

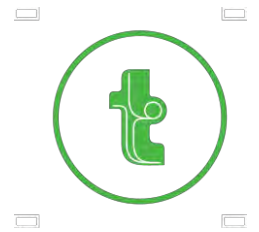
# Construction Traffic Management Plan

Proposed Redevelopment of Curl Curl North Public School, North Curl Curl


Reference: 17.069r02v01 TRAFFIX CTMP Report  
Date: April 2017

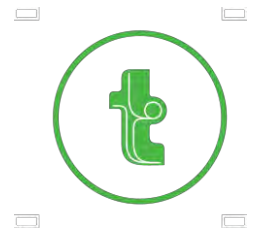
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## Document Verification

<b>Job Number:</b>	17.069			
<b>Project:</b>	Curl Curl North Public School, North Curl Curl			
<b>Client:</b>	Department of Education (DoE)			
<b>Revision</b>	<b>Date</b>	<b>Prepared By</b>	<b>Checked By</b>	<b>Signed</b>
v01	20/04/2017	Khanh Nguyen		

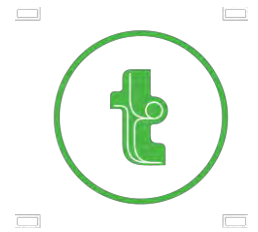


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# 1. Introduction

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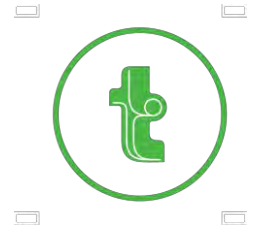
TRAFFIX has been commissioned by Tanner Kibble Denton Architects on behalf of the Department of Education to prepare a preliminary Construction Traffic Management Plan (CTMP) which is required by Council prior to the commencement of works and is also a part of Secretary's Environmental Assessment Requirements (SEARs). This CTMP relates to the redevelopment of the existing Curl Curl North Public school located on Playfair Road, North Curl Curl.

The site is bound by Playfair Road to the west, Abbott Road to the south and its northern and eastern boundaries are bounded by residential properties. The western site boundary (Playfair Road) is approximately 219 metres in length and its southern site boundary (Abbott Road) is approximately 134 metres in length.

A Location Plan is presented in **Figure 1**, for ease of reference.



Figure 1: Location Plan



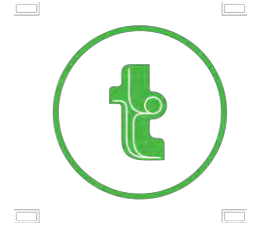
## 2. Implementation

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The Traffic Control Plans (TCPs) that are included in this report, should be implemented taking due account of on-site conditions as will occur over the construction period. Accordingly, construction crew are expected to respond in a pro-active manner to ensure that these plans are implemented to maximum effect and with no obvious safety issues being overlooked. In particular, the following matters are considered noteworthy:

- ➡ All signs are to be placed where clear visibility is available.
- ➡ Installations should be checked intermittently during the course of the day/s, and
- ➡ A minimum of one (1) RMS certified Traffic Controllers shall be on-site at all times during work hours to supervise truck movements.

It is noted that TRAFFIX is responsible for the preparation of these TCPs only and not for their implementation, which is the responsibility of the appointed project manager/builder.



## 3. Existing Conditions

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### 3.1 Location and Site

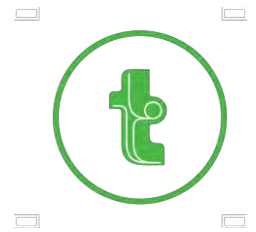
Curl Curl North Public School (site) is situated within North Curl Curl and is bounded by Playfair Road to the west and Abbott Street to the south. The site combined is legally known as Lot 1 in DP 731454 and Lot 286 in DP 752038. The northern and eastern frontages are bounded residential properties zoned as R2 Low Density Residential. It is located approximately 1.5 kilometres south of the Northern Beaches Council (Dee Why branch) and 13.5 kilometres north-east of the Sydney CBD.

The site is irregular in configuration having a total site area of approximately 27,982 m<sup>2</sup>. Vehicular access to the site is provided via a vehicular crossing off Playfair Road servicing the on-site car parking area and waste collection area. There is a second vehicular crossing from Abbott Road at the south eastern boundary which is currently gated and banned from external access into the school.

A Site Plan is provided in **Figure 2** which provides a more detailed appreciation of the site in the context of neighbouring properties.



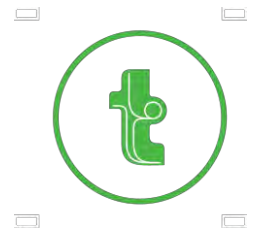
Figure 2: Site Plan



### 3.1 Road Network

The road hierarchy in the vicinity of the site is shown in **Figure 3**, with the following of particular interest:

- ➡ **Pittwater Road:** a classified Main Road (MR 164) which traverses in a north-south direction, with the State administrative category section being Mona Vale Road in the north and Condamine Street, Brookvale in the south. Pittwater Road is a part of Route A8, a metropolitan arterial route and provides access to the school from the north or south via Harbord Road. It carries approximately 18,417 vehicles per day with generally three (3) traffic lanes in each direction. A 60km/h speed limit applies on Pittwater Road. Bus lane clearways generally apply on the kerbside lane and there are timed restricted on-street parking in sections where there are business or residential frontages.
- ➡ **Warringah Road:** a classified Main Road (MR 328) which traverses in an east-west direction between Pittwater Road at Harbord Road, Dee Why in the east and Boundary Street, Roseville in the west. Warringah Road carries approximately 12,953 vehicles per day and provides arterial access from the north to the school. It is subjected to varying 60km/h or 70km/h speed limits depending on which section, and has a capacity of six (6) traffic lanes, three (3) in each direction. Kerb side parking is not permitted on both sides of the road. Warringah Road is also a part of Route A38, a major arterial route.
- ➡ **Harbord Road:** an unclassified Regional Road (7343) which traverses in a north-south direction between Pittwater Road in the north and Lawrence Street in the south. Harbord Road has two (2) traffic lanes in both directions, however some kerbside lanes on either sides permit on-street parking. A 60km/h speed limit applies on Harbord Road. Harbord Road is of significance as it provides access to the school site coming off the arterial state roads of Pittwater Road and Warringah Road. It connects to Abbott Road which then connects to Pitt Road and Playfair Road.
- ➡ **Griffin Road:** a classified Secondary Road (SR 2102) under a 'Regional Road' administrative class to the east of the site that traversing in a north-south



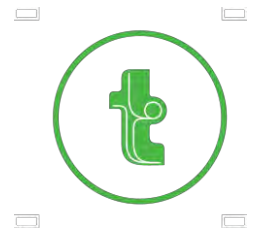
direction and forms a connection to Pittwater Road (State/Main Road 159) via continuation as Dee Why Parade in north and Oliver Street to the north. Griffin Road is subjected to a 50 km/h posted speed limit. The road has an on-road bike lane in both directions and footpath on both sides and is serviced by Sydney Buses. The carriageway is approximately 13 metre wide, carrying a single lane of traffic in both directions and primarily permits unrestricted parallel kerbside parking on both sides. Abbott Road and Pitt Road (via Playfair Road) are connected to Griffin Street to the west, providing access to the school.

 Pitt Road:

an unclassified regional road (7346) traversing in an east-west direction between Robertson Road (east of Griffin Road) in the east and continues as Abbott Road in the west. Pitt Road is subject to a 50km/h posted speed limit however, '40km/h School Zone' speed restrictions apply between 8:00-9:30am and 2:30-4:00pm on school days in the section between Delaigh Avenue and Ross Street. The road has a 12 wide carriageway width, carrying a single lane of traffic in each direction and primarily permits unrestricted parallel kerbside parking on both sides of Pitt Road. The road provides access to the school via Playfair Road and connects to other road with access to the school, notably Abbott Road, Ross Street and Griffin Road.

 Abbott Road:

an unclassified regional road (7346) that is part of the road network between the junction of Griffin Road and Warringah Road traversing in an east-west direction between proposed Harbord Road in the west and Griffin Road in the east. Abbott Road is subject to a '40km/h High Pedestrian Activity' posted speed limit in the section between junction of Pitt Road and Griffin Road, this is compounded with '40km/h 8:00-9:30am and 2:30-4:00pm School Zone' speed restrictions signage and line-marking applying on school days in sections closer to the school. Abbott Road has a carriageway width of 11.4 metres, carries a single lane of traffic in both direction and permits parallel (primarily on the northern kerbside) and 90 degree angled (adjacent John Fisher Park) predominately unrestricted on both sides of the road. Abbott Road currently accommodates pedestrian access and will formalise additional pick-up and drop-off facilities to the school, noting that the proposed upgrade will have its main school entrance on Abbott Road.



Furthermore, the school's on-site (staff) carpark will be relocated to the Abbott Road frontage opposite the Curl Curl Youth and Community Centre.

 **Playfair Road:**

a local road which runs in a north-south direction between Pitt Road to the north and Abbott Road to the south. Playfair Road has a carriageway width of 10.4 metres, carrying a single lane of traffic in both direction and permits unrestricted parallel kerbside parking on both sides with the exception of 'bus zone', 'no parking' restrictions and 'no stopping' restrictions associated with the 'Children's Crossing' (north of Lillie Street) applying during school peak times (8.30am-9.30am; 3pm-4pm) on school days. Playfair Road is also subjected to a '40km/h High Pedestrian Activity' posted speed limit between junction of Pitt Road and Abbott Road, this is compounded with '40km/h 8:00-9:30am and 2:30-4:00pm School Zone' speed restriction signage and line-marking applying on school days. Playfair Road currently accommodates pedestrian access via three (3) school entrances on Playfair Road, special school bus services/zones, pick-up/drop-off facilities and vehicular access to the existing on-site car parking and waste servicing areas. The school bus zones and pick-up/drop-off facility (restrictions) will be retained as per proposed upgrade to the school.

 **Ross Street:**

a proposed local road which generally runs in a north-south direction between Pitt Road to the north and Abbot Road to the south-east. Ross Street has a carriageway width of 10.1 metres, carrying a single lane of traffic in both direction and permits parallel unrestricted kerbside parking on both sides. Ross Street is subjected '40km/h High Pedestrian Activity' posted speed limit similarly to surrounding streets, near the school. There is pedestrian school access on Ross Street via a laneway between No. 17 and No. 19 Ross Street which will be retained as per proposed upgrade. Currently, no formalised pick-up and drop-off facility is provided on Ross Street and likewise will not be proposed under the upgrade plans.

It can be seen in **Figure 3** below, that the site is conveniently located with respect to the sub-arterial and collector road network servicing the region. It is therefore able to effectively distribute traffic onto the wider road network, minimising traffic impacts on local residential streets.

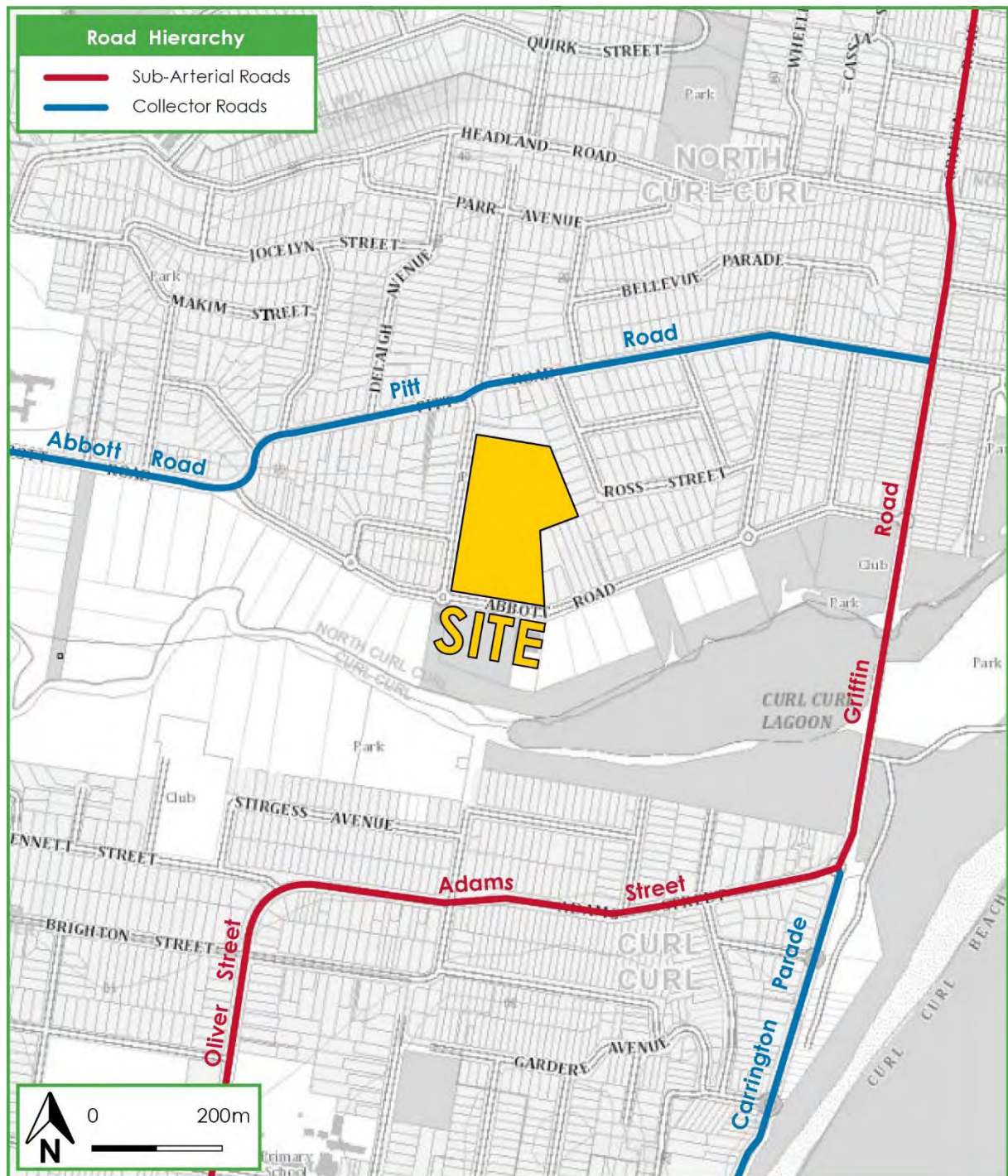


Figure 3: Existing Road Hierarchy



## 3.2 Public Transport

The site is generally serviced by buses, refer to **Figure 4** existing bus services (excludes school services). There are six (6) State Transit bus route/services operating from twelve (12) bus stops within 600 metres of Curl Curl North Public School. These services and accessibility to urban centres are summarised in **Table 1** and shown in **Figure 4**, below.

**Table 1: State Transit Bus Services Near School**

Bus Route Number	Bus Route	Urban Centres Serviced
159	Manly Wharf to Dee Why	Dee Why, North Curl Curl, Brookvale, North Manly, Manly
E36	North Curl Curl to Manly Wharf	Manly, Freshwater, North Curl Curl
E76	Dee Why to City	Dee Why, North Curl Curl, Brookvale, North Manly, Manly Vale, Cremorne, Neutral Bay, City
E77	Dee Why to City	Dee Why, North Curl Curl, Brookvale, North Manly, Manly Vale, Cremorne, Neutral Bay, City
136	Manly to Chatswood	Manly, Queenscliff, Freshwater, Curl Curl, North Curl Curl, Dee Why, Narraweena, Beacon Hill, Frenchs Forest, Forestville, Killarney Heights, Roseville Chase, Castle Cove, Chatswood

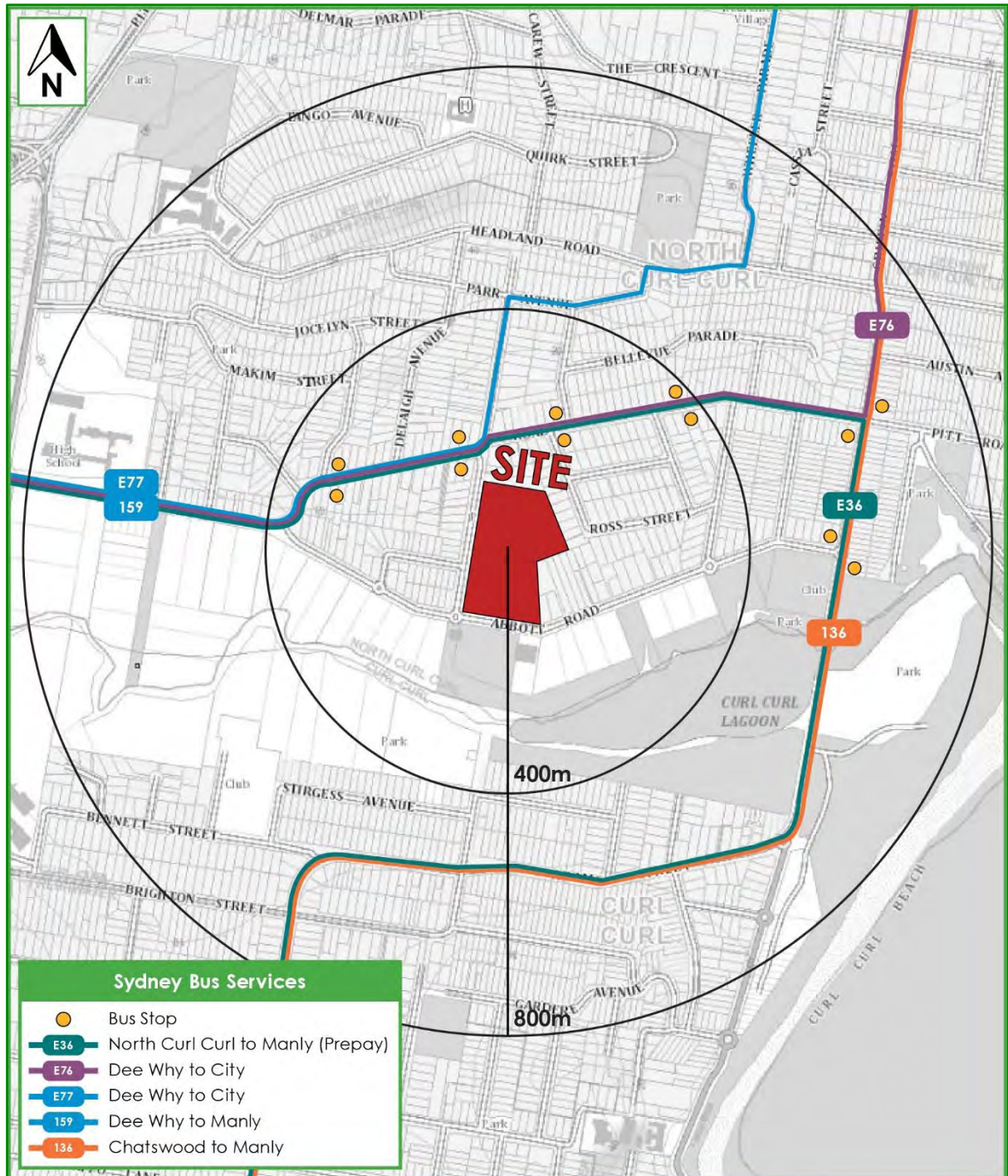
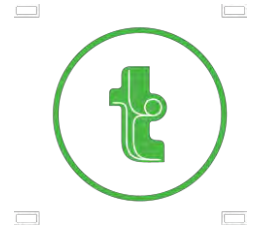


Figure 4: Existing Public Transport (Bus) Network



## 4. Traffic Management Plan

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### 4.1 Truck Routes

The proposed truck routes as shown in **Figure 5** seek use of the arterial road network as much as possible with the use of local streets only where required. All truck drivers shall be provided with a copy of the route prior to accessing the site. These can be summarised as follows:

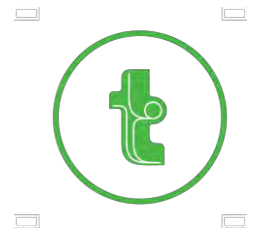
- ② Routes to the Site: Trucks will arrive at the site from the north, south and west via State arterial roads either Warringah Road (Route A38) or Pittwater Road (Route A8) turning into Harbord Road for access to Abbot Road (left-turn in), Pitt Road and then Playfair Road (right-turn in) from the north.
- ② Routes from the Site: Trucks will depart from the site to the south on Playfair Road towards Abbott Road turning right and left onto the continuation of Abbott Road west of Pitt Road to access Harbour Road by turning right for connections to arterial Route A8 (Pittwater Road) and Route A38 (Warringah Road).

Note that all expected truck routes are covered by the arterial road network (also being the best and most desirable route) up until Harbord Road, as it can be assumed that no construction related trucks will be coming from the east as the school is towards the ocean. Therefore, the use of local roads are minimised as much as possible.

### 4.2 Truck Size

For the purposes of this preliminary Construction Traffic assessment the following three typical truck sizes have been considered:

- ② A 19.5m 'Truck and Dog' combination - typically used during demolition and excavation stages;
- ② A 19m Articulated Vehicle – Typically the largest truck used during a construction programme; and
- ② A 12.5m Heavy Rigid Vehicle – A typical sized delivery truck used during a construction programme

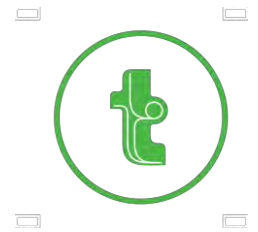


It is noteworthy that Playfair Road is currently serviced by school buses using the intersection of Pitt Road to enter Playfair Road to access the 'Bus Zone' on the eastern side of Playfair Road next to the School. A standard bus is 12.5 metres long with the same dimensions as a HRV truck. Therefore, the swept path assessment has been undertaken for the 19.5m 'Truck and Dog' vehicle and 19m Articulated Vehicle (AV) sizes only at critical intersections with the results presented in **Appendix A**.

The critical intersections are Pitt Road at Playfair Road, Playfair Road at Abbott Road and Abbott Road at Abbott Road (west of Pitt Road). The intersection of Harbord Road at Abbott Road and the intersections of Pittwater Road / Warringah Road / Harbord Road, do not require swept path assessments as it is evident that these intersections have been designed for large truck turning movements with generously wide slip lanes.

The assessment reveals that the proposed truck routes are suitable for access by a Truck and Dog combination and subsequently the HRV design vehicle. However, the ARV design vehicle fails at the right turn into Playfair Road from Pitt Road and Left turn out of Abbott Road to Abbott Road westbound. As such it is recommended the truck routes identified in **Figure 5** be adopted utilising a truck and dog and/or HRV design vehicle for regular construction works.





### 4.3 Vehicular Access

Construction vehicle access to the site will be required for all stages and will be provided via the existing driveway crossover on Playfair Road. These existing 6.2 metre wide access driveway is capable of allowing entry and exit to the site as indicated in the swept path analysis included in **Appendix A**, demonstrating satisfactory access to the site.

Unfortunately, as a result of the use of the existing driveway and construction activity the current on-site parking will need to be vacant. Therefore it is expected that school staff are instructed to park on Abbott Road next to the John Fisher Park, Curl Curl Sports Centre or Curl Curl Youth and Community Centre. Noting that there is ample on-street parking and these spaces are away from residential property frontages and do not coincide with sporting activities at the recreation park as they will be on weekdays and during school hours.

### 4.4 Pedestrian Control

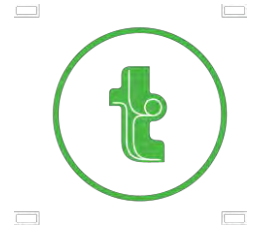
During all construction stages, the construction area will be bounded by perimeter fencing. In the event whereby the pedestrian footpath along Playfair Road frontage is to be closed to public due to construction works, then pedestrians would be directed to opposite side of the street. At least one (1) accredited traffic controllers shall be present on Playfair Road combined with adequate signage to direct pedestrians to the opposite side. Notwithstanding, it is anticipated that the footpath will not be occupied for extended periods of time or at all and will be outside times of high pedestrian activity.

In addition, a traffic controller shall be positioned at the site accesses to ensure pedestrian safety when a vehicle enters and exits site.

### 4.5 Traffic Control Plans

It is noted that all construction works will be carried out from within the site. Notwithstanding this, a Traffic Control Plan (TCP) has been prepared and is included in **Appendix B**, which demonstrates the signage required along Playfair Road throughout all stages of construction.

The TCP included in **Appendix B** has been designed in accordance with the RMS *Traffic Control at Work Sites Manual* and is considered acceptable for implementation.

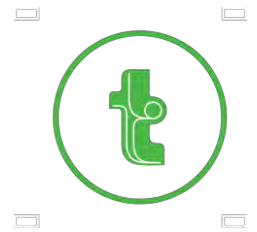


## 4.6 Employee Vehicles

Contractors will be encouraged to ride share to/ from the site noting that the current layout of the school would allow for some off-street parking until future buildings are erected. This parking would of course be restricted for construction employees who car pool to reduce both traffic and parking impacts. In addition, some on-site parking spaces are also provided in the vicinity of the site for all stages of the construction of the school.

Notwithstanding, there are ample on-street parking spaces on the southern side of Abbott Road between Harbord Road and Griffin Road next to John Fisher Park / Curl Curl Sports Centres which is able to accommodate overflow parking without impacting on residents or local roads. Parking supply is not expected to be an issue given the capacity and on weekdays not coinciding with weekend or night use of the recreational park. However, if it does become an issue, employees can be instructed to avoid particular areas to minimise impacts.

It is noted that at no time will contractors be allowed to park their private vehicles within the proposed loading areas, which are for the sole purpose of the loading / unloading of materials and equipment on site.



## 5. Conclusions

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The plan outlined above is considered satisfactory and will minimise any disruptions to residents / tenants of neighbouring developments, as well as pedestrians in the area. This plan meets all requirements of AS 2890.2, AS 1742.3, *RMS Traffic Control at Work Sites Manual* and is recommended for adoption.

Please note that this CTMP report is preliminary as input from the appointed builder is required to finalise the construction program. It is expected that Council or other authorities will impose permitted working hours and days and any other restrictions deemed necessary. Subject to the conditions of consent and further information from the appointed builder, the CTMP can be finalised at a later stage.



# Appendix A

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## Swept Path Analysis



Notes

This drawing is prepared for information purposes only. It is not to be used for construction.

TRAFFIX is responsible for vehicle swept path diagrams and/or drawing mark-ups only. Base drawing prepared by others.

Vehicle swept path diagrams prepared using computer generated turning path software and associated CAD drawing platforms. Vehicle data based upon relevant Australian Standards (AS/NZS 2890.1-2004 *Parking facilities - Off-street car parking*, and/or AS 2890.2-2002 *Parking facilities - Off-street commercial vehicle facilities*). These standards embody a degree of tolerance, however the vehicle characteristics in these standards represent a suitable design vehicle and do not account for all variations in vehicle dimensions / specifications and/or driver ability or behaviour.

no.	revision note	by.	date

Swept Path Legend:

Wheel Path

Vehicle Body Envelope

Clearance Envelope (300mm)

architect

Tanner Kibble Denton (TKD) Architects Pty Ltd

client

Department of Education (DoE)

scale

1:200 @ A3

0m

2

4

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8

project

Curl Curl North Public School

drawing prepared by

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drawing title

Intersection: Pitt Road at Playfair Road  
(Right-Turn)

Swept Path: 19.5m 'Truck and Dog' combination

drawn: HD	checked: KN	date: 20-04-2017
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project no.

drawing phase.

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rev