



Kambala School, Rose Bay Preliminary Construction Traffic and Pedestrian Management Plan

Prepared for:
Kambala School

17 July 2020

The Transport Planning Partnership

Kambala School, Rose Bay

Preliminary Construction Traffic and Pedestrian Management Plan

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APPENDICES

- A. SWEPT PATH ANALYSIS
- B. TRAFFIC CONTROL PLAN

1 Introduction

1.1 Background

This report supports a State Significant Development Application (SSDA) submitted to the Department of Planning, Infrastructure and Environment (DPIE) pursuant to Part 4 of the Environmental Planning and Assessment Act 1979 (EP&A Act), for the proposed redevelopment of the sports precinct of Kambala School at 794 -796 New South Head Road, Rose Bay.

This application is SSD by way of clause 8 and schedule 1 under *State Environmental Planning Policy (State and Regional Development) 2011* on the basis that the development is for the purpose of an existing school and has a Capital Investment Value of more than \$20 million.

This report has been prepared having regard to the Secretary's Environmental Assessment Requirements issued for the project by DPIE, ref no SSD-10385 issued on 24 November 2019.

1.2 Secretary's Environmental Assessment Requirements

On 24 November 2019, the Department of Planning and Environment (DoPE) issued a Secretary's Environmental Assessment Requirements (SEARs) for the proposed development (SSD-10385). Specifically, the SEARs requires the preparation of a preliminary Construction Traffic and Pedestrian Management Plan as part of the Environmental Impact Statement (EIS).

The issues raised in the SEARs have been considered during the preparation of this CTPMP and are summarised in Table 1.1.

Table 1.1: Review of Compliance with SEARs

SEARS Transport, Traffic, Parking and Access	Report Reference
Transport and Accessibility <ul style="list-style-type: none"> The preparation of a preliminary Construction Traffic and Pedestrian Management Plan to demonstrate the proposed management of the impact in relation to construction traffic addressing the following: <ul style="list-style-type: none"> 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 	<p>This Plan</p> <p>Refer to Section 4.7</p> <p>Refer to Section 4.1 and Section 4.2</p> <p>Refer to Section 3.2</p>

o details of anticipated peak hour and daily construction vehicle movements to and from the site	Refer to Section 4.1
o details of on-site car parking and access arrangements of construction vehicles, construction workers to and from the site, emergency vehicles and service vehicles	Refer to Section 3.4 and Section 4
o details of temporary cycling and pedestrian access during construction.	Refer to Section 4.2
o demonstrate how pedestrian and cycle rider movements along footways and cycleways are maintained at all times during construction activities. Should the development require closure to either facility, detail the adequate safety and diversion measures out in place to limit delay and detour distances.	Refer to Section 4.2
o details of any crane locations and road closures; and	Refer to Section 3.8
o details of any potential impacts to the bus network.	Refer to Section 4.3

1.3 Purpose of the CTPMP

The purpose of this CTPMP is to assess the traffic and pedestrian implications and outline how vehicular, cyclist and pedestrian traffic and access will be managed during the construction period. This CTPMP provides a structured approach to manage traffic and access during construction to provide a safe road environment, minimise impact on the surrounding road network and maintain access for all road users and the local community.

Specifically, the purpose of this CTPMP is to:

- maintain vehicle and pedestrian access to/from adjacent properties at all times;
- restrict construction vehicle movements to designated routes to/from the site;
- manage and control construction vehicle activity in the vicinity of the site;
- provide an appropriate and convenient environment for pedestrians and cyclists around the construction site;
- minimise the impact of construction activity on traffic flows, emergency vehicle access, pedestrian movements and during peak school operations;
- maintain appropriate public transport access, and;
- carry out construction activity in accordance with the approved work hours.

The report has been prepared and checked by engineers who hold the Roads and Maritime Services (Roads and Maritime) Prepare a Work Zone Traffic Management Plan card.

2 Existing Conditions

2.1 The Site

Kambala is located at 794 -796 New South Head Road, Rose Bay and is within the Woollahra Council local government area (LGA). Situated in the eastern suburbs of Sydney, the School is approximately 8km east of the Sydney CBD. The School is located on New South Head Road which is a classified road connecting the City with the eastern beaches. The School is surrounded by predominantly residential uses.

The campus is bound by New South Head (to the east), Bayview Hill Road (to the north) and Tivoli Avenue (to the west). Fernbank Boarding House is located at 1A -3 Bayview Hill Road opposite the Kambala School grounds. No works are proposed to this part of the campus in this DA. The locational context of the School is illustrated at Figure 2.1. Figure 2.2 provides an aerial map of the School and its immediate surrounds.

The School campus slopes down from New South Head Road in the east to the west and comprises a series of existing buildings in the western part of the campus that range in height and age. The south western and north western part of the campus accommodates much of the school's existing built form, while the eastern part has the school's sporting fields and courts.

The Kambala School building known as Tivoli House is in the heart of the campus. The house, its interiors, gateposts, gates and flanking walls with railing facing Tivoli Avenue, as well as 2 Norfolk Island Pines are listed as a heritage item in Woollahra Local Environmental Plan 2014 (WLEP 2014).

Within the School campus, the site of this SSDA is illustrated in Figure 2.3. The site proposed for new buildings is on top of the existing sports field and music building, as shown in green. The site proposed for demolition works and associated façade redevelopment and landscaping works is shown in red and is limited to a portion of the existing Hawthorne Building and the Arts building. The site of new landscape works is shown in yellow and includes all external spaces connecting these works. It is anticipated that the construction works will be staged, so the construction site for any given stage will be smaller than the overall site identified in Figure 2.3. The four key main buildings proposed are identified in Figure 2.4.

Figure 2.1: Kambala School Location Context Plan

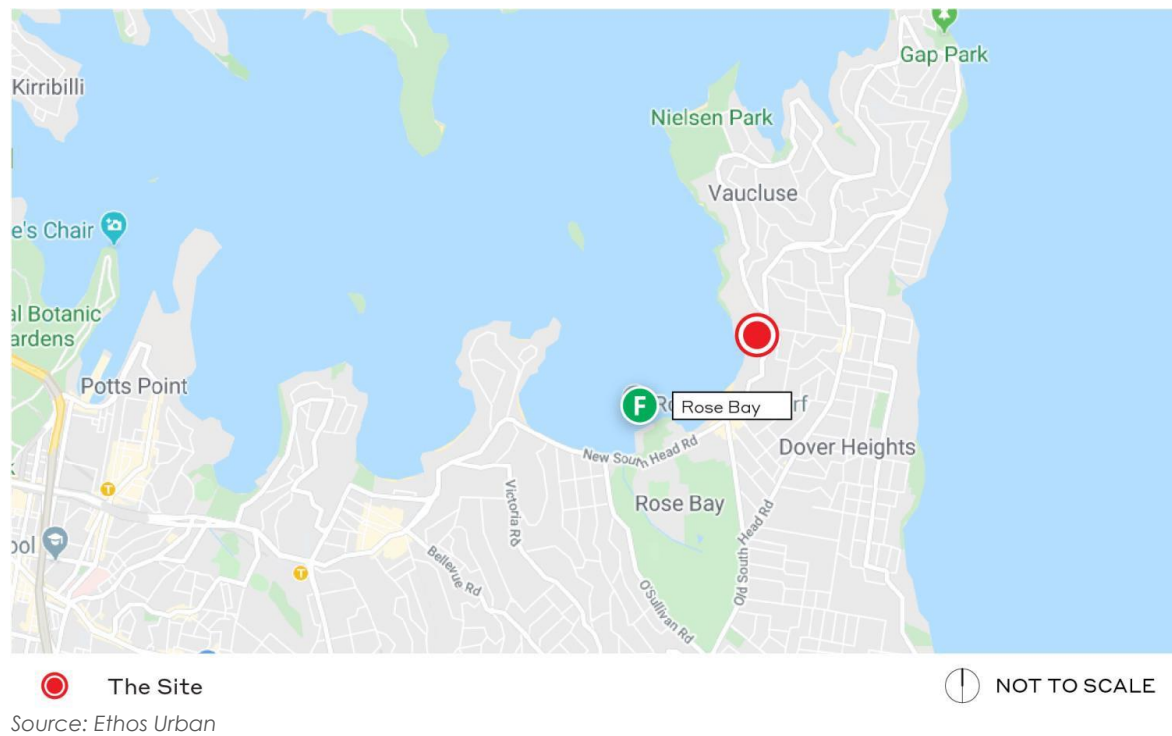
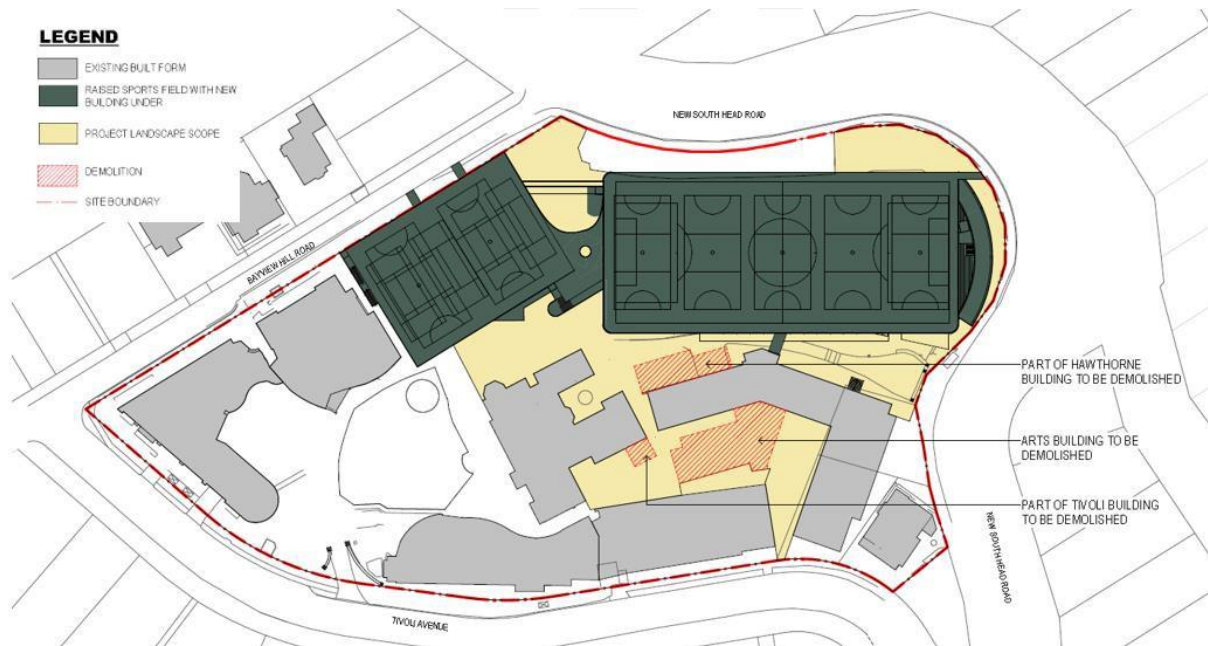


Figure 2.2: Aerial Map of the Kambala Campus



Figure 2.3: Project Scope



Source: AJC

Figure 2.4: Key Plan



Source: AJC

2.2 Surrounding Road Network

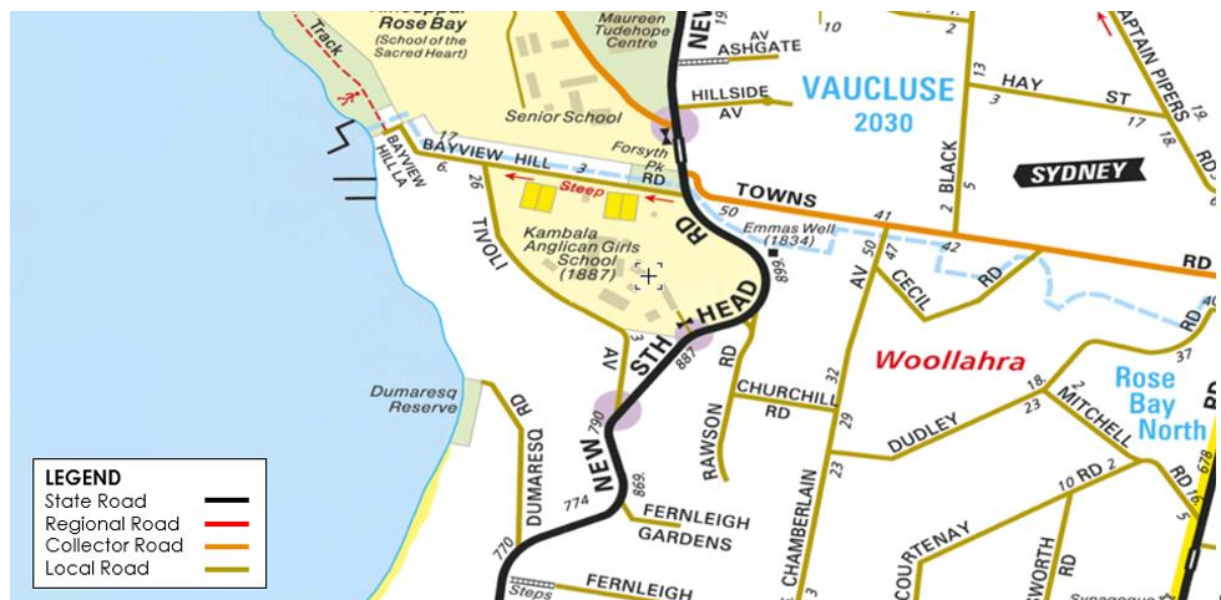
Kambala School is bound between Bayview Hill Road to the north, Tivoli Avenue to the west and New South Head Road to the east. A brief description of the roads is provided below:

Bayview Hill Road is a cul-de-sac local road that is one-way westbound along the boundary of the site (i.e. between New South Head Road and Tivoli Avenue) and two-way west of Tivoli Avenue. East of Tivoli Avenue it is 5m wide with kerbside parking permitted on the northern side of the road. Bayview Hill road is 7m wide west of Tivoli Avenue. The default speed limit along the road is 50km/hr but is governed by school zone speed limits during school days.

Tivoli Avenue is a two-way, two-lane local road with a 9m wide carriageway. The road connects to Bayview Hill Road in the north and New South Head Road in the south. Kerbside parking is provided on both sides along the length of Tivoli Avenue. The default speed limit along the road is 50km/hr but is governed by school zone speed limits during school holidays.

New South Head Road is a two-way, four-lane state road with a 12m wide carriageway. Limited kerbside parking is permitted within the vicinity of the site. There is a posted speed limit of 60km/h outside of school zones.

Figure 2.5: Surrounding Road Network Map



Source: Street Directory Australia

2.3 Parking Restrictions

On-street parking restrictions surrounding the site are presented in Figure 2.6

Figure 2.6: Parking Restrictions



It should be noted that parking spaces along Tivoli Avenue and Bayview Hill Road were generally at capacity during school hours.

2.4 Vehicle Access

The site currently provides three (3) vehicle access gates which are located on New South Head Road and Tivoli Avenue as shown in Figure 2.7.

Figure 2.7: Vehicle Access Locations



Base Map Source: Nearmap, photograph dated 21/01/20

It should be noted that the vehicle access points on Tivoli Avenue and New South Head Road only provide service and emergency vehicle access. The vehicle entry point on Tivoli Avenue close to the intersection with Bayview Hill Road, which leads to the school car park, is the only vehicle access location provided for staff, parents and visitors of the school.

2.5 Public Transport

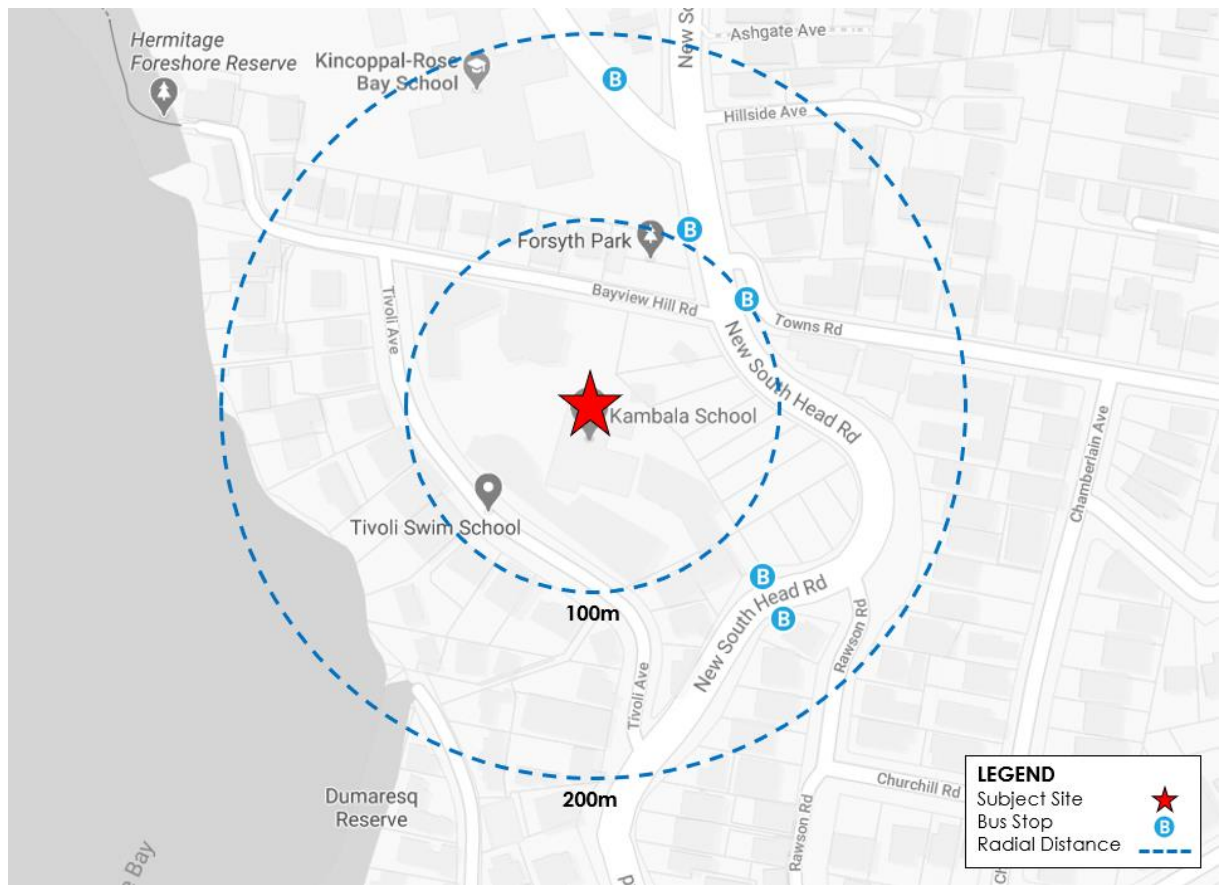
The site is primarily served by buses, with the nearest bus stop located on New South Head Road in front of the main school gate. This stop is serviced by the following bus routes:

- 324 – Watsons Bay to Walsh Bay via Old South Head Rd
- 325 – Watsons Bay to Walsh Bay via Vaucluse Rd
- 386 – Vaucluse to Bondi Junction via New South Head Rd & Old South Head Rd

Buses are available seven days a week and provide services every 15 minutes during peak periods and every 30 minutes outside peak hours.

The locations of these bus stops are presented in Figure 2.8.

Figure 2.8: Public Transport Map

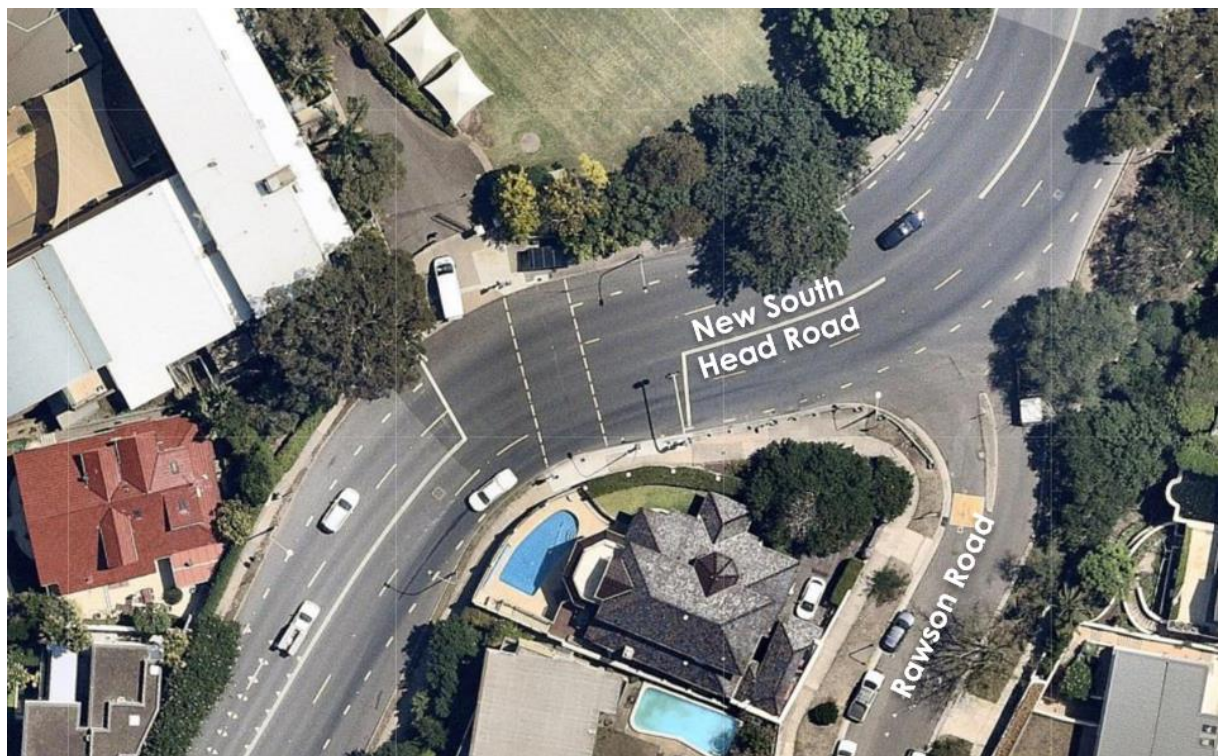


2.6 Pedestrian and Cycling Facilities

Pedestrian footpaths are provided on all roads surrounding the site.

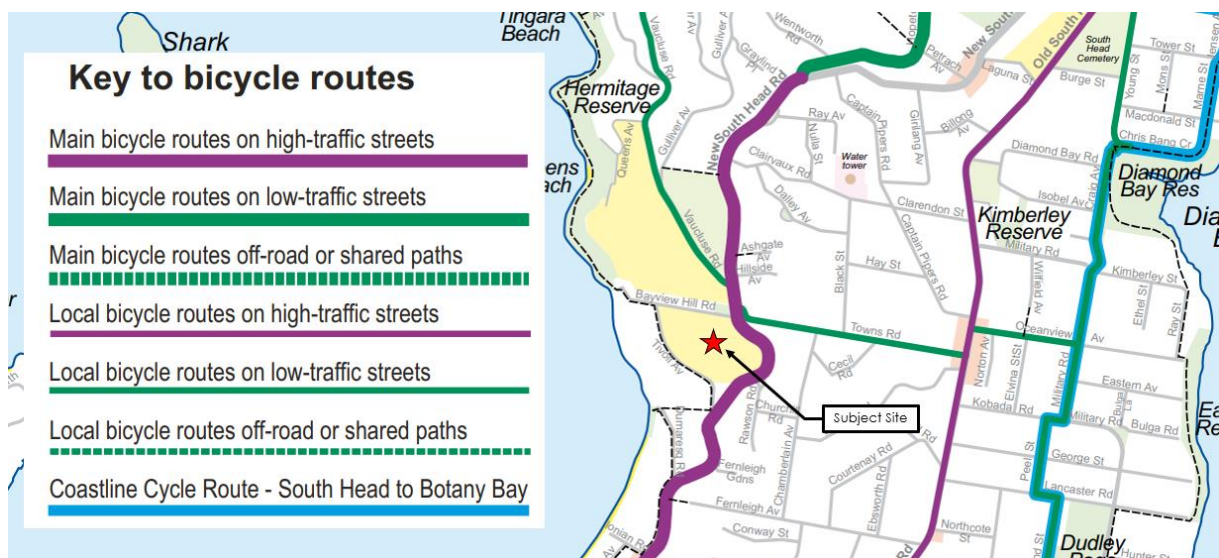
Controlled pedestrian crossings are provided at the intersection of New South Head Road and Vaucuse Road north-east of the subject site and at the intersection of New South Head Road and Tivoli Avenue south of the site. There is also a controlled pedestrian crossing in front of the main school gate some 30m west of Rawson Road as shown in Figure 2.9.

Figure 2.9: Pedestrian Crossing in front of Main School Gate



Within the vicinity, on-road cycling routes are provided along New South Head Road, Vaucluse Road and Towns Road. Cycling routes surrounding the site are shown in Figure 2.10.

Figure 2.10: Cycling Map



Base Map Source: Cycling in Waverley and Woollahra
(https://www.woollahra.nsw.gov.au/_data/assets/pdf_file/0016/36511/Cycle-route-map.pdf)

3 Proposed Construction Activities

This section of the report outlines the proposed construction methodology.

3.1 Description of Construction Activities

This SSDA includes detailed plans for a new sport, wellbeing and senior learning precinct. Accordingly, consent is sought for the following:

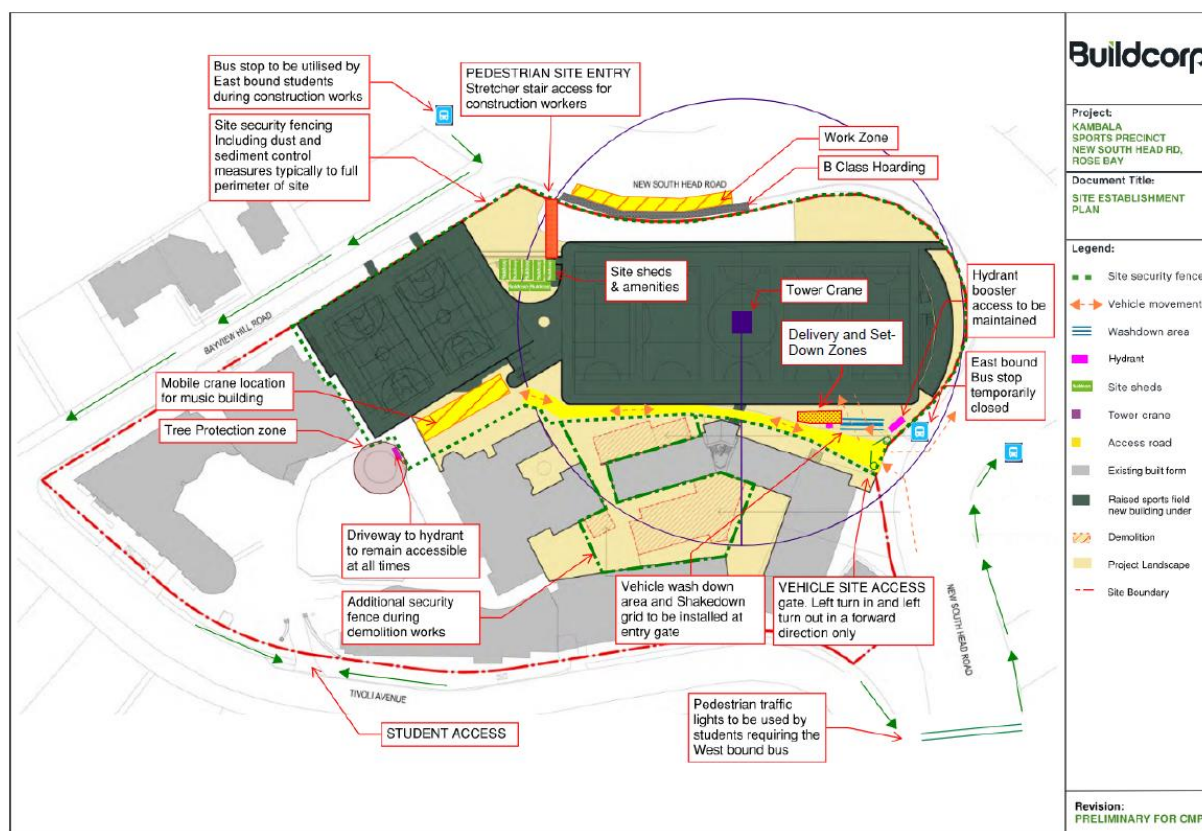
- The excavation of part of the existing sports field to facilitate the construction of a new multipurpose sports facility
- The removal of the tennis courts (currently on the roof of the music building), and the construction of the wellbeing centre, called the SHINE centre and a new staff centre called the KITE centre
- reinstatement of the tennis courts on the new roof
- a new eastern forecourt for the school, new external landscaped areas and new courtyards;
- minor works to the existing music building to facilitate a new connection to the new courtyard;
- the partial demolition of the Hawthorne building and the construction of a new façade, roof and landscaping; and
- the demolition of the Arts building and the construction of new facades to adjacent affected buildings, and new landscaping to the footprint of the demolished building

The proposed construction staging is as follows:

- **Demolition:** demolition of parts of the Hawthorne, Alexander and Tivoli buildings and structures on the existing sports field.
- **Bulk Excavation, Foundation and Sub-Structure:** excavation of the existing sports fields and construction of piles and structural footings will occur concurrently.
- **Structure:** Structural works for the new sports facilities, learning spaces and music building.
- **Facade and Internal Finishes:** Façade works and Internal finishes for the new sports facilities, learning spaces and music building.
- **Landscaping & External Works:** Open recreation space and landscaping.

Refer to Figure 3.1 for the proposed construction works area. It is noted that the building works will be staged within the works area as far as practical to minimise the construction impacts on existing school operations.

Figure 3.1: Proposed Construction Works Area



Source: Buildcorp

3.2 Duration and Staging of Works

The commencement date of the construction works is not known at this early stage however, the proposed construction staging and duration of works are outlined in Table 3.1.

Table 3.1: Proposed Construction Staging and Duration of Works

Construction Stage	Duration
1. Demolition	~2 weeks
2. Bulk Excavation, Foundation and Sub-Structure	~20 weeks
3. Structure	~52 weeks
4. Facade and Internal Finishes	~64 weeks
5. Landscaping & External Works	TBC

3.3 Work Hours

The consent conditions would detail the permitted hours of construction work, however, it is anticipated that construction activities will be permitted during the following periods:

- Monday to Friday 7am to 6pm
- Saturdays 7am to 5pm
- Sundays and Public Holidays No work.
- However, on school days, no construction vehicle movements to/from the site will be permitted during school drop off and pick up times (i.e. between 8:00am and 9:30am and between 2:00pm and 4:30pm).

Any works outside of the above listed hours will only occur with approval from the relevant authorities (i.e. Woollahra Council / Roads and Maritime), prior to the commencement of any works. The Contractor will be responsible to liaise with Council to obtain all relevant permit approvals.

3.4 Site Access Arrangements

Vehicle access to the construction site will be provided via the main school gate on New South Head Road as shown in Figure 3.2 throughout all construction stages.

Figure 3.2: Main School Gate



Source: Google Maps Australia (Street View), view is facing north west towards the school from NSHR.

The use of this access and the associated forecourt area at the school would be restricted to construction vehicles and activities. As the main vehicular access point for staff and service vehicles is provided off Tivoli Avenue, the closure of this access from general school operations would not affect the traffic distribution to/from Kambala. However, students who use this access as a pedestrian entrance would be required to use alternative pedestrian access points at the school.

Vehicles are to access the site via a left-in/left-out movements only. Construction vehicles are not to exit the site while pedestrians are crossing at the signalised pedestrian crossing located east of the access. A site personnel is to be present to look for gaps in traffic and guide construction vehicles out of the site.

To facilitate construction vehicle movements, the temporary closure of the bus stop located adjacent to this access is proposed, as further discussed in Section 4.3.

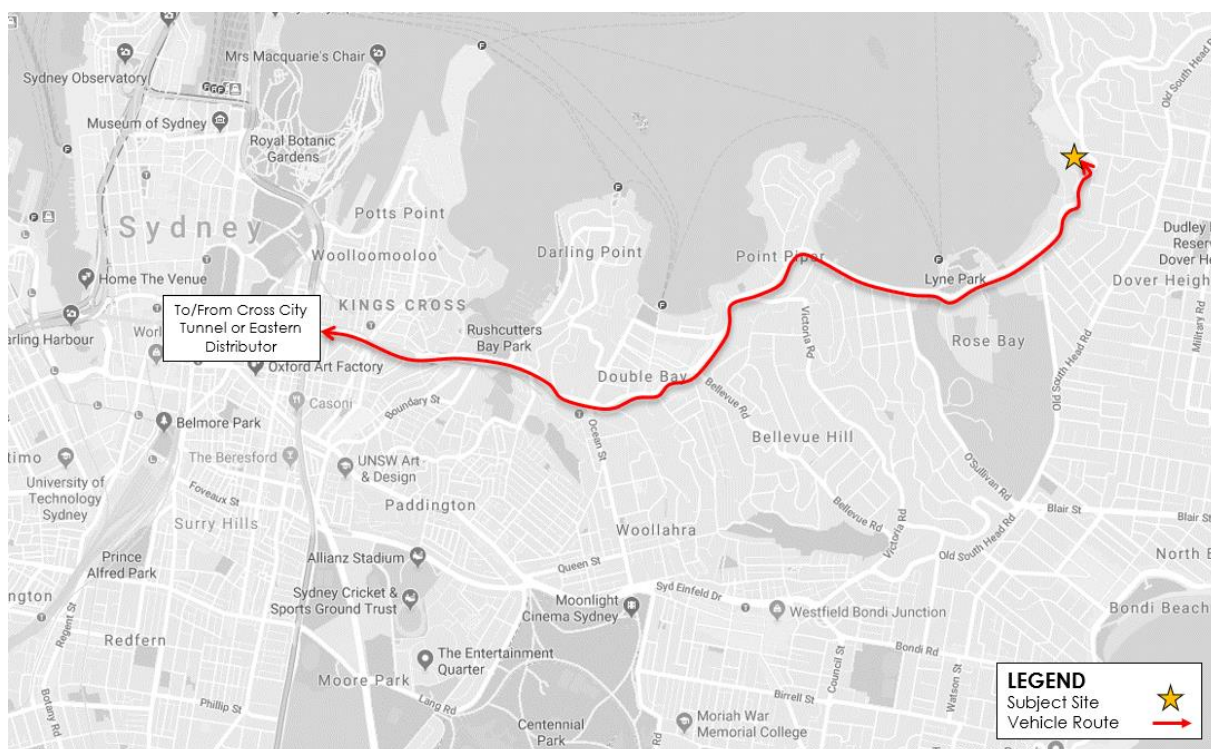
3.5 Construction Vehicle Routes

Construction vehicles will have origins and destinations throughout Sydney. Dedicated construction vehicle routes have been developed to provide the shortest distances to/from the arterial road network, whilst minimising the impact of construction traffic on streets within the immediate vicinity of the site.

All truck drivers will be advised of the designated truck routes to/from the site and be required to adhere to the nominated routes.

The designated construction vehicle routes are presented in Figure 3.3.

Figure 3.3: Construction Truck Routes



Source: Google Maps Australia

No queuing or marshalling/parking will be permitted on public streets, unless otherwise approved. Construction vehicles are to radio or call on approach to ensure adequate access to the site is made available.

All construction vehicles are required to enter and exit the site in a forward direction.

3.6 Construction Vehicle Type

A summary of the construction vehicles expected during each construction stage of the works is provided in Table 3.2.

Table 3.2: Proposed Construction Vehicle Types

Construction Stage	Construction Vehicle Types	Access Points
1. Demolition	Truck & Dogs, Semi-Trailers and Rigid Trucks and Light Vehicles	All vehicles to use main school gate on NSHR
2. Bulk Excavation, Foundation and Sub-Structure	Truck & Dogs, Semi-Trailers and Rigid Trucks and Light Vehicles	All vehicles to use main school gate on NSHR
3. Structure	Semi-Trailers, Rigid Trucks and Light Vehicles	Semi-trailers to utilise the works zone on NSHR, rigid trucks and light vehicles to use main school gate
4. Facade and Internal Finishes	Semi-Trailers, Rigid Trucks and Light Vehicles	Semi-trailers to utilise the works zone on NSHR, rigid trucks and light vehicles to use main school gate

5. Landscaping and External Works	Semi-Trailers, Rigid Trucks and Light Vehicles	Semi-trailers to utilise the works zone on NSHR, rigid trucks and light vehicles to use main school gate
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Swept path analysis has been undertaken using a 19.0m long articulated vehicle (semi-trailer), Truck and Dog and Heavy Rigid Vehicle. The swept path analyses indicate that appropriate vehicle access can be accommodated to/from the site. All expected construction vehicles will enter and exit the site in a forward direction. This swept path analysis is provided in Appendix A.

3.7 Materials and Handling Area

All materials handling and plant equipment, including waste storage, are expected to be wholly stored on-site within the works site. It is not expected that any public road will be required for such purposes. However, if temporary use of any public road is required for temporary storage purposes or the like, prior consultation with Council will be undertaken. All relevant permit approvals will also be obtained prior to the commencement of such activities.

3.8 Works Zone Requirements

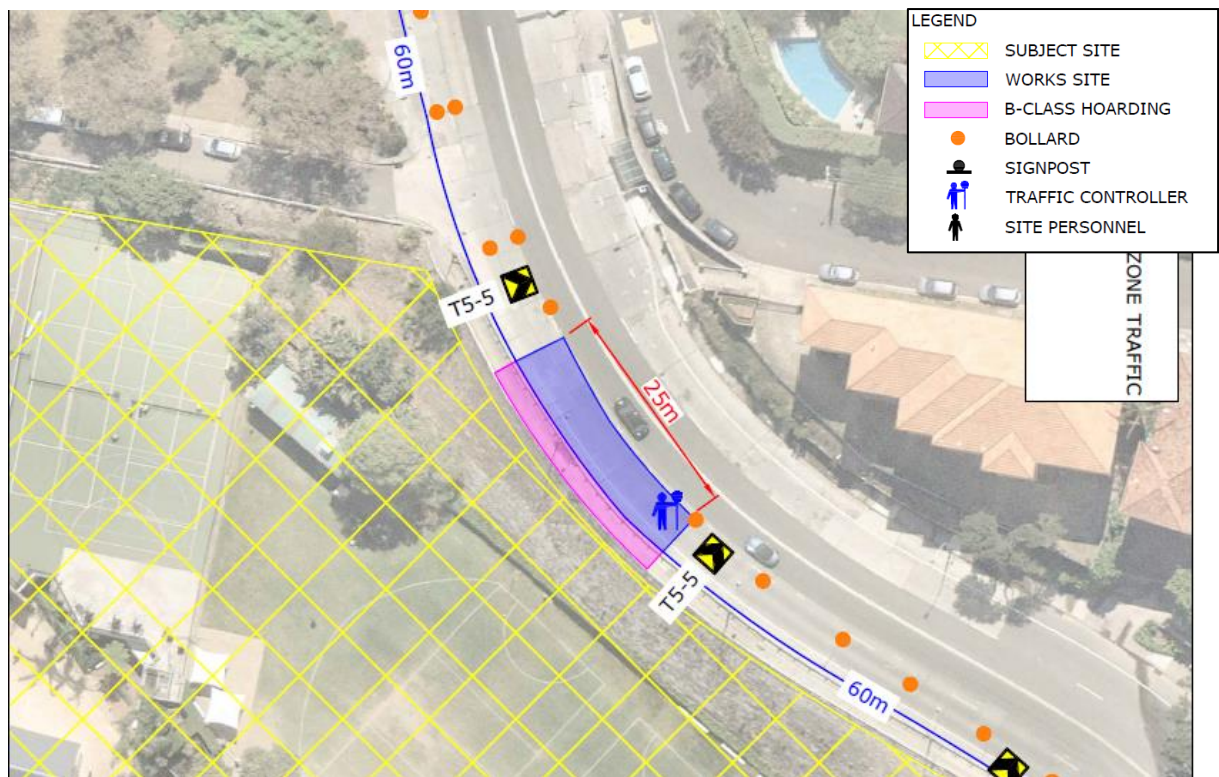
A 25m works zone is proposed along NSHR during Stage 3, 4 and 5 (Structure, Fitout & Finishes and Landscaping & External Work).

During Stages 1 and 2, all vehicles would be accommodated within the site. During Stages 3, 4 and 5, it is anticipated that vehicles up to a 12.5m heavy rigid vehicle would undertake deliveries within the site, while larger vehicles up to a 19m Semi Trailer are accommodated within the works zone on NSHR.

As permitted at other sites along NSHR, the works zone would only be in place from 10am – 3pm from Monday to Friday in order to avoid peak traffic periods. On Saturdays, it is proposed to be in place from 7am-5pm.

The location of the proposed works zone is shown in Figure 3.4 and in the Traffic Control Plan provided in Appendix B.

Figure 3.4: Proposed Works Zone along NSHR



3.9 Road Occupancy License

To facilitate the provision of a works zone along the kerbside lane of NSHR as shown in Figure 3.4, it is considered that a Road Occupancy Licence will be required from Traffic Management Centre (TMC). The Contractor will be responsible to obtain all relevant ROLs as required.

3.10 Crane Handling

One tower crane and one mobile crane would be used during Stage 3, 4 and 5. The location of each crane is shown in Figure 3.1. The tower crane would have a reach of 60m and would be assembled in Stage 3 and dissembled in Stage 5 from the works zone on NSHR. The use of the tower crane is not expected to swing on to adjoining properties or extend past the construction site to areas where the school is still operating.

4 Construction Traffic Assessment and Implications

4.1 Construction Vehicle Traffic Generation

The estimated traffic movements associated with the construction activities are not yet known during this stage. However, as an indication, a summary of the expected traffic movements during each stage of the construction is shown in Table 4.1. These numbers may be refined once the construction methodology progresses further by the Contractor.

Table 4.1: Summary of Expected Construction Traffic Movements

Construction Stage	Daily Two-Way Movements	Average Hourly Two-Way Movements
1. Demolition	30	6
2. Bulk Excavation, Foundation and Sub-Structure	30 – 40	6-8
3. Structure	25 – 30	5
4. Facade and Internal Finishes	30	6
5. Landscaping and External Works	20	3

**Note: shifts are 11 hours long but vehicle movements to/from the site are suspended during school zone hours.*

The proposed construction traffic generation is considered to generate a modest level of vehicular traffic, with up to eight truck movements (two-way) per hour expected during peak construction activities. As such, the proposed construction activities would not be expected to result in an adverse impact on the surrounding road network.

Further to this, construction vehicle access will be restricted to occur outside of school pick-up/drop-up periods to ensure construction traffic does not conflict with peak traffic from the school.

4.2 Construction Workers

The following number of workers are expected during the stages shown in Table 4.2.

Table 4.2: Construction Worker Numbers

Construction Stage	Number of Workers per Day
1. Demolition	20 workers
2. Bulk Excavation, Foundation and Sub-Structure	25 workers
3. Structure	80 – 120 workers
4. Facade and Internal Finishes	80 – 120 workers
5. Landscaping and External Works	50 workers

Construction worker parking is not proposed due to the footprint size of the proposed development leaving no available space on site. All workers will be encouraged and expected to use public transport to travel to/from the site. This will be incorporated in the workers' induction program to ensure minimal parking impact on surrounding streets.

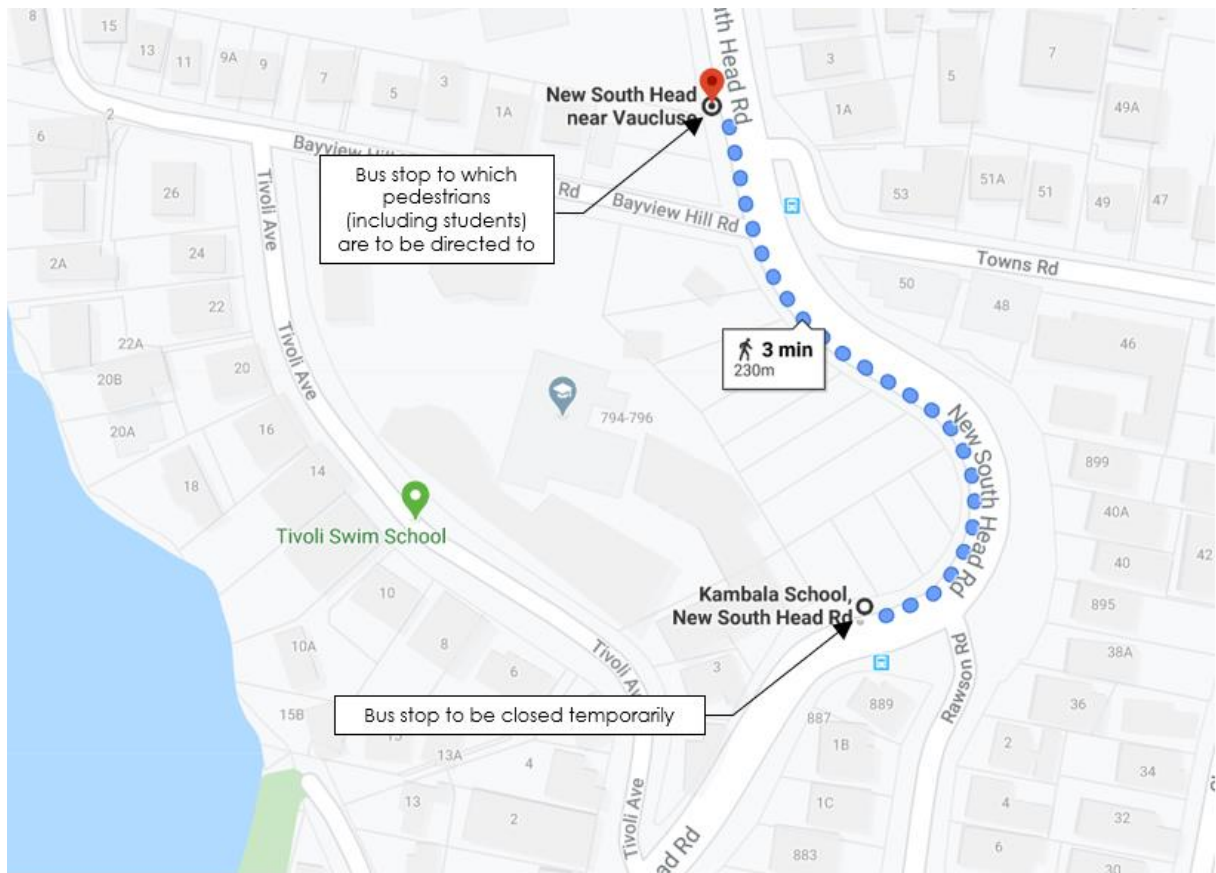
Taking the above into consideration, it is proposed to implement the following measures to encourage workers to use public transport:

- provide an on-site tool drop-off and storage facility to allow tradespeople to drop off and store their specific machinery for the project to prevent the need to drive equipment in everyday
- inform staff during the induction and regular management meetings that no car parking will be available for staff
- instruct staff to use public transport to access the site during the induction and regular management meetings, and
- display public transport timetable information at key locations within the work site and ensure that it is easily accessible by staff.

4.3 Public Transport Facilities

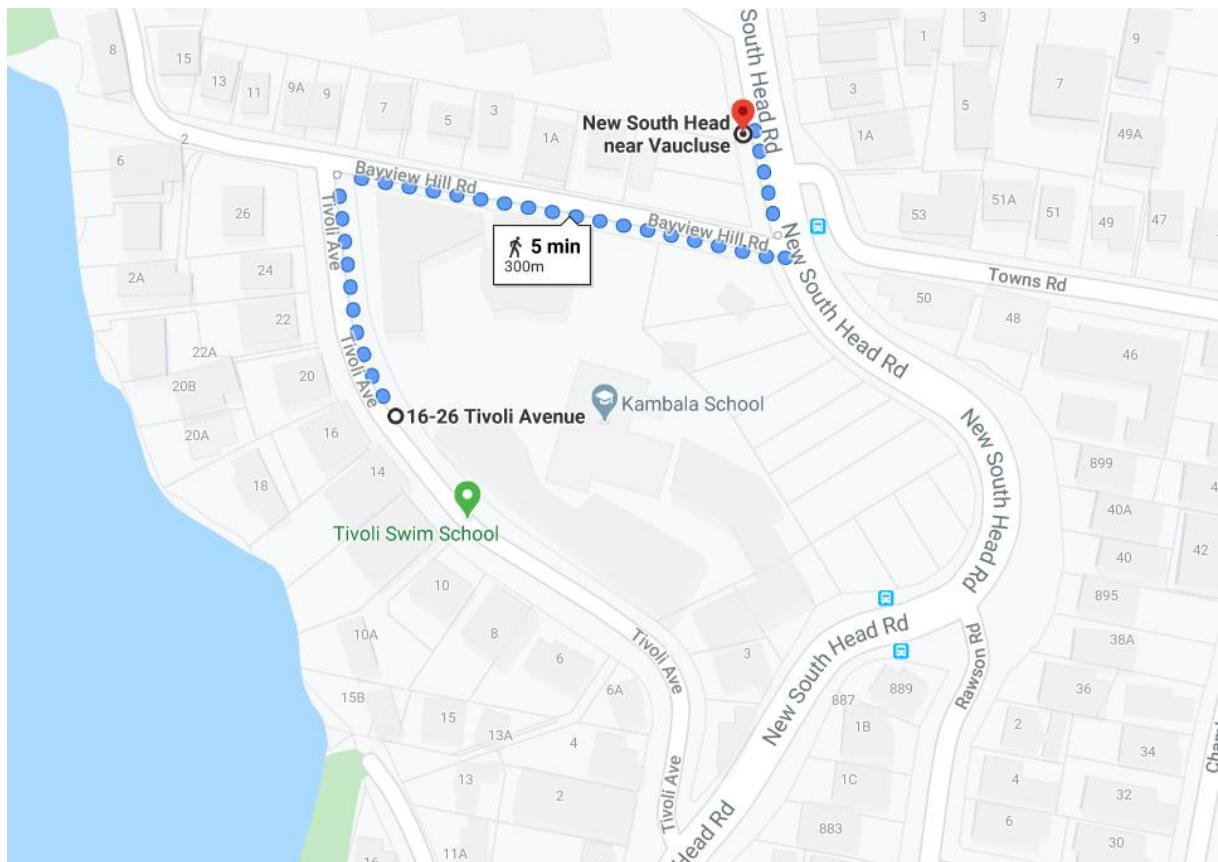
It is proposed to temporarily close the northbound bus stop located immediately adjacent to the school gate on NSHR (Stop ID: 202951) for the duration of construction works. Bus passengers (including students) would be redirected to the next closest bus stop north of the site as shown in Figure 4.1 and Figure 4.2.

Figure 4.1: Pedestrian diversion to nearest bus stop



Base Map Source: Google Maps

Figure 4.2: Student diversion to nearest bus stop



It is understood that a newsletter detailing the closure of said pedestrian crossing would be distributed to students and parents to inform them of the changed transport facilities.

Consultation is to be undertaken with State Transit Authority as part of the preparation of the detailed CTPMP, to confirm the feasibility of temporary closing this bus stop and coordinate any measures required to manage the temporary closure e.g. signage, public notices or any time restrictions for the closure.

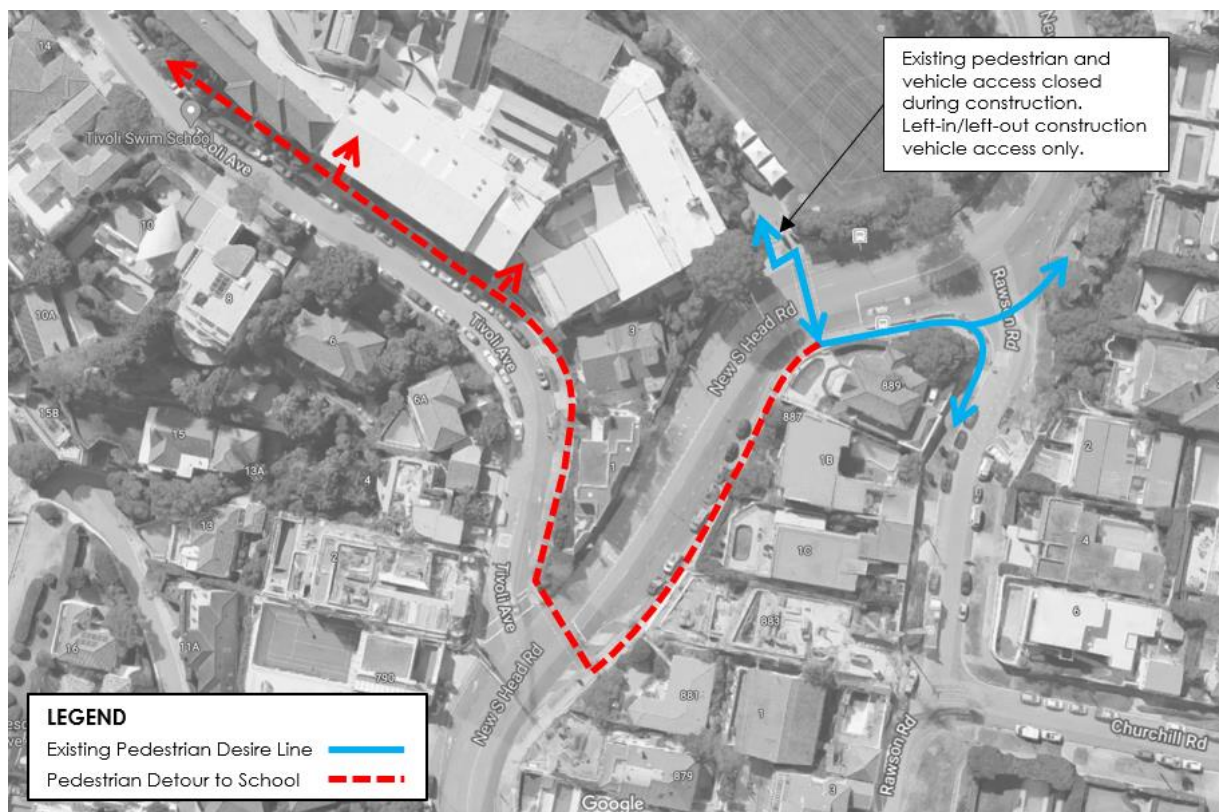
It's noted that this bus stop is likely to be primarily used by Kambala school students and therefore, the impact of this closure to surrounding residents is low. As noted in Section 3.4, the access off NSHR and the associated forecourt area of the school would be restricted construction activities. On this basis, students would be entering/exiting the school via the pedestrian access point along Tivoli Avenue and would no longer be using the access off NSHR. The travel distance from the Tivoli Avenue school access to the bus stop fronting the school and the alternative stop located north of Bayview Hill Road is generally the same (300m). Therefore, in relation to distance, the alternative bus stop location considered to be acceptable and convenient.

4.4 Pedestrian and Cycle Access

Pedestrian and cycle access along the public roads will be maintained as per existing conditions during the project. If required, appropriate hoarding and traffic control management measures and advisory signage will always be in place to ensure pedestrian safety.

As noted above, the existing access and associated forecourt area off NSHR will be closed to pedestrians (students and staff) and dedicated to construction vehicle access only. Pedestrians will be redirected to use the Tivoli Avenue entrance as shown in Figure 4.3.

Figure 4.3: Student Detour Route



The pedestrian crossing located east of the access off NSHR, is to be maintained. Site observations indicate that students of Kambala are the primary users of this pedestrian crossing. On this basis, any pedestrian and construction vehicle interaction at this crossing would be minimal. Notwithstanding, site personnel are to be present to guide construction vehicles out of the site with consideration for pedestrians along the footpath and crossing, as well as to find suitable gaps in traffic.

Class B hoarding is proposed along the footpath adjacent the works zone on NSHR as shown in Figure 3.4. All relevant permit approvals will be obtained from Council (e.g. Class A and B Hoarding), prior to the commencement of any work. Additionally, the Contractor will be

responsible to liaise with the School to ensure safe pedestrian routes are always maintained to/from the site.

4.5 Emergency Vehicles and Service Vehicles

No special provisions for emergency or service vehicles are required as part of the proposed construction works. Emergency and service vehicle access shall be maintained at all times.

4.6 Adjoining Properties and Local Access

The proposed construction works will not impact existing local access to/from properties. Local access to properties will always be maintained during the works.

4.7 Other Construction Activities / Projects

During the construction works, there are no known nearby major construction activities occurring in the area.

5 Construction Traffic Management Measures

5.1 Traffic Management Measures

Roads and Maritime accredited traffic controllers will be assigned to assist construction trucks when accessing the proposed works zone. At no time will traffic controllers be permitted to stop traffic on the public streets to facilitate trucks entering or exiting the work zone, unless otherwise approved. Traffic controllers will only be able to assist, manage and guide construction trucks out of the site under suitable gaps in traffic.

All advisory road signage will be installed in accordance with AS1742.3 Manual of uniform traffic control devices - Traffic control devices for works on roads and the Roads and Maritime Services Traffic Control at Worksites Manual. Signs will be installed and maintained throughout the construction period.

A preliminary Traffic Control Plan has been prepared and is provided in Appendix B.

5.2 Vehicle Access

Construction vehicles will radio/call the site office on approach to ensure a loading area is available within the works site/work zone. All loading and unloading activities will be undertaken within the works site (or within the works zone based on site-specific requirements) during the approved work hours. If there are any materials spilt onto the road, site personnel and equipment will rectify the issue accordingly, subject to appropriate OH&S provision.

5.3 Heavy Vehicle Loads

All drivers will be required to adhere to the posted vehicle load limits on all roads and not overload vehicles beyond its maximum loading limits and/or relevant approvals.

5.4 Truck Routes

Protocols must be in place to ensure:

- procedures for accessing the site via a site induction;
- drivers adhere to the nominated truck routes, as shown in Figure 3.3;
- drivers are aware that pedestrians and cyclists are in the vicinity of the site, and;
- drivers are aware of the sign posted speed limits.

5.5 Site Inspection and Record Keeping

The construction operation would be monitored to ensure that it proceeds as set out in the Construction Management Plan provided by the Principal Contractor. A daily inspection before the start of construction activity is to take place to ensure that conditions accord with those stipulated in the plan and that there are no potential hazards. Any possible adverse impacts are to be recorded and dealt with as they arise.

5.6 Site Induction

All staff employed on the site by the appointed contractor will be required to undergo a site induction. The induction will include permitted access routes to and from the works site for site staff and delivery vehicles as well as standard environmental, OH&S, driver protocols and emergency procedures. The workers are to be informed to use public transport to access the site during the induction.

6 Conclusion

This CTPMP has been prepared to document the proposed construction activities and associated construction traffic management measures necessary to facilitate construction of the proposed development at Kambala School.

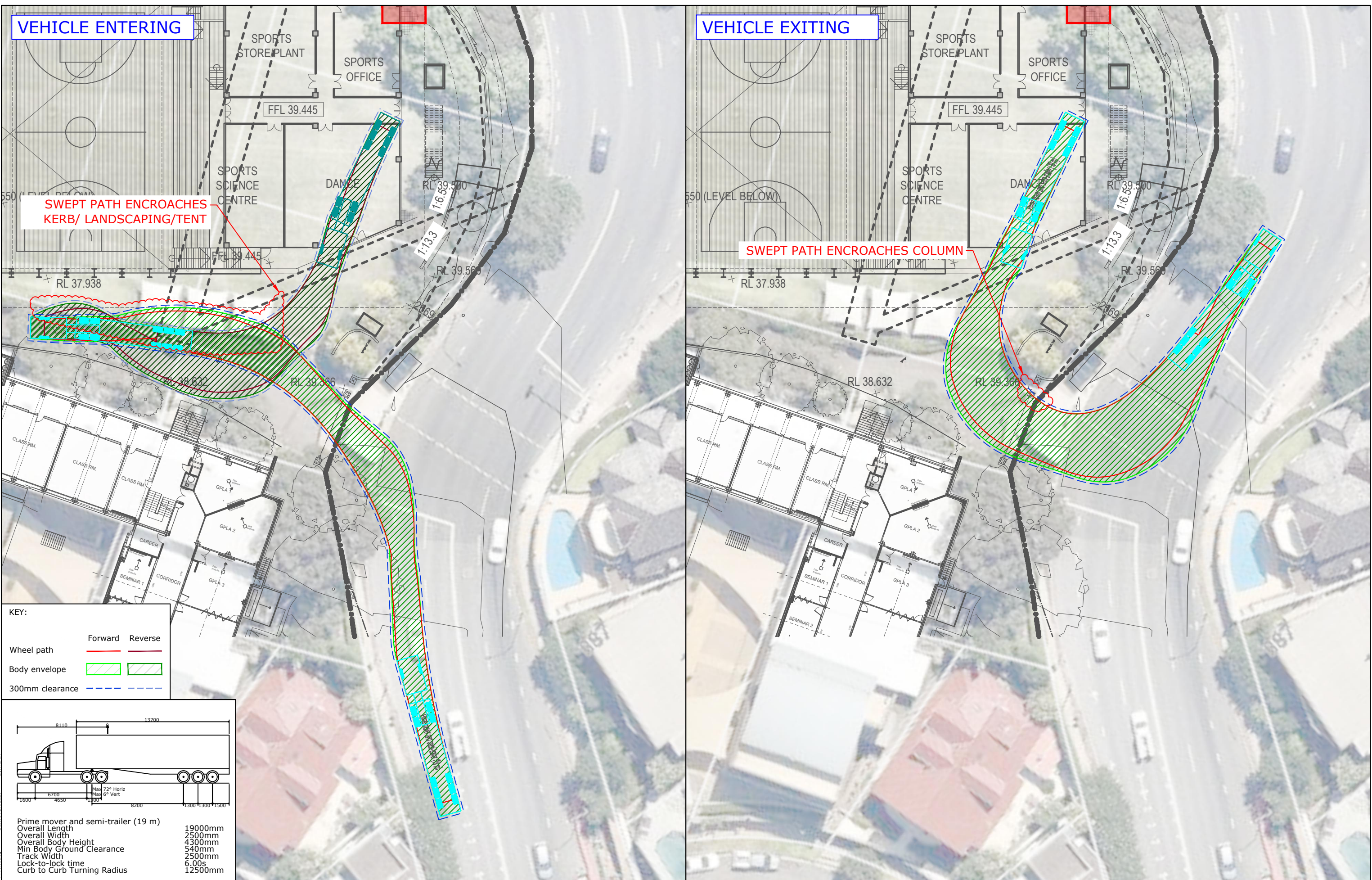
The key findings contained in this CTMP are as per below:

- The construction of the proposed development is expected to generate up to 5 two-way truck movements (10 total movements) per hour during peak construction activities.
- Given the expected low volume of construction vehicles, construction vehicle movements to and from the site can be satisfactorily accommodated in the surrounding road network.
- No pedestrian or cyclist facilities will be impacted as a result of the construction activities, although Class B hoarding will be required over a section of footpath along New South Head Road (NSHR) adjacent the proposed works zone.
- It is proposed that the loading/unloading of trucks are to occur within the site or within the works zone on NSHR, with construction vehicle access provided off NSHR.
- The northbound bus stop located adjacent to the school driveway on NSHR is to be temporarily closed during construction works. Passengers/ students would be diverted to the bus stop located 200-300m to the north. Consultation with STA is to be undertaken to coordinate and assess feasibility of proposed closure, prior to commencement of construction.
- A number of driver protocols will be established as part of the site induction procedure for drivers to ensure the safety of motorists, pedestrians and cyclists.
- Truck drivers are to be instructed to use the designated truck routes to/from the site.

In summary, it is concluded that the proposed traffic control measures will adequately address potential implications associated with proposed construction activities. This CTPMP fulfils the requirements of the SEARs relating to application, SSD-10385.

Appendix A

Swept Path Analysis



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

Prime mover and semi-trailer (19 m)	
Overall Length	19000mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	540mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	09/04/20

PROJECT

KAMBALA SPORTS PRECINCT

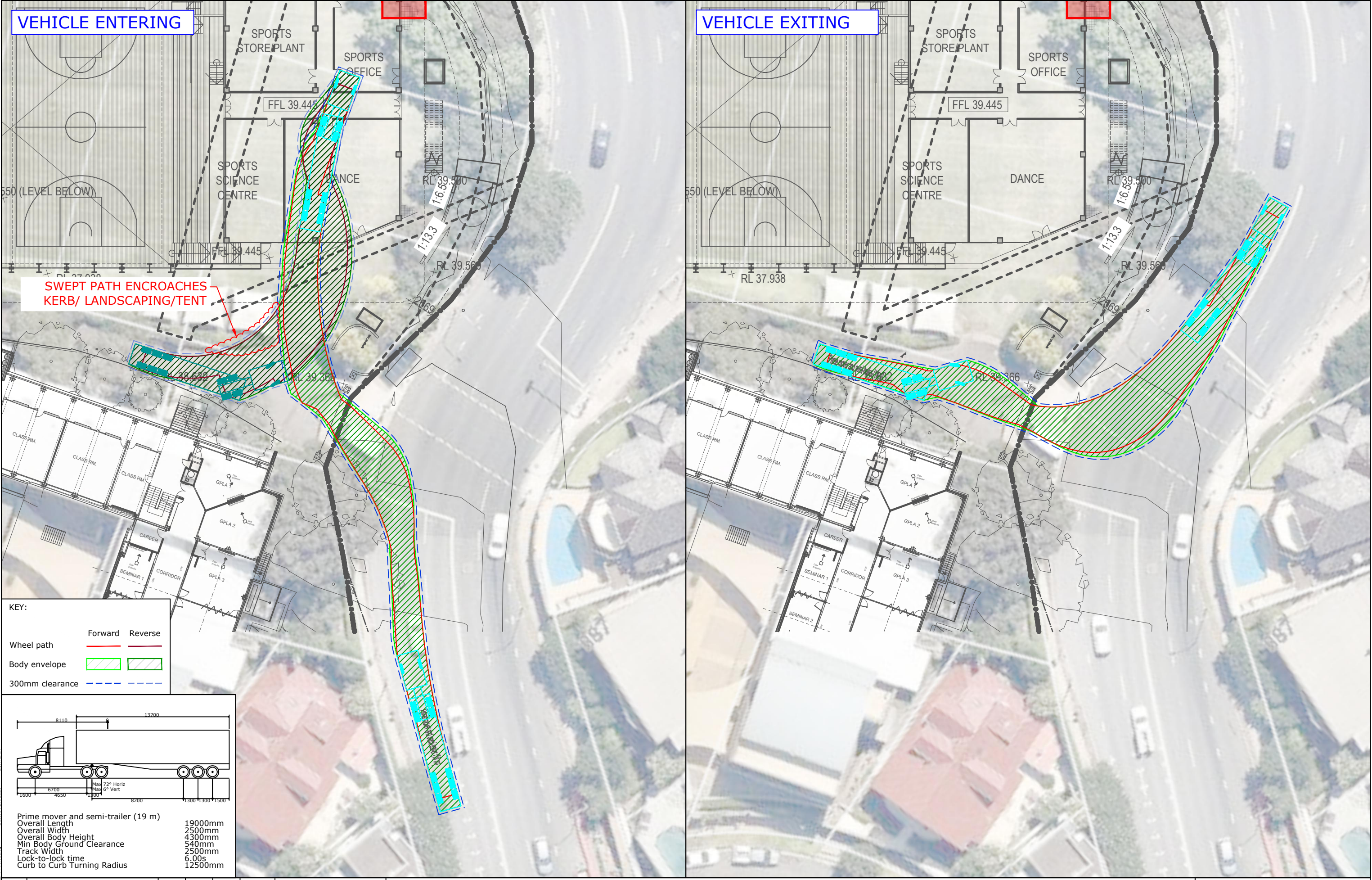
TITLE

SWEPT PATH ANALYSIS
19m PRIME MOVER & SEMI-TRAILER

DWG No. 19465CAD003
FIGURE 2

DATE STAMP 09 APRIL 2020

PROJECT No. 19465	SCALE 1:400 @A3	REV. A
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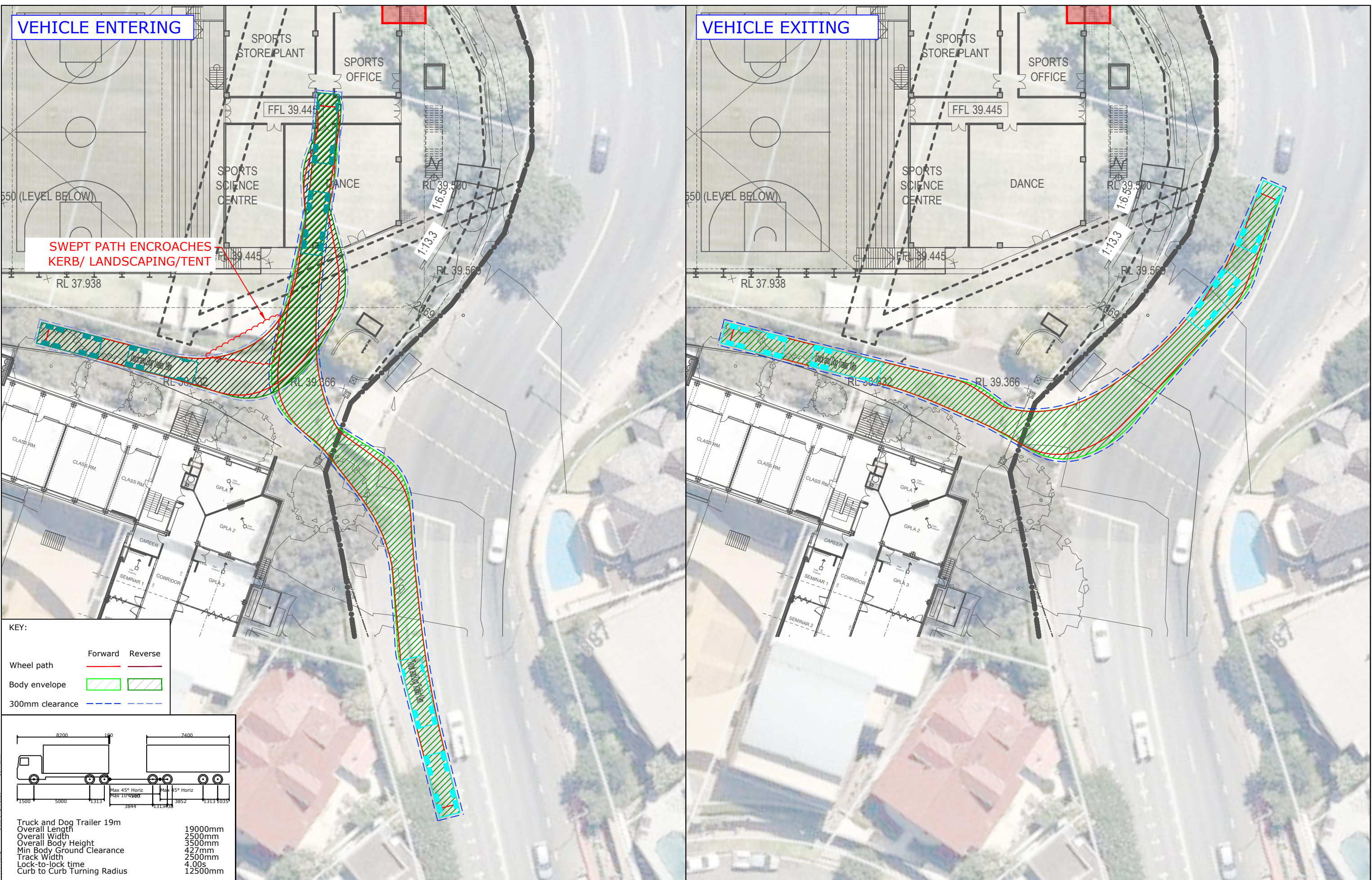


REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	09/04/20



PROJECT	KAMBALA SPORTS PRECINCT
TITLE	SWEPT PATH ANALYSIS 19m PRIME MOVER & SEMI-TRAILER

DWG No.	19465CAD003
FIGURE 3	
DATE STAMP	09 APRIL 2020
PROJECT No.	19465
SCALE	1:400 @A3
REV.	A



KEY:

Wheel path	Forward	Reverse
Body envelope		
300mm clearance		

Truck and Dog Trailer 19m
Overall Length 19000mm
Overall Width 2500mm
Overall Body Height 3500mm
Min Body Ground Clearance 427mm
Track Width 2500mm
Lock-to-lock time 4.00s
Curb to Curb Turning Radius 12500mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	09/04/20



PROJECT

KAMBALA SPORTS PRECINCT

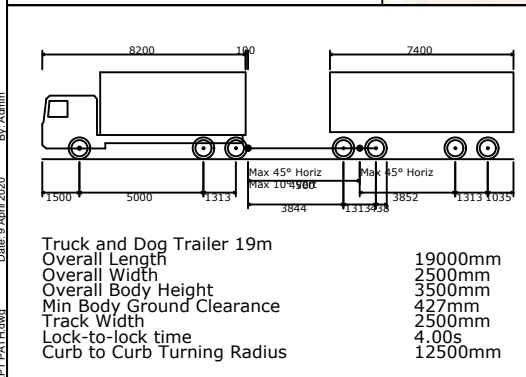
SWEPT PATH ANALYSIS
19m TRUCK AND DOG TRAILER

DWG No.	19465CAD003
FIGURE 4	
DATE STAMP	09 APRIL 2020
PROJECT No.	19465
SCALE	1:400 @A3
REV.	A



KEY:

	Forward	Reverse
Wheel path	—	—
Body envelope	—	—
300mm clearance	—	—



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	09/04/20



PROJECT	KAMBALA SPORTS PRECINCT		
TITLE	SWEPT PATH ANALYSIS 19m TRUCK AND DOG TRAILER		

DWG No.	19465CAD003 FIGURE 5		
DATE STAMP	09 APRIL 2020		
PROJECT No.	19465	SCALE	1:400 @A3
REV.	A		

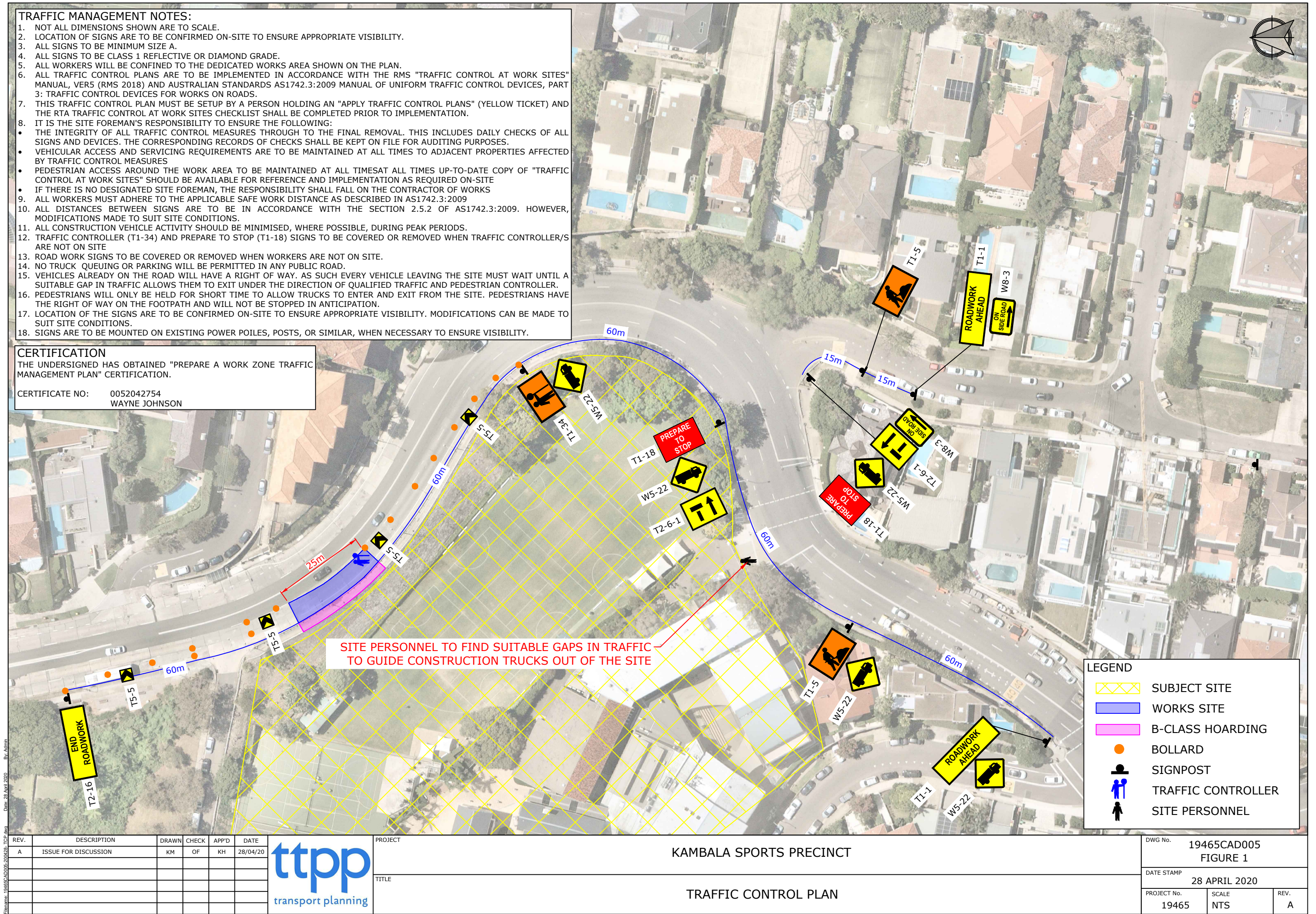
Appendix B

Traffic Control Plan

- TRAFFIC MANAGEMENT NOTES:**
1. NOT ALL DIMENSIONS SHOWN ARE TO SCALE.
 2. LOCATION OF SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY.
 3. ALL SIGNS TO BE MINIMUM SIZE A.
 4. ALL SIGNS TO BE CLASS 1 REFLECTIVE OR DIAMOND GRADE.
 5. ALL WORKERS WILL BE CONFINED TO THE DEDICATED WORKS AREA SHOWN ON THE PLAN.
 6. ALL TRAFFIC CONTROL PLANS ARE TO BE IMPLEMENTED IN ACCORDANCE WITH THE RMS "TRAFFIC CONTROL AT WORK SITES" MANUAL, VER5 (RMS 2018) AND AUSTRALIAN STANDARDS AS1742.3:2009 MANUAL OF UNIFORM TRAFFIC CONTROL DEVICES, PART 3: TRAFFIC CONTROL DEVICES FOR WORKS ON ROADS.
 7. THIS TRAFFIC CONTROL PLAN MUST BE SETUP BY A PERSON HOLDING AN "APPLY TRAFFIC CONTROL PLANS" (YELLOW TICKET) AND THE RTA TRAFFIC CONTROL AT WORK SITES CHECKLIST SHALL BE COMPLETED PRIOR TO IMPLEMENTATION.
 8. IT IS THE SITE FOREMAN'S RESPONSIBILITY TO ENSURE THE FOLLOWING:
 - THE INTEGRITY OF ALL TRAFFIC CONTROL MEASURES THROUGH TO THE FINAL REMOVAL. THIS INCLUDES DAILY CHECKS OF ALL SIGNS AND DEVICES. THE CORRESPONDING RECORDS OF CHECKS SHALL BE KEPT ON FILE FOR AUDITING PURPOSES.
 - VEHICULAR ACCESS AND SERVICING REQUIREMENTS ARE TO BE MAINTAINED AT ALL TIMES TO ADJACENT PROPERTIES AFFECTED BY TRAFFIC CONTROL MEASURES
 - PEDESTRIAN ACCESS AROUND THE WORK AREA TO BE MAINTAINED AT ALL TIMES AT ALL TIMES UP-TO-DATE COPY OF "TRAFFIC CONTROL AT WORK SITES" SHOULD BE AVAILABLE FOR REFERENCE AND IMPLEMENTATION AS REQUIRED ON-SITE
 - IF THERE IS NO DESIGNATED SITE FOREMAN, THE RESPONSIBILITY SHALL FALL ON THE CONTRACTOR OF WORKS
 9. ALL WORKERS MUST ADHERE TO THE APPLICABLE SAFE WORK DISTANCE AS DESCRIBED IN AS1742.3:2009
 10. ALL DISTANCES BETWEEN SIGNS ARE TO BE IN ACCORDANCE WITH THE SECTION 2.5.2 OF AS1742.3:2009. HOWEVER, MODIFICATIONS MADE TO SUIT SITE CONDITIONS.
 11. ALL CONSTRUCTION VEHICLE ACTIVITY SHOULD BE MINIMISED, WHERE POSSIBLE, DURING PEAK PERIODS.
 12. TRAFFIC CONTROLLER (T1-34) AND PREPARE TO STOP (T1-18) SIGNS TO BE COVERED OR REMOVED WHEN TRAFFIC CONTROLLER/S ARE NOT ON SITE
 13. ROAD WORK SIGNS TO BE COVERED OR REMOVED WHEN WORKERS ARE NOT ON SITE.
 14. NO TRUCK QUEUING OR PARKING WILL BE PERMITTED IN ANY PUBLIC ROAD.
 15. VEHICLES ALREADY ON THE ROAD WILL HAVE A RIGHT OF WAY. AS SUCH EVERY VEHICLE LEAVING THE SITE MUST WAIT UNTIL A SUITABLE GAP IN TRAFFIC ALLOWS THEM TO EXIT UNDER THE DIRECTION OF QUALIFIED TRAFFIC AND PEDESTRIAN CONTROLLER.
 16. PEDESTRIANS WILL ONLY BE HELD FOR SHORT TIME TO ALLOW TRUCKS TO ENTER AND EXIT FROM THE SITE. PEDESTRIANS HAVE THE RIGHT OF WAY ON THE FOOTPATH AND WILL NOT BE STOPPED IN ANTICIPATION.
 17. LOCATION OF THE SIGNS ARE TO BE CONFIRMED ON-SITE TO ENSURE APPROPRIATE VISIBILITY. MODIFICATIONS CAN BE MADE TO SUIT SITE CONDITIONS.
 18. SIGNS ARE TO BE MOUNTED ON EXISTING POWER POLES, POSTS, OR SIMILAR, WHEN NECESSARY TO ENSURE VISIBILITY.

CERTIFICATION
THE UNDERSIGNED HAS OBTAINED "PREPARE A WORK ZONE TRAFFIC MANAGEMENT PLAN" CERTIFICATION.

CERTIFICATE NO: 0052042754
WAYNE JOHNSON



By: Admin
Date: 28 April 2020
Filename: 19465CAD005-200428-TCP.dwg

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	KM	OF	KH	28/04/20



PROJECT	KAMBALA SPORTS PRECINCT		
TITLE	TRAFFIC CONTROL PLAN		

DWG No.	19465CAD005		
	FIGURE 1		
DATE STAMP	28 APRIL 2020		
PROJECT No.	19465	SCALE	NTS
REV.	A		

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