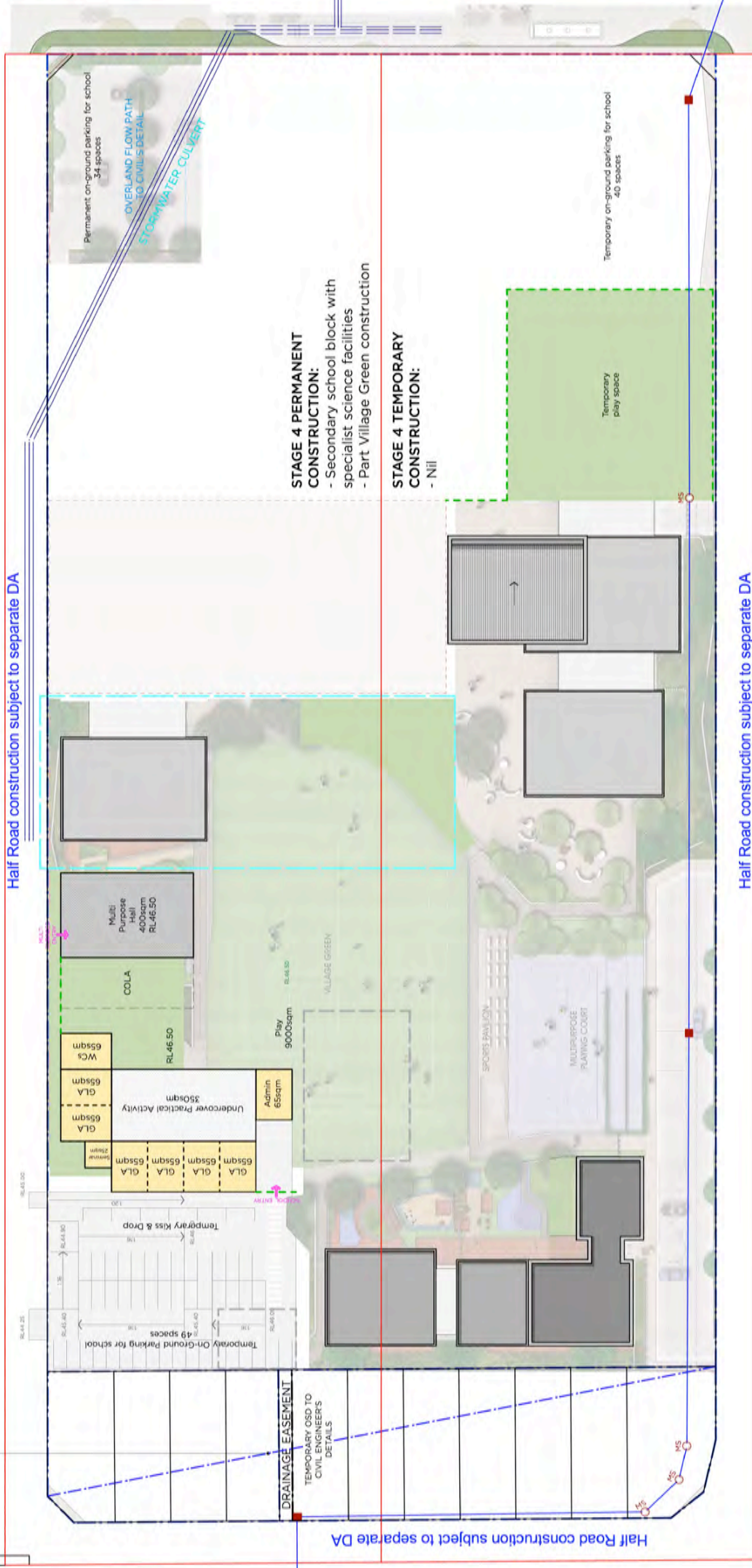
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Sikh Grammar School

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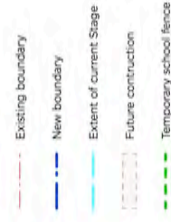
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Half Road construction subject to separate DA



STAGE 4: SECONDARY SCHOOL

Maximum students	900	GFA	9123sqm
Outdoor space	9000sqm	Roof area	4495sqm
Total Parking spaces	155	Hardscape	240sqm

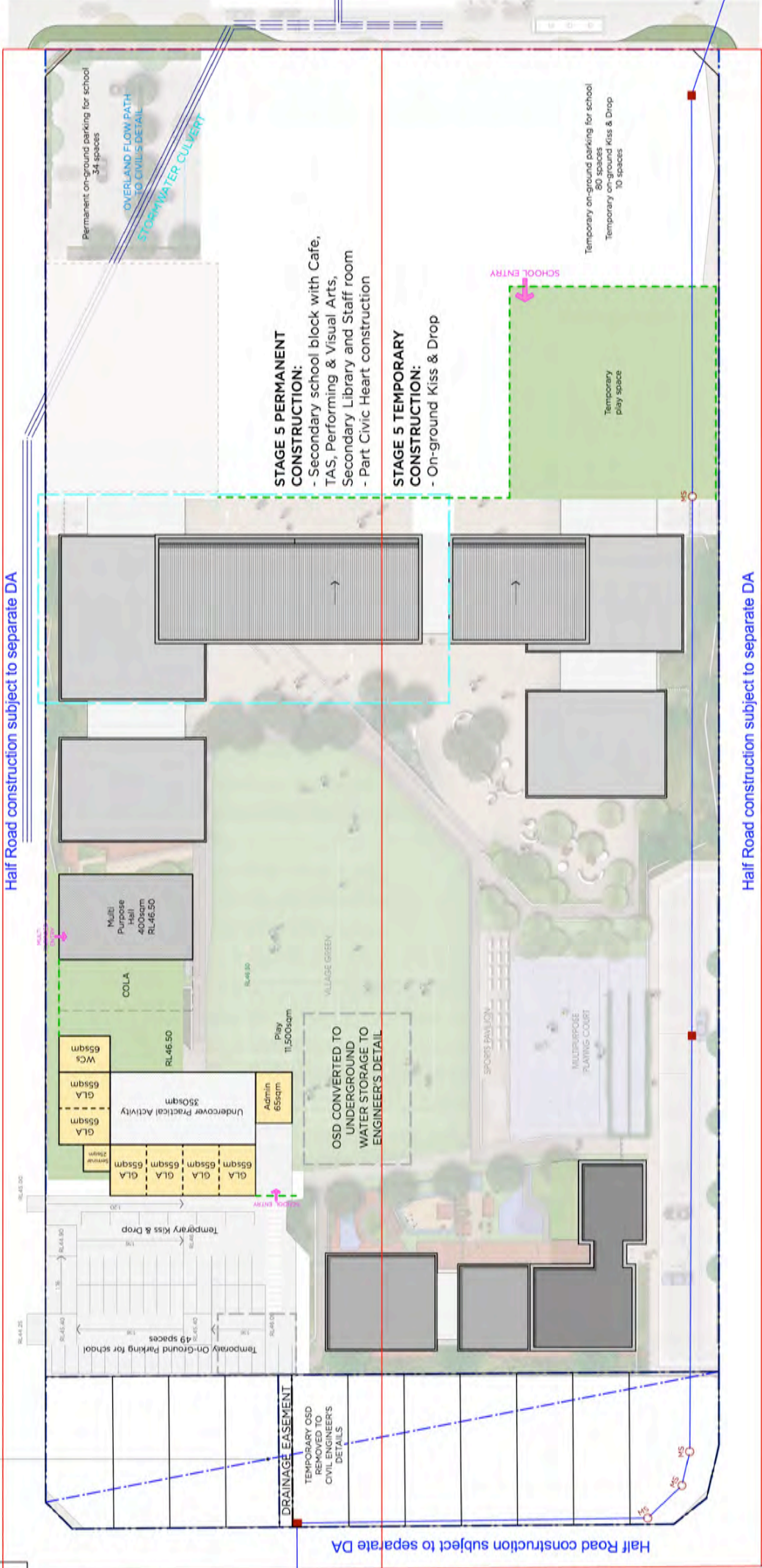


Stage 4



Residential subdivision
subject to separate DA

Half Road construction subject to separate DA



Half Road construction subject to separate DA

Half Road construction subject to separate DA

STAGE 5: SECONDARY SCHOOL

	Maximum students	1150	GFA	12,310sqm
	Outdoor space	11,500sqm	Roof area	5625sqm
	Total Parking spaces	205	Hardscape	8950sqm

- Existing boundary
- New boundary
- Extent of current Stage
- Future construction
- Temporary school fence

Stage 5

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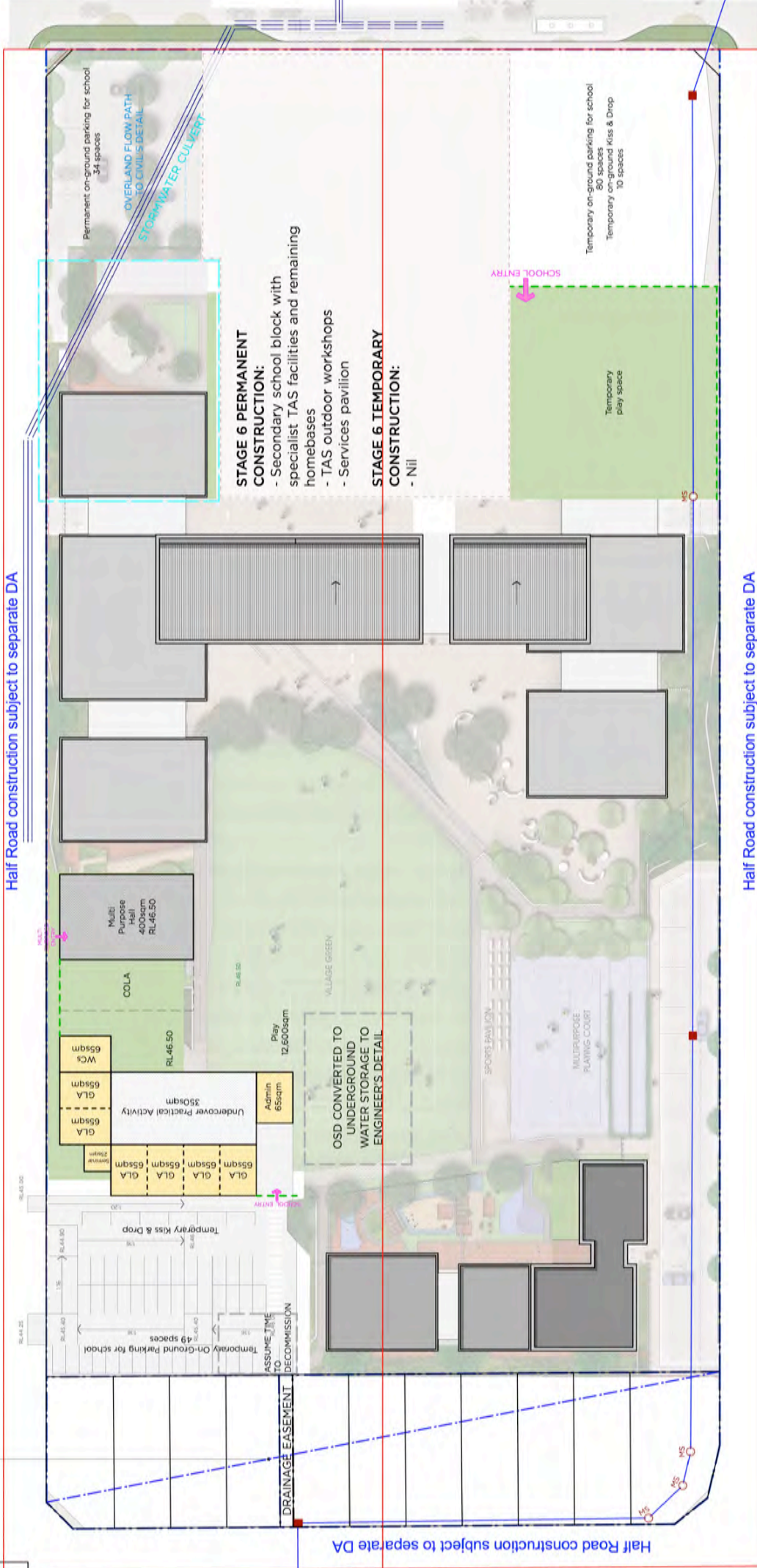
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Sikh Grammar School



Residential subdivision
subject to separate DA

Half Road construction subject to separate DA



STAGE 6 PERMANENT CONSTRUCTION:
- Secondary school block with specialist TAS facilities and remaining homebases
- TAS outdoor workshops
- Services pavilion

STAGE 6 TEMPORARY CONSTRUCTION:
- Nil

SCHOOL ENTRY

Temporary on-ground parking for school
80 spaces
Temporary on-ground Kiss & Drop
10 spaces

Temporary play space

Permanent on-ground parking for school
34 spaces

OVERLAND FLOW PATH
TO CIVIL'S DETAIL
STORMWATER CULVERT

Half Road construction subject to separate DA

Half Road construction subject to separate DA

STAGE 6: SECONDARY SCHOOL

	Maximum students	1260	GFA	14,735sqm
	Outdoor space	12,600sqm	Roof area	6170sqm
	Parking spaces	205	Hardscape	9510sqm

- Existing boundary
- New boundary
- Extent of current Stage
- Future construction
- Temporary school fence

Stage 6

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Sikh Grammar School

DA137

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Half Road construction subject to separate DA



Stage 7 And Basement

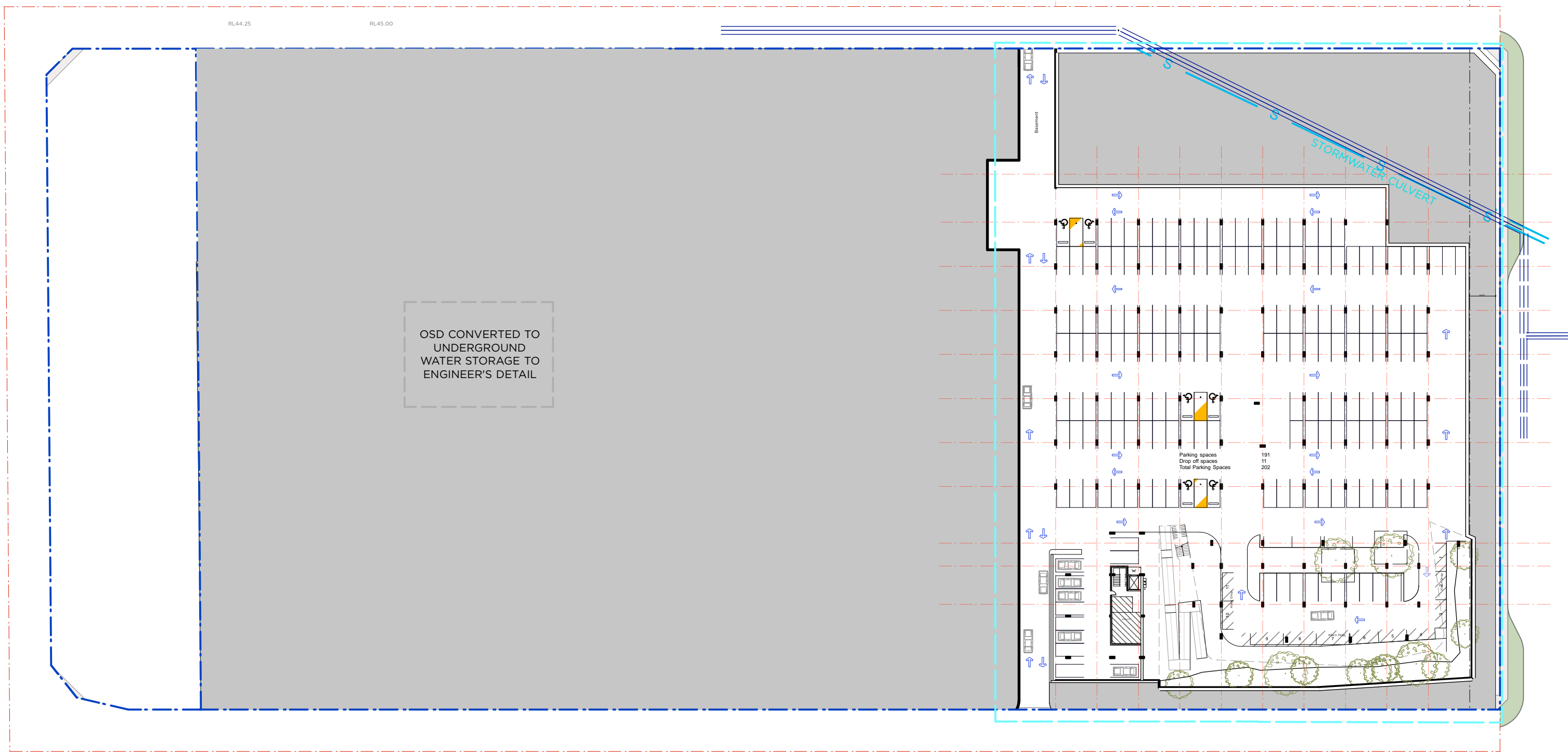
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DA138

Sikh Grammar School



STAGE 7: MULTI-PURPOSE HALL & GURDWARA

Capacity	700	GFA	19,840sqm
Total Parking spaces	317	Roof area	8600sqm
		Hardscape	12,310sqm

- Existing boundary
- New boundary
- Extent of current Stage
- Future construction
- Temporary school fence

Stage 7 -Basement/Parking Plan

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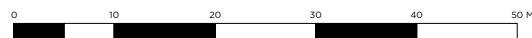
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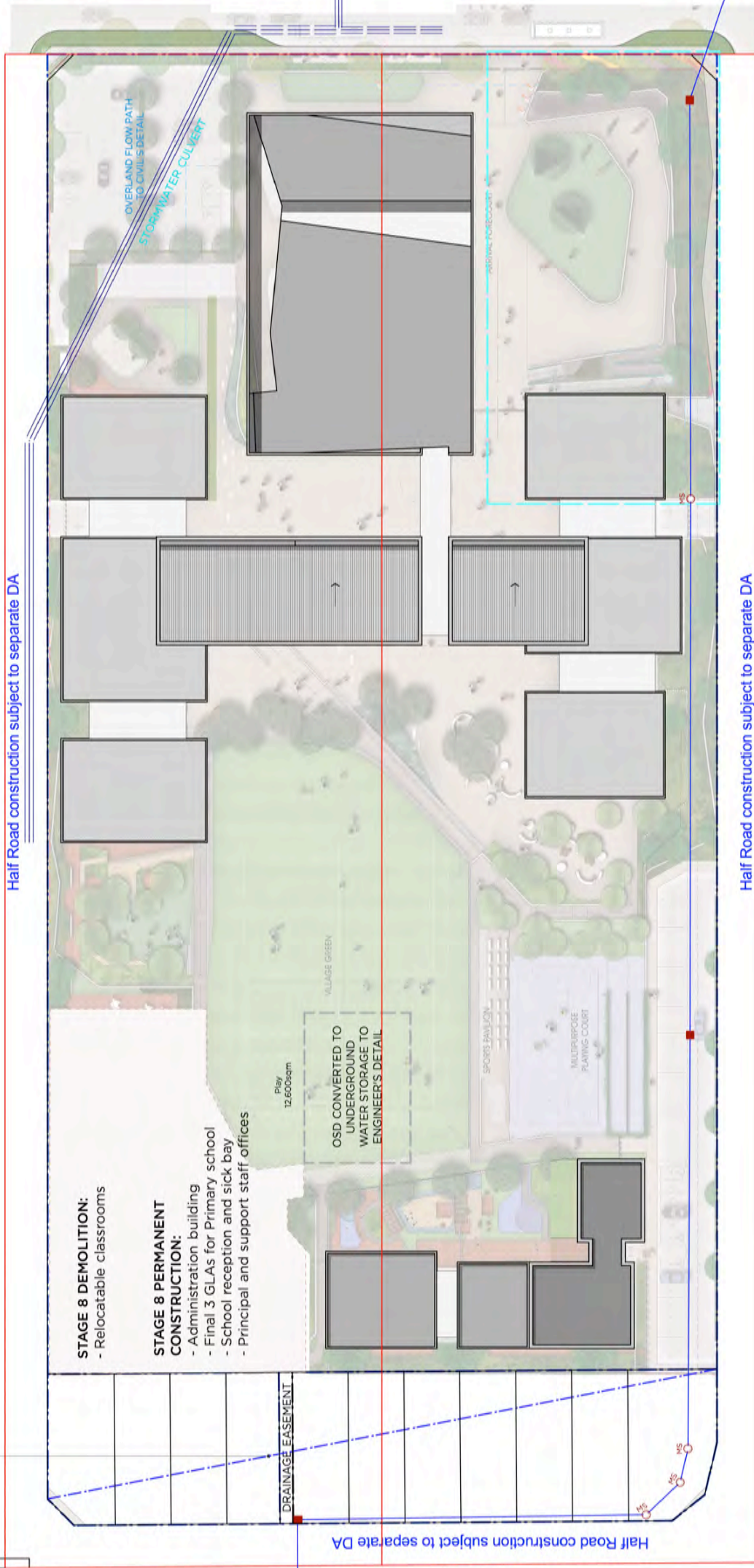
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Sikh Grammar School

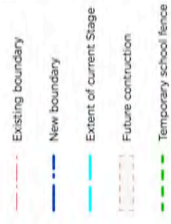


Half Road construction subject to separate DA



STAGE 8: ADMINISTRATION BUILDING & FORECOURT

Maximum students	1260	GFA	21,125sqm
Outdoor space	12,600sqm	Roof area	9130sqm
Parking spaces	317	Hardscape	14,710sqm



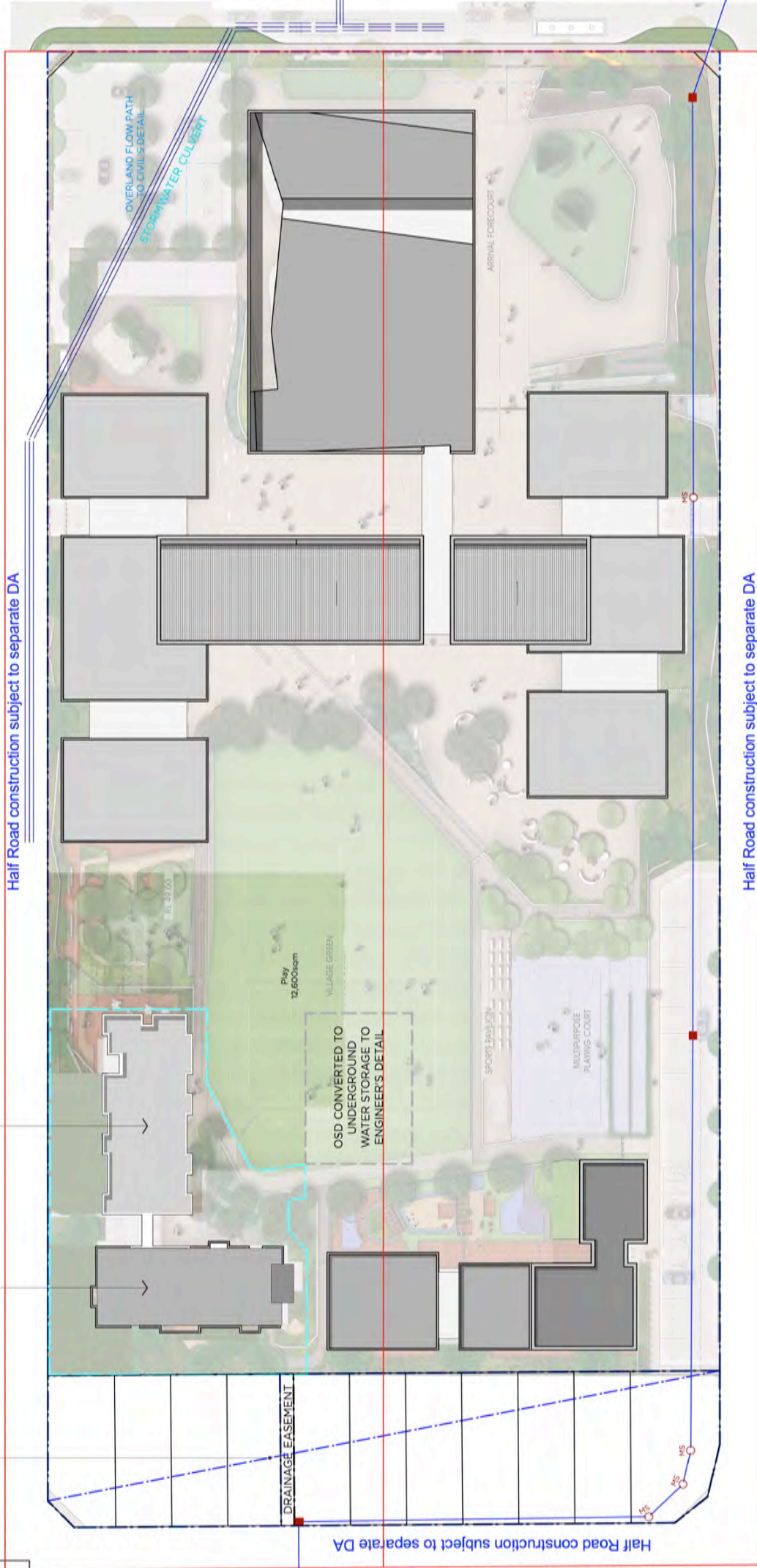
Stage 8



Residential subdivision
subject to separate DA

- STAGE 9 PERMANENT CONSTRUCTION:**
- Demolish temporary carpark
 - Boarding house
 - Staff apartments
 - Undercroft parking for boarding house

Half Road construction subject to separate DA



Half Road construction subject to separate DA

STAGE 9: STUDENT BOARDING HOUSE

	Maximum students	110	GFA	1233sqm
	Staff apartments	6	Roof area	1233sqm
	Outdoor space	1052sqm	Hardscape	682sqm
	Total Parking spaces	281		

- Existing boundary
- New boundary
- Extent of current Stage
- Future construction
- Temporary school fence

Stage 9

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Scale
2757

Date
1:750 @ A3

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