



Adco Constructions Pty Ltd

Waitara Public School OTAMP Final Report

May 2020

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1. Introduction

1.1 Overview

GHD have been commissioned by ADCO Constructions Pty Ltd to provide Transport Planning and Traffic Engineering advice to support the proposed expansion of Waitara Public School.

In July 2018, GHD completed the Waitara Public School Traffic Impact Assessment (TIA). The TIA addressed a series of Secretary's Environmental Assessment Requirements (SEARs) comments issued by the Department of Planning Industry and Environment (DPIE). A copy of the SEARs comments and the responses prepared by GHD is included in Appendix A.

Subsequently, the DPIE have issued a request for an Operational Transport and Access Management Plan (OTAMP) for Waitara Public School. The key conditions of the OTAMP, as detailed in Condition D10 of the Development Consent, namely:

An OTAMP is to be prepared for the school be a suitably qualified person, in consultation with Council, Transport for NSW and RMS.

The D10 specifications (as quoted) are listed in Table 1-1.

Table 1-1 OTAMP Conditions (D10)

Condition		
а	Detailed pedestrian analysis including the identification of safe route options – to identify the need for management measures such as staggered school start and finish times to ensure students and staff are able to access and leave the site in a safe and efficient manner during school start and finish.	
b	The location of all car parking spaces on the school campuses and their allocation (i.e. staff, visitor, accessible, emergency, etc.).	
С	The location and operational management procedures of the drop-off and pick-up parking located within Myra Street and Highlands Avenue, including staff management/traffic controller arrangements.	
d	The location and operational management procedures for the drop-off and pick-up of students by buses and coaches for excursions and sporting activities during the hours of bus lane operations along Edgeworth David Avenue, including staff management/traffic controller arrangements.	
е	Delivery and services vehicle and bus access and management arrangements.	
f	Restrictions on hours of delivery and service vehicles on the site, including those set out in the Condition E13	
g	Management of approved access arrangements.	
h	Potential traffic impacts on surrounding road networks and mitigation measures to minimise impacts, including measures to mitigate queuing impacts associated with vehicles accessing drop-off and pick-up parking in Myra Street and Highlands Avenue.	
i	Car parking arrangements and management associated with the proposed use of school facilities by community members.	

j Restriction on hours for use of the three parking spaces located within the turning area to the west of the existing car park to times outside of the service vehicle delivery hours set out in Condition D10(f). k Monitoring and review program.

The scope of work of this report is to prepare an OTAMP that addresses Condition D10 of the Development Consent.

The CV of the author of this OTAMP (Mark Lucas) is included in Appendix B.

1.2 Background Data

1.2.1 Proposed Waitara Public School Expansion

The proposed school expansion includes the demolition of 15 "demountable" structures and five Modular Design Range buildings and the majority of the current permanent buildings. A new four-storey building is currently being constructed in the north western corner of the school, as shown in Figure 1-1. The proposed school expansion is under construction and is expected to be completed in 2020.

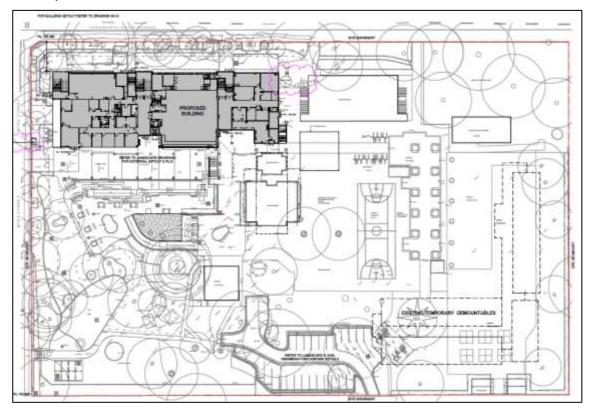


Figure 1-1 Proposed Waitara School Expansion

At the time the TIA was completed (in July 2018), the capacity of the school was expected to increase from 932 students and 38 teachers to 1,000 students and 42 teachers. However, recent information provided by the school principal, indicates that the school currently has a population of 1,070 students and 72 teachers/staff.

1.2.2 Subject Site

Waitara Public School is located at 68 Edgeworth David Avenue in Wahroonga, NSW, as shown in Figure 1-2. The school site is located within the Hornsby Shire Council Local Government Area (LGA).



Figure 1-2 Subject Site Location

Source: Google Maps (2020), modified by GHD

1.2.3 Trip Generation

As part of the TIA scope of works, GHD undertook a significant amount of surveys to determine the mode split and trip generation at Waitara Public School. This included:

- Internet surveys¹, which were distributed to parents via the school principal) to identify:
 - The distances that children travel in order to access the school
 - Mode of transport to access and egress the school, during both the morning and afternoon
 - The portion of trips to the school, which may form part of another journey i.e. dropping off their child/children on the way to work.
- Manual travel mode surveys, which were undertaken between 8:00 am 9:30 am and 2:30 pm 4:00 pm to determine:
 - The number of students being dropped-off and picked-up by their parents, guardians or carers by private vehicle (either at the pick-up/drop-off zone or parking on the nearby streets and walking the students to school)
 - The number of students accessing and egressing the school by bus
 - The number of students walking to and from the school.

Based on a review of the survey data, the current mode split at Waitara Public School is summarised in Table 1-2. It is noted that no cyclists were recorded in the surveys.

¹ 217 parents filled in the internet surveys

Table 1-2 Waitara Public School- Student Mode of Travel

Mode of Transport	AM Peak Entries (No. Students / %)		PM Peak Exits (No. Students / %)	
Pedestrian (walk only)	197	32%	215	38%
Private Vehicle	233	55%	234	42%
Bus	81	13%	110	20%
Total	611	100%	559	100%

The analysis determined that based upon the expected increases in the student/teacher populations, the expansion of Waitara Public School would have a negligible impact on the operation of the adjoining road network.

2. OTAMP Conditions

This section responds to the OTAMP conditions, which are identified in Table 1-1.

2.1 Evidence of Consultation

Provide a copy of the OTAMP and provide evidence of consultation with Council, Transport for NSW and RMS.

2.1.1 GHD

In the preparation of this OTAMP, the following communications have been made with the following key stakeholders (in April 2020):

- Transport for New South Wales (TfNSW)²
- Hornsby Shire Council (Council)
- The Waitara Public School principal

GHD has filled out the SINSW post-approval consultation record, for these communications.

These (email) communications and the consultation records are included in Appendix C.

2.1.2 ADCO Constructions

ADCO Constructions have provided a series of additional stakeholder engagement communications related to traffic and transport for Waitara Public School, as follows:

- Hornsby Shire Council Traffic Meeting minutes (3rd July 2019) indicating:
 - TfNSW should increase the phasing time at signalised intersections in proximity to the school to provide more time for pedestrians.
 - Council should extend the existing kiss and drop facility (on Myra Street).
 - A new wombat crossing should be provided on Myra Street.
 - The existing 40 km/h speed zone on Edgeworth David Drive should be extended further to the west (to Balmoral Street).
 - Additional palisade fencing should be provided at the school to provide additional protection to students.
- An email (24th September 2019) from TfNSW indicating that between the hours of 8:00 am 10:00 am and 3:00 pm 4:30 pm (Monday to Friday) the phasing of the signalised crossings in proximity to the school have been increased by five seconds, to allow more time for pedestrian movements.
- Hornsby Shire Local Traffic Committee minutes (10th March 2020), indicating:
 - The wombat crossing on Myra Street is approved
 - TfNSW should be requested to consider a 50 km/h speed limit on Myra Street
 - TfNSW should be requested to provide a school crossing supervisor at the wombat crossing
 - "Children Crossing" flags should be provided on Myra Street, in accordance with TfNSW specifications
- An email (25th March 2020) from Council indicating the Local traffic Committee has approved the provision of a Wombat Crossing on Myra Street.

² It is noted that Roads and Maritime Services merged with TfNSW in December 2019

- An email (9th April 2020) from Council indicating that ADCO should commence organising the works for the construction of the Wombat crossing.
- An email (17th April 2020) from Council indicating that:
 - A council inspection indicate that new phasing has been implemented
 - A 15 minute parking restriction had been implemented on Myra Street
 - The wombat crossing on Myra Street had been approved
 - Council is investigating a reduction of the speed limit on Myra Street from 60 km/h to 50 km/h
 - Provision of palisade fencing near the school is not supported by Council
- An email (27th April 2020) from TfNSW indicating a request for the expansion of the 40 km/h school zone on Edgeworth David Drive (to Balmoral Street) was not supported.
- Hornsby Shire Council minutes (30th April 2020) indicating:
 - Further consultation will be required with Council to gain approval for the required permits, prior to the commence of the construction of the wombat crossing
 - Council have reviewed the Draft OTAMP prepared by GHD (Document No. 12528632 OTAMP Rev A).
 - Council were satisfied with the deliverable and were not waiting on any further information regarding the OTAMP to close the requirement (Condition D10).

Copies of the communications described above are included in Appendix D.

2.2 Access

Management of approved access arrangements.

Pedestrian access gates to the school are located on Edgeworth David Avenue, Myra Street and Highlands Avenue.

The vehicle pick up/drop off zone is located along the eastern side of Myra Street, with vehicular access to the staff car park provided from Highlands Avenue (see Figure 2-1). Bus stops are provided on Edgeworth David Avenue, located adjacent to the school.

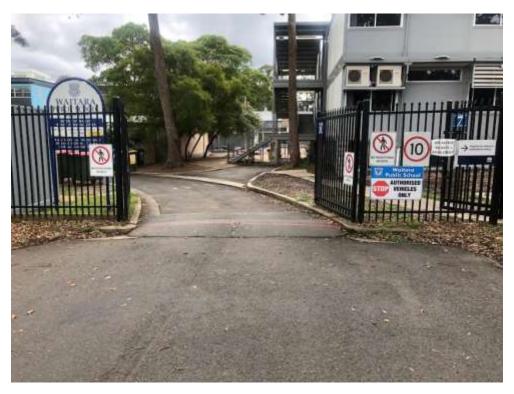


Figure 2-1 Highlands Avenue Access

The existing vehicle and pedestrian access arrangements at Waitara Public School are shown in Figure 2-2.



Figure 2-2 Waitara Public School Access Arrangements

Source: Google Maps (2020), modified by GHD

To facilitate the safety of students during peak periods of school activity, teachers supervise:

- Children crossing the road at the signalised junction of Myra Street and Edgeworth David Avenue.
- Children embarking and disembarking buses.

Information provided by the principal indicates that teachers do not currently supervise the operation of the pick-up/drop-off facility on Myra Street, as it currently operates efficiently.

The Waitara Public School website provides information to parents on how to support the safety of children accessing and egressing the school by car, walking, cycling and public transport. This website also provides links to school road safety publications issued by the NSW Government (https://waitara-p.schools.nsw.gov.au/about-our-school/location-and-transport.html).

This website includes links to safety information sheets for walking, cycling, driving and buses issued by the NSW Department of Education, which are included in Appendix E.

2.3 Active Transport

Detailed pedestrian analysis including the identification of safe route options – to identify the need for management measures such as staggered school start and finish times to ensure students and staff are able to access and leave the site in a safe and efficient manner during school start and finish.

2.3.1 Current Arrangement

There are currently no dedicated cycleways or bicycle facilities in the vicinity of Waitara Public School.

The existing pedestrian facilities in the vicinity of Waitara Public School, as shown in Figure 2-3 indicate that:

- To the east of the school, footpaths are generally proved on one side of the road only, with grass verges on the other side. Footpaths are typically provided on both sides of the road to the west of the school and along key roads, such as Edgeworth David Avenue and Myra Street.
- Signalised pedestrian crossings are provided at the intersections of Myra Street/Edgeworth Avenue (see Figure 2-4), Palmerston Road/ Edgeworth David Avenue and Balmoral Street /Edgeworth David Avenue.
- A pedestrian crossing (zebra) is provided at the entrance to Waitara Train Station at the Alexandria Parade/Waitara Avenue intersection.



Figure 2-3 Pedestrian Facilities in proximity to Waitara Public School

Source: Google Maps (2020), modified by GHD



Figure 2-4 Signalised Crossing at Myra Street/Edgeworth David Avenue intersection

As stated previously, during peak times of activity (morning and afternoon), teachers supervise the movement of students at the Myra Street/Edgeworth David Avenue intersection.

Pedestrian safety fences are located on Myra Street and Edgeworth David Avenue to direct pedestrians to the signalised intersection and discourage potentially unsafe crossing activity at informal crossing locations.



Figure 2-5 Pedestrian Fencing on Edgeworth David Avenue

While signalised pedestrian crossings are provided at the signalised intersections near the school, no formal dedicated school crossings are currently provided entrances to the school on Edgeworth David Avenue and Myra Street.

2.3.2 Proposed Upgrades

Based on discussions with the Client, it is understood that the construction of a new wombat crossing on Myra Street near the southern boundary of the school has been approved by Council and is expected to be constructed in June 2020.

The key features of this crossing include:

- Kerb ramps at the crossing either side of Myra Street
- Kerb blisters on either side of the crossing
- Installation of Children's Crossing "candy posts" and provision for display of "Children Crossing" flags
- No stopping zones either side of the crossing on Myra Street, to provide the required sight distances.

The signage and line marking plan for the wombat crossing is displayed in Figure 2-6.

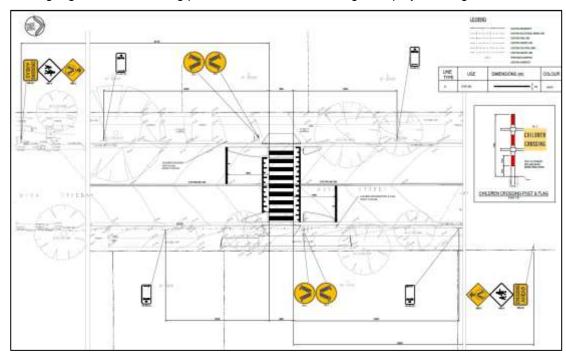


Figure 2-6 Proposed Wombat Crossing

Source: Client

The principal of Waitara Public School has requested to TfNSW, that upon the construction of the wombat crossing a supervisor be employed during peak periods of weekday school activity.

TfNSW's criteria for their provision of a crossing supervisor include:

- The site must have an adjoining children's crossing or pedestrian crossing.
- The crossing must be used by infant and/or primary school children.
- The site must be located within a 40 km/h school zone.
- The crossing must be used by a minimum of 50 school children per hour.

While the volumes of students and their parents/guardians that will cross Myra Street is currently unknown, in accordance with the current student population, it is expected that the number of pedestrians crossing Myra Street will exceed 50 per hour.

TfNSW feedback to the Waitara Public School's request is as follows:

- Pedestrian surveys should be undertaken once the crossing is constructed
- Due to Coviod 19, school supervisor requests are temporarily on hold

It is therefore recommended that pedestrian surveys are undertaken at the proposed crossing once student activity returns to normal. If the criteria of 50 students crossing per hour are met, a request for a crossing supervisor should be submitted to the TfNSW.

Based on discussions with Council, it is noted that the NSW Member for Ku-ring-gai has identified that there is a lack of pedestrian protection (fencing or similar) at the south-western corner of the Myra Street/Edgeworth David Avenue intersection. Council is currently reviewing options to improve pedestrian safety at this location (see Figure 2-7), including potentially a pedestrian fence or other safety improvements.

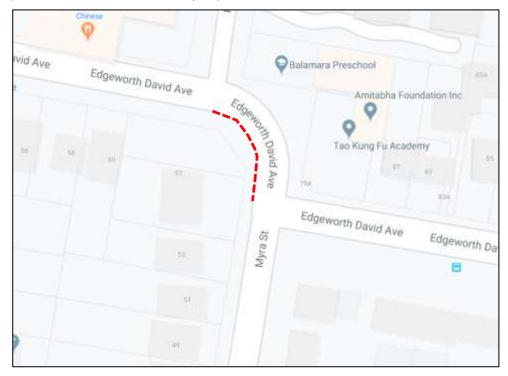


Figure 2-7 Potential Location for a New Safety Barrier

Source: Google Maps (2020), modified by GHD

Based on discussion with the school principal and SINSW, it is understood that there are currently no plans to introduce staggered start and finish times at Waitara Public School. However, staggered times will be considered (if required) following the completion of the school expansion.

2.4 Parking

The location of all car parking spaces on the school campuses and their allocation (i.e. staff, visitor, accessible, emergency etc.

Car parking arrangements and management associated with the proposed use of school facilities by community members.

2.4.1 Current Arrangement

On-street

The on-street parking arrangements in the vicinity of Waitara Public School (at the time the TIA was undertaken) are shown in Figure 2-8, which includes:

- Un-restricted parking
- No-parking
- Time restricted -parking
- Bus zones.

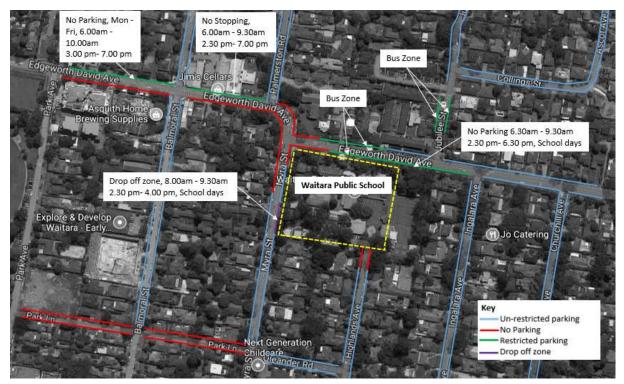


Figure 2-8 On-street Parking Arrangements in Proximity to Waitara Public School

Source: Google Maps (2020), modified by GHD

As displayed in Figure 2-8:

- Parking on Edgeworth David Avenue along the school frontage to the north of the school is typically not permitted.
- The school drop-off and pick-up 'zone is located on the eastern side of Myra Street.
- Bus zones are located on Edgeworth David Avenue and Jubilee Street.
- Parking on the road network in proximity to the school is typically unrestricted.

It is noted that for 'No Parking' restrictions, drivers can stop for a maximum of two minutes and must remain within three metres of their car.

Discussions with the school principal indicate that on the rare occasion an ambulance is called to the school, it would typically park on the Edgeworth David Avenue or Myra Street. However, ambulances can also park within the teacher's car park if required.

The school principal has provided details of a Local Traffic Committee meeting from November 2015, detailing the following proposed parking restrictions, which had been requested by the school, namely:

 Approximately 60 m of 15-minute parking (8:00 am – 9:30 am and 2:30 pm – 4:00 pm) on Myra Street (previously unrestricted). Approximately 35 m 'No Stopping' zone (6:00 am – 9:30 am and 2:30 pm and 7:00 pm) on Edgeworth David Avenue adjacent to the west of the bus zone, which was previously a 'No Parking' zone.

The parking restriction plan for these proposed changes is displayed in Figure 2-9.

The 15-minute parking on Myra Street was proposed to support the pick-up and drop-off of junior students. While the 'No Stopping' zone was proposed to improve traffic flow during peak periods of road network activity.

Both of these changes were supported by the Traffic Committee.



Figure 2-9 Parking Restriction Plan

Source: Waitara Public School

It is noted that:

- A 'No Stopping' zone (that is not time restricted) was implemented on Edgeworth David Avenue, located to the west of the bus zone in 2016 (see Figure 2-10).
- The 15-minute parking zone was implemented on Myra Street in 2019 (see Figure 2-11).



Figure 2-10 'No Stopping' Zone on Edgeworth David Avenue



Figure 2-11 Pick-up/Drop-off Zone on Myra Street

A 'No Stopping' zone (7:00 am – 6:00 pm on school days) was recently introduced on Highlands Avenue, located around 40 m to the south of the access gate. This was introduced to improve access and manoeuvrability for waste collection vehicles and other vehicles seeking to undertake a U-turn manoeuvre (see Figure 2-12).

The previous parking control on Highlands Avenue was 'No Stopping' (8:30 am - 9:30 am and 3:00 pm - 3:30 pm on school days), for approximately 15 m to the south of the school access.



Figure 2-12 'No Stopping' Zone on Highland Avenue

Off-street

There are currently 12 parking spaces provided within the school site for the exclusive use of the teaching staff, as shown in Figure 2-13.

Access to the car park is controlled via a gate at the northern end of Highlands Avenue that is manually opened and closed by school staff (see Figure 2-1).

Only teachers are able to use the car park. There is no general "community" access.

During parent/teachers evenings and school concerts (or similar), parents park their vehicles on the surrounding road network (typically Mya Street, Highlands Avenue and Ingalara Avenue). Based on discussions with the school principal, these types of events happen very infrequently, up to three times per year.



Figure 2-13 Current Car Park

Based on discussions with the principal, it is understood that teachers that are not allocated a parking space within the off-street car park typically park on Ingalara Avenue, located to the east of the school. Further, local residents have not complained about on-street teacher parking activity.

2.4.2 Proposed Upgrades

On Street

Based upon discussion with school and Council representatives, there are currently no plans to amend the parking restrictions in proximity to the school.

Off Street

It is proposed to expand the car park to provide a total of 24 parking spaces. Compared to the current situation, the expansion will improve the current teacher/parking space ratio. This is expected to reduce teachers' demand for on-street parking.

As part of the school expansion, it is proposed to automate the gate to the school car park with access provided by swipe card (or similar).

The proposed car park will typically only be used by teachers, which is consistent with the current arrangement.

2.5 Pick-up/Drop-off

The location and operational management procedures of the drop-off and pick-up parking located within Myra Street and Highlands Avenue, including staff management/traffic controller arrangements.

Potential traffic impacts on surrounding road networks and mitigation measures to minimise impacts, including measures to mitigate queuing impacts associated with vehicles accessing drop-off and pick-up parking in Myra Street and Highlands Avenue.

2.5.1 Current Arrangement

Based on discussions with the school principal, it is understood that due to the large volumes of vehicles traversing Edgeworth David Avenue, it is not used by parents and guardians when picking-up and dropping-off children.

In 2019 the pick-up and drop-off facility on Myra Street was extended to a length of around 100 m (with the inclusion of the 15-minute parking). Assuming that a parked car requires a length of approximately six metres, the facility can accommodate approximately 17 vehicles.

As stated previously, the information provided by the principal indicates that teachers do not currently manage the operation of the pick-up/drop-off facility on Myra Street, as it currently operates in an efficient manner.

2.5.2 Potential Arrangements

TfNSW Centre for Road Safety, *School Drop-off and Pick-up Organising the initiative*, identifies a number of measures to facilitate the efficiency of pick-up/drop-off zones, including the following:

- Designating the mode of transport a child will take, i.e. walking/cycling, buses or cars.
- Corralling children after school into designated areas in proximity to the pick-up/drop-off facilities.
- Developing a system for matching the child to the correct vehicle at pick-up times, i.e. request parents have a sign with their child's name on the dashboard of their vehicle.
- Developing a roster of those adults approved by the school community to supervise students as they exit or enter a vehicle.
- Communicating details of the initiative's operation and safety procedures to drivers, students, supervising adults and the general school community.
- Designating pick-up times, with parents/guardians/carers not to arrive before this period.
- Staggering the pick-up/drop-off times between grades.

Based on discussions with the principal, they would consider implementing some measures at the pick-up/drop-off facility on Myra Street, subsequent to the school expansion, if they were required.

It is recommended that the operation of pick-up/drop-off facility is monitored and teachers be allocated to supervise its operation during peak periods of school activity (if required).

2.6 Service Vehicles and Bus

The location and operational management procedures for the drop-off and pick-up of students by buses and coaches for excursions and sporting activities during the hours of bus lane operations along Edgeworth David Avenue, including staff management/traffic controller arrangements.

Delivery and services vehicle and bus access and management arrangements.

Restrictions on hours for delivery and services vehicle access onto the site, including those set out in in the Condition E13.³

³ Condition E13 states that waste collection services are not to be undertaken between 7:30 am – 6:00 pm, Monday to Friday.

Restriction on hours for use of the three parking spaces located within the turning area to the west of the existing car park to times outside of the service vehicle delivery hours set out in Condition D10.

2.6.1 Current Arrangement

Buses

The nearest bus zone (which includes a shelter) to the school is located at the school frontage on Edgeworth David Avenue, around 85 m to the east of the intersection with Myra Street, as shown in Figure 2-2 and Figure 2-14.

This is the primary bus zone serving Waitara Public School due to:

- Its proximity to the school
- It does not require children to cross Edgeworth David Avenue



Figure 2-14 Bus Shelter on Edgeworth David Avenue

A second bus stop is located on Edgeworth David Avenue, to the west of Ingalara Avenue (see Figure 2-2).

Waitara Public School is served by a number of school buses, which are operated by Transdev and provide transfers from nearby train stations, such as Hornsby Station and Wahroonga Station.

School bus services include 8029, 8091 and 8020 operate in the morning peak period between 7:00 am - 9:00 am. Afternoon school services, operating between 3:00 pm - 4:00 pm include bus services 9091 and 9099.

When children go on excursions, buses layover at the zone on Edgeworth David Avenue. As the majority of buses at this location area associated with school services (with a single morning and afternoon service), the impacts of "excursion" buses on other buses is negligible.

A summary of the bus routes operating in proximity to Waitara Public School and their approximate frequency is provided in Table 2-1.

Table 2-1 Bus Routes and Frequencies

Bus Route	Origin – Destination	Frequency (minutes)	
		Peak	Off-peak
Bus Stop (west of	Ingalara Avenue)		
575	Macquarie University to Hornsby	20	40
591	Hornsby to St Ives	60	60
Bus Zone (at the	frontage of the school)		
591	Hornsby to St Ives	60	60
8029	Duffy & Chivers to Waitara Public School via Wahroonga Station	Morning School Bus	
Hornsby Interchange to Waitara Public School		Morning School Bus	
8020	Wahroonga Station to Waitara Public School	Morning School Bus	
9091 Hornsby Interchange to Waitara Public School Afternoon School Bus		School Bus	
9099	Hornsby Interchange to Waitara Public School	Afternoon S	School Bus

As stated previously, during peak periods of activity, teachers supervise children embarking and disembarking buses at the bus shelter on Edgeworth David Avenue.

Waste Collection Vehicles

Waste collection vehicles currently access/egress the school site via the access at Highlands Avenue. A hammerhead turnaround facility is provided within the school site so that waste collection vehicles can enter and exit the school site in a forward direction.

Waste collection occurs twice a week at approximately 5:00 am to ensure that collection activity does not coincide with peak travel demand periods for teachers, students and parents/guardians. The timing of the waste collection activities conforms with Condition E13 of the Development Consent.

As stated in Section 2.41, a 'No Stopping' zone (7:00 am - 6:00 pm on school days) was recently introduced on Highlands Avenue located approximately 40 m to the south of the school access to improve manoeuvrability for waste collection vehicles. These restrictions are also consistent with Condition E13 of the Development Consent.

Delivery Vans

Delivery vans typical layover on Myra Street or within the teachers' car park.

Based on discussions with the principal, it is noted that:

- No official curfew is applied to the operation of delivery vans.
- The school is staffed from 7:00 am, and most van drivers arrive at the school around this time.

- On average, three delivery vans access the school per day.
- Delivery vans operate in an efficient manner, with negligible impacts on the road network adjacent to the school.

2.6.2 Proposed Changes

No changes to the bus or service vehicle activity or facilities are proposed as part of the school upgrade. However, upon completion of the expansion, bins would be located further to the west within the car park.

It is noted that the previous car park design for Waitara Public School included three parking bays in the turnaround facility. As part of the recent design, these parking bays have been relocated and are no longer included in this facility (see Figure 2-15).

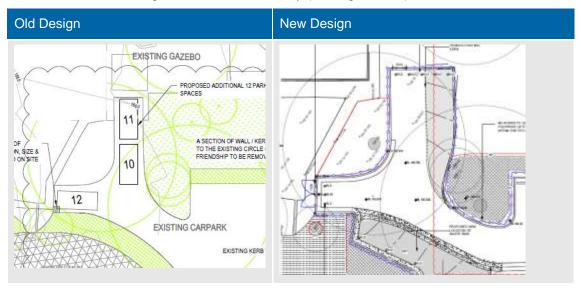


Figure 2-15 Turnaround Facility

As this design has been changed

In accordance with this change, the following comment is no longer applicable to the Waitara Public School upgrade:

Restriction on hours for use of the three parking spaces located within the turning area to the west of the existing car park to times outside of the service vehicle delivery hours set out in Condition D10.

2.7 Additional Comments

A monitoring and review program.

Potential monitoring and review activities applicable to the traffic and transport facilities in proximity to Waitara Public School Include the following:

- Review bus patronage to ensure that there is sufficient capacity for school students
- Monitor the pick-up/drop-off facility on Myra Street to ensure parents comply with the
 designated parking controls. Further to this, allocate teaching staff to supervise the
 operation of the pick-up/drop-off facility (if required).
- Review pedestrian activity on Myra Street to support an application to TfNSW for a pedestrian crossing supervisor.

If vehicles driven by parents are observed to undertake illegal manoeuvres or parking behaviour (which carry fines), Council should be requested to send out rangers to patrol the school zone. It is expected that enforcement in the vicinity of the school will quickly stop this behaviour and facilitate the safety and efficiency of the operation of the designated pick-up/drop-off facilities.

3. Summary

GHD have been commissioned by ADCO Constructions Pty Ltd to provide Transport Planning and Traffic Engineering advice to support the proposed expansion of Waitara Public School.

The scope of work of this report is to prepare an OTAMP that addresses Condition D10 of the Development Consent.

The OTAMP conditions and the location within the report they have been addressed is identified in Table 3-1.

Table 3-1 OTAMP Conditions

Condition	Report Section
Detailed pedestrian analysis including the identification of safe route options – to identify the need for management measures such as staggered school start and finish times to ensure students and staff are able to access and leave the Site in a safe and efficient manner during school start and finish.	Section 2.3
The location of all car parking spaces on the school campuses and their allocation (i.e. staff, visitor, accessible, emergency, etc.).	Section 2.4
The location and operational management procedures of the drop-off and pick-up parking located within Myra Street and Highlands Avenue, including staff management/traffic controller arrangements.	Section 2.5
The location and operational management procedures for the drop-off and pick-up of students by buses and coaches for excursions and sporting activities during the hours of bus lane operations along Edgeworth David Avenue, including staff management/traffic controller arrangements.	Section 2.5 and Section 2.6
Delivery and services vehicle and bus access and management arrangements.	Section 2.6
Restrictions on hours of delivery and service vehicles on the site, including those set out in the condition E13	Section 2.6
Management of approved access arrangements.	Section 2.2
Potential traffic impacts on surrounding road networks and mitigation measures to minimise impacts, including measures to mitigate queuing impacts associated with vehicles accessing drop-off and pick-up parking in Myra Street and Highlands Avenue.	Section 2.5
Car parking arrangements and management associated with the proposed use of school facilities by community members.	Section 2.4
Restriction on hours for use of the three parking spaces located within the turning area to the west of the existing car park to times outside of the service vehicle delivery hours set out in Condition D10(f).	Section 2.6
Monitoring and review program.	Section 2.7

In summary:

- During peak times of activity (morning and afternoon), teachers supervise the movement of students at the Myra Street/ Edgeworth David Avenue intersection
- Based on discussions with the Client, it is understood that the construction of a new wombat crossing on Myra Street near the southern boundary of the school has been approved by Council and is expected to be constructed in June 2020
- Based on a request by the school, it is noted that:
 - A 'No Stopping' zone (that is not time restricted) was implemented on Edgeworth David Avenue, located to the west of the bus zone in 2016 (see Figure 2-10).
 - The 15-minute parking zone was implemented on Myra Street in 2019 (see Figure 2-11).
- There are currently 12 parking spaces provided within the school site for the exclusive use of the teaching staff
- It is proposed to expand the car park to provide a total of 24 parking spaces. Compared to the current situation, the expansion will improve the current teacher/parking space ratio.
- In 2019 the pick-up and drop-off facility on Myra Street was extended to a length of around 100 m (with the inclusion of the 15-minute parking). Assuming that a parked car requires a length of approximately six metres, the facility can accommodate approximately 17 vehicles.
- Waitara Public School is served by a number of school buses, which are operated by Transdev and provide transfers from nearby train stations, such as Hornsby Station and Wahroonga Station.
- School bus services include 8029, 8091 and 8020 operate in the morning peak period between 7:00 am – 9:00 am. Afternoon school services, operating between 3:00 pm – 4:00 pm include bus services 9091 and 9099.
- Waste collection vehicles currently access/egress the school site via the access at
 Highlands Avenue. A hammerhead turnaround facility is provided within the school site, so
 that waste collection vehicles can enter and exit the school site in a forward direction.
- No changes to the bus or service vehicle activity or facilities are proposed as part of the school upgrade.
- It is not longer proposed to include parking bays in the vehicle turnaround facility.



Appendices

Appendix A – Waitara Public School SEARs Table

Comment	Response
Accurate details of the current daily and peak hour vehicle, public transport, pedestrian and cycle movement and existing traffic and transport facilities provided on the road network located adjacent to the proposed development.	As there are no specific trip generating guidelines for schools, extensive survey data was collected on the mode share of students traveling to and from Waitara Public School to determine peak hour traffic generation (see Section 4.3). Existing public transport, pedestrian and cycling infrastructure is described in Section 2.4 and Section 2.6.
An assessment of the operation of existing and future transport networks including the bus network and their ability to accommodate the forecast number of trips to and from the development.	Waitara Train Station is located approximately 1 km (walking distance) to the south of Waitara Public School. There are currently a number of school bus services that act as feeder services to Waitara Public School from key train stations such as Waitara Station and Hornsby Station. Data from the mode of travel surveys indicates that 13 percent of students take the bus to school in the morning and 20 percent take the bus in the afternoon when leaving school. This data indicates that an additional 32 students are likely to use the bus in the morning peak and 47 students in the afternoon peak. This would be equivalent to an additional bus service during the peak periods.
Details of estimated total daily and peak hour trips generated by the proposal, including vehicle, public transport, pedestrian and bicycle trips based on surveys of the existing and similar schools within the local area.	 The trip generation for Waitara Public School has been undertaken on a first principles basis, accounting for: The current and proposed student populations. The modes of transport currently used by the student population. During the weekday AM and PM peak hours, the proposed school expansion is expected to generate: 29 inbound and 29 outbound vehicle trips in the AM peak hour (8:00 am – 9:00 am) 22 inbound and 22 outbound vehicle trips in PM peak hour (3:00 pm – 4:00 pm).
The adequacy of public transport, pedestrian and bicycle networks and infrastructure to meet the likely future demand of the proposed development having regard to the identified school catchment area.	Currently, the public transport services in proximity to the school consist of the school bus routes 8029, 8091 and 8020 that operate during the morning peak that act as feeder services to the school from Wahroonga Station and Hornsby Interchange. Route 9091 and 9099 bus services operate during the afternoon that

Comment	Response
	are feeder services to Hornsby Interchange from the school.
	As mentioned above, an additional bus service during the peak period may be required to cater for additional students.
	There are adequate footpaths in proximity to the school. Signalised pedestrian crossings exist at nearby intersections. The school could benefit from mid-block pedestrian crossings adjacent to the school entrance/ exits on Myra Street and Edgeworth David Avenue.
	The walking route between the school and Waitara Station is along Myra Street and Alexandria Parade, with a traffic signal controlled pedestrian crossing provided at the intersection of Myra Street and Alexandria Parade. A raised pedestrian crossing is also provided on Alexandria Parade located adjacent to the Waitara Station entrance.
	There are currently no dedicated cycleways or bicycle facilities in the vicinity of Waitara Public School.
The impact of the proposed development on existing and future public transport infrastructure within the vicinity of the site in	The TIA report (July 2018) impacts of the proposed school expansion on the public transport facilities is expected to be negligible.
consultation with Roads and Maritime Services and Transport for NSW and identify measures to integrate the development with the transport network.	Emails were sent to TfNSW on 8 June 2017, 19 June 2017 and 26 June 2017, seeking feedback / input into the study.
	Emails were sent to Roads and Maritime on 19 June 2017 and 26 June 2017.
	No feedback has been received from either organisation.
	Multiple communications (phone calls and emails) were undertaken with Hornsby Shire Council to identify any proposed traffic management schemes and agree on an annual growth rate to identify the horizon year background traffic volumes.
Details of any upgrading or road improvement works required to accommodate the proposed development;	No mitigation measures are put forth as part of this assessment.
Details of travel demand management measures to minimise the impact on general traffic and bus operations and to encourage sustainable travel choices and details programs for implementation.	Green Travel Plans (GTP) are particularly important in a schools context as schools are often located in residential areas where surrounding residents are negatively impacted by the significant peaks of traffic at school pick-up and drop-off time.
	Furthermore, there has been a trend towards increasing the size of schools, which puts pressure on

Comment	Response
	the space at schools. A GTP has been prepared for the proposed expansion of Waitara Public School and has been submitted with this TIA (July 2018).
The impact of trips generated by the development on nearby intersections, with consideration of the cumulative impacts from other approved developments in the vicinity, and the need/associated funding for upgrading or road improvement works if required.	As discussed and agreed with Council SIDRA analysis has been undertaken for the intersection of Edgeworth David Avenue with Palmerston Road, Myra Street, Jubilee Street and Ingalara Avenue. Analysis has been undertaken for the 2021 and 2031 horizon years. An annual growth rate of two percent has been applied to the existing traffic volumes to identify the background horizon year traffic volumes. No mitigation measures are put forth as part of this assessment.
The proposed active transport access arrangements and connections to public transport services	Signalised pedestrian crossings are provided to enable the safe pedestrian movement to from the bus stops on Edgeworth David Avenue.
Details of any proposed school bus routes along bus capable roads (i.e. travel lanes of 3.5 m minimum) and infrastructure (bus stops, bus layovers etc.);	No additional school bus routes are proposed as a part of this assessment.
The proposed access arrangements, including car and bus pick-up/drop-off facilities, and measures to mitigate any associated traffic impacts and impacts on public transport, pedestrian and bicycle networks, including pedestrian crossings and refuges and speed control devices and zones.	 The current site access arrangement to Waitara Public School is not expected to change, namely: Pedestrian access to Waitara Public School will be provided on Edgeworth David Avenue, Myra Street and Highlands Avenue. The vehicle pick up/drop off zone is provided on Myra Street with vehicular access to the staff car park provided from Highlands Avenue. 40 km/h school zones are currently in operation on Myra Street and Edgeworth David Avenue in proximity to Waitara Public School.
Measures to maintain road and personal safety in line with Criminal Prevention Through Environmental Design (CPTED) principles.	It is assumed Waitara Public School will be designed/constructed in accordance with CPTED Principles.
Proposed bicycle parking facilities in secure, convenient, accessible areas close to main entries incorporating lighting and passive surveillance.	It is proposed to maintain the 23 bicycle racks within the school. These are located adjacent to school library.

Comment	Response
Details of the proposed number of car parking spaces and compliance with appropriate parking codes and justify the	The existing staff car park (which is accessed from Highlands Avenue) provides 12 parking bays. It is planned to reconfigure the existing parking area to
level of car parking provided on-site.	provide 12 additional bays (24 parking bays in total).
	A Green Travel Plan has been prepared to identify measures to reduce car travel, particularly single occupant trips undertaken by teachers.
Details of emergency vehicle access arrangements.	Emergency vehicles (if required) are expected to access the proposed school from Highlands Avenue. The proposed school layout will continue to provide internal road network for emergency vehicles.
	Upon completion of the school master plan, a swept path analysis will be undertaken to ensure the design emergency vehicle can enter the school, manoeuvre internally and exit in a forward direction.
An assessment of road and pedestrian safety adjacent to the proposed development and the details of required road safety measures.	A crash data review has been carried out. Crash data shows there has been a single accident involving pedestrians (which resulted in moderate injuries) in proximity to the school in the last five years.
	This suggests that pedestrian network in proximity to the school operates safely.
	A Road Safety Audit (RSA) has been prepared to examine and identify road safety concerns resulting from the existing operation of Waitara Public School and has been submitted with this TIA (July 2018) .
Service vehicle access, delivery and loading arrangements and estimated	Service vehicle access is proposed from Highlands Avenue.
service vehicle movements (including vehicle type and the likely arrival and departure times);	Details of the type and frequency of vehicles expected to access/egress the school is not currently available. However it is assumed it will occur outside of peak school activity.
	Upon completion of the school master plan, a swept path analysis will be undertaken to ensure the design service vehicle can enter the school, manoeuvre internally and exit in a forward direction.

Appendix B – Resume of OTAMP Author



Curriculum Vitae

Mark Lucas

Principal Transport Planner



Qualified. University of New South Wales - Bachelor of Applied Science (Geography Major) 2005.

Relevance to project.

Mark is a transport planner with over 15 years' experience. He has worked extensively in Australia and the United Arab Emirates.

Mark's experience is drawn from a broad range of transport planning projects including master plan level traffic studies, environmental impact assessments, active transport planning, parking, access and circulation studies, traffic impact assessments and traffic studies to support the upgrading of strategic road links.

Carlingford and Epping Public Schools Traffic Impact Assessment Department of Education | Sydney, Australia

Mark was technical lead in the preparation of Traffic Assessments for the proposed expansion of Epping and Carlingford Public Schools. The scope of work included undertaking an extensive series of surveys (including an online survey completed by parents) to determine the current level of vehicular activity at the school and identify a per student trip rate. This was applied to the proposed increase in student population and the adjoining intersections were assessed using SIDRA software accounting for a ten year horizon.

Secondment at Lake Macquarie Council Lake Macquarie Council

Mark completed a seven month secondment at Lake Macquarie Council. Key tasks during the secondment included reviewing development applications for a wide range of land uses, providing input into strategic planning documents (including Section 94 studies), undertaking traffic modelling on the local road networks and the provision of ad-hoc transport planning/traffic engineering advice to council staff.

North Kellyville Operational, Transport and Access Management Plan (OTAMP) ADCO | Sydney, Australia

Mark completed the OTAMP for a new school in North Kellyville. As part of this assessment, Mark undertook a detailed of the school's parking, access and pick-up/drop-off facilities in accordance with transport planning/traffic engineering principles and Australian Standards and Guidelines. This included the identification of safe route options to identify the need for management measures to ensure students and staff are able to access and leave the site in a safe and efficient manner

Kibbleplex Educational Precinct Transport Assessment

Gosford City Council | Gosford, Australia

Mark undertook a traffic assessment for a major educational precinct in the Central Coast. Based on the analysis a number of physical mitigation measures were identified to ensure the road network surrounding the subject site would continue to operate with an acceptable level of service.

Thomas Mitchell Drive and Denman Road Traffic Study

BHP Billiton | Hunter Valley, Australia

Mark undertook a traffic assessment to review the operation of the intersection of Thomas Mitchell Drive and Denman Road, to determine if the current configuration has sufficient capacity to accommodate the potential increase in vehicle activity in the Hunter Region. The traffic modelling undertaken for the intersection of interest indicated that based upon its current configuration it has the capacity to accommodate expected increases in traffic until 2028.

Mangoola Coal Mine Traffic Assessment Umwelt | Hunter Valley, Australia

Mark completed a traffic assessment to support a seven year extension to the mine life of the

Mark Lucas CV 1



Curriculum Vitae

Mangoola Coal Mine, in accordance with SEARs issued by the RMS. The scope of works included SIDRA analysis at multiple intersections in proximity to the mine, accounting for the expected construction and operational traffic volumes.

Cameron Park Sports Complex Lake Macquarie Council | Newcastle, Australia

Whilst on secondment at Lake Macquarie Council, Mark undertook a traffic assessment the Cameron Park Sports Complex which includes cricket, netball, AFL and rugby league facilities. The trip generation was undertaken on a first principles basis accounting for the expected utilisation for a weekday evening and weekend scenario. SIDRA analysis was completed to determine if the adjoining road network could accommodate the trips associated with each scenario.

Dunloe Sand Quarry Statement of Environmental Effects Holcim Pty Ltd | Pottsville, Australia

Mark completed a transport study as part of a Statement of Environmental Effects (that was submitted to the Department of Planning and Environment) for a Section 96 modification to a condition of consent relating to vehicular movements at the quarry. The study assessed the impact of the proposed service vehicle activity using absorption capacity analysis. Additionally, warrants included in Austroads Guidelines were used to identify suitable turning treatments at the intersection formed by the quarry access and the external road network.

Blue Mountains Integrated Transport Strategy

Blue Mountains City Council

Mark was Project Manager and Technical Lead for the Blue Mountains Integrated Transport Strategy 2025 (ITS) was designed to provide policies and actions that will guide the planning, investment and operation of the Blue Mountain City Council's traffic and transport infrastructure.

The scope of works completed by Mark included a movement and place assessment at key road in each of the Blue Mountains population centres and the identification of strategies to enhance the regions public transport networks.

Augmentation and Safety Upgrade to Chaffey Dam

Worley Parsons | Nundle, Australia

Mark completed a transport study to identify the traffic impacts of the proposed augmentation to Chaffey Dam, in response to Director General Requirements. The study assessed the impact of the proposed construction vehicle activity for each of the proposed phases if construction. Additionally, a high level Construction Management Plan was completed to identify mechanisms to minimise traffic impacts and facilitate a safe working environment.

Newcastle GPT Development The GPT Group | Newcastle, Australia

Mark completed a Traffic Assessment for the Newcastle GPT Development, a proposed major mixed-used development in the Newcastle CBD. The impact analysis included "conservative", "moderate" and "aggressive" trip generation scenarios, accounting for the potential implementation of a variety of travel demand measures such a green travel plan and the potential development of the public transit facilities identified in the Newcastle Urban Renewal Strategy, including the construction of a light rail corridor in the Newcastle CBD.

Glenfield Transport Interchange – Traffic Assessment

Glenfield Junction Alliance | Sydney, Australia

Mark provided technical direction to assess the traffic and parking impacts associated with the Glenfield Transport Interchange, a key component of the South West Rail Link. Analysis was undertaken to identify the peak hour operation at the critical intersections in proximity to the station for the existing situation and 2023 horizon year to account for proposed road upgrades, including the removal of a right turn ban and the change in direction of a one-way access road. Parking surveys were undertaken to assess the level of compliance at car parks in proximity the subject site. Additional analysis was undertaken to identify the capability of providing bicycle lanes in proximity to the subject site in accordance with Austroads Geometric Design Guidelines.

Mark Lucas CV 2



Curriculum Vitae

3

Cherrybrook Station Bus and Vehicular Access Study

Transport for NSW | Sydney, Australia

Mark completed an access study for Cherrybrook Station, which is a key component of the Sydney Metro North West. The study included an assessment of five proposed options to alter the existing bus services, in order to provide connectivity to Cherrybrook Station. The analysis was undertaken against ten specific criteria including access hierarchy, bus catchment, service legibility, active transport connectivity and relative costs. Each of the bus access options was assessed using a graduated scoring system to indicate to what degree they met the objectives of the assessment criteria.

Boomerang Park Traffic and Transport Assessment De Witt Consulting | Raymond Terrace,

Australia

Mark undertook a traffic and transport assessment with respect to the proposed reclassification and rezoning of part of Boomerang Park, which functions as an important social and recreational area for residents and visitors of Raymond Terrace. Key measures were identified to maximise the accessibility and permeability of the proposed rezoned subject site, to encourage the use of public transit and active transit modes of travel.

Shortland Water Golf Club PEP Consulting | Newcastle, Australia

Mark undertook a parking assessment for a proposed golf club in Newcastle. The assessment was undertaken for a "typical day" plus large events such as a wedding. The analysis accounted for a variety of car occupancy and public transit scenarios and identified the required number of parking bays and overflow parking areas. In addition, Mark prepared an overarching Construction Traffic Management Plan for the stockpiling of clean fill to facilitate the construction of the proposed development.

Mark Lucas CV

Appendix C - Stakeholder Communications



Post Approval Consultation Record

	Transition of the control of the con
Identified Party to	Hornsby Shire Council
Consultation type:	Email
Consultation type:	
When is consultation required?	Prior to operation
Why	Condition D10 – An Operational Transport and Access Management Plan (OTAMP) is to be prepared for the school be a suitably qualified person, in consultation with Council, Transport for NSW and RMS.
When was	2 nd April 2020 – Email to Rodney Pickles
consultation	8 th April 2020 – Email from Rodney Pickles
scheduled/held	8 th April 2020 – Email from Radek Zarzycki
oon our and an incide	7 April 2020 - Ellian Helli Hadek Zaizyeki
Identify persons and positions who were involved	Rodney Pickles – Manager, Development Assessments Mark Ozinga - Principal Manager Land Use Planning & Development
	Radek Zarzycki – Senior Traffic Engineer
Provide the details	The following information was sought:
of the consultation	Details of any proposed upgrades to the traffic and
	transport facilities in proximity to Waitara Public School
What specific matters were discussed?	Required inclusions for the OTAMP
What matters were	
resolved?	Council are reviewing the provision of additional pedestrian fencing at the intersection of Edgeworth David Drive and Myra Street.
	Council have no additional proposed upgrades to the traffic and transport facilities (other than a previously approved wombat crossing on Myra Street).
What matters are unresolved?	Nil
Any remaining points of disagreement?	Nil
How will SINSW address matters not resolved?	NA



Post Approval Consultation Record

Identified Party to	TfNSW
Consult:	
Consultation type:	Email
When is consultation required?	Prior to operation
Why	Condition D10 – An Operational Transport and Access Management Plan (OTAMP) is to be prepared for the school be a suitably qualified person, in consultation with Council, Transport for NSW and RMS.
When was consultation scheduled/held	2 nd April 2020 – Email to Ken Ho, Mark Ozinga and Para Sangar
Identify persons and positions who were involved	Ken Ho – Transport Planner Mark Ozinga - Principal Manager Land Use Planning & Development Para Sangar Senior Transport Planner
Provide the details	Para Sangar – Senior Transport Planner The following information was sought:
of the consultation	Details of any proposed upgrades to public transport in proximity to Waitara Public School
	 Details of any upgrades to the signal phasing at the intersections in proximity to the school
What specific matters were discussed?	Required inclusions for the OTAMP
What matters were resolved?	NA – TfNSW has not responded to the data request
What matters are unresolved?	NA – TfNSW has not responded to the data request
Any remaining points of disagreement?	NA
How will SINSW address matters not resolved?	It is noted that signal phasing at intersections in proximity to the school were recently amended to provide additional green time for pedestrians during peak periods of school activity.
	A number of school buses operate at Waitara Public School.



Post Approval Consultation Record

Identified Party to	Waitara Public School
Consult:	Waltara Fublic Scribbi
Consultation type:	Email and phone call
When is consultation	Prior to operation
required?	
Why	Condition D10 – An Operational Transport and Access Management Plan (OTAMP) is to be prepared for the school be a suitably qualified person, in consultation with Council, Transport for NSW and RMS.
When was	8 th April 2020 – Email to Dany Coelho
consultation	8 th April 2020 – Conversation with Dany Coelho
scheduled/held	8 th April 2020 – Email to Dany Coelho
	8 th April 2020 – Email from Dany Coelho
Identify persons and positions who were involved	Dany Coelho – Principal Waitara Public School
Provide the details	The following information was sought:
of the consultation	 Details of any proposed upgrades to the traffic and
	transport facilities in proximity to Waitara Public School
What specific	Details of the current operation of the school's traffic and transport
matters were	facilities.
discussed?	
What matters were resolved?	 Pick-up/drop-off activity does not occur on Edgeworth David Avenue as it is too busy and unsafe
	The pick-up/drop-off zone on Myra Street is not managed by teachers
	You would consider doing so post expansion of the school
	(if required)
	During peak periods of activity, teachers manage the signalized innetion of Myra Street/David Edgeworth Avenue
	signalised junction of Myra Street/David Edgeworth Avenue (for safety reasons) and the bus stop on David Edgeworth Avenue
	The bus stop on David Edgeworth Avenue is used to store
	buses when children go on excursions
	The operation of Highlands Avenue is the primary concern
	re traffic and access at the school
	Waste vehicles enter the school twice a week at
	approximately 5:00 am. The sanitation workers have a key to the school gate
	Teachers typically park on Ingalara Avenue, local residents have not complained about this
	Access to the gate on Highlands is via a key. It is proposed
	to automate the gate with access via swipe card (or similar)
	Only teachers are allowed to park within the school
	The school currently has no plans to stagger start/finish
	times but would consider this at a later time (if required)
	and a same a same and a same and a same a sa



	•	Ambulances can stop within the school car park if required
What matters are unresolved?	Nil	
Any remaining points of disagreement?	Nil	
How will SINSW address matters not resolved?	NA	

From: Radek Zarzycki «RZarzycki@hornsby.nsw.gov.au»

Sent: Wednesday, 8 April 2020 3:51 PM

To: Mark Lucas

Cc: Dean Israel; Rodney Pickles; Lesley Tipping
Subject: RE: Waitara Public School - Transport Planning

Attachments: Reps to Hornsby Waitara PC Liu.pdf

Mark,

The traffic proposal along Edgeworth Avenue near the school's frontage is no longer pursued by Council.

A new issue that has been raised by the local MP is the lack of pedestrian protection on the south/western corner of Edgeworth David Avenue and Myra Street. To address the concerns a vehicle impact resident structure would be required along kerb line.

While the use of pedestrian fencing has been suggested, pedestrian fencing is often used to direct pedestrians to a preferred formal crossing point and to discourage pedestrians from making dangerous crossing movements where visibility may be limited. Unfortunately, it does not prevent pedestrians from unexpected vehicle impacts.

A more suitable solution for this site would be a concrete crash barrier, however current crash data for this location will not qualify under the Blackspot Funding program, due to a lack of crashes at the site in question.



Regards,

Radek Zarzycki

Senior Traffic Engineer | Traffic Engineering & Road Safety | Hornsby Shire Council p 02 9847 6524 m 0438 777 509

e rzarzycki@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

Council acknowledges the traditional owners of the lands of Hornsby Shire, the Darug and Guringai people.

From: Mark Lucas < Mark Lucas@ghd.com Sent: Wednesday, 8 April 2020 1:20 PM

To: Rodney Pickles < RPickles@Hornsby.nsw.gov.au>

Cc: Radek Zarzycki <RZarzycki@hornsby.nsw.gov.au>; Dean Israel <deani@adcoconstruct.com.au>

Subject: RE: Waitara Public School - Transport Planning

Thanks Rodney.

Hi Radek, feel free to call me to discuss.

Cheers,

Mark Lucas

Senior Transport Planner

GHD

T: +61 2 9239 7141 | V: 217141 | M: 0428 269819 | E: mark.lucas@ghd.com Level 15 133 Castlereagh Street Sydney NSW 2000 Australia | www.ghd.com

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From: Rodney Pickles < RPickles@Hornsby.nsw.gov.au>

Sent: Wednesday, 8 April 2020 1:11 PM **To:** Mark Lucas < Mark.Lucas@ghd.com>

Subject: RE: Waitara Public School - Transport Planning

Hi Mark,

I have referred your enquiry to Council's traffic engineer Radek Zarzycki for advice.

RZarzycki@hornsby.nsw.gov.au

Regards

Rodney Pickles

Manager, Development Assessments | Development Assessments | Hornsby Shire Council p 02 9847 6731 m 0438 777 571

e rpickles@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

Council acknowledges the traditional owners of the lands of Hornsby Shire, the Darug and Guringai people.

From: Mark Lucas < Mark.Lucas@ghd.com > Sent: Wednesday, 8 April 2020 12:26 PM

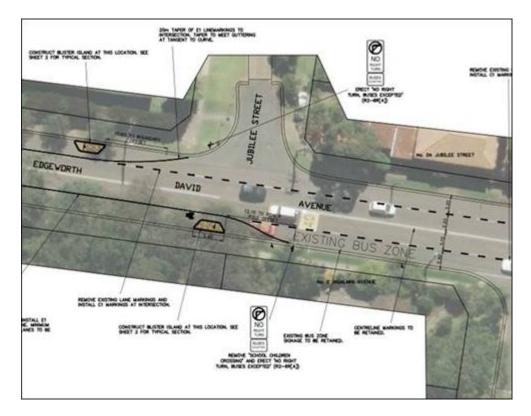
To: Rodney Pickles < RPickles@Hornsby.nsw.gov.au > Cc: Dean Israel < deani@adcoconstruct.com.au > Subject: Waitara Public School - Transport Planning

Hi Rodney,

GHD has been commissioned by ADCO to undertake an Operational Transport and Access Management Plan for Waitara Public School.

Other than the Wombat Crossing on Myra Street, does Council have any plans to upgrade/amend the traffic and transport infrastructure in proximity to the school?

I note that during my previous involvement at Waitara Public School, there was traffic calming proposals on Edgeworth David Avenue.



Please call me to discuss when you have some free time.

Regards.

Mark Lucas

Senior Transport Planner

GHD

T: +61 2 9239 7141 | V: 217141 | M: 0428 269819 | E: mark.lucas@ghd.com Level 15 133 Castlereagh Street Sydney NSW 2000 Australia | www.ghd.com

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From: Mark Lucas

Sent: Thursday, 2 April 2020 3:33 PM

To: Ho, Ken; Mark Ozinga; Para.Sangar@transport.nsw.gov.au

Cc: Dean Israel

Subject: Waitara Public School

CompleteRepository: 12528632

Description: Waitara Public School OTAMP

JobNo: 12528632

OperatingCentre: 21

RepoEmail: 12528632@ghd.com

RepoType: Proposal

Gentlemen,

GHD has been commissioned to complete an Operational Transport and Access Management Plan (OTAMP).

Could you please confirm if TfNSW are seeking to amend/upgrade the public transport services in proximity to the school or the signal phasing at the intersection of Myra Street and Edgeworth David Avenue?

Feel free to call me to discuss any questions you may have?

Kind Regards,

Mark Lucas

Senior Transport Planner

GHD

T: +61 2 9239 7141 | V: 217141 | M: 0428 269819 | E: mark.lucas@ghd.com Level 15 133 Castlereagh Street Sydney NSW 2000 Australia | www.ghd.com

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From: Dany Coelho <dany.coelho@det.nsw.edu.au>

Sent: Wednesday, 8 April 2020 3:17 PM

To: Mark Lucas

Subject: Re: Parking sign plan for Myra Street

There are no parking restrictions in Highlands apart from the no stopping zone directly outside the gate. Regards

DANY

Dany Coelho (M.Teach)
Principal
Waitara Public school
68 Edgeworth David Avenue
Wahroonga NSW 2076
Ph 02 94893105

From: Mark Lucas <Mark.Lucas@ghd.com> Sent: Wednesday, 8 April 2020 2:26 PM

To: Dany Coelho

Cc: Dean Israel; Katy Johnson

Subject: RE: Parking sign plan for Myra Street

Hi Dany,

Thank you very much for your time today. Does your parking restriction plan extend to Highlands Avenue?

I have made a few notes, if I missed or misunderstood anything, please let me know:

- Pick-up/drop-off activity does not occur on Edgeworth David Avenue as it is too busy and unsafe
- The pick-up/drop-off zone on Myra Street is not managed by teachers
- You would consider doing so post expansion of the school (if required)
- During peak periods of activity, teachers manage the signalised junction of Myra Street/David Edgeworth Avenue (for safety reasons) and the bus stop on David Edgeworth Avenue
- The bus stop on David Edgeworth Avenue is used to store buses when children go on excursions
- 15 minute parking restrictions (during school period) has recently been implemented on Highlands as well as some "No Stopping" near the school to allow vehicles to turn around
- The operation of Highlands Avenue is the primary concern re traffic and access at the school
- Waste vehicles enter the school twice a week at approximately 5:00 am. The sanitation workers have a key to the school gate
- Teachers typically park on Ingalara Avenue, local residents have not complained about this
- Access to the gate on Highlands is via a key. It is proposed to automate the gate with access via swipe card (or similar)
- Only teachers are allowed to park within the school
- The school currently has no plans to stagger start/finish times but would consider this at a later time (if required)
- Ambulances can stop within the school car park if required

Kind Regards,

Senior Transport Planner

GHD

T: +61 2 9239 7141 | V: 217141 | M: 0428 269819 | E: mark.lucas@ghd.com Level 15 133 Castlereagh Street Sydney NSW 2000 Australia | www.ghd.com

WATER | ENERGY & RESOURCES | ENVIRONMENT | PROPERTY & BUILDINGS | TRANSPORTATION

Please consider our environment before printing this email

From: Dany Coelho <dany.coelho@det.nsw.edu.au>

Sent: Wednesday, 8 April 2020 1:43 PM
To: Mark Lucas < Mark.Lucas@ghd.com>
Subject: Fw: Parking sign plan for Myra Street

FYI DANY

Dany Coelho (M.Teach)
Principal
Waitara Public school
68 Edgeworth David Avenue
Wahroonga NSW 2076
Ph 02 94893105

From: Lesley Tipping < LTipping@hornsby.nsw.gov.au >

Sent: Wednesday, 21 August 2019 9:14 AM

To: Dany Coelho **Cc:** Radek Zarzycki

Subject: Parking sign plan for Myra Street

Hi again Dany,

Thank you for your time on the phone this morning. It's great to connect with you and work with you in regards to traffic and road safety around Waitara Public School.

As discussed, attached is the Local Traffic Committee report and the Parking Restrictions Plan from 2015. The plan shows where the 15 minute parking zone was proposed. As mentioned Council can install these signs at any time, once you give us the go ahead. I understand you may need to notify staff and parents alike about these changes, so we will work in with you.

In regards to the existing No Stopping (8:00am – 9:30am, 2:30pm to 4:00pm) Zone in Highlands Avenue, I will discuss this with Radek and find out if we need to take this to the Local Traffic Committee if it is possible.

Please contact me at any time on the details below to discuss any issues going forward. It's great to be working with you and the school.

Best regards,

Lesley

Lesley Tipping

Road Safety Officer | Traffic Engineering & Road Safety | Hornsby Shire Council

p 02 9847 6856 m 0478 881 081

e |tipping@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

Council acknowledges the traditional owners of the lands of Hornsby Shire, the Darug and Guringai people.

Appendix D – Stakeholder Communications (provided by ADCO Constructions)

From: Radek Zarzycki <RZarzycki@hornsby.nsw.gov.au>

Sent: Thursday, 9 April 2020 11:21 AM

To: Michael Yarham
Cc: Alan Boyd; Rob Rajca

Subject: RE: Wombat Crossing - Waitara PS

Michael,

Please proceed with organising the works.

Regards,

Radek Zarzycki

Senior Traffic Engineer | Traffic Engineering & Road Safety | Hornsby Shire Council p 02 9847 6524 m 0438 777 509

e rzarzycki@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

Council acknowledges the traditional owners of the lands of Hornsby Shire, the Darug and Guringai people.

From: Michael Yarham < MYarham@adcoconstruct.com.au>

Sent: Thursday, 9 April 2020 10:49 AM

To: Radek Zarzycki <RZarzycki@hornsby.nsw.gov.au>

Cc: Alan Boyd <ABoyd@Hornsby.nsw.gov.au>; Rob Rajca <RRajca@Hornsby.nsw.gov.au>

Subject: RE: Wombat Crossing - Waitara PS

Hi Radek,

Does that imply that we could receive further conditions/permits in the future, as all requirements of the wombat crossing has not yet been finalised and confirmed within council?

I am wanting to clarify to ensure ADCO allows for all requirements of HSC, and can proceed with organising works.

Regards,

Michael Yarham

Cadet

ADCO Constructions Pty Ltd

Level 2, 7-9 West Street, North Sydney NSW 2060 T 02 8437 5000 M 0430 382 462

W www.adcoconstruct.com.au



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From: Radek Zarzycki <RZarzycki@hornsby.nsw.gov.au>

Sent: Thursday, 9 April 2020 10:40 AM

To: Michael Yarham < MYarham@adcoconstruct.com.au>

Cc: Alan Boyd <ABoyd@Hornsby.nsw.gov.au>; Rob Rajca <RRajca@Hornsby.nsw.gov.au>

Subject: RE: Wombat Crossing - Waitara PS

Michael,

At this stage only a road closure permit is required.

Regards,

Radek Zarzycki

Senior Traffic Engineer | Traffic Engineering & Road Safety | Hornsby Shire Council p 02 9847 6524 m 0438 777 509

e rzarzycki@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

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From: Michael Yarham < MYarham@adcoconstruct.com.au>

Sent: Thursday, 9 April 2020 10:31 AM

To: Radek Zarzycki < RZarzycki@hornsby.nsw.gov.au >

Cc: Alan Yang < AYang@hornsby.nsw.gov.au >; Dean Israel < deani@adcoconstruct.com.au >; Andreas

Pashiou <apashiou@adcoconstruct.com.au>; Thomas Dean <tdean@adcoconstruct.com.au>

Subject: RE: Wombat Crossing - Waitara PS

Radek,

Tried to get in contact this morning to request an update.

If you could please provide an update on the below, that would be great.

It is becoming a pressing requirement that ADCO obtains all associated information and details relating to the Wombat Crossing.

Regards,

Michael Yarham

Cadet

ADCO Constructions Pty Ltd

Level 2, 7-9 West Street, North Sydney NSW 2060 T 02 8437 5000 M 0430 382 462

W www.adcoconstruct.com.au



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From: Michael Yarham

Sent: Thursday, 2 April 2020 11:25 AM

To: Radek Zarzycki < RZarzycki@hornsby.nsw.gov.au >

Cc: Alan Yang AYang@hornsby.nsw.gov.au; Dean Israel deani@adcoconstruct.com.au; Andreas

Pashiou <apashiou@adcoconstruct.com.au>; Thomas Dean <tdean@adcoconstruct.com.au>

Subject: Wombat Crossing - Waitara PS

Hi Radek,

Following our conversation this morning, I am requesting an update on the approval status of the wombat crossing and wanting to determine what is required of ADCO prior to the construction of the wombat crossing.

As previously mentioned, the wombat crossing design has been approved, but ADCO has yet to receive any formal approval letter or notification. Please refer to the below email correspondence.

You indicated on the phone, due to certain reasonings, ADCO is **ONLY** required to obtain a '**Road Closure Permit'** prior to commencing works, and Hornsby Shire Council is not required to provide ADCO with any additional permits or conditions.

Due to this, could you please confirm if the 'Road Closure Permit' is the only required permit associated with the works, or if additional permits and conditions will apply.

It is crucial that we receive this information, as it has a direct impact on the operations and management associated with the works, therefore if you could please confirm the requested information and details, that would be much appreciated.

Regards,

Michael Yarham

Cadet

ADCO Constructions Pty Ltd

Level 2, 7-9 West Street, North Sydney NSW 2060 T 02 8437 5000 M 0430 382 462





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Subject: FW: HPE CM: WPS - Road Safety Measures for SSD - HSC comments

CompleteRepository: 12528464

Description: Dee Why and Mona Vale Public School Traffic Assessment

JobNo: 12528464

OperatingCentre: 21

RepoEmail: 12528464@ghd.com

RepoType: Proposal

From: Radek Zarzycki <RZarzycki@hornsby.nsw.gov.au>

Sent: Friday, 17 April 2020 3:01 PM

To: Damien Backshall < Damien.Backshall@tsamgt.com>

Cc: David Browning <David.Browning@tsamgt.com>; Mardi Christian <Mardi.Christian@tsamgt.com>; Lesley Tipping <LTipping@hornsby.nsw.gov.au>; Alan Yang

<AYang@hornsby.nsw.gov.au>

Subject: RE: HPE CM: WPS - Road Safety Measures for SSD - HSC comments

Damien,

My comments are included under in the table in Green font.

Regards,

Radek Zarzycki

Senior Traffic Engineer | Traffic Engineering & Road Safety | Hornsby Shire Council

p 02 9847 6524 **m** 0438 777 509

e rzarzycki@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

Council acknowledges the traditional owners of the lands of Hornsby Shire, the Darug and Guringai people.

From: Damien Backshall < Damien.Backshall@tsamgt.com>

Sent: Friday, 17 April 2020 10:16 AM

To: Radek Zarzycki < <u>RZarzycki@hornsby.nsw.gov.au</u>>

Cc: David Browning < <u>David.Browning@tsamgt.com</u>>; Mardi Christian < <u>Mardi.Christian@tsamgt.com</u>>

Subject: HPE CM: WPS - Road Safety Measures for SSD

Hi Radek,

Thanks again for your time this morning. As discussed, as a part of our reporting requirements for the Waitara Public School Redevelopment SSD we need to confirm which of the proposed six road safety measures, originally discussed at a meeting with council on the 3rd July 2019 (minutes attached), have now been completed. I have also summarised below the six items and what we believe to be the status of each, but if you can please help confirm our understanding and clarify the remainder that would be greatly appreciated.

Status of road safety items

Item #	Description	Status
1	 Item 1 - Myra Street / Edgeworth David Drive Intersection Light Phasing: Consultation outcome with RMS dated 24/09/2019: All 3 signalised pedestrian crossings outside Waitara Public School, between the hours of 0800-1000 and 15:00-16:30 Mon-Fri, have been increased by at least 5 seconds to allow for more pedestrian movements 	Complete - Council's site inspections confirmed the new phasing.
2	Item 2 – Myra Street Kiss & Drop: O Hornsby Council to extend length of Kiss & Drop Zone.	Complete – 15min P installed in area approaching the No Parking zone. Issue resolved.
3	 Item 3 - Myra Street Road Crossing During School Zone Hours Hornsby Council proposed solution of a new Wombat crossing to intersection North of Park Lane & Myra Streets, and the deletion of the Myra Street footpath widening works. 	Won't be complete until after Stage 1 finished – LTC approval gained and forwarded to contractor.
4	 Item 4 - Highlands Avenue No Stopping Zone Stopping Zone hours to be changed to 24 hour No Stopping Zone. 	Complete – Changes to No Stopping made where possible however LTC did not support 24 hour zone due to impact on residents.
5	 Item 5 - 40km/hr Speed Zone Edgeworth David Drive / Myra Street Extend length of 40 km/hr Speed Zone from current location to Balmoral Street. 	? Matter for RMS / TfNSW – DoE to write to RMS directly requesting the change.

		On a related matter Council is perusing the reduction of speed limit along Myra Street from 60 to 50Km/h with RMS.
6	Item 6 - Edgeworth David Drive School Entry / Exit Gate 1	?
	 Install 10-12 lineal metres of RMS rated Palisade Fencing to foot path/gutter to act as traffic / crash 	Council's investigation
	barrier.	found that fence along
		this location would
		impact on Bus and
		vehicle kerb side
		access. School to
		consider using /
		directing students to
		other gates once works
		are completed and take
		advantage of new
		crossing desire line that
		will be created at the
		new Wombat crossing
		in Myra Street.

Regards,

Damien Backshall

Project Manager



Level 15, 207 Kent Street, Sydney, NSW 2000 O: +61 (0)2 9276 1400 \ M: +61 (0)406 114 181

Damien.Backshall@tsamgt.com tsamgt.com

From: Radek Zarzycki@hornsby.nsw.gov.au>

Sent: Monday, 27 April 2020 11:48 AM

To: Damien Backshall

Cc: Lesley Tipping; Alan Yang

Subject: Reply: WPS - Road Safety Measures for SSD - Item 5 TfNSW Input

Damien,

We are satisfied with RMS response. No further action required in relation to item 5.

Regards,

Radek Zarzycki

Senior Traffic Engineer | Traffic Engineering & Road Safety | Hornsby Shire Council p 02 9847 6524 m 0438 777 509

e rzarzycki@hornsby.nsw.gov.au | w hornsby.nsw.gov.au | f facebook.com/HornsbyCouncil

Council acknowledges the traditional owners of the lands of Hornsby Shire, the Darug and Guringai people.

From: Damien Backshall < Damien.Backshall@tsamgt.com>

Sent: Monday, 27 April 2020 11:37 AM

To: Radek Zarzycki <RZarzycki@hornsby.nsw.gov.au>

Cc: David Browning <David.Browning@tsamgt.com>; Mardi Christian <Mardi.Christian@tsamgt.com>

Subject: WPS - Road Safety Measures for SSD - Item 5 TfNSW Input

Hi Radek.

In line with the attached email we contact Zakaria from TfNSW and he provided the below input regarding Waitara PS Road Safety Measure Item 5 (increase to extent of school zone). Can you please review and advise if council are satisfied that this item (#5) is now closed out, or if further action is required.

Regards,

Damien Backshall

Project Manager



Level 15, 207 Kent Street, Sydney, NSW 2000 O: +61 (0)2 9276 1400 \ M: +61 (0)406 114 181

<u>Damien.Backshall@tsamgt.com</u> <u>tsamgt.com</u>

From: RMS Customer Relations < customer@rms.nsw.gov.au>

Sent: Friday, 24 April 2020 11:28 AM

To: Damien Backshall < <u>Damien.Backshall@tsamgt.com</u>>

Subject: 01048860 - Waitara Public School - Road Safety Measures for SSD - HSC comments [

ref:_00D28HSVA._5000K2BsFij:ref]



Dear Damien.

Thank you for your email regarding the extension of the school zone on Edgeworth David Avenue to Balmoral Street, Wahroonga.

As part of our Safety Around Schools Program, 40km/h school zones have been provided on roads with an active direct access point from the school, and on roads where a Transport for NSW (formerly Roads and Maritime Services) School Crossing Supervisor is employed. In accordance with this program, 40km/h school zones have been provided along Edgeworth David Avenue, Myra Street, Jubilee Street, Highlands Avenue and Ingala Avenue for Waitara Public School.

In reference to your query regarding a school zone extension to Balmoral Street, school zones are intended for close proximity to school access points where school children's activities along the road are in higher concentrations. School zones are not intended for routes to school.

Therefore, the request for a School Zone extension on Edgeworth David Avenue does not fall within the intended use for School Zones and hence is not considered appropriate.

If you have any further questions or would like to discuss any of the above, please do not hesitate to contact me on 02 8849 2205.

Yours sincerely,

Zakaria Ahmad Network & Safety Officer

On 1 December 2019, Roads and Maritime Services and Transport for NSW (TfNSW) merged to create one integrated, TfNSW, so we can deliver better outcomes for customers and communities across NSW

ref:_00D28HSVA._5000K2BsFij:ref

From: David Spare <David.Spare@det.nsw.edu.au>
Sent: Tuesday, 24 September 2019 3:56 PM

To: Dany Coelho; Michelle Johns

Cc: Rosie Majer; Bruce Litchfield; Katy Johnson; Adi Mudigeti; Suchit Jani

Subject: FW: Waitara P.S Traffic Signals Update

Importance: High

Hi Dany,

Please find detailed below the confirmation by RMS Signalling Team of the successful change in signalling to the Myra Street intersection.

Regards,

David Spare

Project Director | Infrastructure Projects

M 0466 745 726 | E david.spare@det.nsw.edu.au | education.nsw.gov.au

Level 8, 259 George Street, Sydney NSW 2000 | GPO Box 33, Sydney, NSW 2001



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From: Matthew r Rodgers <matthew.rodgers2@rms.nsw.gov.au>

Sent: Tuesday, 24 September 2019 7:54 AM

To: David Spare <David.Spare@det.nsw.edu.au>; Claire Beattie <Claire.Beattie1@det.nsw.edu.au>

Subject: Waitara P.S Traffic Signals

Importance: High

Good morning David/Claire,

As requested, RMS have investigated the concern raised and can advise the following.

All 3 signalised pedestrian crossings outside Waitara Public School, between the hours of 0800-1000 and 15:00-16:30 Mon-Fri, have been increased by at least 5 seconds to allow for more pedestrian movements.

Regards

Matthew Rodgers Director Greater Sydney | Sydney Roads | Network Operations



HORNSBY SHIRE LOCAL TRAFFIC COMMITTEE

MEMBER FOR KU-RING-GAI - Mr Alister Henskens MP

MEMBER FOR KU-RING-GAI - Mr Alister Henskens MP's Delegate Mr David Ross

HORNSBY POLICE – Senior Constable Narelle Tomich

TRANSPORT FOR NSW - Mr Zakaria Ahmad

COUNCILLOR Michael Hutchence - Council's representative

THE MAYOR AND ALL COUNCILLORS - For your information

GENERAL MANAGER - For your information

DEPUTY GENERAL MANAGER INFRASTRUCTURE & MAJOR PROJECTS -

For your information

NSW FIRE SERVICE - For your information

NSW AMBULANCE SERVICE - For your information

TRANSDEV BUS SERVICE - For your information

HILLSBUS BUS SERVICE – For your information

NSW TAXI COUNCIL - For your information

Road:

Myra Street

Suburb:

Wahroonga

Location:

Waitara Public School

File Ref: F2005/00166

LTC No:

07/2020

Electorate:

Ku-ring-gai

UBD Ref:

153 M3

Subject:

Proposed Wombat Crossing

Date of Circulation: 10 March 2020

REFERRAL OF TRAFFIC MATTER FOR COMMENT OR OBJECTION, IF ANY

SUMMARY

This report details the traffic and parking implications for the proposed wombat crossing in Myra Street Wahroonga, to improve pedestrian safety around Waitara Public School.

SUBJECT

As the population of north western Sydney increases, changes to the road network are required to ensure adequate levels of road safety and access are maintained. Council in partnership with the Department of Education have identified that a marked pedestrian crossing is required across Myra Street near the southern boundary of Waitara Public School to provide a safe crossing location for children and parents who walk to school from the recently developed Waitara residential precinct.

A traffic study was undertaken on Myra Street Wahroonga in December 2019. The pedestrian and vehicular count results are as follows:

Morning Peak (8.30am - 9:30am)

Pedestrians: 257 Vehicles: 789

Product (P×V): 202,773

Afternoon Peak (3.00pm - 4.00pm)

Pedestrians: 165 Vehicles: 798

Product (P×V): 131,670

Site observations

- During the peak hours of the school, cars travelling along Myra Street often stop and give way to pedestrians at this informal crossing location.
- There are no formal pedestrian crossing facilities on Myra Street between Alexandria Parade and Edgeworth David Avenue. Many pedestrians use the median (approx. 1 metre wide) located between Park Lane and Oleander Road as a refuge.
- 60% of pedestrians were school students being accompanied by adults.
- The proposed wombat crossing will be located within the existing school zone.
- The current speed limit outside of school zone times is 60Km/h.

TfNSW Warrants

Transport for New South Wales (TfNSW) guidelines for traffic facilities contain a number of warrants which need to be met. These warrants are based on some of the following:

P - Measured pedestrian flow per hour

V - Measured vehicular traffic flow per hour

Type of road 85th percentile speed Sight distance Crash History

TfNSW warrant for a marked foot crossing is the product of P and V, which must equal or exceed a value of 60,000 during three separate periods in a day, or two separate periods at school hours for sites used predominantly by school children.

The application of reduced warrant for school children is appropriate due to high pedestrian movement and majority of pedestrians observed being school children. The traffic data indicates that the site meets TfNSW warrant for a marked pedestrian (Zebra) crossing due to high pedestrian activity and vehicle movements. Council officers have monitored the location and determined that a wombat crossing in Myra Street is warranted.

Key features of the proposal are:

- Construction of a raised threshold with a marked pedestrian crossing near the southern boundary of Waitara Pubic School (rear of 42-44 Balmoral Street and 39-43 Myra Street).
- 2. Installation of Children's Crossing candy posts and provision for display of "Children Crossing" flags.
- 3. Installation of 24m long "No Stopping" restrictions in Myra Street on the approach to the crossing.
- 4. Installation of 15m long "No Stopping" restrictions in Myra Street on the departure side of the crossing.

CONSULTATION

In February 2020, Council invited comments on the proposal from the public. The proposal was also placed on exhibition on Council's website for 14 days. 30 letters were sent to residents, tenants and Waitara Public School, as well as regulatory authorities and transport providers. Four (4) submissions were received by Council. A summary of the comments and Council response is provided below. Copies of submissions are available upon request:

Submission from resident – Parking congestion along our street is a big problem especially when the car encroaches upon the private driveway access. Please detail to what house numbers the no stopping restrictions will apply along Myra Street? Will these restrictions only apply during school hours?

Response – Council is aware that the section of Myra Street close to Waitara Public School is in high demand of on-street parking spaces. The Installation of a wombat crossing will reduce the number of on-street parking spaces due to the crossing and associated parking restrictions. The 'No Stopping' restrictions will apply along the rear of 42-44 Balmoral Street and 39-43 Myra Street on western side of Myra Street and 46 Myra street on eastern side. Although Council considered to reduce the length of parking restrictions to minimise the loss of on-street parking, TfNSW practice does not permit variations to 'No Stopping' distances. These restrictions will be 24/7 according to TfNSW Technical directions and Australian Standards.

Submission from resident – Parents have no way to adequately drop off and collect their children, there is rampant double parking, parents parking in driveways and considerable aggression from motorists that are simply trying to get through but are heavily delayed by this. I would like you now to picture how much worse that will be when a 45m stretch of space with which to park has been removed from both sides of the road.

Response – Waitara Public School redevelopment will provide a Green Travel Plan to encourage a reduction in car-based trips to the site and reduce parking demand over time. The provision of the crossing by the Department of Education will also encourage parents and carers to walk their children to and from school. Existing set down and pick up area (No Parking) is provided at the front of the school in Myra Street and accommodate up to 6 cars (37m long), a 15 minute drop off zone is also provided allowing for up to 10 cars (60m long). These restrictions were approved by LTC 24/2015.

Submission from resident – The proposed wombat crossing is too close to the intersection and is likely to impact on the operation of the traffic signals and result in extensive delays.

Response – Council has conducted multiple site inspections to determine the best location of the wombat crossing. The proposed crossing will be located 100 metres away from the intersection of Edgeworth David Avenue with Myra Street and situated near the school gate. It will provide a simple and direct connection between school and residential areas. While it is

CONSULTATION continued

likely that some disruption to traffic flow will occur as the result, It is recommended that in order to reduce constant stream of pedestrians disrupting traffic flow Transport for NSW consider providing a school crossing supervisor at the location from commencement of operation of the crossing in Myra Street.

Submission from resident – 'Happy to see a pedestrian crossing, but please – no bumps.'

Response – A raised pedestrian crossing (Wombat Crossing) is an elevated pedestrian crossing used widely throughout NSW in particular near schools. Studies show that wombat crossings reduce road related pedestrian casualties.

Submission from Ausgrid - Ausgrid has no objections to the proposal. Ausgrid recommends Council consider the need to upgrade the pedestrian crossing lighting to required standards.

Response – The review of street lighting will be referred to ADCO Constructions Pty Ltd for investigation and upgrade if necessary.

Submission from resident – 'Suggestion: To appeal to the state government to add in a green arrow to allow a better flow for the traffic. This is needed as Myra Street is now equal to or even more of a thoroughfare than Edgeworth David Avenue than it was when the lights were initially sequenced.'

Response – Alterations to traffic signals at the intersection of Edgeworth David Avenue and Myra Street are outside the scope of this proposal. The suggestion will be forwarded to TfNSW for consideration.

Submission from resident – 'If a crossing MUST be put in, it should be put as close to Park Lane as possible as (when construction in the school is finished) there are less cars parked down the South end of Myra Street. This is where the least amount of disruption to parking will occur and the pedestrians would gain the most benefit.

Response – The location of the proposed crossing has been established in consultation with the Department of Education and Council's Tree Management officers. The location near Park Lane was considered however it is not suitable due to its impact on heritage trees and geometrical constrains. Furthermore, the location near Park Lane is beyond the 'School Zone' where it would be likely impacted by higher speeds.

CONCLUSION

Site visits and consultation with the Principal of Waitara Public School, the Department of Education, local residents and Council's traffic rangers confirm the necessity for a wombat crossing at this location. The Planning Minister's approval for the upgrade of Waitara Public School was subject to conditions including the installation of the wombat crossing.

RECOMMENDATION THAT

- Construction of a Wombat Crossing, associated parking restrictions, delineation and warning signs in Myra Street near the southern boundary of Waitara Public School (rear of 42-44 Balmoral Street) be approved as per Plan No 18380 CCEX00.
- Transport for NSW be requested to consider reducing the speed limit on Myra Street to 50Km/h.
- 3. Transport for NSW be requested to consider providing a school crossing supervisor at the location of the new crossing from its completion date.
- 4. That Waitara Public School display the "Children Crossing" flags in accordance with TfNSW guidelines.
- 5. A review of street lighting at the location be conducted by ADCO Constructions Pty Ltd and any changes to street lighting implemented.

Note for voting Local Traffic Committee members.

Under Transport for NSW 'Delegation of Functions to Regulate Traffic' (operation of local traffic committees) you are required to comment or indicate your acceptance or objection to the recommendation of this report. Your response must be submitted in writing within 14 days of the date of this notice.

Please send your response via return email for the item, or email trafficbranch@hornsby.nsw.gov.au.

For further information please contact Radek Zarzycki on 9847 6524.

Upon receipt of your comments the matter will be referred to Council for action.

Radek Zarzycki Acting Chairman

Date: 10 March 2020





Meeting Title: Waitara Public School Redevelopment

Hornsby Shire Council SSD Consultation

Date: Thursday, 30th April 2020

Time: 10:30am to 11:30am

Location: Online (Microsoft Teams Meeting)

Attendees:

Rodney Pickles (RP)	Manager, Development Assessments	HSC	RPickles@Hornsby.nsw.gov.au
Radek Zarzycki (RZ)	Senior Traffic Engineer	HSC	RZarzycki@hornsby.nsw.gov.au
Alison Bangs (AB)	Heritage Architect/Heritage Planner	HSC	ABangs@hornsby.nsw.gov.au
Katy Johnson (KJ)	Project Director	SINSW	Katy.Johnson3@det.nsw.edu.au
Suchit Jani (SJ)	Project Officer	SINSW	Suchit.Jani@det.nsw.edu.au
Mardi Christian (MC)	Project Manager	TSA	Mardi.Christian@tsamgt.com
Damien Backshall (DBa)	Project Manager	TSA	Damien.Backshall@tsamgt.com
Dean Israel (DI)	Project Manager	ADCO	deani@adcoconstruct.com.au
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Michael Yarham (MY)	Cadet	ADCO	MYarham@adcoconstruct.com.au

Apologies:

David Browning (DBr) Project Director TSA <u>David.Browning@tsamgt.com</u>

Distribution: All attendees and apologies.

Item	Description	Action	Date Due
1	Welcome and Introductions		
1.1	The Waitara Public School Redevelopment is a State Significant Development (SSD). Several SSD conditions make reference to the requirement for consultation with council. The project team has already been in contact with council prior to this meeting regarding many of these conditions, the purpose of this meeting is to provide the current status of these items and capture any further items for consideration.	Note	-
1.2	All attendees introduced themselves.	Note	-
2	Conditions B28 and D8 – Road Safety Mitigation Works (including wombat crossing)		
2.1	ADCO advised that they have approval from council for the wombat crossing in the form of an email. RZ noted that the Local Traffic Committee (LTC) has approved the design and a report from the LTC confirming this is on the council's website. No conditions will be imposed by council because the work is not being performed under a council Development Application.	Note	-

Best for Project 1





2.2	Further consultation with council will be required to gain approval for any necessary permits, eg. Road Opening Permit, that are required prior to the commencement of works for the wombat crossing.	ADCO	29/05/20
2.3	Council would like to perform an inspection of the wombat crossing at completion and 6 months after completion. ADCO to notify council when works complete and ready for inspection.	ADCO	12/06/20
2.4	The maintenance or defects liability period for wombat crossing was agreed to be six months from completion.	Note	-
2.5	Council requested Works As Executed drawings for the wombat crossing following completion.	ADCO	12/06/20
3	Condition B44 – Archival Photographic Documentation – Building A		
3.1	Following an initial review of the Photographic Archival Recording (PAR) by AB, more photos were requested. Additional photos were taken on the 27 th of April 2020. The PAR is currently being revised and will be reissued shortly.	ADCO	8/05/20
4	Conditions D5 and D12 – Protection of Public Infrastructure and Road Damage		
4.1	TSA to contact RP when required to arrange for an inspection of the council assets surrounding the development. This is expected to be during August 2020.	TSA	14/08/20
4.2	ADCO advised that they were not aware of any damage caused by the development.	Note	-
4.3	To date no council site visits have occurred.	Note	-
4.4	ADCO confirmed that a dilapidation survey was conducted prior to commencement.	Note	-
5	Condition D9 – Green Travel Plan		
5.1	The draft Green Travel Plan (GTP) was submitted to council on the 23 rd of April 2020. Council have reviewed and RZ provided comments on the 30 th of April 2020 just prior to the meeting. The project team had no initial comments or queries and will work through council's feedback in order to close this item out.	ADCO	8/05/20
6	Condition D10 – Operational Transport and Access Management Plan		
6.1	An Operational Transport and Access Management Plan (OTAMP) is being prepared by GHD. GHD have been in contact with council to develop the report. RZ advised that council were satisfied and not awaiting any further information regarding the OTAMP in order to close this item out.	Note	-

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7	Condition D13 – Heritage Interpretation Plan		
7.1	A draft Heritage Interpretation Plan (HIP) was issued to council on the 23 rd of April 2020. AB provided comments on the 24 th of April, and the HIP was revised and reissued on the 29 th of April. AB confirmed that council are satisfied with the revised report and are not awaiting any further information in order to close this item out.	Note	-
7.2	ADCO will commence production of the heritage signage in accordance with the revised HIP.	Note	-
8	Other Business		
8.1	It is a requirement of the SSD that numerous documents are to be submitted to council for their information. RP confirmed that these should be issued to him and council's generic email: devmail@hornsby.nsw.gov.au	Note	-
8.2	DBa thanked council for their support and contribution to the project thus far.	Note	-

Best for Project



SINSW-Waitara P.S

Hornsby Council Traffic Meeting No. 1

Date: Wednesday	/ 3 July 2019 Time: 11:45 AM – 1:00 PM		
Location: Hornsby Council - Office			
Name	Organisation	Initials	
Attendees			
Radek Zarzycki	Senior Traffic Engineer, Traffic and Road Safety, Hornsby Shire Council (HSC)	RZ	
Lesley Tipping	Road Safety Officer, Traffic and Road Safety, Hornsby Shire Council (HSC)	LT	
Michelle Johns	Director, Northern Sydney Asset Management Unit, Department of Education	MJ	
Dany Coelho	Principal, Waitara Public School, Department of Education	DC	
David Spare	Project Director, School Infrastructure NSW (SINSW), Department of Education	DS	

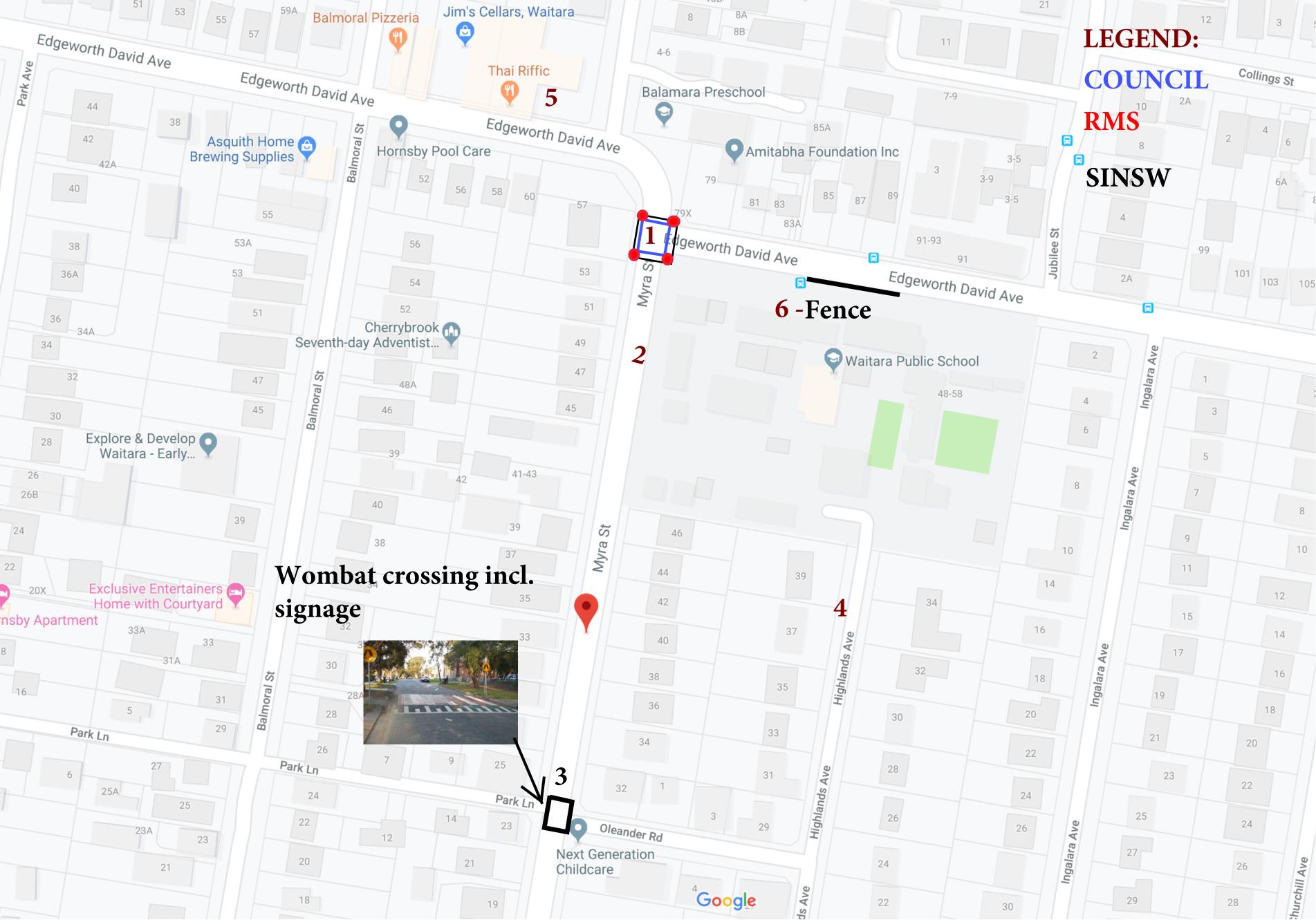
Item	Minute	Action by
1.0	Introduction	
1.1	Attendees provided introductions.	
2.0	Matters For Discussion	
2.1	Meeting commenced by discussing broadly matters that required raising at the meeting.	
2.2	Item 1 – Myra Street / Edgeworth David Drive Intersection Light Phasing.	
	Issue: Motorists Turning Right from Edgeworth David Drive East to Myra Street late (after lights turning RED, creating hazards for pedestrians walking on WALK GREEN flashing light.	
	Resolution: RMS to undertake re-phasing of traffic lights during school zone hours of operation – 8.00am-9.30am & 2.30pm-4.00pm. SINSW to request RMS to undertake assessment to increase the length of time of	SINSW / RMS Immediate



Item	Minute				
	WALK GREEN FLASHING LIGHT crossing for both Myra Street & Edgeworth David Drive.				
2.3	Item 2 – Myra Street Kiss & Drop.				
	Issue: Motorists excessive queuing to access Kiss & Drop Zone.				
	Resolution: Hornsby Council to extend length of Kiss & Drop Zone. HSC to commence consultation process.	HSC Immediate			
2.4	Item 3 – Myra Street Road Crossing During School Zone Hours				
	Issue: Excessive Traffic congestion during School Zone hours creates road crossing difficulties for pedestrians				
	Resolution: Hornsby Council proposed solution of a new Wombat crossing to intersection North of Park Lane & Myra Streets, and the deletion of the Myra Street footpath widening works. SINSW to prepare engineering plans for submission. HSC to issue engineering standards, and then commence consultation process.	HSC / SINSW Immediate			
2.5	Item 4 – Highlands Avenue No Stopping Zone				
	Issue: Vehicles overstaying approved parking periods, creating an issue for traffic flows in Highlands Avenue eg. preventing adequate turning circle for vehicles.				
	Resolution: Stopping Zone hours to be changed to 24 hour No Stopping Zone. HSC to commence consultation process.	HSC Immediate			
2.6	Item 5 – 40km/hr Speed Zone Edgeworth David Drive / Myra Street				
	Issue: The 40km/hr Speed Zone is currently deemed inadequate				
	Resolution: Extend length of 40 km/hr Speed Zone from current location to Balmoral Street. SINSW / HSC to commence consultation with RMS.	RMS Immediate			
2.7	Item 6 – Edgeworth David Drive School Entry / Exit Gate 1				
	Issue: Students exiting this gate at peak periods risk during high traffic periods				
	Resolution: Install 10-12 lineal metres of RMS rated Palisade Fencing to foot path/gutter to act as traffic / crash barrier. HSC to assist fence procurement, paid by SINSW.	HSC/SINSW Immediate			



Item	Minute	Action by
8.0	Meeting Close	



Appendix E - Road Safety Information Sheets (NSW Department of Education)





YOU ARE RESPONSIBLE FOR YOUR CHILDREN'S SAFETY WHEN THEY ARE TRAVELLING TO AND FROM SCHOOL.

Safe bus travel

A child is most at risk of harm just after getting off the bus.

To reduce risk:

- meet your children at the bus stop never on the opposite side of the road
- hold your children's hands at the bus stop
- stand a few steps back from the edge of the road when waiting at the bus stop
- wait until the bus has gone, then choose a safe place to cross the road.

Help your children to find a safe place to cross such as:

- at a pedestrian crossing or traffic lights, if available
- a clear section of road where they are visible to all traffic.

If you can't be with your children, organise for a trusted adult to meet them at the bus stop.



For further support

Go to the department's Road Safety Education program at education.nsw.gov.au/road-safety-education or visit education.nsw.gov.au and search for road safety education.





YOU ARE RESPONSIBLE FOR YOUR CHILDREN'S SAFETY WHEN THEY ARE TRAVELLING TO AND FROM SCHOOL.

Ride a bicycle safely

As younger children are still developing the skills needed to ride alone, the safest place to ride bikes, scooters and skateboards is within fenced areas.

Until children are at least 10 years old they should ride away from vehicles and driveways. As they are learning to ride it is important to ride or walk alongside them and talk about how to be a safe bicycle rider.

Children between 10 years old and 12 years old should ride away from busy roads.

Children under 16 and adult riders accompanying and supervising them may ride on the footpath, unless there are signs specifically prohibiting cycling.

Teach your children to be safe bicycle riders by getting them to always:

- follow bicycle road rules including:
 - ride to the left on footpaths
 - give pedestrians right of way on footpaths
 - watch out for cars entering or leaving driveways
- wear a correctly fitted bicycle helmet it's the law
- wear bright-coloured clothing such as a vest so other road users can see them.

For further support

Go to the department's Road Safety Education program at education.nsw.gov.au/road-safety-education or visit education.nsw.gov.au and search for road safety education.

For older children, think carefully about the following when judging their ability to ride on their own:

- How safe is the travel route?
- What are their riding skills like?
- How aware are they of their surroundings in the traffic environment?
- How well can they manage unexpected hazards?

Your school will have procedures about students bringing bikes onto school grounds. Ensure your children follow these at all times.







YOU ARE RESPONSIBLE FOR YOUR CHILDREN'S SAFETY WHEN THEY ARE TRAVELLING TO AND FROM SCHOOL.

Walk safely

Always hold your children's hands – when walking on the footpath, in the car park and when crossing the road – until they are at least 8 years old.

When your children are between 8 and 10 years old, supervise them very closely when they are near traffic and crossing the road.

When you decide to let your children over 10 years old walk to and from school by themselves, plan the journey together. Practise being a safe pedestrian by:

- keeping to the left of the footpath
- being aware of vehicles coming in and out of driveways
- not being distracted by mobile devices or by other people
- using a safe, alternative way home in wet weather
- showing respect to other pedestrians.

STOP! one step back from the kerb. **LOOK!** continuously look both ways. **LISTEN!** for the sounds of approaching traffic. **THINK!** is it safe to cross?

For further support

Go to the department's Road Safety Education program at education.nsw.gov.au/road-safety-education or visit education.nsw.gov.au and search for road safety education.

Encourage your children:

- to always use a safe place to cross the road such as a pedestrian crossing, traffic lights or a school crossing, if available
- to check for turning vehicles before they cross the road and driveways
- never to assume that a driver can see them or will stop for them
- to make eye contact with a driver so they know the driver has seen them
- to wait till the driver has completely stopped their vehicle before they cross the road or driveway.







YOU ARE RESPONSIBLE FOR YOUR CHILDREN'S SAFETY WHEN THEY ARE TRAVELLING TO AND FROM SCHOOL.

Drive and park safely near schools

The beginning and end of the school day are busy times for pedestrians and drivers outside schools.

You can help keep children safe by remembering the following:

- drop off and pick up children on the school side of the road
- never call out to children from across the road it is very dangerous
- always take extra care when driving in 40km school zones
- follow all parking signs these help keep children as safe as possible
- park responsibly even if this means you have to walk further to the school gate
- never double park it is illegal and puts children at risk
- never do a U-turn or three-point turn outside the school as it puts children at risk of harm
- model safe and considerate pedestrian and driver behaviours to your children.

For further support

Go to the department's Road Safety Education program at education.nsw.gov.au/road-safety-education or visit education.nsw.gov.au and search for road safety education.

When travelling in a car ensure your children:

- use a booster seat if they are aged between 4 and 7 years old – it's the law
- are correctly buckled up in their seatbelts
- always get in and out of the car through the 'safety door' – the rear door on the footpath side of the car
- are never left alone in the car.



Up to 6 months Approved rear-facing child car seat



6 months to 4 years Approved rear- or forward-facing child car seat



4+ yearsApproved forwardfacing child car seat or
booster seat



145cm or taller Suggested minimum height to use adult lap-sash seatbelt

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8/https://projectsportal.ghd.com/sites/pp15_04/waitarapublicschoolo/ProjectDocs/12528632 OTAMP Rev 1.docx

Document Status

Revision	Author	Reviewer		Approved for Issue		
		Name	Signature	Name	Signature	Date
А	M Lucas	O Peel	ORP	J Akstein	Jayne States	24/04/20
1	M Lucas	J Akstein	Jayne Starte	J Akstein	Jayna Mart	08/05/20

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