



**Orewa Northwest Primary School,
Sunnyheights Road**

Integrated Transport Assessment


February 2019

flow

TRANSPORTATION SPECIALISTS

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Prepared by: Colin Roche and Michael Jongeneel
Reviewed by: Bronwyn Coomer-Smit

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EXECUTIVE SUMMARY

Flow Transportation Specialists Ltd has been commissioned by the Ministry of Education to prepare an Integrated Transport Assessment for the designation of a site for a new primary school located on Sunnyheights Road, Orewa. The proposed school site is located within a currently rural environment which allows for residential development under the Orewa Precinct Plan 2. The proposed school designation site will occupy a site currently consented to allow the development 53 residential lots.

The proposed new primary school will cater to year 1 to year 6 children, with a long term school roll of up to 800 children. Two concept plans have been developed for the proposed school, and these are illustrated in Figure ES1 below. The plans have been developed to illustrate at a high level how the proposed school's facilities could be accommodated on the site, and are not fixed.

Figure ES1: Concept Plans



This report has assessed the high level transport effects of the proposed new school designation. In terms of a summary, the proposed school is:

- ♦ Expected to be able to comply with the parking and access requirements of the standard designation conditions of the Minister's schools in the AUP-OIP
- ♦ Expected to result in no significant traffic effects on the wider road network, due to the school's very limited catchment
- ♦ Expected to increase vehicle trips on local streets close to the proposed school, including on Sunnyheights Road, Celestial Crescent and a new local street termed "Street A". The effects on these local streets are not expected to necessitate any road capacity improvements
- ♦ Any traffic and transport effects of the designation on the transport network should – in consultation with the Road Controlling Authority, Auckland Transport – consider and record agreements and a programme of works for providing measures that:
 - Mitigate any adverse pedestrian and cyclist safety effects attributable to the School, and

- Prioritise travel to the school by walking, cycling and public transport, and suitably discourage private car travel.
- ◆ The development of a School Travel Plan by the elected Board of Trustees within 6 months of the School opening, together with Auckland Transport; will provide appropriate monitoring of ongoing traffic and transport effects once the School is operational. This Plan is expected to address TDM methodologies to minimise those future potential effects.

It is concluded that, subject to the above mitigation being provided, that the proposed school designation area will result in transport effects that can be efficiently and safely accommodated by the surrounding road network. As such there are no transport planning reasons to preclude the implementation of the designation as intended, subject to the proposed transportation related conditions of consent.

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1 INTRODUCTION

Flow Transportation Specialists Ltd (Flow) has been commissioned by the Ministry of Education to prepare an Integrated Transport Assessment (ITA) for the designation of a site for a new primary school located on Sunnyheights Road, Orewa.

This ITA accordingly addresses the transport planning and traffic engineering matters associated with the proposed development within the designation and includes the following matters.

- ♦ A description of the existing and anticipated future transport conditions pertaining to the designation site, including the site location within the surrounding transport network, public transport and active mode accessibility, as well as the existing road safety record in the vicinity the site
- ♦ A description of the proposed school development within the designation area, including a brief description and assessment of the transport elements of the proposal, including vehicle access, parking provision, footpath provision, cycle parking, site pick-up and drop-off area, school bus services and travel plan development
- ♦ A traffic assessment, including quantifying the amount of vehicular traffic that is likely to be generated by the proposal, and the effect this additional traffic is predicted to have on the surrounding road network during the peak commuter hours
- ♦ An assessment of the proposal with regard to the proposed designation conditions for this project
- ♦ A summary and recommendations.

2 STRATEGIC CONTEXT

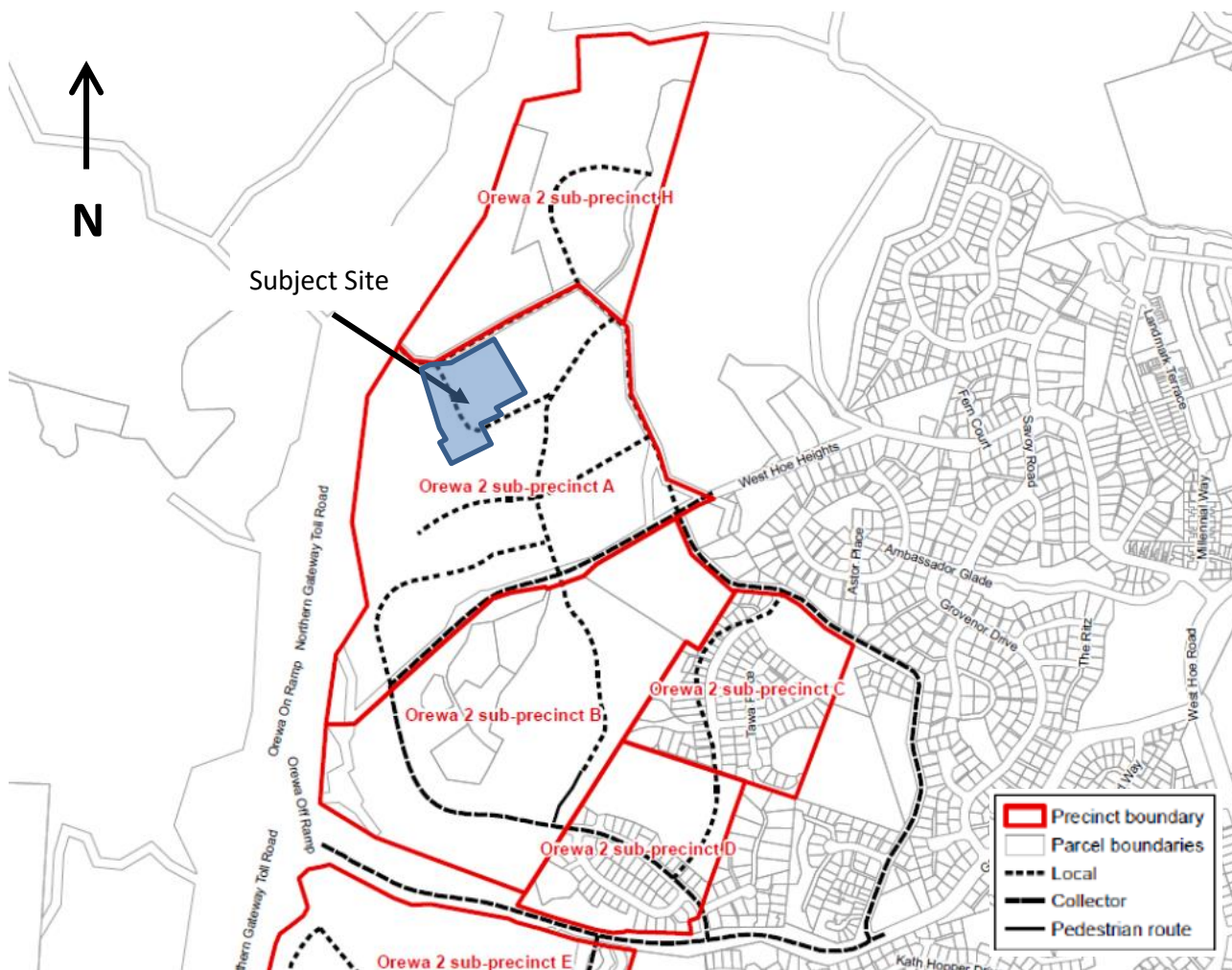
2.1 Orewa Precinct Plan

The Orewa Precinct as set out within the Auckland Unitary Plan – Operative in Part (AUP-OIP) is divided into three separate precinct plans; as described below:

- ♦ Orewa Precinct Plan 1 – located at the corner of Centreway Road and Puriri Avenue at the northern end of Orewa
- ♦ Orewa Precinct Plan 2 - bounded by the Orewa River estuary to the south; Hukumea Stream to the north; State Highway 1 (SH1) to the west; and the established Orewa urban area to the east. The Orewa 2: Precinct Plan is divided into 8 sub-precincts
- ♦ Orewa Precinct Plan 3 – located off West Hoe Heights Road in Orewa.

The subject site of the proposed school designation is located within the Orewa Precinct Plan 2 - Sub Precinct A, as shown in Figure 1.

Figure 1: Orewa Precinct plan 2 – Sub-Precincts¹



The Orewa Precinct Plan enables generally residential development within a currently rural environment. The Orewa Precinct Plan also identifies West Hoe Heights as a Collector type route.

3 EXISTING ENVIRONMENT

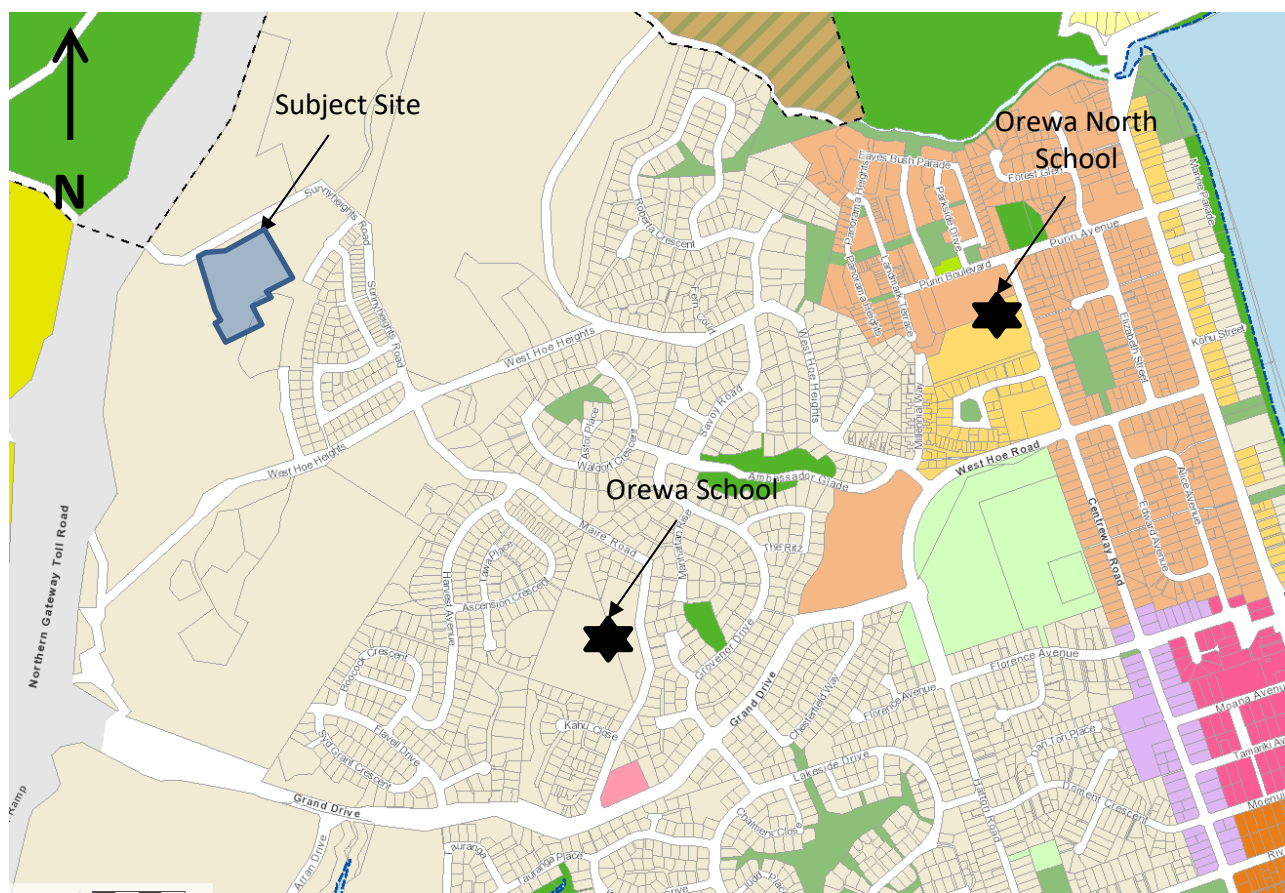
It is noted that the existing land use environment in the vicinity of the site is rural, as are the surrounding roads. The area is currently being urbanised and will change significantly in the future. Nonetheless, the existing conditions are documented here for completeness.

3.1 Site Location and the Surrounding Road Network

The proposed designation site is located on Sunnyheights Road, Orewa as shown in Figure 2 below. The existing site is currently undeveloped and rural in nature, however is zoned in the AUP-OIP for residential land use activity. Figure 2 also identifies the locations of the two existing primary schools within Orewa.

¹<http://unitaryplan.aucklandcouncil.govt.nz/Images/Auckland%20Unitary%20Plan%20Operative/Chapter%20I%20Precincts/5.%20North/I530%20Orewa%20%20Precinct.pdf>

Figure 2: Surrounding land use, Sunnyheights Road, Orewa



Sunnyheights Road, West Hoe Heights and Marie Road, in the vicinity of the site, are not classified as Arterial Roads in the AUP-OIP, and function as local roads. Sunnyheights Road and West Hoe Heights are currently rural roads, and are in the process of being urbanised.

Further to the south, Grand View Drive connects with SH1 at a grade separated interchange. Grand View Drive is classified as an Arterial Road within the AUP-OIP, and forms the main east-west arterial link between SH1 and Orewa. The signalised intersections on Grand View Drive form the main vehicle capacity constraint in the immediate area.

A network of residential, urban streets is currently under construction between West Hoe Heights and Sunnyheights Road.

3.2 Public Transport Facilities

There are no existing bus routes within the immediate proximity of the site. The nearest routes are located approximately 2 km away as shown in Figure 3.

Figure 3: Location of Existing Bus Networks



3.3 Walking and Cycling

Sunnyheights Road, West Hoe Heights and Maire Road are currently in the process of being urbanised, and have existing footpaths on both sides of each road. West Hoe Heights also has an existing painted cycle lane in each direction.

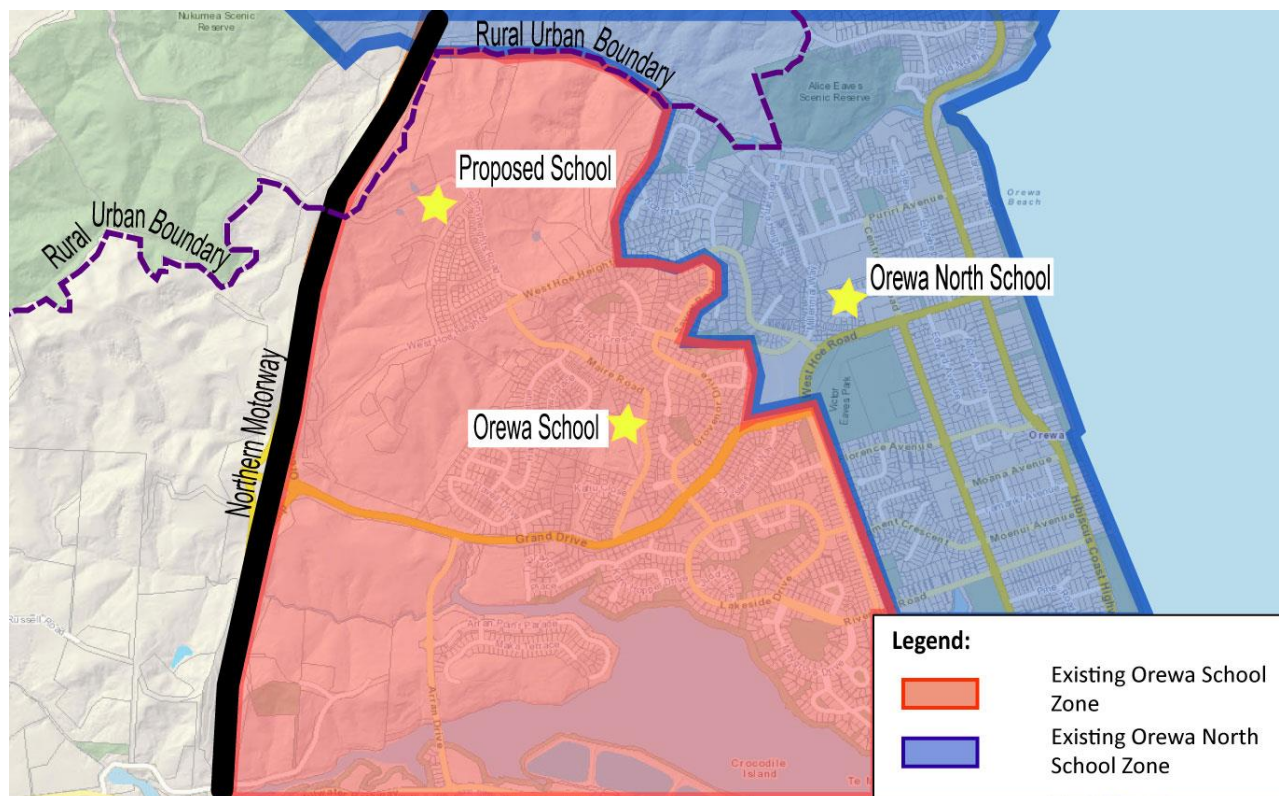
3.4 Safety Assessment

A review of New Zealand Transport Agency's Crash Analysis System (CAS) has been completed on the roads in the vicinity of the site for the five-year period 2013 to 2017 (inclusive). Over five-year period, one crash has been reported on Sunnyheights Road vicinity of the subject site. The crash occurred due to a loss of control and resulted in minor injuries.

3.5 School Enrolment Zones

Figure 4 below illustrates the school enrolment zones for the two existing primary schools in the Orewa area. The proposed school is located within the existing enrolment zone for Orewa Primary School.

Figure 4: Existing School Enrolment Zones



3.6 Existing School Mode Shares

The following table presents the existing mode shares from the two nearest existing primary schools in Orewa, as identified in Figure 2, in addition to the other public primary schools on the Hibiscus Coast and across Auckland.

Table 1: Existing Mode Shares at Hibiscus Coast Primary Schools

	Type	Walk	Cycle	Public Transport	Car
Orewa Primary Schools					
Orewa School	Years 1-6	19%	2%	4%	75%
Orewa North School	Years 1-6	11%	1%	1%	87%
Other Hibiscus Coast Primary Schools					
Red Beach School	Years 1-6	21%	1%	0%	77%
Silverdale School	Years 1-8	20%	2%	9%	67%
Stanmore Bay School	Years 1-6	29%	2%	0%	69%
Whangaparaoa School	Years 1-6	21%	3%	1%	74%

Table 1: Existing Mode Shares at Hibiscus Coast Primary Schools

	Type	Walk	Cycle	Public Transport	Car
All Auckland Primary Schools					
Auckland average	Years 1-6	31%	1%	2%	65%
Highest mode share	Years 1-6	60% ²	13% ³	35% ⁴	94% ⁵

The following observations are made in regard to the above existing school mode shares:

- ♦ The majority of school children travel by car. This is particularly the case within Whangaparaoa, and more so at Orewa North School, which has a significant rural school zone that extends beyond Puhoi
- ♦ Few school children travel by bus. Silverdale School is an outlier due as it shares a bus route from Stillwater with Stella Maris College and Kingsway School
- ♦ Between 10% and 60% of children walk to school, with 29% being the upper limit within Whangaparaoa
- ♦ Relatively consistent proportions of children cycle to school, at 1% to 3%, although some Auckland schools achieve much higher modes.

4 FUTURE ENVIRONMENT

4.1 Consented Land Use and Road Network

Figure 5 overleaf illustrates the extent of the consented residential developments in the area of the proposed school. A currently unnamed and incomplete local street immediately south of the development site has, for clarity, been named Street A throughout this report.

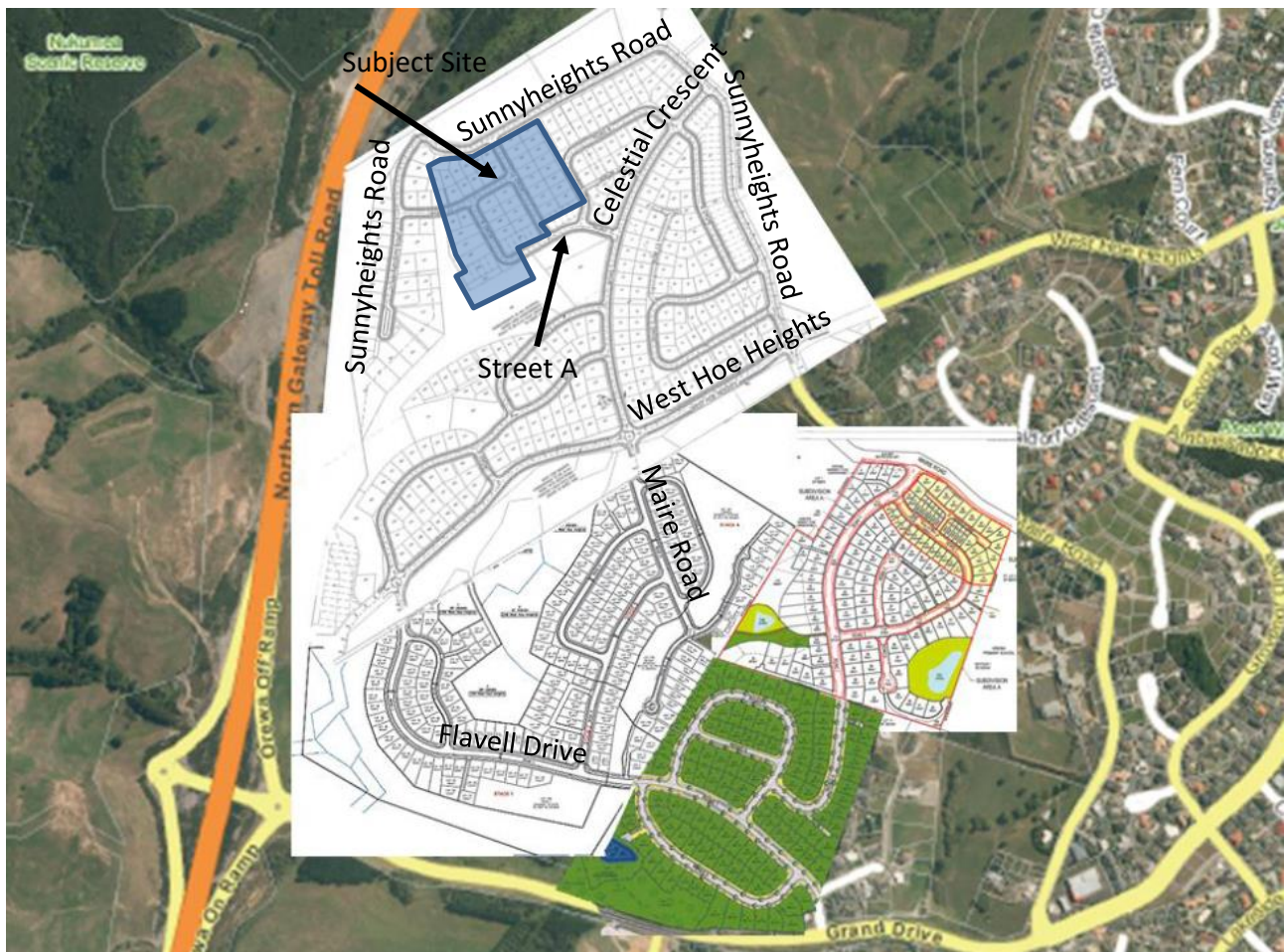
² Devonport and Glenfield Primary Schools

³ Bayswater School

⁴ Matakana School

⁵ St Joseph's School Orakei

Figure 5: Consented Residential Subdivisions



The Orewa Precinct Plan 2 intends to provide a proposed street network to allow attractive and safe transport routes with the provision for all modes of transport. This has been realised through the introduction of various local and collector roads, with the indicative cross sections of these roads illustrated in Figure 6 and Figure 7.

Figure 6: Orewa Precinct 2 – Collector Road

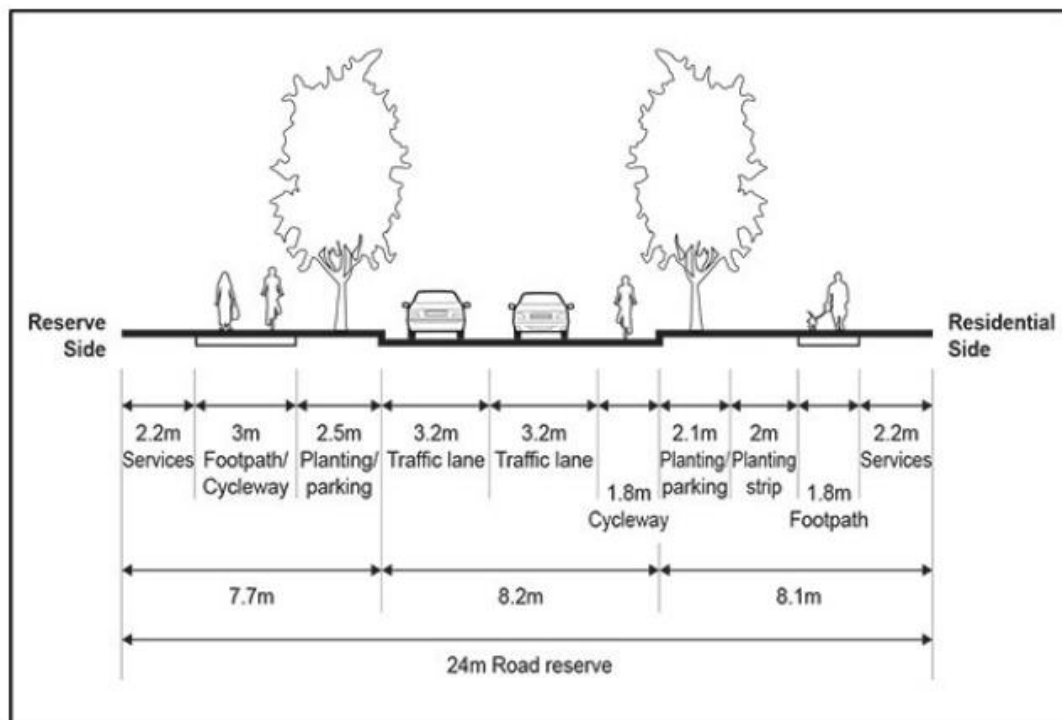
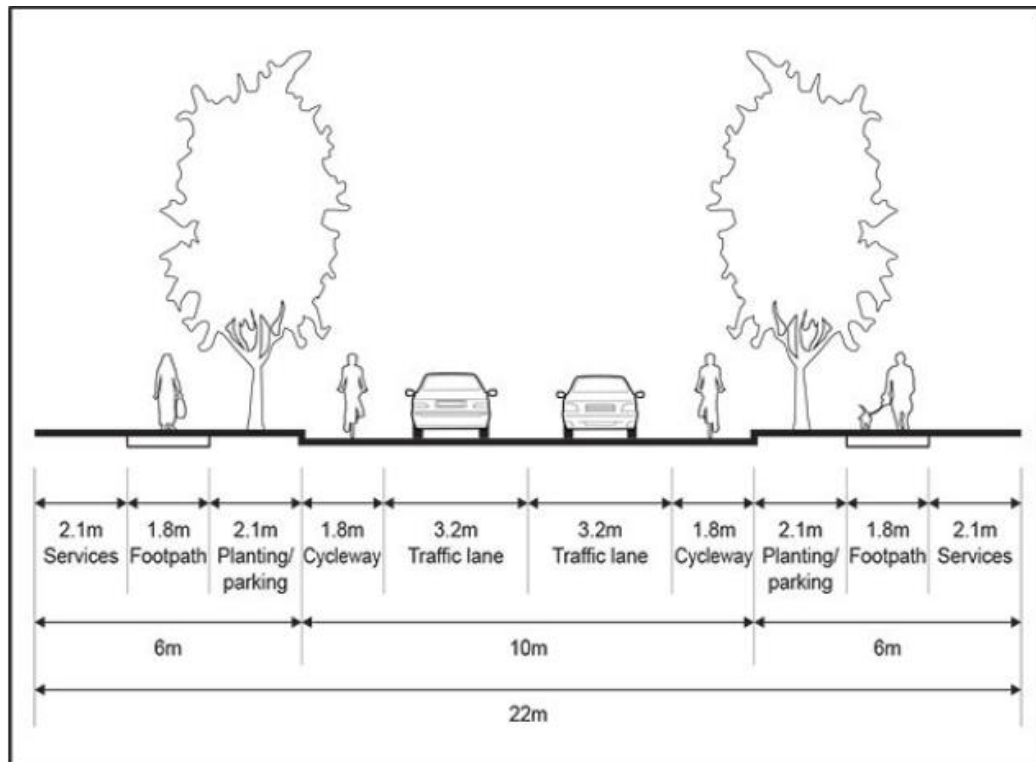


Figure 7: Orewa Precinct 2 – Collector Road Park Edge



On completion of the Orewa Precinct Plan 2 area, Grand View Drive will continue to be the only arterial road through the area. All roads to the north will be local or collector streets, controlled by priority intersections or single lane roundabouts.

4.2 Consented Trip Generation for the Site

The proposed school will occupy the site of 53 consented residential lots. Low density residential lots such as those consented typically generate 9 daily vehicle trips per household and 0.85 vehicle trips per household during the commuter peak hours⁶. Applying these rates, the 53 currently consented households are expected to generate in the order of 477 daily vehicle trips, and 45 vehicle trips during the commuter peak hours.

4.3 Public Transport Facilities

Auckland Transport has indicated that the existing route 985 (N95 in the below route consultation map) will be extended via Flavell Drive, Celestial Crescent, Sunnyheights Road and West Hoe Heights once the surrounding area has been urbanised. The 985 service currently operates hourly throughout the day.

Figure 8: Existing and Future Bus Network



4.4 Walking and Cycling

As shown in Figure 6 and Figure 7 above, all new streets proposed as part of the wider Orewa Precinct Plan 2 will have footpaths on both sides of the street. Collector and arterial routes will also have cycle facilities, either in the form of on street painted cycle lanes, or off street shared paths.

⁶ The Road and Traffic Authority of New South Wales (RTA), *Guide to Traffic Generating Developments, Version 2.2*

4.5 Road Safety

Given that the road environment surrounding the proposed school is generally under construction and the area was historically rural, the crash history documented in Section 3.4 is not considered representative of the longer term road safety environment, following urbanisation. It is expected however that the roads being constructed will meet current road safety expectations for an urban, residential area, in that:

- ♦ Streets will have footpaths on both sides and pram crossings in appropriate places
- ♦ Traffic speeds on local streets will be appropriate
- ♦ The geometric design of streets will be appropriate
- ♦ Cycle lanes will be provided on Collector routes.

It is noted however that the footpaths currently being constructed on local streets in the area are generally 1.8 m wide. While this is appropriate to support residential land uses currently proposed, they are not necessarily sufficient to provide access to a large primary school.

5 PRELIMINARY CONCEPT PLAN

5.1 Overview

The proposed new primary school will cater to year 1 to year 6 children, with a forecast school roll of 550 children. The Ministry of Education has indicated however that the long term capacity of the school may be as high as 800 children, and it is this upper capacity limit that has been assessed in this ITA.

Two concept plans have been developed for the proposed school, and these are illustrated in Figure 9 and Figure 10 overleaf. We understand that the concept plans were developed to confirm the area of land required for the new educational facilities, the bulk and massing of school buildings and how the school's features may be accommodated, as well as confirming a suitable location for road access to service all future activities on the undeveloped area of land.

It is noted that the concept plans considered in this report are subject to change. They are provided here only to assist in the assessment of potential traffic and transport effects of the designation. The final form of development on the School site will be the basis of the Establishment Outline Plan of Works, submitted once the designation is confirmed.

Figure 9: Option 1 Concept Plan

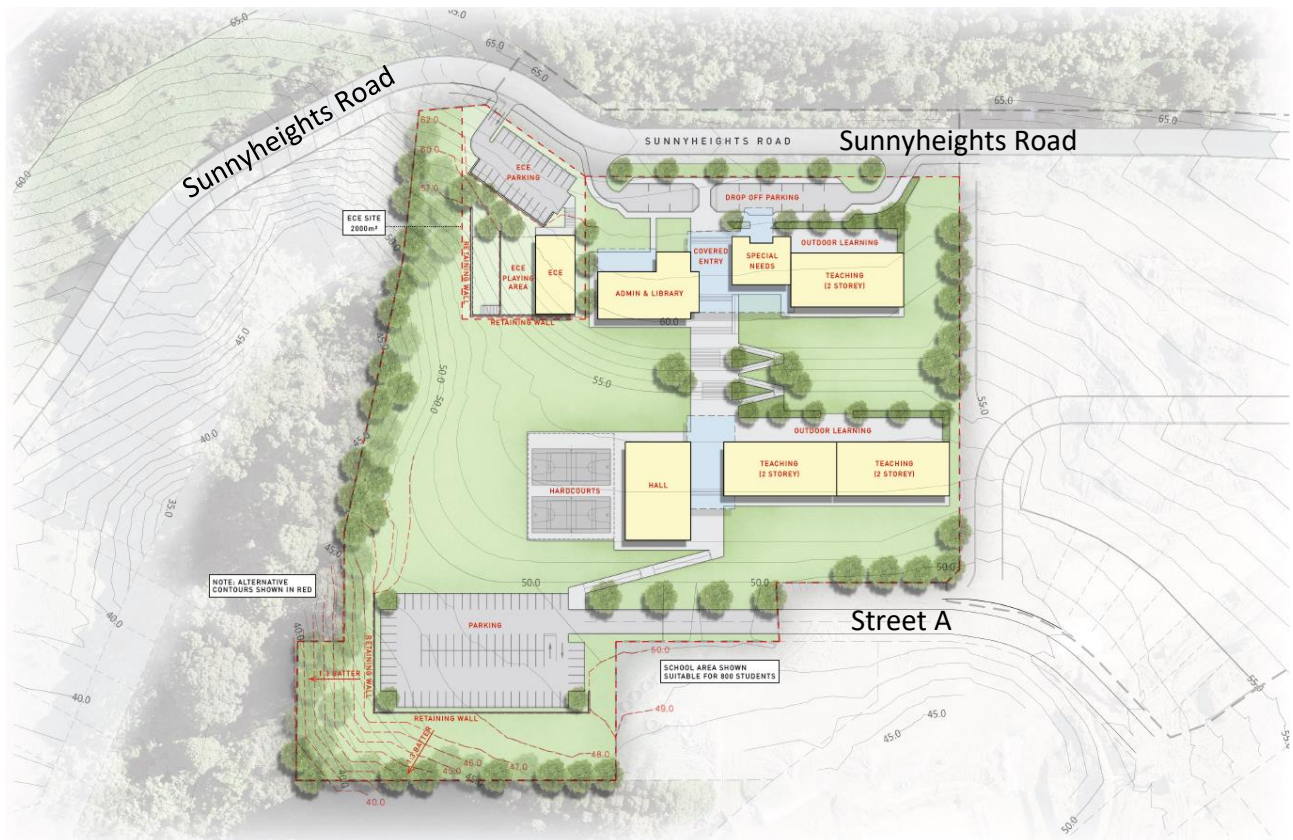


Figure 10: Option 2 Concept Plan

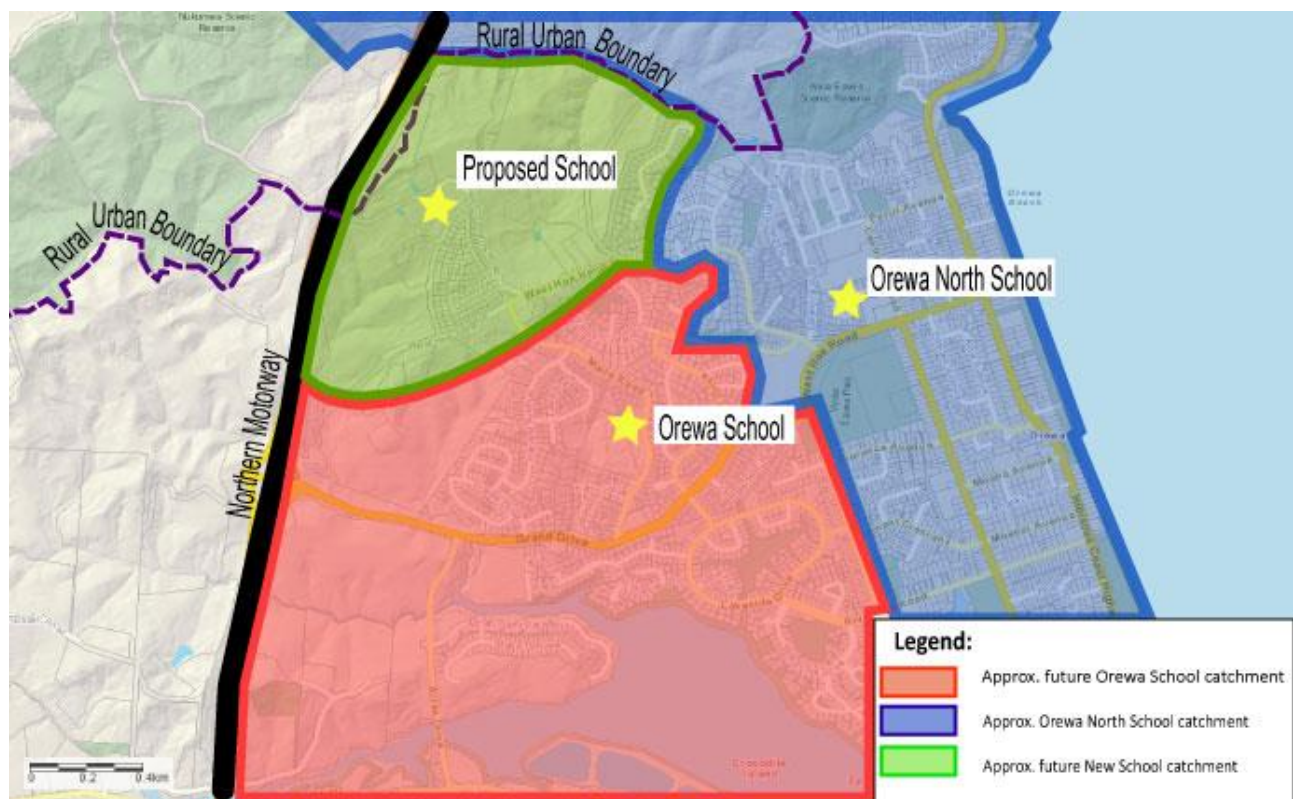


5.2 School Catchments

The following figure illustrates the estimated school catchment of the proposed school. In developing this plan, the following has been considered:

- ◆ The proposed catchment will fall, broadly, midway between the proposed school and the two existing adjacent schools
- ◆ The proposed catchment is not expected to extend north of the Rural Urban Boundary, as there are no proposed road links from the Orewa Precinct Plan 2 area into this rural area. Instead, rural areas to the north are expected to remain within the enrolment zone of Orewa School, to which there are bus links
- ◆ The proposed catchment is not expected to extend west of SH1. While the AUP-OIP identifies Future Urban Areas west of SH1 to the southwest, the Supporting Growth programme proposes no future road links across the motorway north of Grandview Drive. It is assumed that future residential development west of SH1 will be supported by a new school west of SH1.

Figure 11: Estimated Future School Catchment Areas



The estimated catchment of the proposed school is extremely compact, with most students anticipated to live within a 1 km walk of the school.

5.3 Vehicle Access

Four vehicle accesses are proposed, split across Sunnyheights Road and “Street A” to the south of the school site. These include:

- ◆ Two accesses for a parent pick-up/drop-off area on Sunnyheights Road (one entry and one egress)
- ◆ One access for a staff parking area on Street A
- ◆ One access for a parking area to support a separate early childhood education facility.

Splitting the vehicle traffic across the two streets will distribute the effects of school traffic during the school peak periods and reduce conflict.

The design of each vehicle access will be compliant with the design requirements of the AUP-OIP in terms of width, gradient, separation, and distance from boundaries and intersections. The number of vehicle crossings proposed will also comply with the AUP-OIP requirements given the approximately 260 m road frontage of the site.

5.4 Parking Provision

As shown on in the concept plans above, it is intended to provide three separate on-site car parking within the school grounds for:

- ◆ School staff
- ◆ Parent pick-up and drop-off
- ◆ The early childhood education facility (both staff and parent pick-up and drop-off).

Overall the amount of parking that will be required to be provided on the site will be in accordance with the standard AUP-OIP school designation conditions for car parking provision as follows:

- ◆ School activities: A minimum of two spaces per classroom. No maximum applies
- ◆ Early Childhood Education activities: A minimum of 0.1 per child, plus one per full time equivalent employee. No maximum applies.

5.5 Cycle Parking

Cycle parking will be provided on the site in accordance with the standard AUP-OIP school designation conditions as follows:

- ◆ Visitor spaces: A minimum of one space plus one space per 400 students and full time equivalent employees (approximately three visitor spaces are anticipated)
- ◆ Secure spaces: A minimum of one space per 30 students in years 1 to 5 plus one per 15 students in year 6 (approximately 30 secure spaces are anticipated).

Notwithstanding this AUP-OIP requirement, it is anticipated that the minimum cycle parking required to meet the AUP-OIP requirements will not meet the demand for student’s bicycles. A higher provision is accordingly recommended, in line with the predicted mode share presented in Section 5.9

5.6 On-site Pick up and Drop off Provision

An on-site pick-up and drop-off area will be provided within the school site, with one-way entry and egress onto Sunnyheights Road. There is no reason why the site cannot be designed such that parents who prefer to pick up and drop off their children by car can enter the school's parking area and park at the allocated parking and then pick up their children.

It is unlikely however that this pick-up and drop-off area will be sufficient to cater for all vehicles, particularly in the afternoon peak when parents typically park and wait for their children to finish school, and when parking demands are greatest. As a result, some degree of short stay parking on the local street network is expected at these peak times during school terms.

5.7 School Bus Service

Given the small catchment of the proposed school, no school bus service is proposed.

5.8 School Travel Plan

A School Travel Plan will be developed to provide specifically for measures to reduce vehicle dependence, including walking school buses, carpooling, the encouragement of the use of remote pick up/drop off locations if appropriate, and the encouragement of walking and cycling. This Travel Plan will also specifically address the following matters:

- ♦ Safe access to the entry points to the school. Features such as Kea Crossings or Zebra Crossings will be specifically considered
- ♦ Consistency with, or use of Auckland Transport's TravelWise programme, or any equivalent programme adopted
- ♦ Measures to separate vehicle entry and pedestrian/cyclist entries.

This Travel Plan will be developed in consultation with Auckland Transport Community Transport group and will include details of the required monitoring, to be agreed with Auckland Transport as part of the Travel Plan's development.

5.9 Predicted Mode Share

A predicted mode split for the proposed primary school has been developed, based on the existing Whangaparaoa and wider Auckland primary schools' mode shares presented in Section 3.6, in addition to the following considerations:

- ♦ The school's estimated catchment will be very small, with a large portion of pupils expected to live within a 1 km walk of the school
- ♦ Almost all the streets within the school's catchment will be local streets, with only West Hoe Heights and Maire Road being collectors; there will be no arterial roads within the catchment
- ♦ The new collector roads proposed within the Orewa Precinct Plan will generally all have off road shared paths or on street cycle lanes, while roads around existing Whangaparaoa primary schools generally do not

- ♦ Mitigation is recommended to improve the surrounding environment for pedestrians and cyclists (refer Section 6.3)
- ♦ While the school will be served by a proposed new public bus route, this is not expected to be used by a significant number of pupils, due to their age and the small size of the school's catchment
- ♦ There will be limited parking capacity for parents wishing to drop off or pick up their children
- ♦ A School Travel Plan will be implemented to encourage parents to allow their children to travel via modes other than private car (Section 5.8).

Table 2: Predicted Student Mode Shares at Proposed Primary School

	Walk	Cycle	Public Transport	Car	Total
Percentage	60%	10%	1%	29%	100%
Students	480	80	8	232	800

5.10 Predicted Traffic Generation

In order to assess the expected vehicular trip generation of the proposed development within the designation, an assessment has been carried out using a “first principles” approach. This assessment is based on a combination of trip generation rate information including:

Table 3: Applicable Vehicle Trip Rates (per hour unless specified)

Source	Morning Peak Trip Rate	Afternoon Peak Trip Rate
Early childhood education facilities		
RTA guidelines ⁷	1.4 trips/child (2-hour)	0.8 trips/child (1½-hour)
New Zealand Trips Database Bureau (TDB)	0.9 trips/child	0.8 trips/child
Average	0.8 trips/child	0.67 trips/child
Primary Schools		
RTA guidelines	No data	No data
New Zealand Trips Database Bureau (TDB)	0.65 trips/child	0.56 trips/child
Average	0.65 trips/child	0.56 trips/child

Given however that the average Auckland primary school has a private car mode share of 65%, while the proposed school is expected to have a private car mode share of 29% (ie 55% less), the trip generation rates for the proposed primary school have been factored down by 55%.

⁷ The Road and Traffic Authority of New South Wales (RTA), *Guide to Traffic Generating Developments, Version 2.2*

A summary of the resulting morning and evening peak hour vehicle trip generation assessment can be found in Table 4 below.

Table 4: Vehicle Trip Generation Summary

Land use Activity		Morning Peak Hour		Afternoon Peak Hour	
		Trip Rate	Trips	Trip Rate	Trips
Early childcare facility	100 children assumed	0.8 trips/child	70	0.67 trips/child	67
Primary school	700 children assumed	0.29 trips/child	203	0.25 trips/child	175
TOTAL		273 trips		242 trips	

The 273 peak hour trips during the morning peak hour equates to 137 return trips. As a sensibility check – the 232 students travelling to school by car (Section 5.9) corresponds to an average of 1.5 students per car, if assuming 90% of students travel during the peak hour. This is a sensible outcome, as some students will be dropped off with siblings or friends.

The above trip generation is greater than the currently consented 53 households, which are estimated to generate approximately 45 vehicle trips in the morning peak hour.

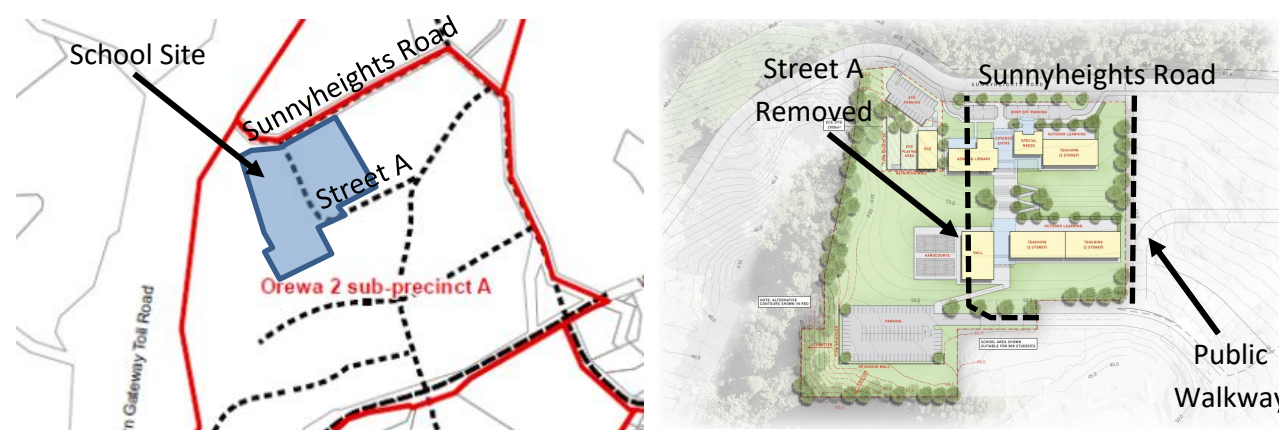
It is expected that the proposed school will generate negligible vehicle trips during the evening commuter peak hour, which is less than the 45 trips generate by the currently consented 53 households.

5.11 Alignment with Orewa Precinct Plan 2

It is not a requirement of the proposed designation, to comply in their entirety with Precinct Plan rules, objectives or policies contained in a District Plan. They are however, considered here in this section against the preliminary concept plans for School development for reference only, and to enable a more comprehensive assessment of traffic and transport effects.

The Orewa Precinct Plan 2 identifies a local street link within Orewa 2 Sub Precinct A (“Street A”). The proposed school will replace this local street link, as illustrated in Figure 12. It is noted however that a public walkway will be provided immediately east of the school, as shown in Figure 12.

Figure 12: Orewa Precinct plan 2 Road Network (left) and Proposed School (right)



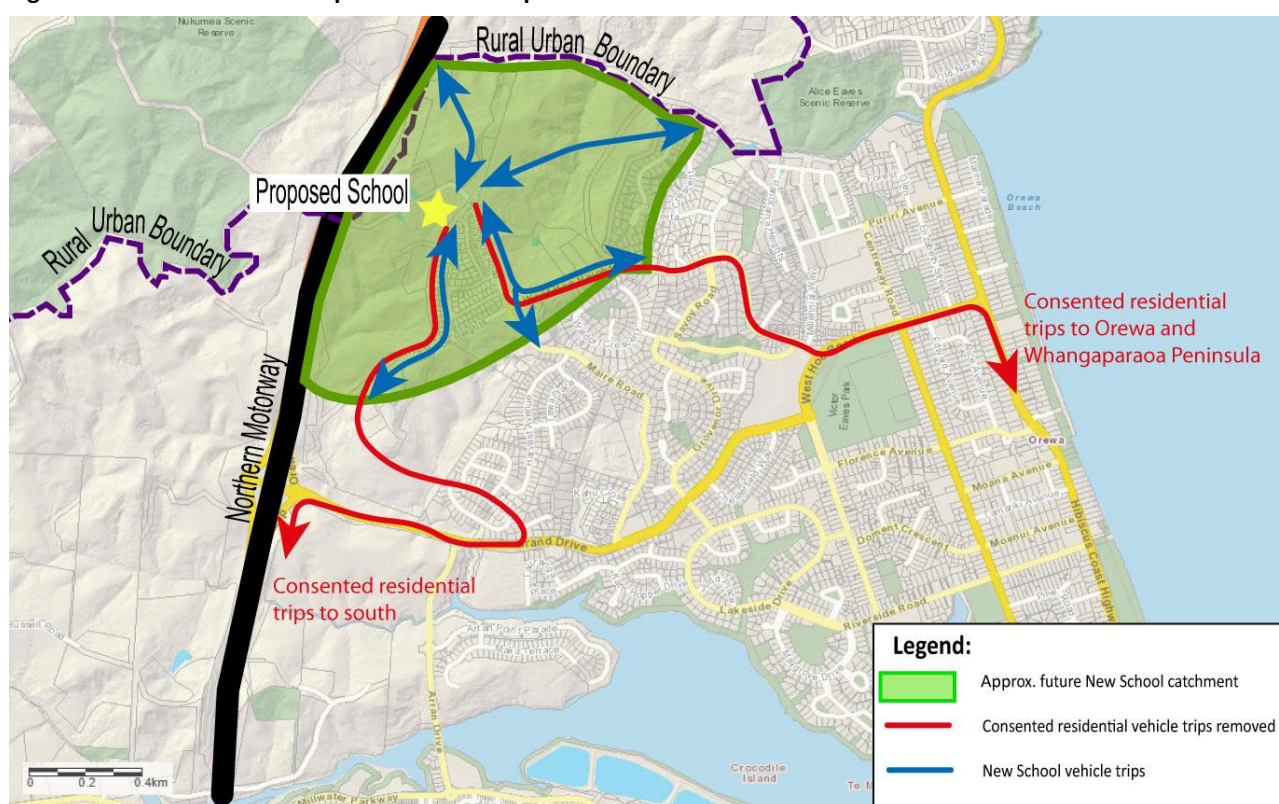
This change is minor inconsistency with the proposed Orewa Precinct Plan 2, the effects of which are discussed in Section 6.2.

6 TRAFFIC EFFECTS

6.1 School Traffic

As identified previously in Section 5.2, the proposed new school will have a relatively small catchment. This catchment will be bounded on the west by SH1 and the Rural Urban Boundary, and to the north by the Rural Urban Boundary. As a result, the school's estimated vehicle trips in Table 4 will generally be limited to this small catchment, as illustrated schematically in Figure 13.

Figure 13: Consented and Proposed Vehicle Trip Patterns



With regard to the 45 vehicle trips per hour estimated to be generated by the currently consented residential development and shown in red above, the following is noted:

- ◆ These vehicle trips will be very tidal, with typically 85% outbound in the morning peak hour (38 vehicle trips)
- ◆ These residential trips will generally be bound for the Northern Motorway via Grand Drive, or for Orewa and the Whangaparaoa Peninsula via West Hoe Road and Hibiscus Coast Highway
- ◆ Predominantly use only two routes south
- ◆ As a result, the 45 residential vehicle trips per hour will contribute to wider traffic congestion on Grand Drive, the Northern Motorway, Hibiscus Coast Highway and beyond.

By comparison, the 273 morning peak hour vehicle trips estimated to be generated by the proposed school will generally be:

- ◆ Return trips (137 trips in each direction)
- ◆ Limited to a very small geographic area that does not include Grand Drive, the Northern Motorway, Hibiscus Coast Highway or any arterial roads
- ◆ Be distributed across multiple routes, including new local streets to the north that have not yet been planned.

As a result, while the proposed school will generate more vehicle trips than the currently consented residential land use, the traffic effects on the wider transport network are expected to reduce.

Local traffic effects of the school's vehicle trips will have an impact on the local streets that directly serve the site, most notably on Sunnyheights Road, Celestial Crescent and "Street A". Suitable provision will need to be provided for these vehicles, in terms of both parking and managing their traffic effects. This is expected to require on street parking spaces to be clearly demarcated on all streets in close proximity to the school gates, with no stopping markings elsewhere. Depending on the availability of on-street parking on these streets (currently under construction), additional on-street parking may also be required within indented parking bays.

It is not anticipated that the intersections of local streets (currently under construction) will need to be changed to accommodate school traffic.

The current school concept plans do not preclude the local network from operating safely and efficiently. In particular, the division of the school's vehicle activity between the two access roads (Sunnyheights Road and Street A) will disperse the traffic effects, with approximately 135 vehicle trips per hour using each approach (if split 50/50), or roughly two vehicles per minute. These two vehicle trips per minute are not expected to result in congestion on these low volume, slow speed local streets.

6.2 Removed Local Street

As identified in Section 5.11, the proposed school will be inconsistent with the Orewa Precinct Plan 2, in that a local street link identified in this plan ("Street A") will no longer be able to be provided. In this regard, the local street in the Precinct Plan would have served two network functions:

- ◆ Local property access: Street A would have provided property access to the residential lots directly fronting it. By replacing these lots, the proposed school makes this function redundant
- ◆ Access to Sunnyheights Road: Street A would have provided a secondary access to the western end of Sunnyheights Road, affecting the 45 residential lots proposed on this cul-de-sac, west of Street A. By removing Street A, access to these properties will only be via the eastern end of Sunnyheights Road. The Sunnyheights Road route is approximately the same length as the Street A route, and is a more appropriate route given Sunnyheights Road has a higher network function. For pedestrians and cyclists, a public accessway is proposed immediately east of the school, replicating the connectivity of Street A for active mode users.

As a result of the above, the network effects of removing the local link identified in the Precinct Plan are considered to be insignificant.

6.3 Transport Network Improvements

There will be a number of improvements required to the local transport network to assist in achieving the mode shares previously documented in Section 5.9, and to mitigate the safety implications of increased numbers of children on streets within the area. These improvements will be subject to agreement with Auckland Transport as the Road Controlling Authority (RCA), and will need to both address any adverse environmental effects of the designation on the transport network, as well as appropriately prioritise travel to the school by walking and cycling over private car travel.

7 RECOMMENDED CONDITIONS

The following conditions are recommended to apply to the school designation:

1. Establishment Outline Plan

The requiring authority shall, in accordance with the requirements of s176A of the Resource Management Act, submit an Establishment Outline Plan for the construction and development of the school and/or Early Childhood Education Centre (ECE) which will include the following further information:

- a) *A Design Concept Plan* for the site showing:
 - i. The general location of access points for vehicles, scooters/cyclists and pedestrians, parking areas (including cycle/scooter parks), and pick-up and drop-off areas;
 - ii. Measures and treatments at all access points to manage conflict between pedestrians, cyclists/scooter users and vehicles;
 - iii. General location of building platform areas for proposed buildings and open space (such as playgrounds and sport fields); and
 - iv. “Indicative” areas accommodating future education purpose growth on this site. This may include building platforms, car-parking areas, vehicular access, manoeuvring and circulation areas.
- b) *A Traffic Impact Assessment (TIA) Report* prepared by a suitably qualified traffic engineer and/or transportation planner which, taking into account the Integrated Transport Assessment (ITA), as well as safety and efficiency, addresses the following specific matters:
 - i. Safe access to the site for pedestrians, cyclists and vehicles (including buses, rubbish trucks and ground and building maintenance) and appropriate measures and treatments to minimise conflict between all transport modes;
 - ii. On-site staff and visitor car parking, cycle and scooter parking, and loading spaces to facilitate deliveries and rubbish removal;

- iii. On-site pick-up and drop-off area(s) specifically designed to accommodate predicted demand including vehicular access, circulation, manoeuvring for cars and buses (if required). The following matters should be specifically addressed:
 - a. Potential effects on the safe and efficient operation of the transport network;
 - b. Providing for the continuity of cycle and pedestrian facilities;
 - c. Providing access points to the school for those who walk and cycle on either side of the pick-up and drop-off access;
 - d. An onsite pick-up and drop-off area for the ECE independent of the school; and
 - e. Whether access to the pick-up and drop-off area(s) is to be provided off Sunnyheights Road or the road on the southern boundary of the site. The access design will be supported by a preliminary design stage safety audit and a non-motorised user audit undertaken by an independent traffic engineer.
- iv. Impediments on the safe and efficient movement of pedestrians and cyclists within the school catchment and any measures needed to mitigate these;
- v. Traffic generation and any means of mitigating adverse effects on the efficiency and safety of the transport network;
- vi. Measures that encourage and provide for safe walking and cycling routes along routes leading to and from the proposed school, including but not limited to Celestial Crescent between Sunnyheights Road and West Hoe Heights (with consideration given to the speed environment on these routes); and
- vii. Measures that provide safe, convenient and appealing access to the public transport network for staff and pupils of the school.
- c) A summary of the *Consultation and Engagement* with Auckland Transport (Road Controlling Authority) and Auckland Council (Territorial Authority), recording agreements reached on the traffic and transport matters described below, and effects associated with the school and ECE on the adjoining existing and future transport network. A copy of the draft *Design Concept Plan* and draft *Traffic Impact Assessment* prepared to support the Establishment Outline Plan will be provided to Auckland Transport for the purposes of this consultation and engagement.

The specific transport matters that will be considered and discussed include:

- i. Measures and treatments to ensure safe access is provided to the school and ECE for all transport modes;
- ii. Measures and treatments to the adjoining road network, such as those included in the Auckland Transport Code of Practice, or updated equivalent Auckland Transport design standards which apply at the time of the preparation of the Establishment Outline Plan – road widening, pedestrian and cycle facilities (crossings and paths), right turn bays, signs, road markings (e.g. No Stopping At All Times (NSAAT)), traffic management and calming

measures – to support forecast increases of traffic and travel modes that are attributed directly to School traffic and transport; and

- iii. Bus access (if any) and the location of bus stops and shelters along the school and ECE road frontages.

2. School Travel Plan

- a) Within six (6) months of the opening of the School, the requiring authority shall either directly or through the School Board of Trustees, develop a School Travel Plan.
- b) The purpose of the School Travel Plan is to provide specifically for measures to reduce vehicle dependence, including walking school buses, carpooling, the encouragement of the use of public transport, and the encouragement of walking and cycling. This Travel Plan must also specifically address the following matters:
 - i. Safe access to the entry points of the school. Features such as kea crossings or zebra crossings should be specifically considered;
 - ii. Consistency with or use of Auckland Transport's Travelwise Programme, or any equivalent programme adopted;
 - iii. Measures to separate vehicle entry and pedestrian/cyclist entries; and
 - iv. Location and provision on site of any scooter and cycle parking required.
- c) The School Travel Plan shall be developed in consultation with Auckland Transport and shall include a monitoring programme. The School Travel Plan will be revised at the time of submitting each subsequent outline plan where there is an increase in student numbers.
- d) A joint Travel Plan for the school and early childhood education centre on the site may be developed.

3. On Site Pick Up and Drop Off

- a) Vehicular on-site pick up and drop off areas for the school and ECE shall be provided. The number of pick up and drop off bays will be determined by an assessment of the peak demand for vehicles entering and exiting the site. This assessment will be undertaken, and the results submitted, as part of any future outline plans where there is an increase in student numbers.
- b) An assessment of the need for a bus pick-up and drop-off facility for the school shall be submitted as part of any future outline plans where there is an increase in student numbers.

4. Construction

A Construction Management Plan shall be prepared and submitted with any outline plan for major site works.

8 CONCLUSIONS

This report has assessed the high level effects of the proposed new school designation, within the Orewa Precinct Plan 2 area. In conclusion, from a traffic and transport perspective, the proposed school:

- ♦ Will be able to comply with the parking and access requirements of the standard designation conditions of the Minister of Education already included in the AUP-OIP.
- ♦ Will result in no significant traffic effects on the wider road network, due to the school's very limited catchment
- ♦ Will increase vehicle trips on local streets close to the proposed school, including on Sunnyheights Road, Celestial Crescent and "Street A". The effects on these local streets are not expected to necessitate any road capacity improvements
- ♦ Will, where any traffic and transport effects of the designation on the transport network are identified – in consultation with the Road Controlling Authority, AT – consider and record agreements and a programme of works; for providing measures mitigating any adverse safety effects on the network, which are wholly attributable to the School and the designated site.
- ♦ Will develop a School Travel Plan as a designation condition. This Travel Plan developed by the elected Board of Trustees within 6 months of the School opening together with Auckland Transport; will provide appropriate monitoring of ongoing traffic and transport effects once the School is operational. This Plan is expected to address TDM methodologies to minimise those future potential effects.

Subject to the above traffic and transport matters being considered and addressed at the time of Establishment OPW it is considered that the proposed school designation area will result in transport effects that can be efficiently and safely accommodated by the surrounding road network.

As such there are no transport planning reasons to preclude the implementation of the designation as intended, subject to the traffic and transport effects-related designation conditions identified previously in Section 7 of this ITA.