



Upgrades to Chatswood Public School and Chatswood High School – SSD 9483

Response to Submissions

Prepared for:
School Infrastructure NSW

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- B. JENKINS STREET VEHICLE SWEPT PATHS

1 Introduction

In March 2020, the NSW Department of Education submitted a State Significant Development (SSD) application for a proposed upgrade works at the Chatswood Public School and Chatswood High School sites.

The application (SSD 9483) was placed on exhibition with supporting documents, including a Transport and Accessibility Impact Assessment prepared by The Transport Planning Partnership Pty Ltd (TTPP).

Submissions to SSD 9483 have been received and a request for a 'Response to Submissions' issued to NSW Department of Education.

This document has been prepared by TTPP in response to submissions relating to traffic and transport aspects of the proposed upgrade works.

In preparing this 'Response to Submissions' document, further consultations with Transport for NSW (TfNSW) and Willoughby City Council have been undertaken to obtain a deeper understanding of the issues as well as develop appropriate mitigation and management measures to be included in the proposal.

2 Response to TfNSW Comments

The following responses have been prepared to address comments provided in the TfNSW submission dated 28 April 2020.

1. Pacific Highway Boundary

TfNSW has previously resumed and dedicated a strip of land as road along the Pacific Highway frontage of the subject property, as shown by grey colour on the attached Aerial – “X”. All buildings and structures, together with any improvements integral to the future use of the site are to be wholly within the freehold property (unlimited in height or depth), along the Pacific Highway boundary.

Response

Noted. It is confirmed that all buildings, structures and improvements as proposed by SSD 9483 will be wholly contained within the School sites and not extend beyond the site's Pacific Highway frontage property line.

2. Chatswood Public School Pacific Highway Access

The Chatswood Public School has alternative vehicular access via the local road network, and as such the proposed construction vehicular access and proposed emergency and service vehicular access on the Pacific Highway is not supported on road safety and efficiency grounds.

Response

The Public School site currently has an onsite staff car park and delivery area with a vehicle access from the Pacific Highway. The existing car park provides some 16 staff car parking spaces. Waste collection and deliveries also occur via this car park with access via the Pacific Highway.

The Pacific Highway access is also the designated emergency vehicle access for the Public School site.

Operational Conditions (Post Construction)

The proposed upgrade works for the Public School include the relocation of the existing staff parking spaces with access via the Pacific Highway to the new staff parking area accessed via Jenkins Street.

It is proposed that the Pacific Highway access would be maintained for emergency vehicle access and ad hoc deliveries to the school office. It is noted that the main delivery and loading area will be relocated to the new facility accessed via Jenkins Street.

The proposed upgrade works will significantly improve the operational aspects of the existing Pacific Highway access by reducing the volume of vehicles access to the school via the Pacific Highway.

It is considered important to maintain the existing emergency vehicle access at the Pacific Highway or the front door to the facility. Emergency vehicles accessing the site would generally be undertaking the movement under sirens and hence alert both vehicles and pedestrians of the vehicle turning paths.

Ad hoc deliveries to the office could be arranged to occur outside of the “school zone” hours such that the vehicles are not seeking access to the school via the existing Pacific Highway driveway while school students are accessing the school and using the footpaths.

Overall, the proposed upgrades would provide significant improvements to road safety and efficiency at the Pacific Highway access.

During Construction

It is proposed that during construction, construction vehicle access will be provided via the existing Pacific Highway access and the Jenkins Street access.

It is acknowledged that the Public School site has multiple road frontages, namely:

- Pacific Highway
- Centennial Avenue
- Jenkins Street
- James Street

It is also acknowledged that the Public School will remain operational during the construction phase, and thus construction vehicle access, on site work compounds and internal access to the new buildings needs to allow the school to continue to function.

Given the need to maintain school operations, it is not considered viable to provide construction vehicle access via Centennial Avenue.

Additionally, James Street currently has a 3 tonne load limit for vehicle movements and is not considered to be a suitable street to accommodate construction vehicles.

As shown in the images below, James Street is a split level road with narrow road pavements and existing restrictions to vehicles over 6 metres in length. There is also a significant level difference between James Street and the School site that would restrict vehicle access.

Figure 1 – James Street looking towards the Public School from Fullers Road



The Pacific Highway construction access would accommodate construction works on the eastern portion of the Public School site, while the Jenkins Street access would accommodate works in the western portion of the site.

As set out in the preliminary Construction Traffic Management Plan (CTMP) submitted with the SSD application, it is acknowledged that construction vehicle access via the Pacific Highway would be managed with restrictions implemented to both the maximum size of vehicle to be used and the time of vehicle access.

Vehicle swept paths for various sized trucks have been undertaken for the existing Pacific Highway access. These swept paths are shown in Appendix A.

The swept path analysis indicates that Small Rigid Vehicles (6.4m long) can adequately access the site turning in wholly from the kerbside lane. Larger vehicles, including a Heavy Rigid Vehicle (12.5m) can enter the site via the existing access while straddling the kerbside and adjacent lane.

It is noted that detailed traffic management measures will be developed as part of the comprehensive CTMP to be prepared and approved prior to Construction Certification (CC).

The following measures shall be considered for incorporation into the CTMP:

- No vehicle larger than an SRV to access the site via the Pacific Highway during “School Zone” hours.
- All vehicles to access the site with traffic controllers for pedestrian movements.

It is noted Willoughby City Council has included a recommended draft condition of consent relating to the preparation of a Construction Management Plan. TTPP concurs with the intent of this condition and recommends that the condition, or something similar be adopted as part of any consent.

Notwithstanding the above, the ability for the Public School construction works to access the site via the existing Pacific Highway access allows the intrusion of construction vehicles into surrounding local streets to be minimised.

The potential construction traffic routes to and from the Public School site for an access on the Pacific Highway, Jenkins Street and James Street are shown in Figure 2.

Figure 2 – Construction Vehicle Routes for Various Site Accesses



As shown in Figure 2, all three of the potential construction site accesses for the Public School site would involve construction movements along the Pacific Highway. However, only the Pacific Highway access would remove the need for construction vehicles to use local roads to access the site.

Thus, the Pacific Highway access is considered an appropriate access to use as a measure to reduce the potential implications of construction vehicles on Local roads.

3. Measures to Increase Usage of the Pacific Highway Pedestrian Bridge

There are existing pedestrian safety concerns at the Victoria Avenue and Pacific Highway intersection with students not using the pedestrian bridge provided in close proximity. The Traffic Impact Assessment refers to a new pedestrian access for the Chatswood Primary School and it is requested that the applicant considers measures to encourage students to use the pedestrian overbridge instead of the signalized intersection crossing.

Response

The Chatswood Public School currently has pedestrian access via gates at the Pacific Highway adjacent to the pedestrian bridge and on Centennial Avenue.

The upgrade works would introduce another pedestrian access via Jenkins Street.

The provision of pedestrian access via Centennial Avenue and Jenkins Street allows pedestrians to avoid the need to access the school via the Pacific Highway.

The Public School's Pacific Highway pedestrian access is located in close proximity to the pedestrian bridge over the Pacific Highway and when operational is an attractive option for access across the Pacific Highway.

It is understood that there are maintenance issues associated with the escalators which result in extensive periods when they are not operational. Discussions with Willoughby City Council indicated that the pedestrian bridge is owned and operated by the land owners of 799 Pacific Highway.

Any measures available to the school to encourage students to use the pedestrian bridge in preference to the at grade crossing rely on the operation of the escalators.

Notwithstanding the above, it is accepted that the Public School should encourage students to use the pedestrian overbridge through measures developed and implemented by the comprehensive Travel Plan (see Issue 6 below).

The comprehensive Travel Plan should include and reflect outcomes of discussions between relevant agencies and stakeholders regarding road safety education. SINSW is in discussion

with Willoughby City Council to investigate possible signage to encourage the school community to use the pedestrian footbridge.

4. Jenkins Street Car Park Access Swept Paths

The submitted swept paths for Jenkins Street should take into account parked vehicles both sides of the road.

Response

The swept path analysis has been updated and the results presented in Appendix B.

The updated analysis indicates that the design vehicle can adequately access the site via Jenkins Street with vehicles parked on both sides of the street.

5. School Traffic Generation Rates

The Traffic Impact Assessment should not rely on a low 16% survey response for the Chatswood High School travel mode and should use the TfNSW Traffic Generation study rates.

Response

As documented in the Transport Assessment report submitted with the SSD, travel behaviour information of staff and students for both the public school and the high school was obtained through online surveys with varying degrees of response rates.

The response rates obtained were:

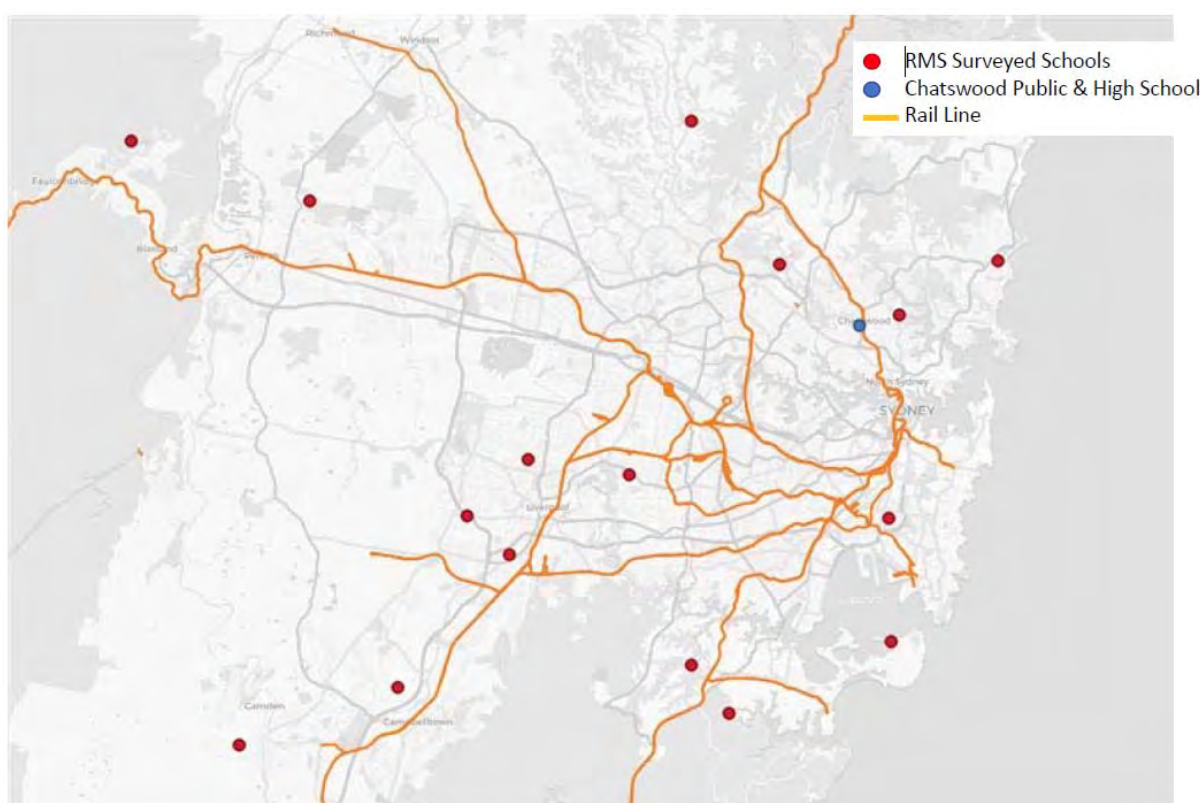
- Chatswood Public School Students – 819 out of 1,337 students (61% response rate)
- Chatswood Public School Staff – 80 out of 105 staff (76% response rate)
- Chatswood High School Students – 261 out of 1,670 students (16% response rate)
- Chatswood High School Staff – 84 out of 101 staff (83% response rate).

While the response rate for the High School students was low (16%) each of the other categories were comparatively high (61% - 83%).

It is noted that the travel mode responses for each category have been applied to the future school populations as means of reflecting the site specific conditions that influence travel to and from the Chatswood schools. In particular the high level of accessibility to public transport.

With regard to the TfNSW (RMS) Traffic Generation study rates, it is noted that none of the surveyed schools is located within 400 metres of a major transport interchange like the Chatswood Schools are.

As shown in the figure below, RMS surveyed schools are located away from train lines. For the RMS surveyed schools, the traffic generation would be expected to be significantly higher than Chatswood given the very different levels of access to public transport.



Notwithstanding the above, the RMS school traffic generation rates indicate that the vehicle trip rates for primary (public) schools are significantly higher than the rates for secondary schools (high schools).

The RMS school vehicle trips rates per student are summarised in Table 2.1 below.

Table 2.1: Summary of RMS School Trip Rates

School Type	Period	Vehicle Trip per Student
Primary (Public)	AM	0.88
	PM	0.71

Secondary (High School)	AM	0.47
	PM	0.27

Reference: TTPP Reference

As shown in Table 2.1 above, the secondary school traffic or vehicle trip generation rate is approximately 50% of primary school rate in the AM and 40% in the PM periods. This difference reflects the age of students and the tendency for independent travel by older students.

For the traffic assessment of the proposed upgrades to the Chatswood Public and High Schools, the high school traffic generation rate used based on the survey responses was 60% of the public school rate in the AM and 70% in the PM.

As such, while the survey response rate for Chatswood High School students was low (16%), the traffic generation rates used in the assessment for the proposed Chatswood High School upgrade could be considered to be conservatively high as the rate used was higher than the ratio of vehicle trips for primary and secondary schools within the RMS guidelines for school trips. A higher sample size for Chatswood High School students may have provided a lower traffic generation rate than those used in the analysis.

Additionally, discussions with the principals for the Chatswood public and high school indicated that the rates obtained by TTPP's surveys were representative of the travel demands of the schools.

In summary, it is considered that the traffic generation rates utilised in the Transport Assessment report reflect the existing travel demands for the Chatswood schools and are appropriate given the schools' close proximity to good levels of public transport.

6. Green Travel Plan

TfNSW requests that prior to the issue of an Occupation Certificate, the applicant should prepare a comprehensive Travel Plan (or amend and expand the existing GTP) taking into account the GTP initiatives outlined in the framework GTP to assist with increasing the proportion of trips made by walking and cycling.

Response

Noted.

The transport assessment prepared by TTPP as part of the EIS documentation and SSD application included a Green Travel Plan 'framework'.

It is envisaged that should the SSD be approved, a condition of consent will be applied that will require the preparation of a comprehensive Travel Plan for both the public and high schools.

The TfNSW comment includes a number of matters to be considered as part of a comprehensive Travel Plan, including details pertaining to who will be responsible for:

- the delivery of various actions contained within the Travel Plan;
- reviewing the Travel Plan performance once implemented; and
- ongoing modifications to the management measures included in the Travel Plan to reflect review findings, changes to the school operation and / or the surrounding transport infrastructure network.

In response to the above, it is confirmed that the schools would themselves be responsible for the development, implementation and maintenance of the Travel Plan.

It is envisaged that the NSW Department of Education would provide the necessary support and learned experience in achieving a successful Travel Plan. But ultimately, it is the schools that will need to implement and manage the Travel Plan.

TTPP endorses the matters raised in the TfNSW comment (Issue No. 6) for consideration and incorporation into the comprehensive Travel Plan to be prepared prior to Occupation Certification.

3 Response to Willoughby Council Comments

The following responses have been prepared to address comments provided in Willoughby City Council's submission dated 30 April 2020.

General Comments by Council's Traffic Section

General comments include the statement that there will be an impact on the road network from traffic generation by the development as follows:

- Increased pedestrian traffic (school children) during the morning and afternoon peaks
- Increased school staff parking demand
- Increased drop off / pick up and traffic generation to / from schools.

Response

It is a subtle point but it should be acknowledged that the proposed development, or upgrades works at the Chatswood Public School and High School, will not themselves generate additional pedestrian, traffic and parking demands associated with the schools.

The proposed development is simply building works to provide upgraded educational facilities for the existing and potential future school populations.

The proposed works will provide the ability of the schools to better accommodate existing school populations along with the ability to accommodate a potential future increase in school populations should the demand occur.

Thus, the additional potential travel demands as indicated by Council relate to school population growth. As set out in the Transport Assessment submitted with the SSD application, the measures to mitigate the potential implications of increased travel demand relate to the potential increases to school populations.

Mitigation to address school population increases (as opposed to new building constructions) includes measures to reduce the overall travel demand by private vehicles along with peak spreading through staggered start / finish times etc. to maintain, if not improve, existing school related operations with a potential population increase.

It is noted that the Department of Education has developed a strategy to manage enrolment demand in Chatswood, including a commitment to building a new public school in the Chatswood area.

School On Site Car Parking Provisions – Operational (Post Construction)

Council notes that:

- Existing and proposed car parking provisions are not compliant with Willoughby Development Control Plan (WDCCP) requirements, however both schools are located within good proximity to the Chatswood Transport Hub (Metro, Train and Bus). Both schools also have well connected cycle paths. A reduced on-site parking provision will reduce traffic generation and traffic congestion in the surrounding area, which is consistent with Willoughby Community Strategic Plan and Willoughby Street Parking Strategy.
- The Transport Impact Study suggested that on-street parking is available for each school's parking needs and demand. The point is made that teachers should not depend on street parking, as unrestricted parking zones are limited for local residents and associated visitor parking. The development should consider and provide adequate 'reduced' number of staff parking without depending on street parking.
- The Transport Impact Study suggested that Council apply time parking restrictions to the adjacent local streets. This is not necessarily the solution. The point is made that Council has previously encountered resistance to further parking restrictions in the area around both schools.

Response

The balancing act of encouraging travel by public transport and the provision of 'adequate' on site parking is a difficult task for all developments.

Council's support for a reduced on onsite parking provision for the school's as a measure to achieve increased use of the available public transport options is acknowledged.

Certainly, the travel demand measures within the comprehensive Travel Plan will seek to encourage greater use of public and active transport modes by both students and staff.

One measure to be included in the comprehensive Travel Plan is the allocation of a portion of on site parking to those staff members that car pool. The provision of an allocated space within the school's parking area is a strong encouraging factor to participate in the practice of car pooling and thereby reducing the number of vehicles being driven to and from the schools.

The Transport Impact Study identified that there is a proportion of school staff that currently park on street surrounding the schools.

It is noted that while school staff parking on street may be undesirable and not consistent with Council's desired use of this parking, it is legal to do so provided that the parking controls are adhered to.

The point is made that if on street parking is provided in an unrestricted manner then those spaces are legally available for all uses and not necessarily restricted to just local residents and their visitors.

Notwithstanding the above, the intent of Council's comments to reduce / minimise the implications of staff parking on street is supported.

Hence the inclusion of the recommendation in the Transport Impact Study for Council to consider the implementation of further on street parking controls such as a resident parking scheme in the areas surrounding the school as a measure to further increase the attractiveness of public and active transport as an option for staff to get to and from school.

It is noted that the implementation of on street parking controls would not only address the potential future additional staffing populations at the schools but also the existing on street parking demand from school staff, commuters and people working within the Chatswood commercial centre.

Past resistance from residents surrounding the schools to on street parking controls is noted. However, the schools are part of the fabric of the community as much as residents and businesses. There is obviously demand for on street parking by each of the community uses.

Hence it is recommended that Council consider the implementation of on street parking controls in consultation with the community. Through consultation and further consideration it may be determined that there is a preference not to implement on street parking controls and residents are prepared to accept the demands of all potential users of on street parking.

Provision of Parking During the Construction Period

Council has identified the potential loss of on school site parking during the construction period for both schools and the associated impacts to the surrounding streets.

Response

Both schools will continue to operate during construction and certainly there will be a loss of on site parking for staff during the construction period.

The provision of staff car parking during construction is an issue being considered as part of the detailed construction methodology being developed by SINSW and building contractors. It is noted that the Tender phase for the selection of a building contractor has not yet been completed and thus construction methodology and staging has not yet been finalised.

Notwithstanding the above, the operational requirements of the schools and the building works will almost certainly reduce the availability of on site parking for staff.

It is recommended that the comprehensive Travel Plan be developed and implemented prior to the commencement of construction works such that staff are encouraged to utilise public or active transport modes.

Jenkins Street Access

- Post-construction vehicle & pedestrian access at Jenkins St & Oliver Rd should have separate access points/paths.

Response

Separate access points between vehicle & pedestrian access has been allowed for in the design, namely pedestrians will access via a dedicated pedestrian gate separate from the vehicle access.

Notwithstanding the above, detail designs shall ensure that clear and compliant sight lines (AS2890.1) are provided for vehicles exiting the car park towards pedestrians on the footpath and accessing the school's pedestrian gate.

Oliver Street Drop Off Spaces During Construction

- During construction - the 4 available parking spaces should be increased and prioritised for special needs students drop off area.

Response

The 4 spaces identified by Council are proposed specifically for special support drop-off.

School Loading Areas During Construction

- Identify location of temporary loading area for the school during construction.

Response

The provision of loading areas during construction is an issue being considered as part of the detailed construction methodology being developed by SINSW and building contractors. It is noted that the Tender phase for the selection of a building contractor has not yet been completed and thus construction methodology and staging has not yet been finalised.

Temporary Drop Off / Pick Up Zone on Centennial Avenue

- The temporary drop off / pick up zone on Centennial Avenue (south side, east of Whitton Road) is supported if required, however, pedestrian crossings at Whitton Road need to be manned during the AM and PM school peak hours, ensuring school children safety while maintaining good traffic flows from Whitton Road.

Response

The pedestrian crossing across Centennial Avenue at Whitton Road is currently manned during the AM and PM peak period on school days. The crossing attendant is provided by TfNSW.

It is intended that all crossings (temporary or operational) will continue to be manned during school zone hours.

Pacific Highway Pedestrian Safety

- Improve pedestrian crossing facilities (capacity and safety) on Pacific Highway (at Victoria Avenue and Albert Avenue) and overhead bridge facility to ensure they are convenient, safe and accessible. In this regard further consultation is recommended with TfNSW.

Response

As identified in Section 2, the use of the pedestrian bridge over the Pacific Highway is the preferred route for school students traversing between the schools and the Chatswood Transport Interchange.

However, the attractiveness of the bridge is adversely impacted by a lack of maintenance which renders the escalators inoperable for extended periods of time. Further discussions between SINSW, TfNSW, Council and the bridge owners will be undertaken to address the maintenance issue.

Movements to and from Centennial Avenue drop off / pick up zones

- Provide Local Area Traffic Management (LATM) for the schools traffic movements and drop off and pick up activities, such as, installation of a roundabout(s) on Centennial Avenue to facilitate safe u-turns movements, to access both sides of Centennial Avenue and Jenkins Street drop off zones and for traffic to return to the Highway. A condition is proposed in Attachment 4.

Response

As noted above in the response to the general comments by Council, the proposed improvement works at the Public and High School sites would not generate additional demands for school drop off / pick up facilities, nor additional traffic or pedestrian movements.

These demands would only be generated if both the growth in school populations continues at the current rate and the travel behaviour of students and staff remains unchanged.

With regard to school population growth, an additional primary school in Chatswood is being considered by the Department of Education to address future growth and ease current demand at Chatswood Public School.

Furthermore, the implementation of a comprehensive school Travel Plan will have the effect of maintaining the existing level of demand (and thus existing level of impact) associated with the schools' operations even with potential increases to the school populations.

Thus it is considered that the need for LATM investigations and potential improvement measures are not required to address the implications of the proposed school upgrade project.

Mitigation Measures Supported by Council

It is acknowledged that the following proposed mitigation measures as identified in the Transport Assessment submitted with the SSD application are supported by Council:

- Staggered start and finish times for both schools
- An integrated Travel Plan covering both schools
- Continuing to run Safe Routes to School campaigns

These measures will be adopted into the comprehensive Travel Plan.

4 Response to Community Comments

Community responses to the SSD application have been summarised based on the issue and addressed below. It is noted that issues raised by the community have also been identified by TfNSW and Council and addressed in Sections 2 and 3 above.

Traffic Management

Numerous general comments provided by community submissions, pertained to need for improved traffic management for the schools to accommodate the proposed upgrade works.

As noted above in Section 3, the proposed school upgrade works will not change the existing traffic and travel demands associated with the school.

Thus, traffic management measures are not warranted as part of the proposed school upgrade works.

Lack of on-street parking, cumulative impacts from surrounding residential high-rise developments

On street parking arrangements and controls would not be modified by the proposal and is a matter for Council to consider as part of the management for the broader local road network.

As identified in Sections 2 and 3 above, it is recommended that Council consider the implementation of on street parking restriction to control the demand for on street parking by the schools and other non-residential developments.

This would be supported by a comprehensive School Travel Plan which will encourage both existing and future school staff populations to utilise public and active modes of transport for the journey to and from school.

Existing poor behaviour of parents/carers with regard to parking in no-stopping zones and across driveways

The Department of Education seeks to work pro-actively with the school community and Council to encourage appropriate behaviour.

Pedestrian Safety

Matters relating to pedestrian safety and in particular the movement of pedestrians crossing the Pacific Highway have been addressed through Sections 2 and 3 above.

Traffic conditions are worse than indicated in TIA - numerous residents dispute the "average delay driving from Centennial Ave to Albert Ave at peak AM and PM times is 28 seconds" - they indicate it's closer to 15-25 minutes.

It is acknowledged that at peak school drop off and pick up times, the road network surrounding the schools currently experience traffic congestions and delay.

In line with standard modelling methodology and reporting, the average delay results presented in the TIA represents average delays across a 1-hour period. Within that 1-hour period there may be variations to delay for shorter periods, for example the 5-10 minutes either side of the school day commencement and completion.

Notwithstanding the reported level of vehicle delay, the assessment methodology has sought to develop measures which will reduce traffic generation of the potential school population increases to no more than existing traffic levels.

Issues with buses for sporting events and excursions

TPP hasn't observed any particular existing issues associated with school buses for sports or excursions.

Notwithstanding the above, the operation of school buses and buses generally shall be addressed in the comprehensive Travel Plan for the schools.

Lack of access to inner part of school for deliveries

The provision of delivery loading areas within close proximity to road (i.e. not to the inner parts of the school) is a deliberate strategy to reduce vehicle intrusions into school areas which are utilised by students.

The loading arrangements also reflect a response to school site security requirements.

Concern with shared entry access for cars and pedestrians at Pacific Highway.

The existing staff car parking facility accessed via the Pacific Highway will be relocated to Jenkins Street. Only emergency vehicles and delivery vehicles will be permitted to access the school via the Pacific Highway access.

This will significantly reduce the existing vehicle / pedestrian conflict at the Highway and is a significant benefit of the project.

Inadequate pick up and drop off areas

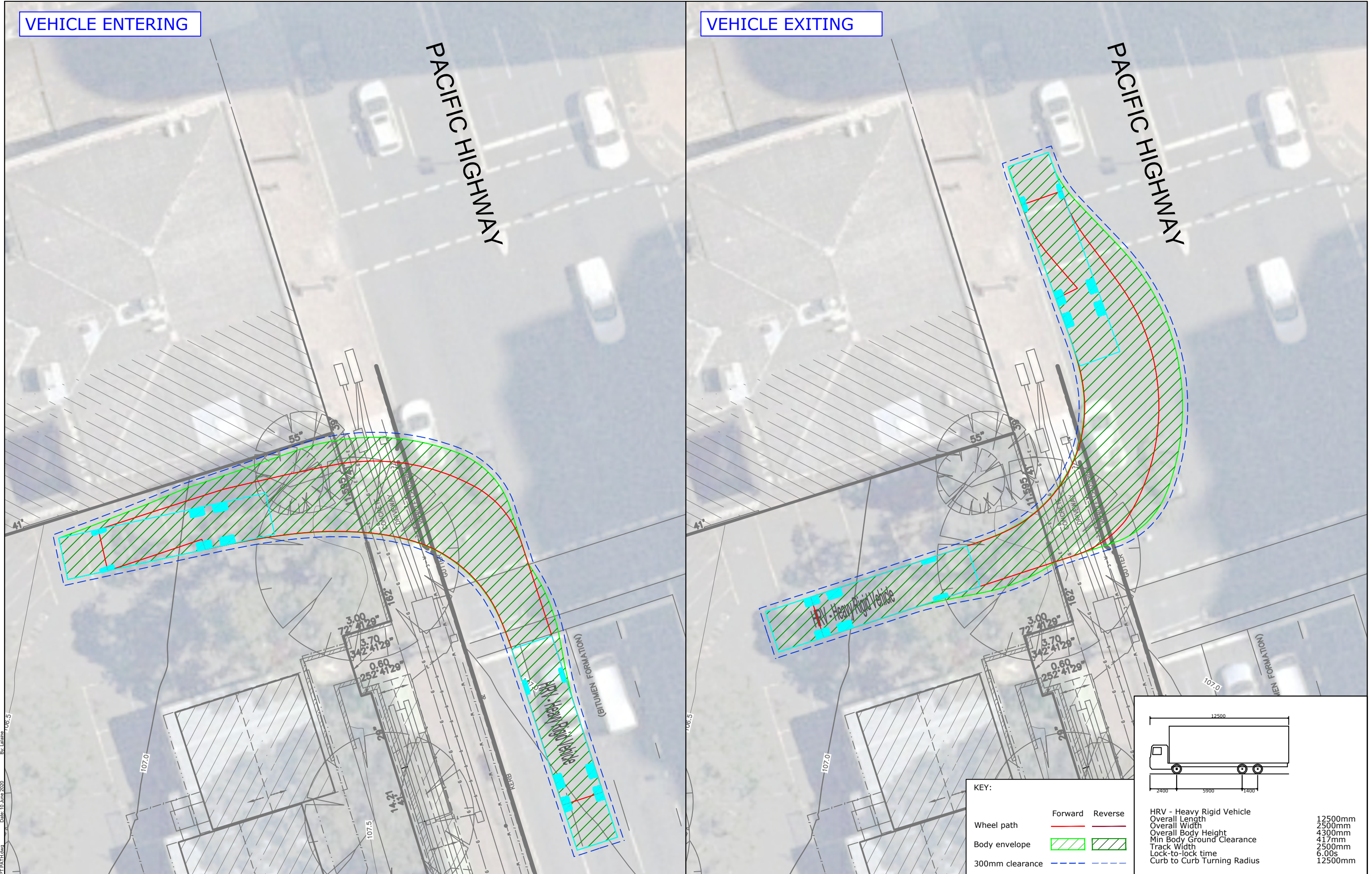
The comprehensive Travel Plan will implement a range of measures to improve the operation of the pick up / drop off areas including staggered start and finish times to spread demand for the facility.

Appendix A

Pacific Highway Access – Construction Vehicle Swept Paths

VEHICLE ENTERING

VEHICLE EXITING



12500
2500
4300
417
2500
6.00
12500

HRV - Heavy Rigid Vehicle

Overall Length	12500mm
Overall Width	2500mm
Overall Body Height	4300mm
Min Body Ground Clearance	417mm
Track Width	2500mm
Lock-to-lock time	6.00s
Curb to Curb Turning Radius	12500mm

KEY:		
	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	JR	JR	10/06/20

PROJECT
UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE
12.5m HEAVY RIGID VEHICLE SWEEP PATH
PACIFIC HIGHWAY ACCESS

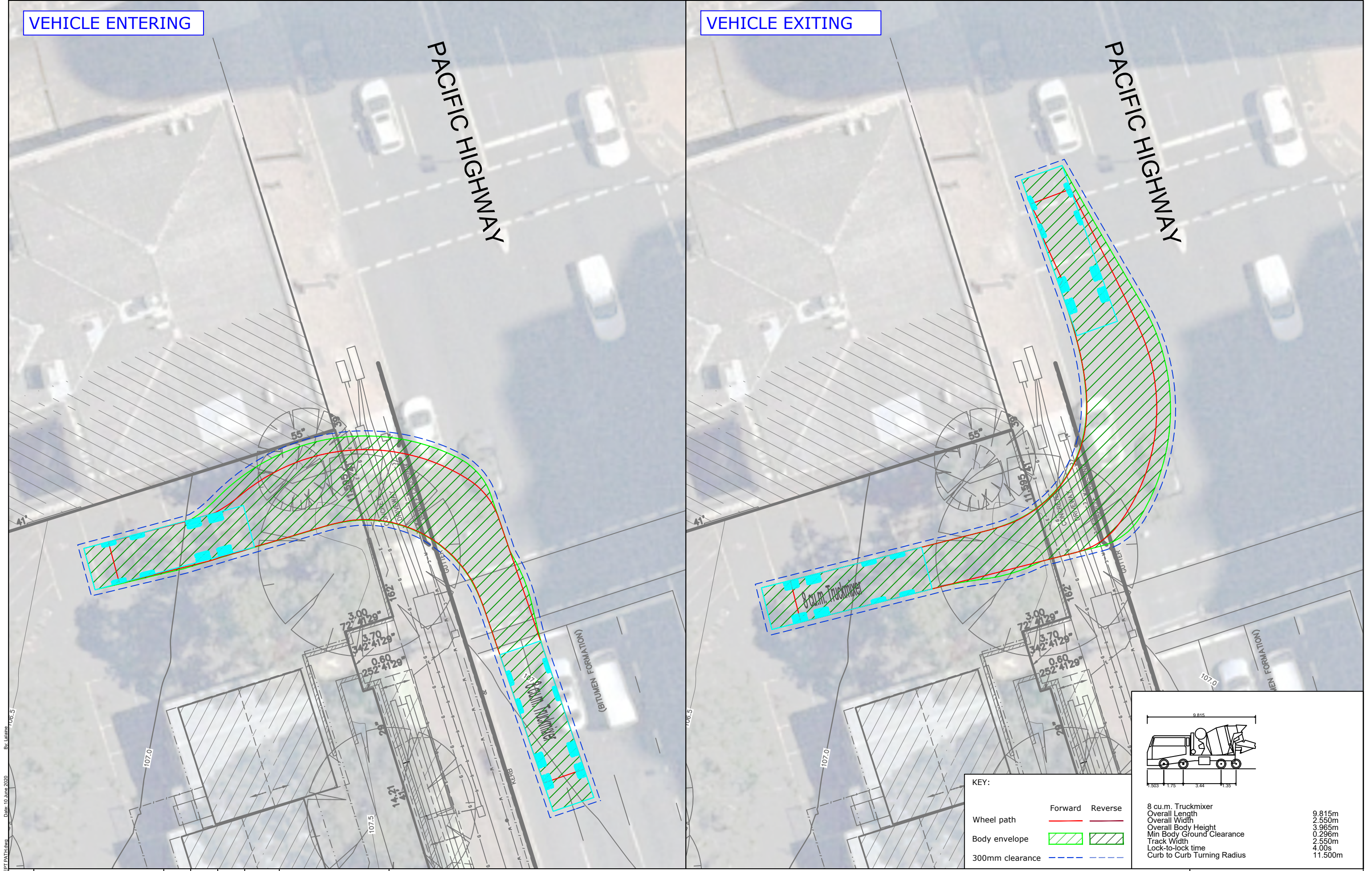
DWG No. 20182CAD013
FIGURE 1

DATE STAMP 10 JUNE 2020

PROJECT No. 20182	SCALE 1:200 @A3	REV. A
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VEHICLE ENTERING

VEHICLE EXITING



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	JR	JR	10/06/20

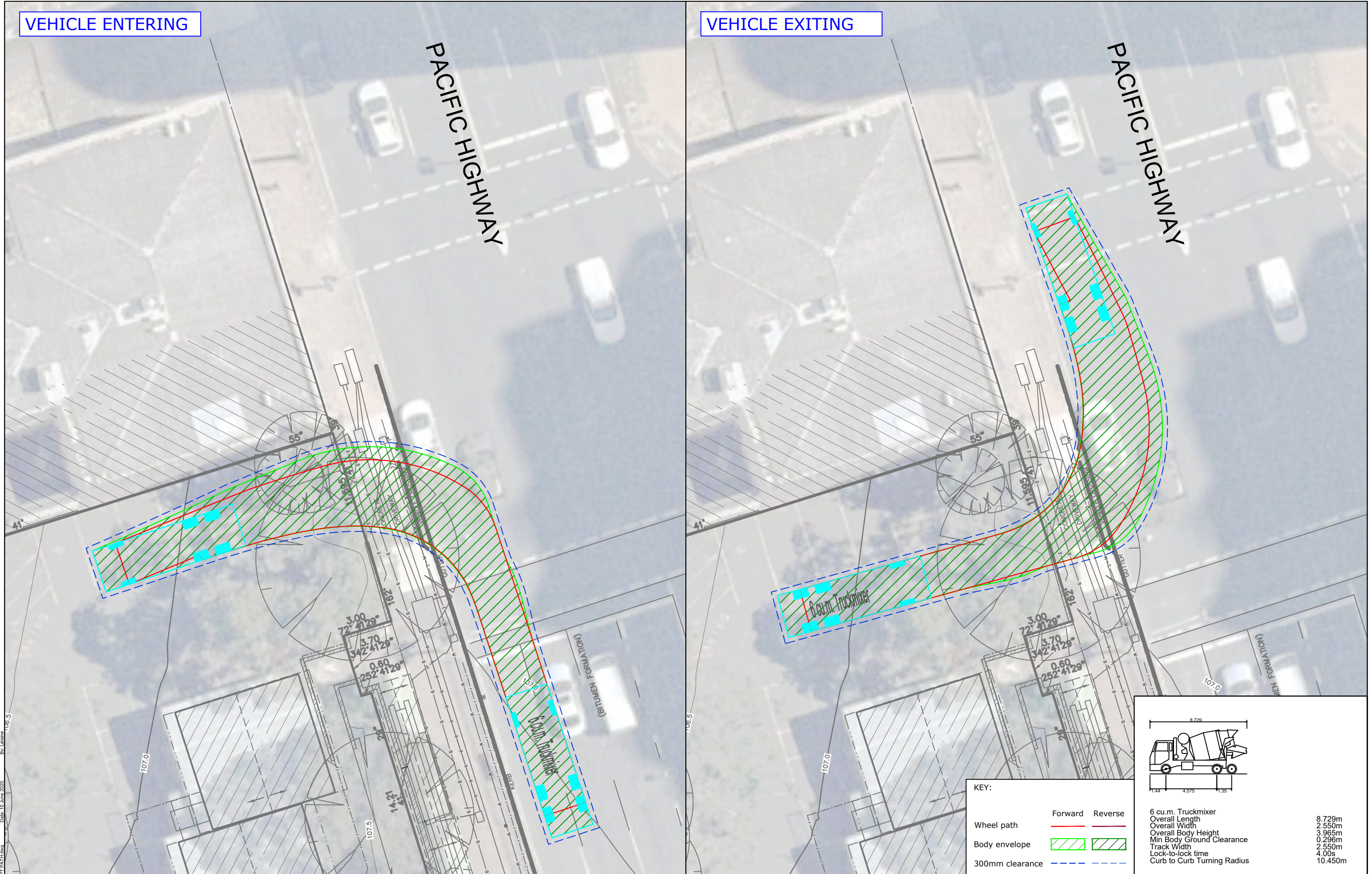


PROJECT	UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL		
TITLE	8-CUBIC METRE CONCRETE MIXER SWEEP PATH PACIFIC HIGHWAY ACCESS		

DWG No.	20182CAD013		
	FIGURE 2		
DATE STAMP	10 JUNE 2020		
PROJECT No.	20182	SCALE	1:200 @A3
REV.	A		

VEHICLE ENTERING

VEHICLE EXITING

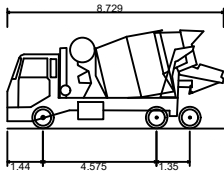


File name: 20182CAD013-2018-10-SWEEP PATH.dwg Date: 10 June 2020 By: Lalaine

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	JR	JR	10/06/20



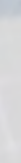
PROJECT	UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL		
TITLE	6-CUBIC METRE CONCRETE MIXER SWEEP PATH PACIFIC HIGHWAY ACCESS		



6 cu.m. Truckmixer	
Overall Length	8.729m
Overall Width	2.550m
Overall Body Height	3.965m
Min Body Ground Clearance	0.296m
Track Width	2.550m
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10.450m

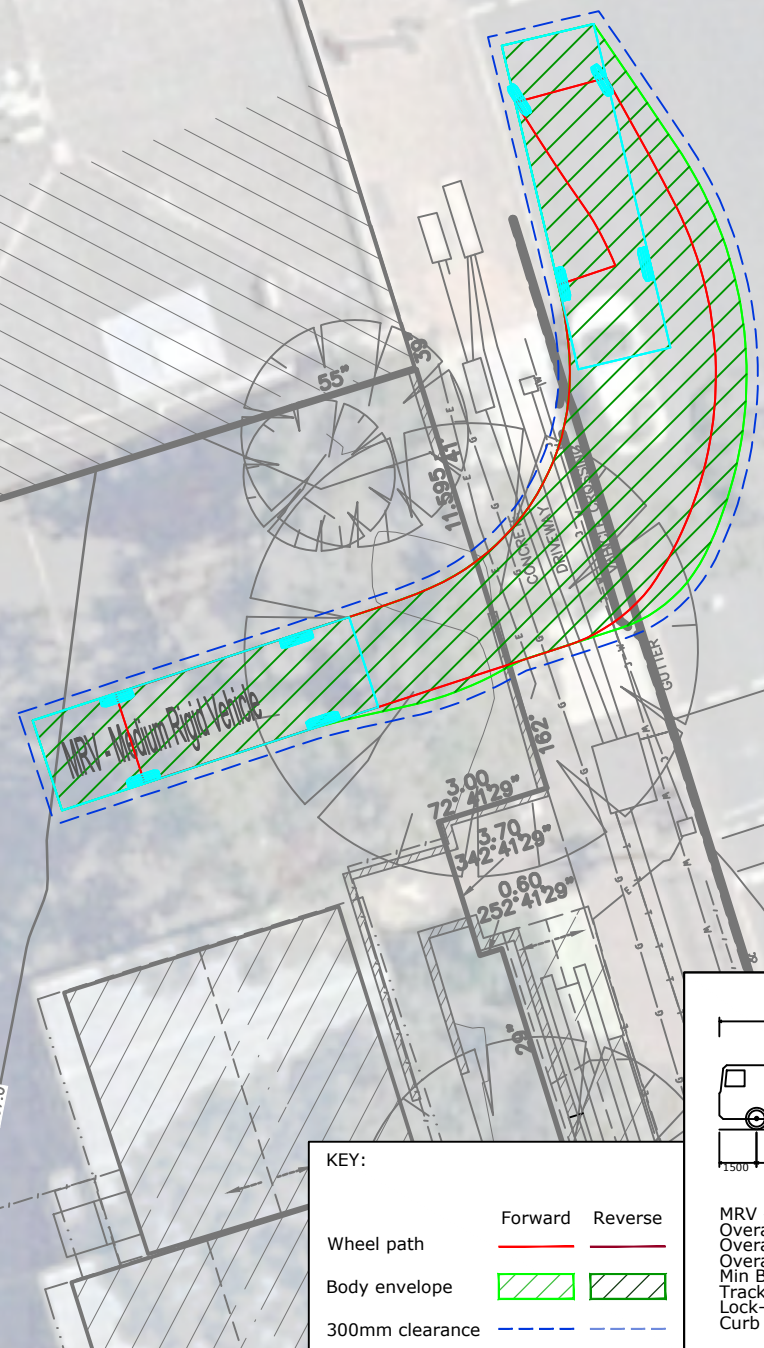
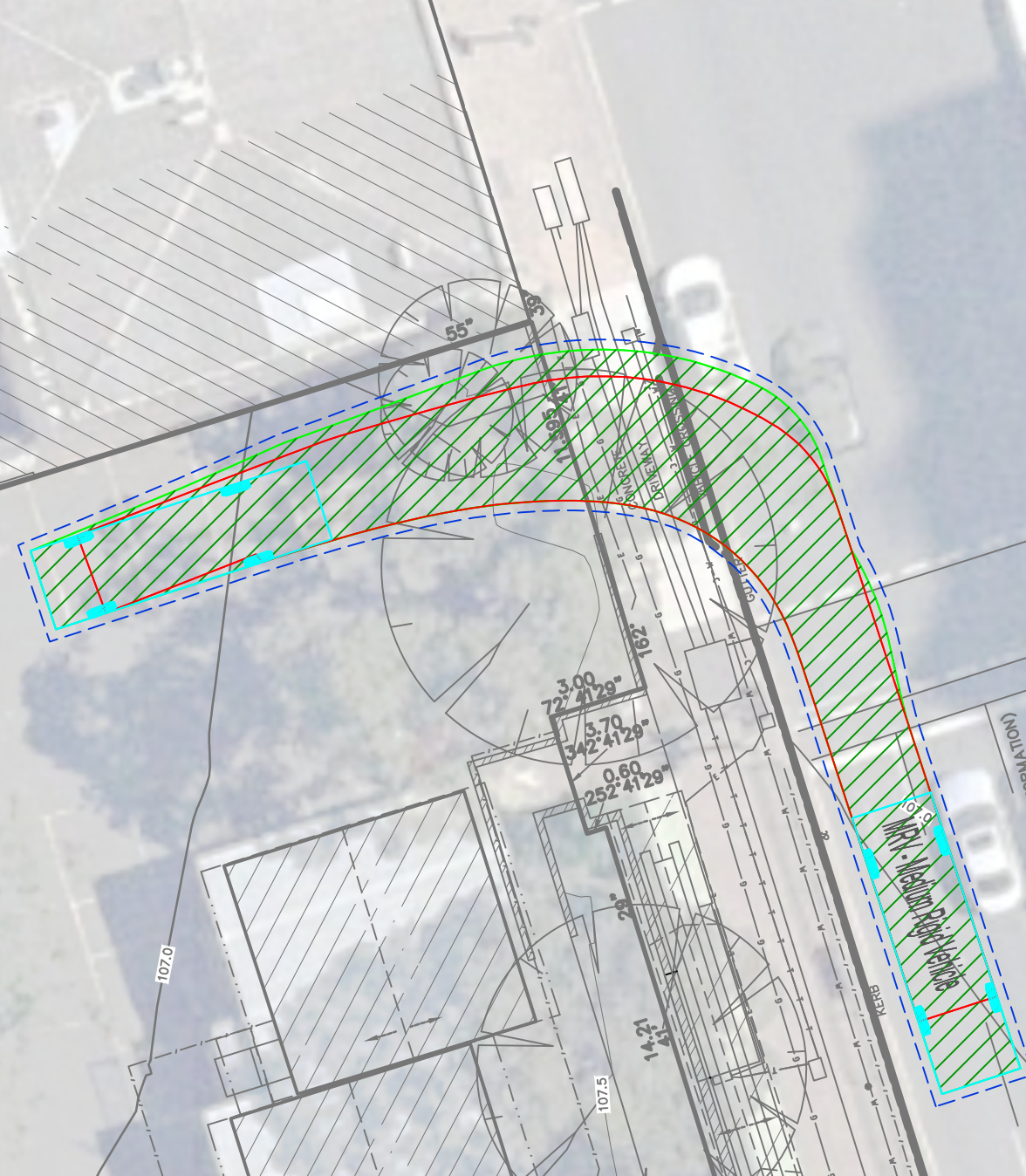
KEY:		
Wheel path	Forward	Reverse
Body envelope		
300mm clearance		

DWG No. 20182CAD013	
FIGURE 3	
DATE STAMP 10 JUNE 2020	
PROJECT No. 20182	SCALE 1:200 @A3
REV. A	









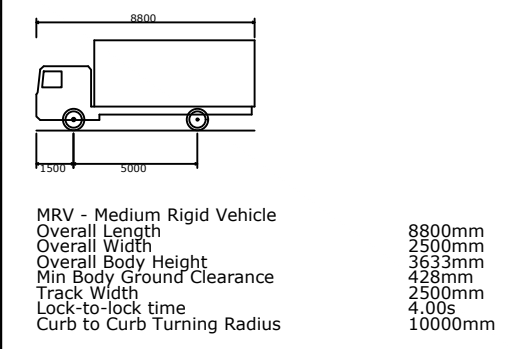
PACIFIC HIGHWAY

PACIFIC HIGHWAY



KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

[illegible]

PROJECT	UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL
TITLE	8.8m MEDIUM RIGID VEHICLE SWEPT PATH PACIFIC HIGHWAY ACCESS

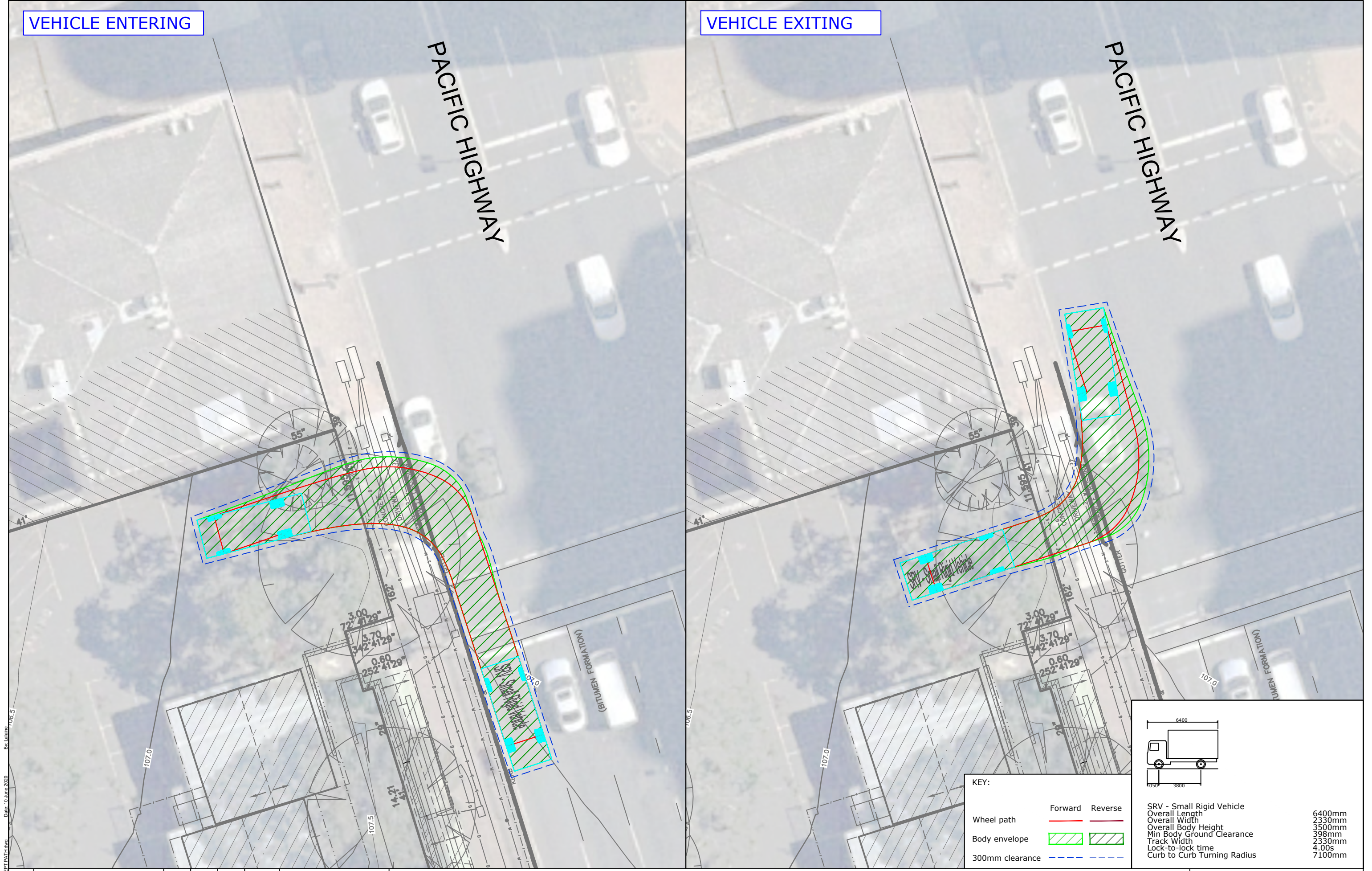
DWG No.	20182CAD013		
	FIGURE 4		
DATE STAMP			
10 JUNE 2020			
PROJECT No.	SCALE	REV.	
20182	1:200 @A3	A	

VEHICLE ENTERING

VEHICLE EXITING

PACIFIC HIGHWAY

PACIFIC HIGHWAY



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	JR	JR	10/06/20



PROJECT	UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL		
TITLE	6.4m SMALL RIGID VEHICLE SWEEP PATH PACIFIC HIGHWAY ACCESS		

DWG No.	20182CAD013 FIGURE 5		
DATE STAMP	10 JUNE 2020		
PROJECT No.	SCALE	REV.	
20182	1:200 @A3	A	

Appendix B

Jenkins Street Vehicle Swept Paths

VEHICLE ENTERING

8000

7800

ENSURE LOADING AREA IS KEPT CLEAR

3500mm

3500mm

RL 96.873

1:14

RL 97.515

NEW LOADING AREA AND STAFF CAR PARK

1:44

RL 97.109

1:12

RL 96.186

3650

100

8000

10000

1300

RL 96.411

1:50

RL 96.800

1:20

RL 96.800

MRV WILL OBSTRUCT AISLE WHEN PARKED IN LOADING BAY

INDICATIVE EXTENT OF ON-STREET PARKING

2100mm

2100mm

2100mm

MRV Medium Range Vehicle

VEHICLE EXITING

ENSURE LOADING AREA IS KEPT CLEAR

NEW LOADING AREA AND STAFF CAR PARK 1:44

MRV WILL OBSTRUCT AISLE WHEN PARKED IN LOADING BAY







INDICATIVE EXTENT OF ON-STREET PARKING

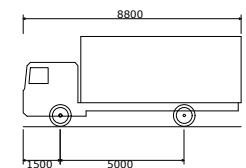
KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		

MRV - Medium Rigid Vehicle
 Overall Length 8800mm
 Overall Width 2500mm
 Overall Body Height 3633mm
 Min Body Ground Clearance 428mm
 Track Width 2500mm
 Lock-to-lock time 4.00s
 Curb to Curb Turning Radius 10000mm

KEY:

	Forward	Reverse
Wheel path		
Body envelope		
300mm clearance		



MRV - Medium Rigid Vehicle	
Overall Length	8800mm
Overall Width	2500mm
Overall Body Height	3633mm
Min Body Ground Clearance	428mm
Track Width	2500mm
Lock-to-lock time	4.00s
Curb to Curb Turning Radius	10000mm

REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	JR	JR	17/06/20



PROJECT	
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UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL

TITLE

SWEPT PATH ANALYSIS
AS2890.2 8.8m MEDIUM RIGID VEHICLE

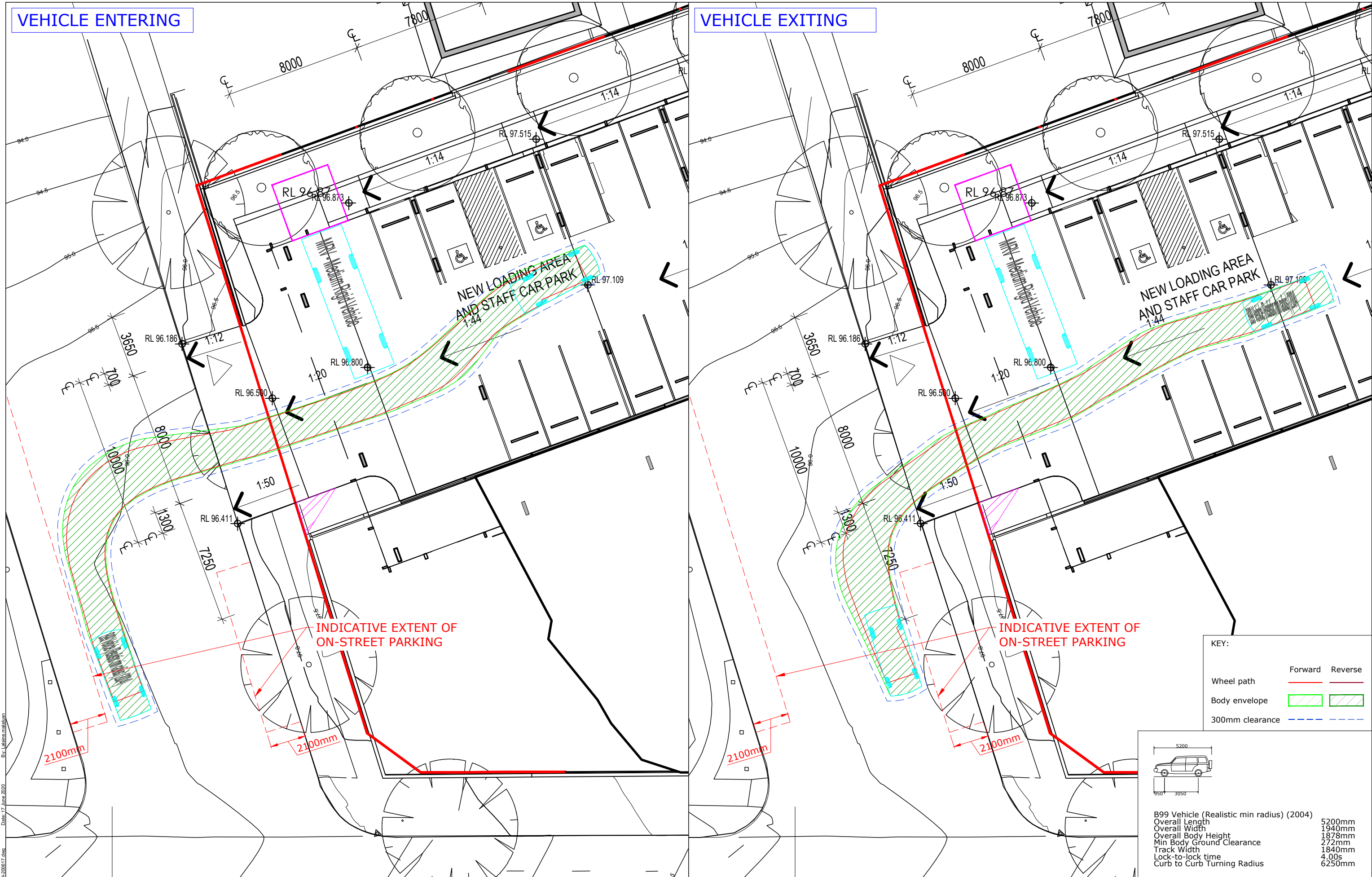
DWG No.	17356CAD014
	FIGURE 1

DATE STAMP	17 JUNE 2020
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PROJECT No. 17356	SCALE 1:200 @A3	REV. A
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VEHICLE ENTERING

VEHICLE EXITING



REV.	DESCRIPTION	DRAWN	CHECK	APP'D	DATE
A	ISSUE FOR DISCUSSION	LM	JR	JR	17/06/20



PROJECT	UPGRADES TO CHATSWOOD PUBLIC SCHOOL AND CHATSWOOD HIGH SCHOOL				
TITLE	SWEPT PATH ANALYSIS AS2890.1 5.2m B99 VEHICLE				

DWG No.	17356CAD014 FIGURE 2		
DATE STAMP	17 JUNE 2020		
PROJECT No.	SCALE	REV.	
17356	1:200 @A3	A	

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