Our Reference: **PT18022**

Sikh Grammar School Australia
C/O Willowtree Planning Pty Ltd
Suite 4,
Level 7,
100 Walker Street,
North Sydney NSW 2060

23 November 2020

Att: Mr Travis Lythall

Via email: tlythall@willowtp.com.au

Proposed Sikh Grammar School, Rouse Hill (SSD 9472)
Addendum Traffic Report

Further to our traffic impact assessment report dated November 2020 (PT18022r01_Final_V6), please find below some additional information in response to the matters raised by DPIE representatives following a preliminary assessment of the traffic impact assessment report.

This addendum has considered the updated staging plans prepared by PMDL Architecture Pty Ltd of which copies are attached to **Appendix A** of this addendum report.

For ease of reference each matter raised is repeated below with a response following.

Items for Further Information

The Department notes that the staging plans submitted by PMDL Architects in the Architectural Design Report currently does not match the Traffic Report (Table 4). As an example:

- ***the plan for Stage 4 shows an additional 40 on ground spaces and 10 drop-off / pick-up spaces at the south-eastern corner. This is not reflected in the traffic report.***
- ***the traffic report states that the under-ground drop-off / pick-up area would be delivered in Stage 5 whereas the Staging plan says it would occur in Stage 7.***

Response

The revised staging plans presented in **Appendix A** of this response report should be considered as the most up to date information on the potential staging of the site.

To reflect the most current staging plans, **Table 3** in **Section 4.1** from the original traffic report has been updated to confirm the number of students, parking spaces, Kiss and Drop spaces and bicycle parking spaces identified to occur by stage and is presented below.

Table 3 – Summary of Proposed Staging

Stage	Items	Primary Students	Secondary Students	Total Students	Yr12 Students	ELC Children	Total No. Staff	Total On Site Parking Spaces	DCP Parking Req.	Total Kiss & Drop Spaces	DCP Kiss & Drop Req.	DCP Bicycle Req.	Total Bicycle Parking
1	• Tallawong Rd Upgrade • Relocatable primary school building • Open space • 2 x at grade car parks	112	0	**112**	0	0	8	84	10 school	6	0	0	5 school
2	• Permanent private school building • Open space • Multi-purpose court (school use)	168	0	**168**	0	0	12	84	14 school	6	0	0	5 school
3A	• Additional primary school buildings including library • Entry driveway within southern boundary road for future car park access	392	0	**392**	0	0	27	84	31 school	6	0	0	10 school
3B	• Early learning centre (ELC) • Early learning centre car park	392	0	**392**	0	86	27	84 school + 32 ELC	31 school + 27 ELC	6	0	0	10 school + 4 ELC
4	• Secondary school • Additional parking	448	224	**672**	0	86	51	163 school + 32 ELC	58 school + 27 ELC	6	0	0	18 school + 4 ELC
5	• Additional Secondary School buildings	532	420	**952**	56	86	74	163 school + 32 ELC	96 school + 27 ELC	16	0	0	25 school + 4 ELC

Stage	Items	Primary Students	Secondary Students	Total Students	Yr12 Students	ELC Children	Total No. Staff	Total On Site Parking Spaces	DCP Parking Req.	Total Kiss & Drop Spaces	DCP Kiss & Drop Req.	DCP Bicycle Req.	Total Bicycle Parking
	• At Grade Kiss & Drop facilities												
6	• Additional Secondary School buildings	588	504	**1.092**	84	86	85	163 school + 32 ELC	113 school + 27 ELC	16	0	0	30 school + 4 ELC
7	• Multi-purpose hall for school • Gurdwara / Langer Worship building • Basement car park with northern and southern boundary road connections	588	504	**1,092**	84	86	85	226 school / Place of Worship + 32 early learning centre	113 school OR 96 Place of Worship + 27 ELC	17	0	0	34 school + 4 ELC
8	• Administration building • Staff accommodation (6 dwellings)	588	672	**1,260**	112	86	102	226 school / Place of Worship + 32 early learning centre	138 school OR 96 Place of Worship + 27 ELC	11	0	0	34 school + 4 ELC
9	• Boarding house (110 students)	588	672	**1,260**	112	86	102	226 school / Place of Worship + 32 early learning centre+ 13 boarding house	138 school OR 96 Place of Worship + 27 ELC + 13 boarding house	11	0	0	34 school + 4 ELC + 5 boarding

The table above confirms that at each and every stage of the proposed development both the parking provision and Kiss and Drop provision complies with or exceeds the minimum requrements of the DCP and is consdiered satisfactory.

Additionally, the report includes no assessment of the efficiency of the proposed drop-off / pick-up spaces on the site (whether the 11 car spaces are suitable) and how many cars are expected to be accommodated within the site at any one time.

Response

As confirmed above the proposed development by stage includes on-site parking provision which well exceeds the minimum requirments of the DCP. Thus, the site benefits from both short term (Kiss & Drop) and long term (general parking) spaces to perform the task of dropping off and picking up passengers.

Whilst the DCP does not require *any* specific Kiss and Drop parking areas, the approach to the provision of parking for the College is one which provides for both short term drop off / pick up and longer stay drop off / pick up. For example, a combination of staggered finsihing times of junior and senior schools with siblings in each requires parents to park for longer periods which would not be accomodated in a kerbside parallel Kiss and Drop parking facility.

In practice, a parallel Kiss and Drop facility can be expected to accommodate one vehicle per 30 seconds for drop off and one vehicle per 2 minutes for pick up (conservative estimate). Further the capacity is typically estimated in line with the reuqirements of bus servicing which are all bus servicing of the school should take no longer than 30 minutes before start time and after finishing time.

To allow for staggered start and finish times (usually separated by some 15 minutes), the capacity has been calculated on 45 minutes.

On the above basis, the ultimate 11 space parallel Kiss and Drop facility would accommodate **990** vehicles in the AM peak and **248** vehicles in the PM peak. At 1.2 persons per vehicle this would equate to the ability for the Kiss and Drop facility alone to transport **1,188** students in the AM peak and **298** students in the PM peak.

Having regard to the Green Travel Plan report prepared by Traffix Pty Ltd submitted with the application, the following presents the target mode share for the school:

Travel Mode	Travel Percentage for Students	
	Reference	Long-Term Targets
By Car (as driver)	5%	5%
By Car (as passenger – pick-up or drop-off)	67%	53%
By Car (as passenger – carpool)	0%	1%
Public Transport – Bus	13%	20%
Public Transport – Train / Metro	7%	8%
Cycle	0%	3%
Walk	8%	10%

With a long term target of 53% (668) of students travelling as a passenger to / from the school, it is evident above that the 11 space Kiss and Drop facility alone with accommodate the drop off task and near 50% of the pick up task without the use of any other parking on-site.

Overall, the Kiss and Drop facility in its ultimate form combined with the large excess of on-site parking is expected to accommodate the trips by students as passengers.

Please confirm (in an addendum traffic statement):
• what is the AM and PM peak drop-off and pick-up periods respectively (this is not mentioned anywhere. Usually a specific time is provided such as 8:30am – 9am).

Response

Having regard to standard hours for 40km/hr school zones which operate 8:00am – 9:30am and 2:30pm – 4:00pm, it is expected that the start and finishing times of the schools would commence 30 minutes before the end of the morning / afternoon 40km/hr school zone periods.

As is also expected as the school reaches a larger student population with students in both primary and secondary streams, staggered start and finishing times is expected to occur separated in the order of 10-15 minutes. This approach is common within schools and allows for better management of student crowding and more efficient spread of traffic demands generated by the school.

what is the duration of the peak drop-off / pick-up periods considered (whether 15 mins in the morning or 20 mins in the afternoon).

Response

As stated above at full occupation of the school it is expected that after accounting for staggered start and finishing times drop off / pick up periods would occur over 30-45 minutes in the morning and afternoon.

what is the average turn-around time considered for each car using the drop-off / pick-up.

Response

Please refer to the above standard practice assumptions of the length of stay for drop off and pick up of each vehicle within the parallel parking Kiss and Drop facility.

on what basis has the traffic report concluded that the 11 spaces would cater for all the students in the school.

Response

As confirmed above the school does not rely solely on the ultimate 11 space parallel Kiss and Drop facility to perform the students travelling as a passenger in a vehicle task. Such a facility which caters for older students confident in entering / exiting a vehicle at the kerbside does not cater for parents whom require longer stay parking due to multiple children attending the school, staggered start / finish times and the like.

As also confirmed above the 11 space Kiss and Drop facility would more than cater for the forecast travel to the school as a passenger and 50% of the travel from the school as a passenger of a vehicle.

confirm whether the 11 drop-off and pick-up spaces cater for 296 vehicle trips two way in the AM peak and 176 vehicle trips two way in the school afternoon peak, which have been derived in the traffic report.

Response

The forecast traffic generation of the school at ultimate development is not solely generated by the Kiss and Drop component of travelling to / from the school. It can typically include other elements including staff, Year 12 students, after hours tutors etc travelling to / from the school during peak periods.

The intersection modelling presented in the traffic reprot confirms that the immediate local intersections providing connection to Tallawong Road operate at a satisfactory level of service conservatively assuming the school peak generated traffic coincides road network peak which isnt the case in the afternoon.

whether the 11 drop-off / pick-up spaces within the site are provided on the basis of the DCP requirements

Response

As confirmed above, the current DCP does not require *any* Kiss and Drop facility to be provided at the school with only parking for both staff and Year 12 students necessary. The proposed development includes both temporary and formal Kiss and Drop facilities throughout the site as the school evolves and a parking provision which well exceeds the minimum requirements of the DCP ensuring that all parking demands are catered for on-site at all times.

whether all the cars using the drop-off / pick-up area can be accommodated within the site at any one time or whether queuing.

Response

As is commonplace during school peak periods internal queuing can occur from time to time. However, the subject site includes both a high capacity Kiss and Drop facility and large parking areas which provide parking well in excess of the minimum requirements of the DCP which requires 1 space for every staff member.

The provision of a high capacity Kiss and Drop facility combined with excess on-site parking would in turn reduce the likelihood of congestion / queuing as parents are afforded a wide variety of parking choices / locations depending on their specific needs.

whether the temporary drop-off / pick-up areas in each stage of the development is suitable for the proposed number of students.

Response

The site includes a combination of Kiss and Drop facilities along with parking which well exceeds the minimum requirements of the DCP for each and every stage of the proposal.

The parking demands whether short term or long term would be well accomodated on site at all times.

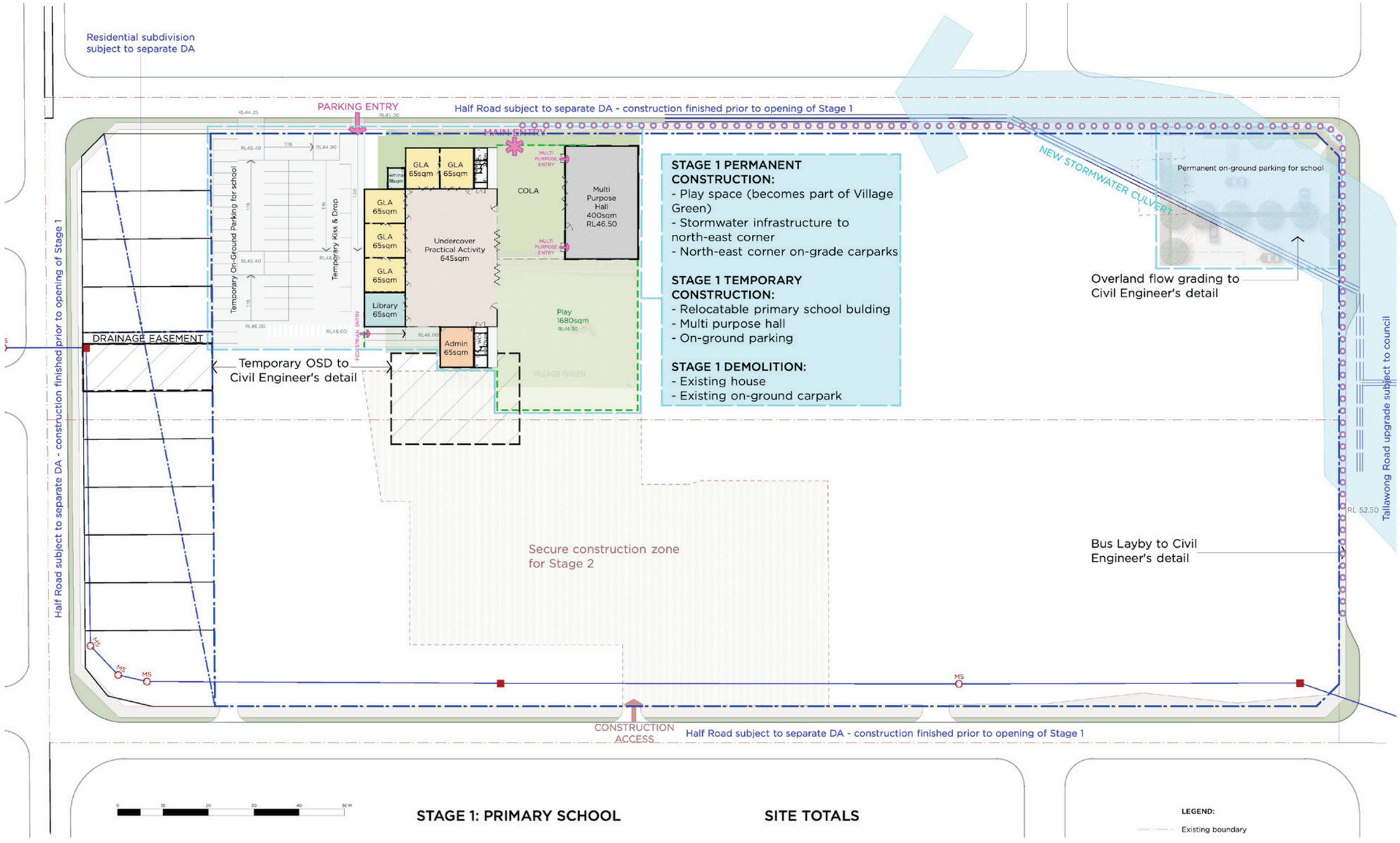
We trust the additional information assists you. Should you require any further information please do not hesitate to contact myself on 0414 462247.

Yours sincerely

DEAN BRODIE
Managing Director

Appendix A – Revised Staging Plans

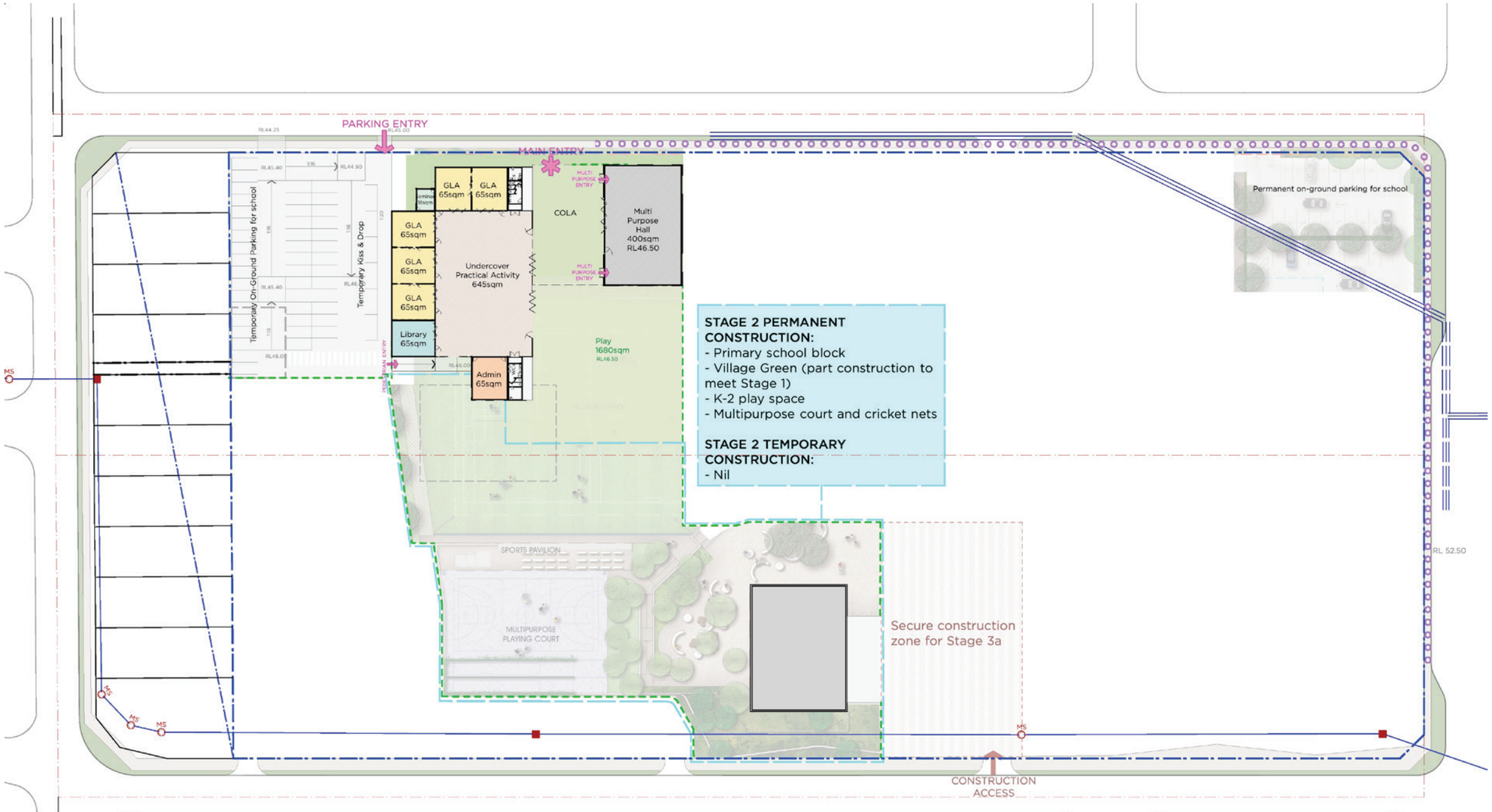
CONSTRUCTION STAGE 1 - SITE PLAN
ESTIMATED COMPLETION JAN 2022



STAGE 1: PRIMARY SCHOOL		SITE TOTALS	
Maximum students	**112**	GFA	**1,650sqm**
Staff	**8**	Roof area	**1,200sqm**
Outdoor space	**1,680sqm**	Hardscape	**2,000sqm**
Total Parking spaces	**84**		

LEGEND:
- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 2 - SITE PLAN
ESTIMATED COMPLETION JAN 2024



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STAGE 2: PRIMARY SCHOOL

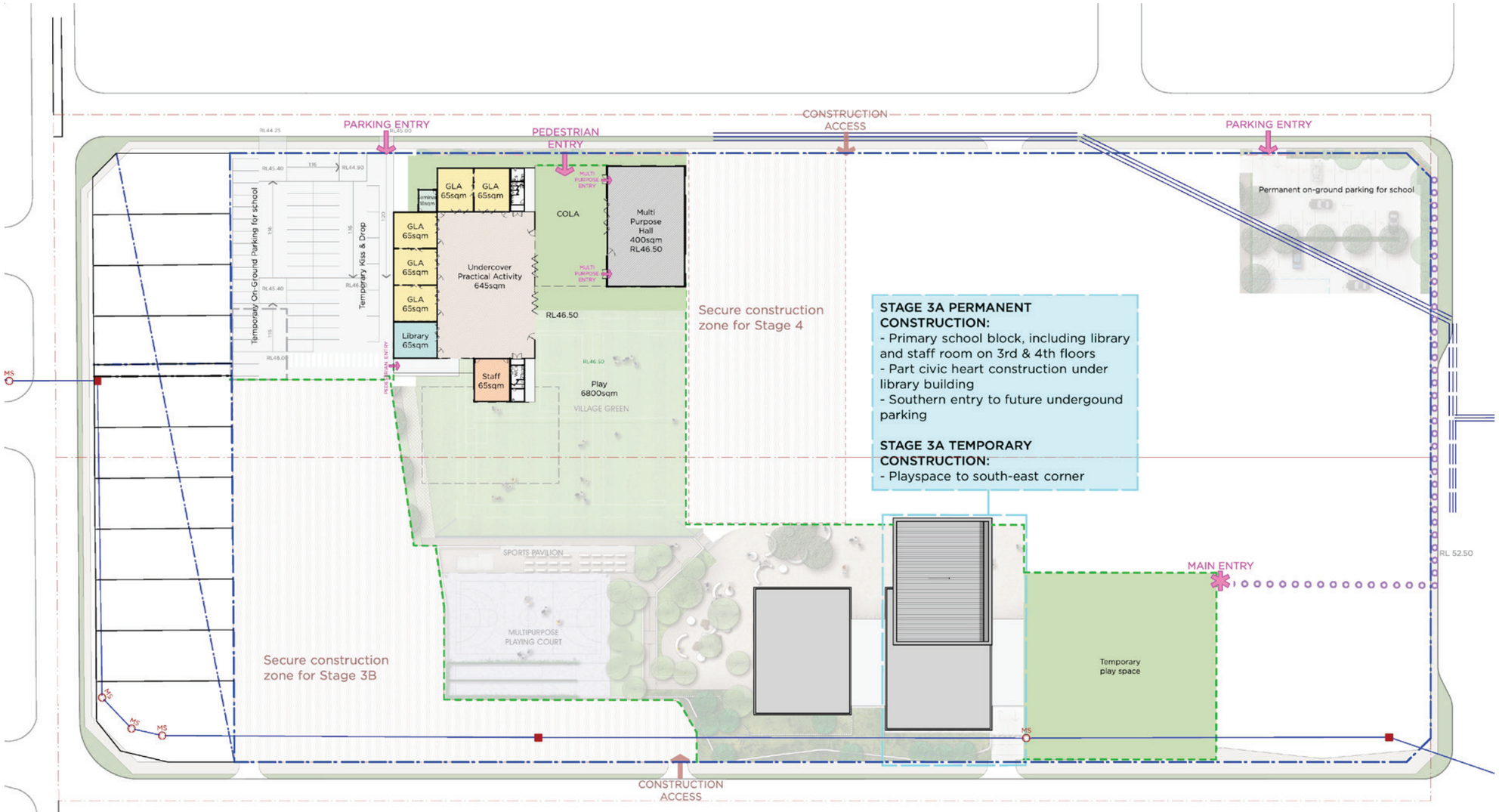
Maximum students	**168**
Staff	**12**
Outdoor space	**4,200sqm**
Total Parking spaces	**84**

SITE TOTALS

GFA	**2,200sqm**
Roof area	**1,800sqm**
Hardscape	**4,900sqm**

LEGEND:
- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 3A - SITE PLAN
ESTIMATED COMPLETION JAN 2027



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STAGE 3A: PRIMARY SCHOOL

Maximum students	**392**
Staff	**27**
Outdoor space	**6,800sqm**
Total Parking spaces	**84**

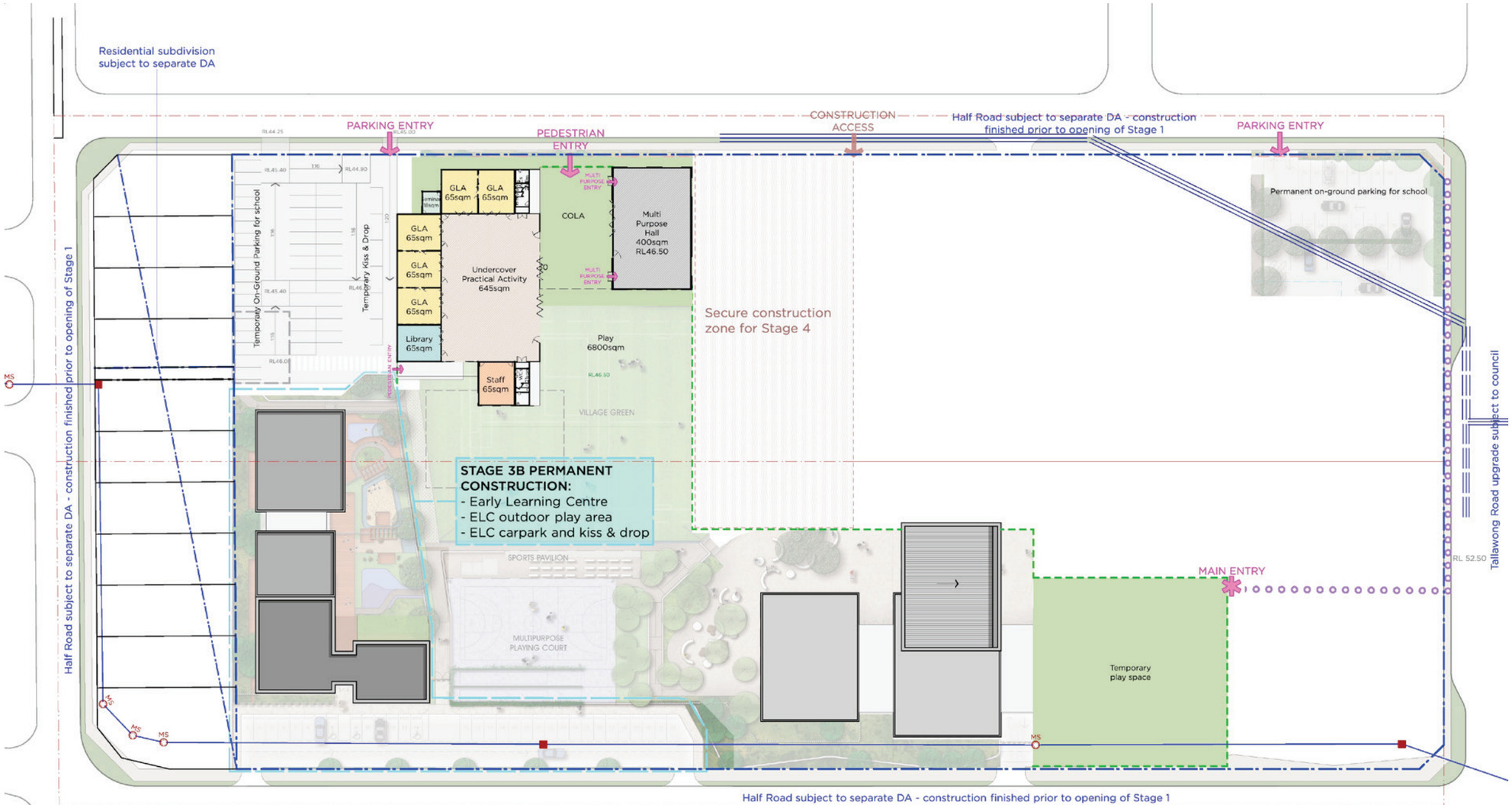
SITE TOTALS

GFA	**5,700sqm**
Roof area	**2,900sqm**
Hardscape	**5,400sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 3B - SITE PLAN
ESTIMATED COMPLETION JAN 2030



STAGE 3B: EARLY LEARNING CENTRE

Maximum students	**86**
Outdoor space	**860sqm**
Total Parking spaces	**32**

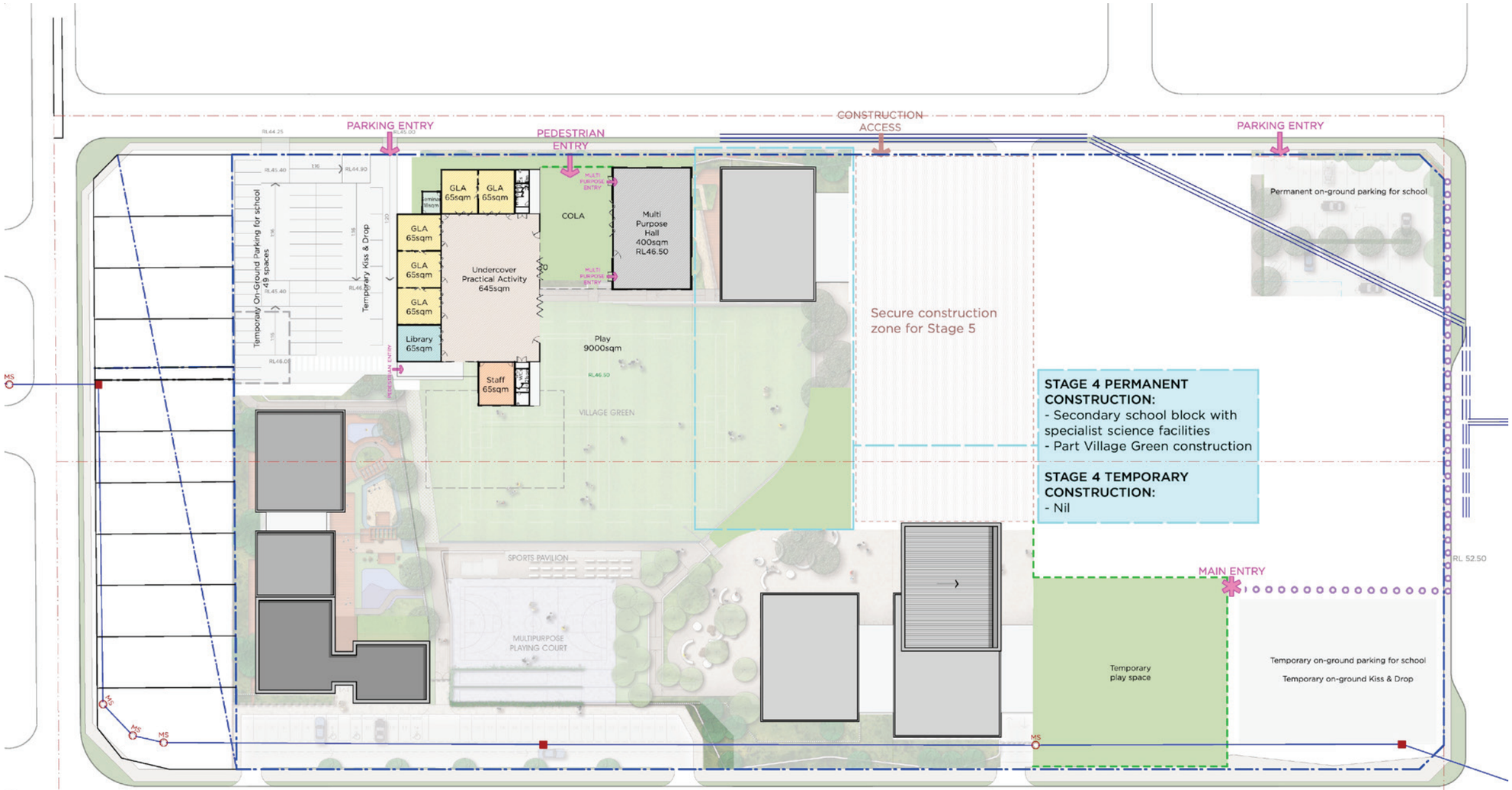
SITE TOTALS

GFA	**7,100sqm**
Roof area	**3,900sqm**
Hardscape	**6,700sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 4 - SITE PLAN
ESTIMATED COMPLETION JAN 2030



STAGE 4: SECONDARY SCHOOL

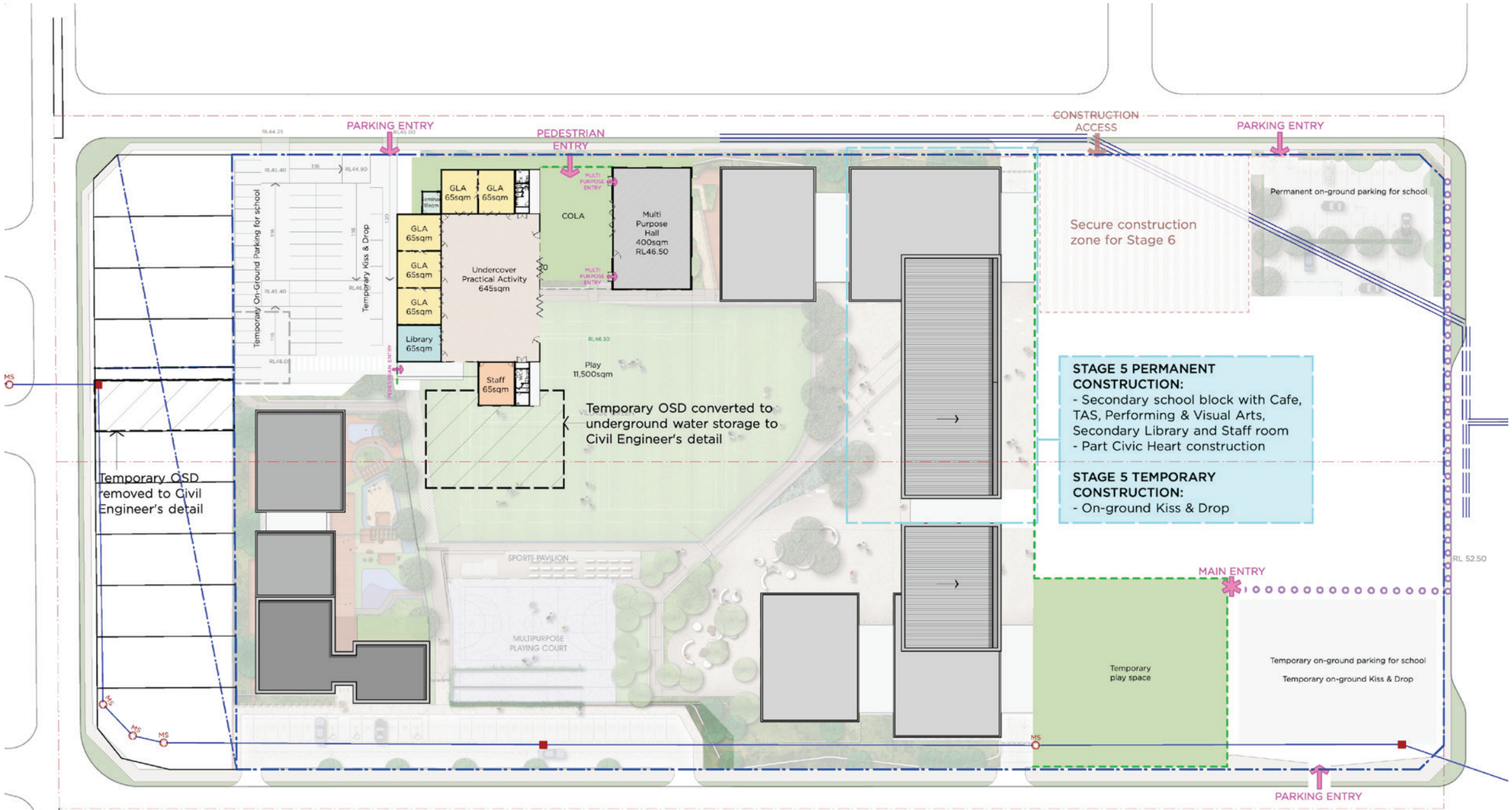
Maximum students	**672**	+ 86 ELC Students
Staff	**51**	
Outdoor space	**9,000sqm**	
Total Parking spaces	**163**	+ 32 ELC Parking

SITE TOTALS

GFA	**8,800sqm**
Roof area	**4,500sqm**
Hardscape	**8,200sqm**

LEGEND:
- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 5 - SITE PLAN
ESTIMATED COMPLETION JAN 2033



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STAGE 5: SECONDARY SCHOOL

Maximum students	**952**	+ 86 ELC Students
Staff	**74**	
Outdoor space	**11,500sqm**	
Total Parking spaces	**163**	+ 32 ELC Parking

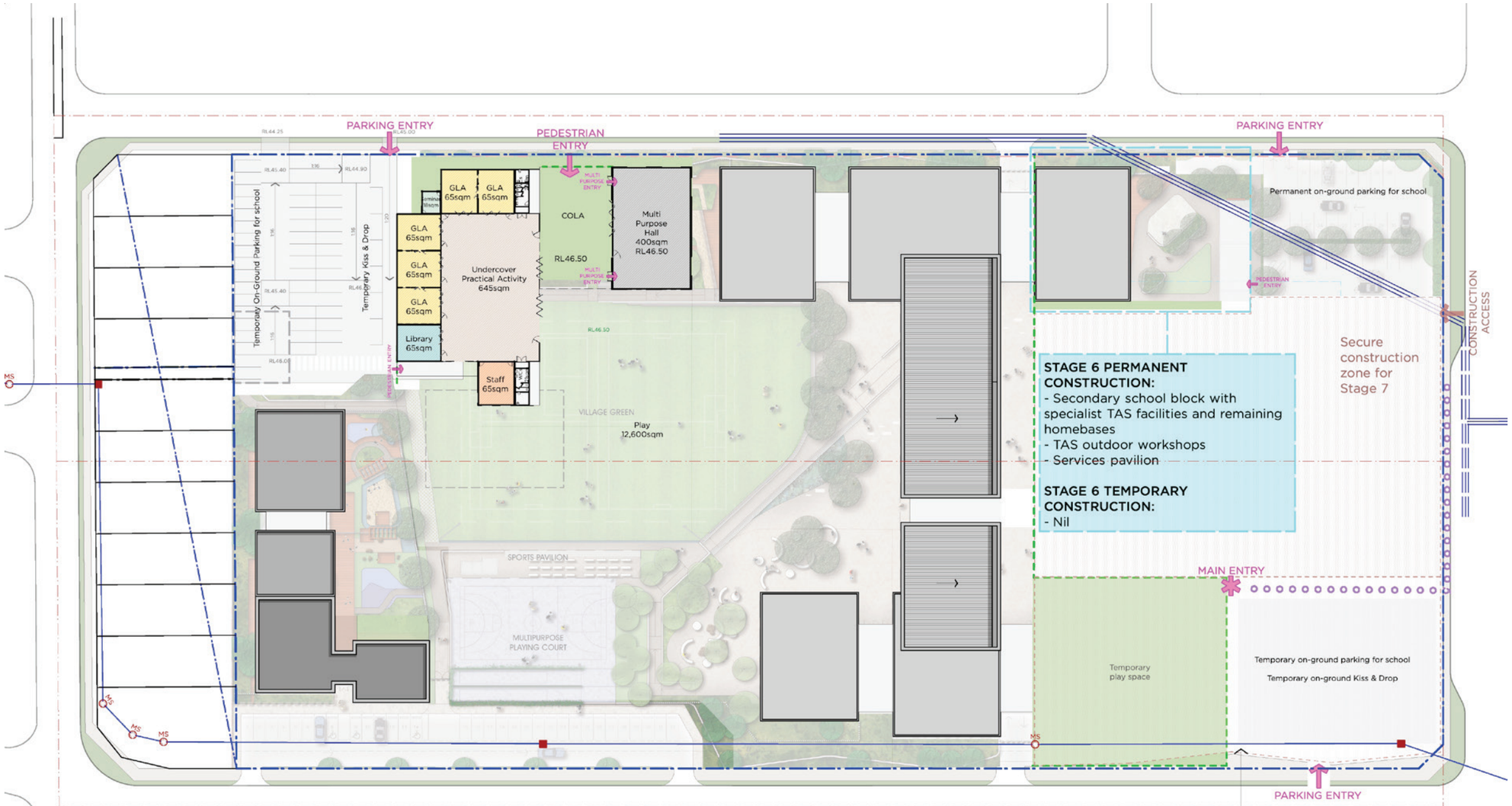
SITE TOTALS

GFA	**12,300sqm**
Roof area	**5,600sqm**
Hardscape	**9,000sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

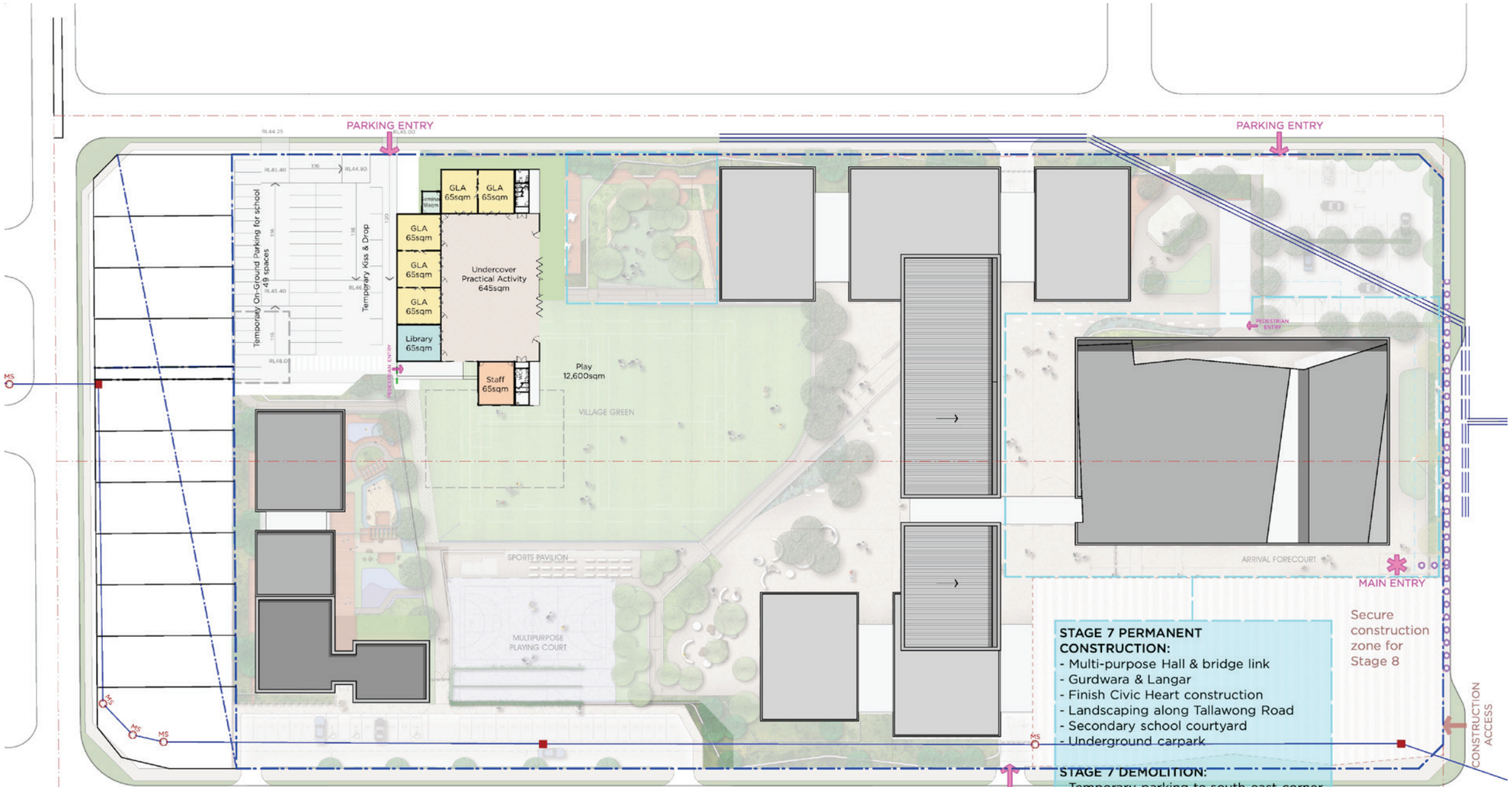
CONSTRUCTION STAGE 6 - SITE PLAN
ESTIMATED COMPLETION JAN 2036



STAGE 6: SECONDARY SCHOOL			SITE TOTALS	
Maximum students	**1092**	+ 86 ELC Students	GFA	**14,800sqm**
Staff	85		Roof area	**6,200sqm**
Outdoor space	**12,600sqm**		Hardscape	**9,500sqm**
Total Parking spaces	**163**	+ 32 ELC Parking		

LEGEND:
- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 7 AND BASEMENT - SITE PLAN
ESTIMATED COMPLETION JAN 2037



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STAGE 7: MULTI-PURPOSE HALL & GURDWARA

Capacity	**700**
Total Parking spaces	**226**

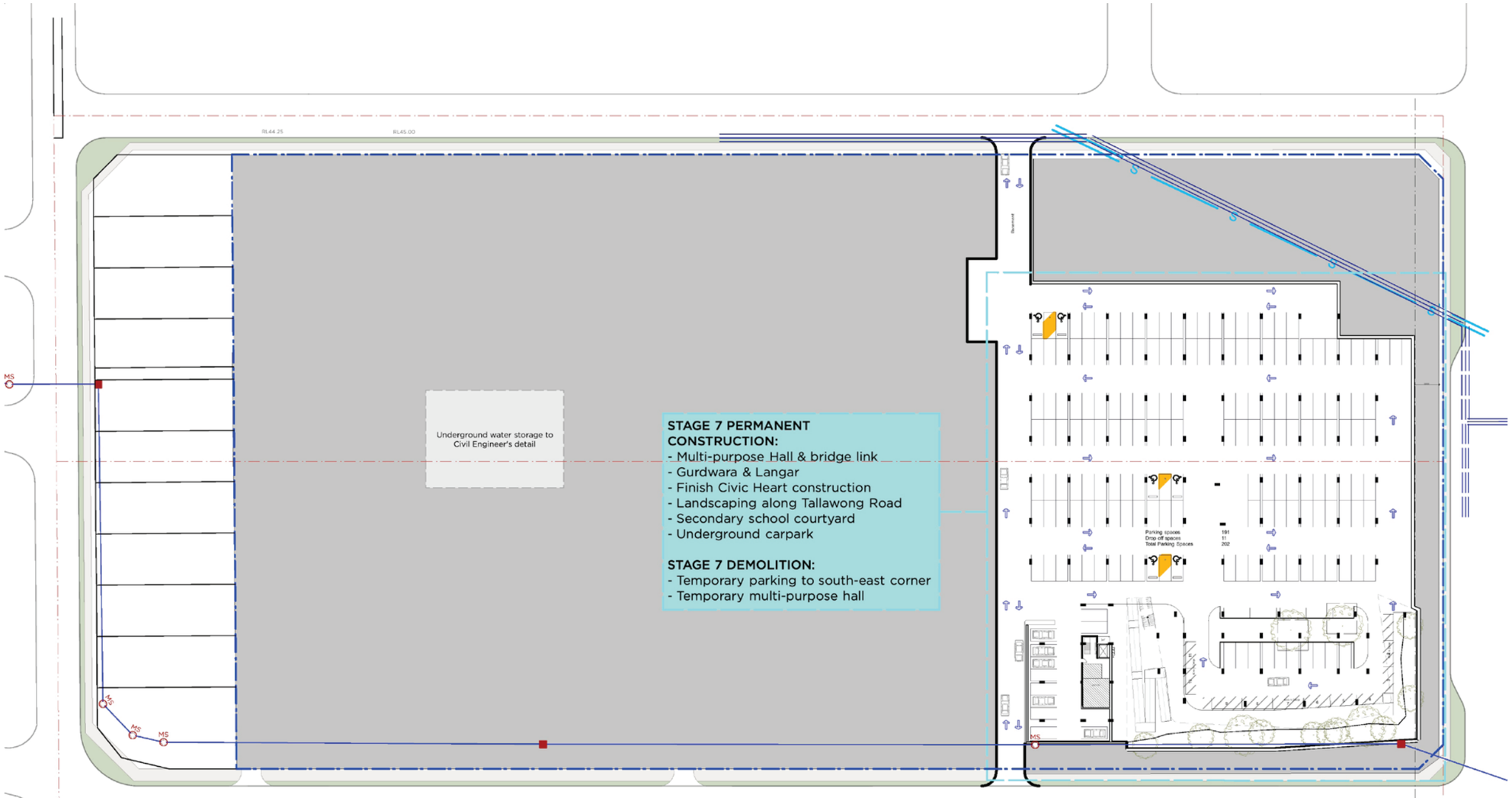
SITE TOTALS

GFA	**19,440sqm**
Roof area	**8,600sqm**
Hardscape	**12,310sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 7 - BASEMENT PARKING - SITE PLAN
ESTIMATED COMPLETION JAN 2039



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STAGE 7: MULTI-PURPOSE HALL & GURDWARA

Capacity	**700**
Total Parking spaces	226

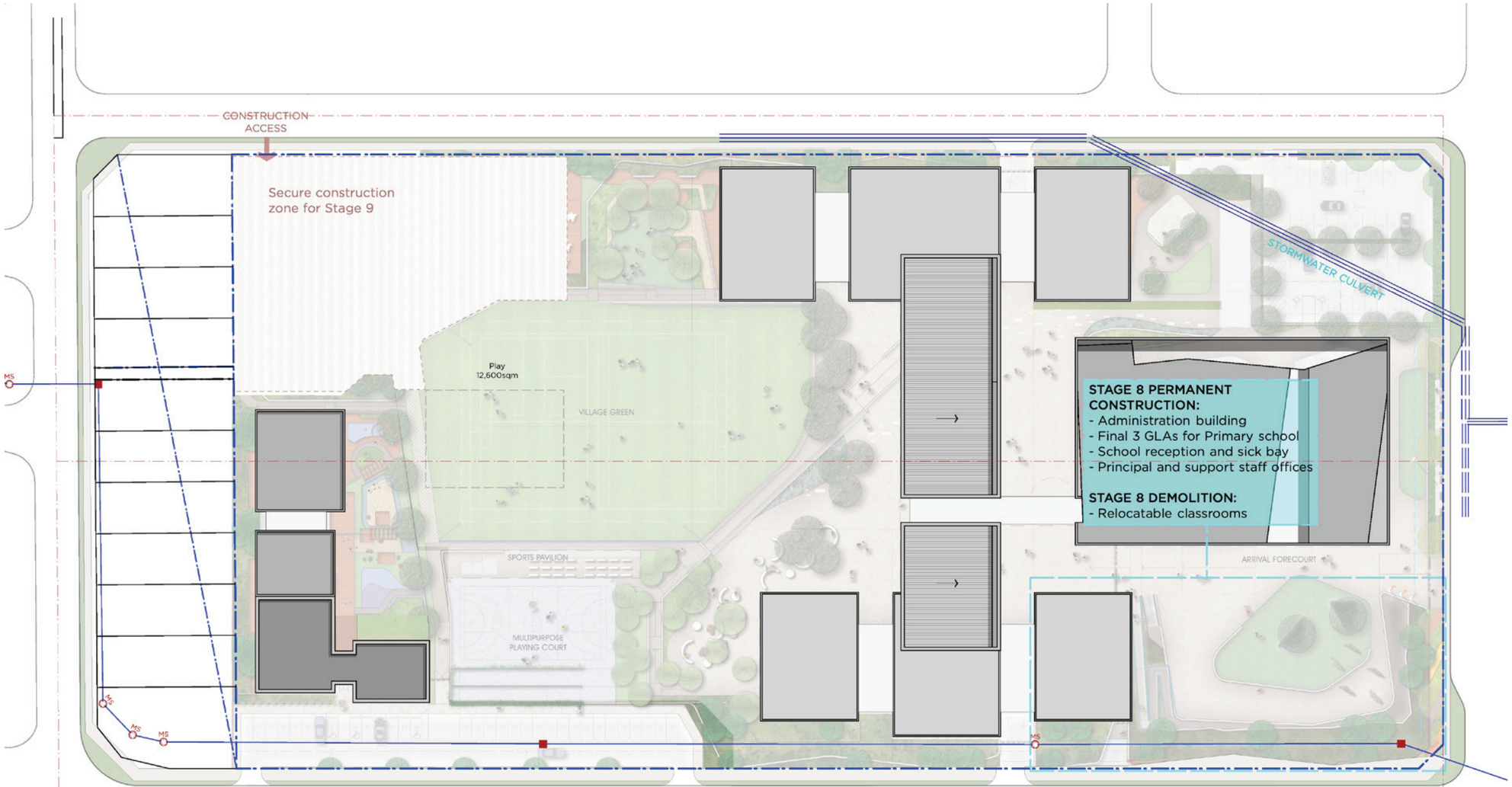
SITE TOTALS

GFA	**19,440sqm**
Roof area	**8,600sqm**
Hardscape	**12,310sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 8 - SITE PLAN
ESTIMATED COMPLETION JAN 2042



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STAGE 8: ADMINISTRATION BUILDING & FORECOURT

Maximum students	**1260**	+ 86 ELC Students
Staff	**102**	
Outdoor space	**12,600sqm**	
Parking spaces	**226**	+ 32 ELC Parking

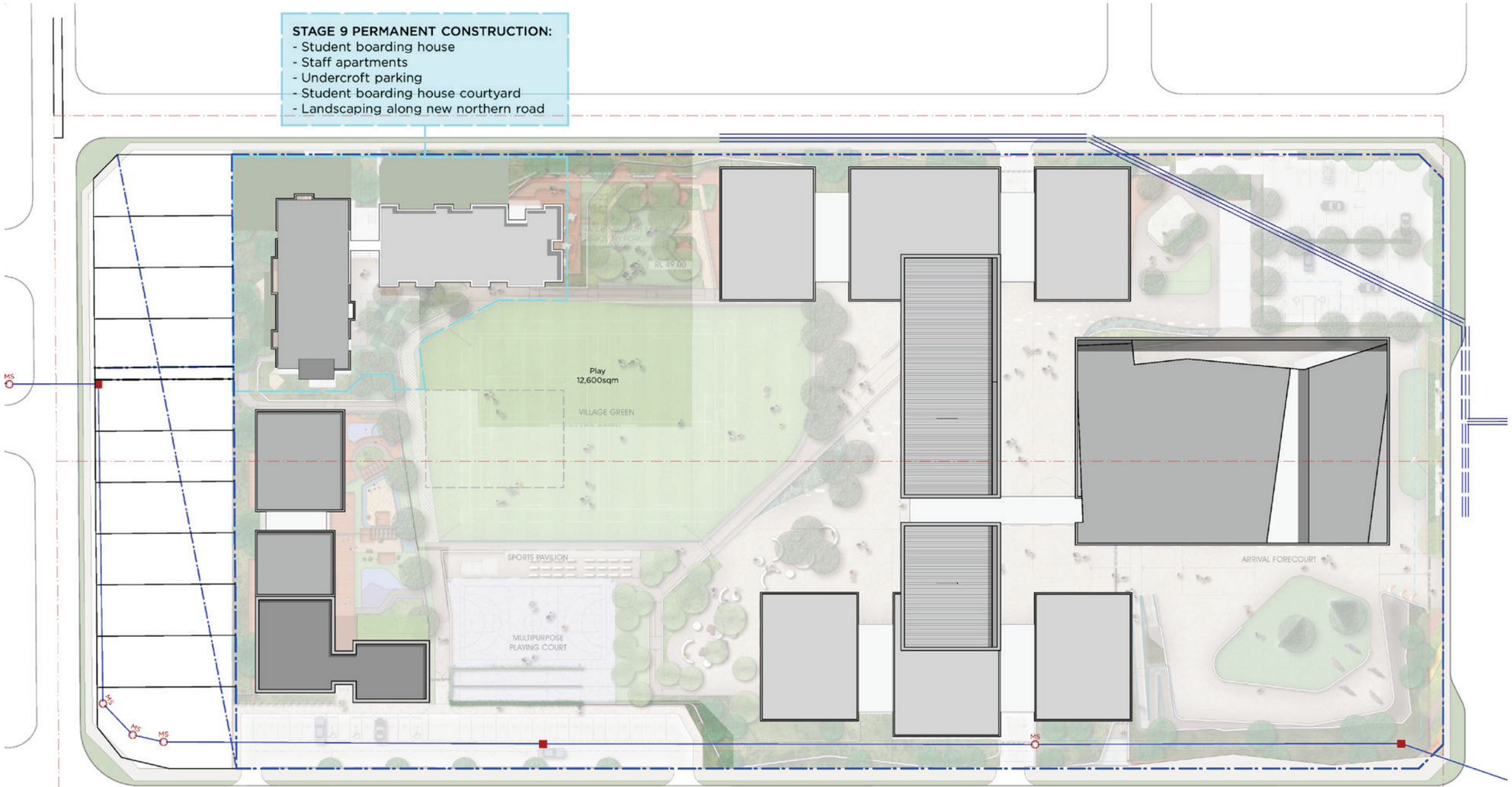
SITE TOTALS

GFA	**22,000sqm**
Roof area	**920sqm**
Hardscape	**13,500sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path

CONSTRUCTION STAGE 9 - SITE PLAN
ESTIMATED COMPLETION JAN 2046



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STAGE 9: STUDENT BOARDING HOUSE

Maximum students	**110**
Staff apartments	**6**
Outdoor space	**1,050sqm**
Total Parking spaces	**13**

SITE TOTALS

GFA	**22,000sqm**
Roof area	**12,400sqm**
Hardscape	**14,710sqm**

LEGEND:

- Existing boundary
- New boundary
- Extent of current Stage
- Future secure construction zone
- Temporary school fence
- Safe pedestrian access path