



Ministry of Education

Flat Bush School Notice of
Requirement

Integrated Transportation Assessment Report

February 2016

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Quality Assurance Statement

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1. Introduction

TDG was commissioned by The Ministry of Education to prepare an Integrated Transport Assessment (“ITA”) for a new primary school and childcare to be built on Flat Bush School Road in Flat Bush, Auckland.

As a Requiring Authority, the Ministry of Education is seeking a Notice of Requirement to enable this process. This report follows the Auckland Transport guidelines for the preparation of an ITA.

The purpose of the report is to establish if the site in question is suitable for situating a school and childcare, rather than to focus upon the details of how these institutions will be constructed or operate.

2. Existing Transport Context

2.1 Site Location

The proposed school site is located on Flat Bush School Road approximately 300m east of its intersection with Murphys Road. The surrounding land is currently mostly rural but that is rapidly developing into mainly suburban housing. Initial residential developments already exist on Flat Bush School Road on the western side of Murphys Road. **Figure 1** shows an aerial photo of the site and its surroundings.

A large Special Housing Area (“SHA”) allowing expedited consenting and development has been announced by Auckland Council and a developer just north of the proposed school site. Furthermore, a “strategic SHA” has been declared over the wider surrounding area, with both shown in **Figure 2**. This strategic overlay identifies that any further developers in this area who apply for SHA status are likely to be approved relatively directly by Council. While neither the specific SHA nor the strategic overlay provide certainty of actual development, they indicate plans for significant and potentially relatively speedy development in the area.

Regarding zoning, the surrounding areas are mainly Flat Bush Residential 3 according to the Auckland Council District Plan – Operative Manukau Section (“District Plan”), with a Flat Bush Neighbourhood Centre zoning on the area around the eastern side of the Flat Bush School Road / Murphys Road intersection, towards the school side. This allows medium-to-high density residential development in the area surrounding the school. While high density may not eventuate in the near future, it is considered that the surrounding area has a potential for large numbers of housing units.

2.2 Public Transport

Currently there are no public bus services that serve Flat Bush School Road or Murphys Road in the vicinity of the site. The nearest bus route is the 589, located over 1km away on Ormiston Road, which connects Botany Town Centre with Beachlands and Maraetai.

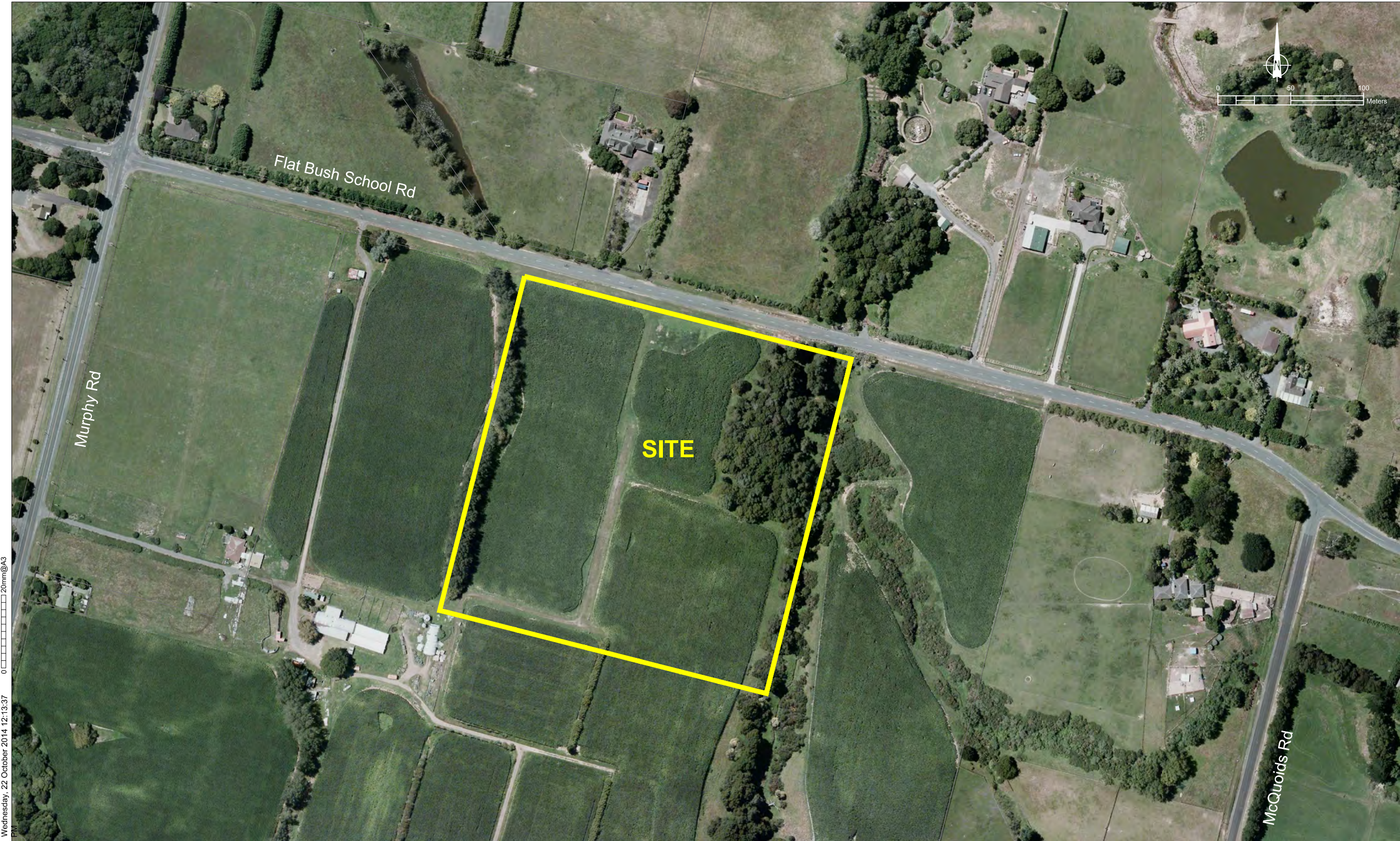
A peak hour bus route is proposed to run along the Flat Bush School Road frontage of the site. This is shown as part of the consultation currently underway for the eastern suburbs of Auckland. This route will begin once the Flat Bush area is developed. The frequency of services is unknown but is only likely to run during the morning and evening peak periods which will be suitable to serve the school staff and students. In addition, a connector route will run approximately 500m from the site. This route will have a higher frequency and run all day which may be able to act as an alternative public transport option.

The bus stop locations for these routes are yet to be determined however it is likely that a stop will be provided within 100m of the school for the peak period service. A school is already in place on the north-western corner of the intersection between Murphys Road and Flat Bush School Road. The connector route is likely to have stop near this location which will make them approximately 600m walking distance from the proposed school site.

The nearest train station is Manukau Train Station which is approximately 4.8km south-west of the site.

2.3 Road Network

Figure 3 shows the location of the site in relation to the surrounding road hierarchy as defined by the District Plan.



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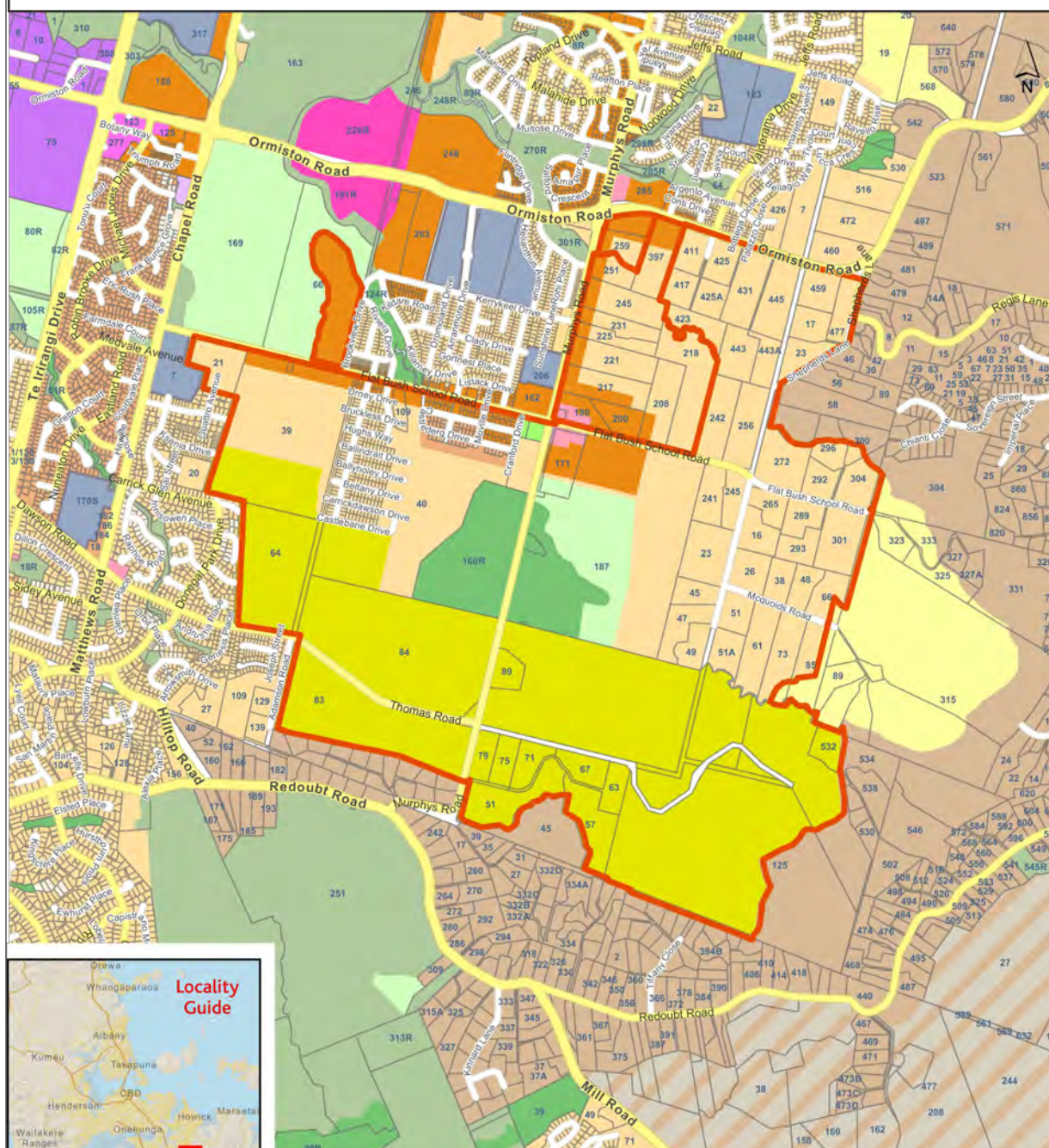
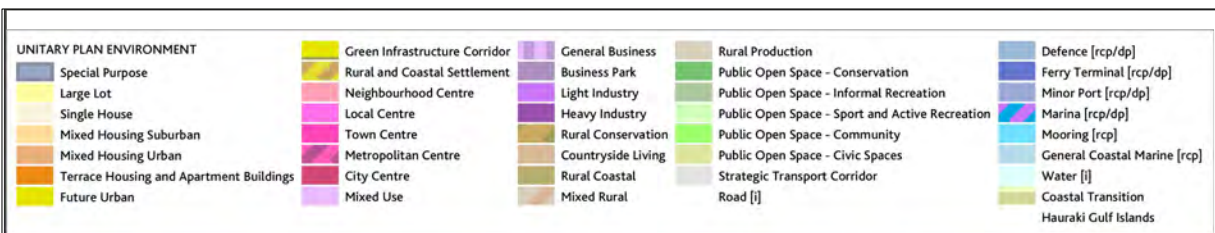
REV	DATE	DRN	CHK	DESCRIPTION
1	22.10.14	CTM		Site Location

MOE Primary School, Flatbush School Road: ITA for NOR

DRAWN:CTM	--	--
DATE: 22.10.14	STATUS: --	
SCALE: 1:2500@A3		
DWG NO:12988A2A		



1



Created Date: 06 May 2014
Scale @ A4 = 1:22,500

Special Housing Area (SHA)
Parcel Boundaries
123 Address label



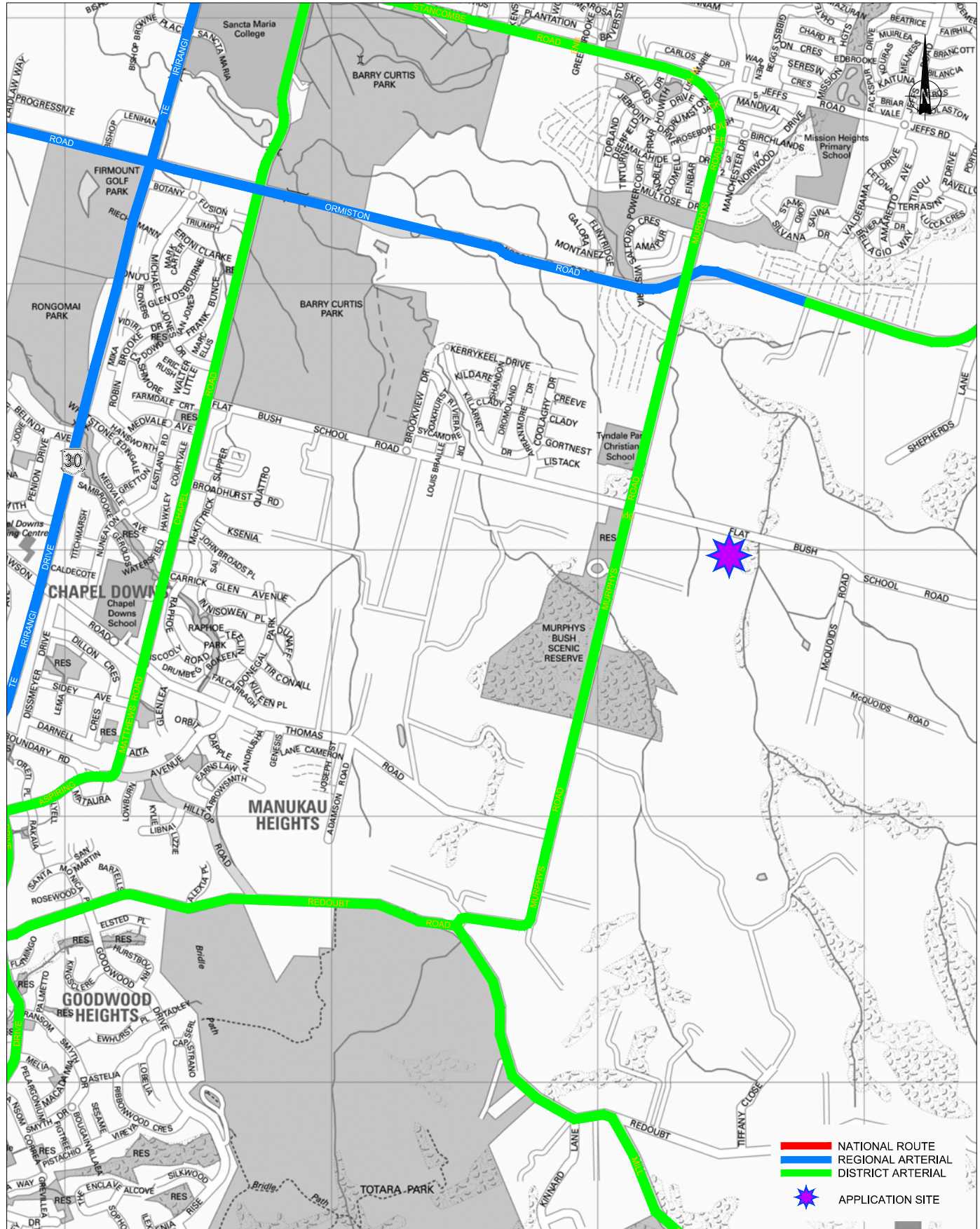
MOE Primary School, Flatbush School Road: ITA for NOR Flat Bush Strategic Area - Special Housing Area



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MOE Primary School, Flatbush School Road: ITA for NOR

Road Hierarchy



3

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2.3.1 Flat Bush School Road

Flat Bush School Road is the site's main frontage road, on its northern edge. It is currently classified as a "local road" in the District Plan. From the Flat Bush plan change ("PC20") supporting documents, and our assessment of the likely function, we would expect that this will eventually be changed to at least a "Collector Road" status, where, compared to a local road, through movement is emphasised slightly higher than local access. However, this is not considered a concern for a school facility.

A traffic count was undertaken by Auckland Transport in May 2014. The count location was some short distance to the west of Murphys Road and showed an Annual Average Daily Traffic ("AADT") of 2,966 vehicles, which is comparatively low. It is noted that traffic flows on Flat Bush School Road east of Murphys Road (at the potential school site) would be expected to be significantly lower than this due to the lack of onward connectivity or development in that direction. While new development of the area over the next decades will significantly increase traffic volumes, it is always likely to remain significantly lower than in the western sections, due to the lack of onward connectivity to the east, which will be of some benefit for the school, particularly in terms of access and walking / cycling safety and convenience.

The ART3 Model, which is maintained by Auckland Transport, is the regional model that covers the whole of the Auckland area. The model was used to estimate the peak hour future flows on Flat Bush School Road and the surrounding area for the expected land use scenario for 2026.

The future flows across the frontage of the proposed school are shown in **Table 1** below.

Direction	AM Peak	PM Peak
Eastbound	115	205
Westbound	225	125
Total	340	330

Table 1: Estimated Traffic Volumes for 2026 on Flat Bush School Road

The road along the site frontage currently has a 100 km/h speed limit. It is expected, with the zoning and proposed development around it, that this will eventually be dropped to 50 km/h as appropriate in an urban / suburban area. The procedures outlined in Land Transport Rule 54001 would be used to determine what the speed limit should be and the presence of a school is likely to result in a 50 km/h speed limit being posted. This speed reduction should be implemented before the opening of the school. Rule 54001 also considers other developments near the school which also impact upon the outcomes of the procedure. The process should be undertaken closer to the time the school is opened.

The road in the vicinity of the site is sealed and has one lane in each direction. It has a very straight alignment (which creates a tendency among drivers to speed – though speed surveys have not been undertaken as part of this assessment).

2.3.2 Murphys Road

This is the nearest major north-south road, some 300m west of the site. It is classified as a District Regional Arterial in the District Plan. While this is the lowest level of the arterial road classifications, this in general terms means that it prioritises movement over access.

A traffic count was undertaken by Auckland Transport in June 2014. The count some distance to the north of Flat Bush School Road showed an AADT of 11,001 vehicles. This is already relatively high, and is expected to increase further with development.

Future peak hour traffic volumes for Murphys Road were taken from the ART3 model. The volumes for 2026 along Murphys Road are shown in **Table 2** below.

Location	Direction	AM Peak	PM Peak
North of Flat Bush School Road	Northbound	390	560
	Southbound	590	505
	Total	980	1,065
South of Flat Bush School Road	Northbound	285	520
	Southbound	605	505
	Total	890	1,025

Table 2: Estimated Traffic Volumes for 2026 on Murphys Road

Similarly to Flat Bush School Road, it currently has a posted speed-limit of 100 km/h in the vicinity of the site, has no footpaths, and only some partial cycle lanes. All these aspects are likely to change as the area upgrades, in line with the discussion already provided above for Flat Bush School Road.

2.3.3 Future Roads

Council's long term plans – as envisaged in the Flat Bush Structure Plan ("Structure Plan") shown in **Figure 4** – provide for a variety of future roads near the site. Many of these will change slightly or possibly even more significantly as developers construct their subdivisions, but we note the following three roads that are proposed to border the school's possible site (the names are given for convenience in discussing these in the assessment, and are not official names):

- "West Road" – a short local road running north-south along the western boundary of the site. This road has no real network function, and will simply form a road to allow traffic to access local properties.
- "South Road" – a somewhat longer road running west-east along the southern boundary of the site. Again, this road has only very limited network function.
- "East Road" – a potentially very long road running along the eastern boundary, which continues north and south of the site for significant distances.

None of these three roads would be required to be in place for the operation of the site as a school, though they could potentially assist with route and access options.

In particular, East Road has a potential positive effect in that it would add local connectivity from the surrounding areas – especially residential areas lying directly to the north and south of the school, including for walking and cycling. As a potential negative effect, if developed as a north-south through route through the large new residential areas, for several kilometres in length as shown in the Structure Plan, it could also see significant motor vehicle traffic. This could imply a need to more strongly consider pedestrian crossing opportunities and traffic calming near the site vicinity, to not create severance that would deter walking and cycling to school.

It is noted that the school site may be surrounded by roads on all four sides. This also highlights the need to consider pedestrian crossing opportunities and traffic calming on these roads to avoid severance that would deter walking and cycling to school.

2.4 Walking and Cycling

Flat Bush School Road has no footpaths or other pedestrian facilities at this stage. Implementation of continuous footpaths to the surrounding residential and commercial areas being developed will be an important factor for establishing a school here, and this should be undertaken before opening a school. Pedestrian crossings have been installed across all four legs of the signalised intersection between Flat Bush School Road and Murphys Road.

Flat Bush School Road currently has no cycle facilities near the site, although cycle lanes (on-road, without physical protection from motor vehicles) have been implemented on the road west of the Murphys Road intersection, and have been implemented on the approach to the signalised intersection with Murphys Road. It is expected that these will be extended further east as the road is upgraded in line with the area's development. It is suggested that this will be a positive factor for establishing a school here. If future cycle lane facilities would be upgraded to a higher standard (protected cycle lanes), these would also assist cycle safety for younger children (i.e. the current cycle lanes are not considered ideal for a primary school).

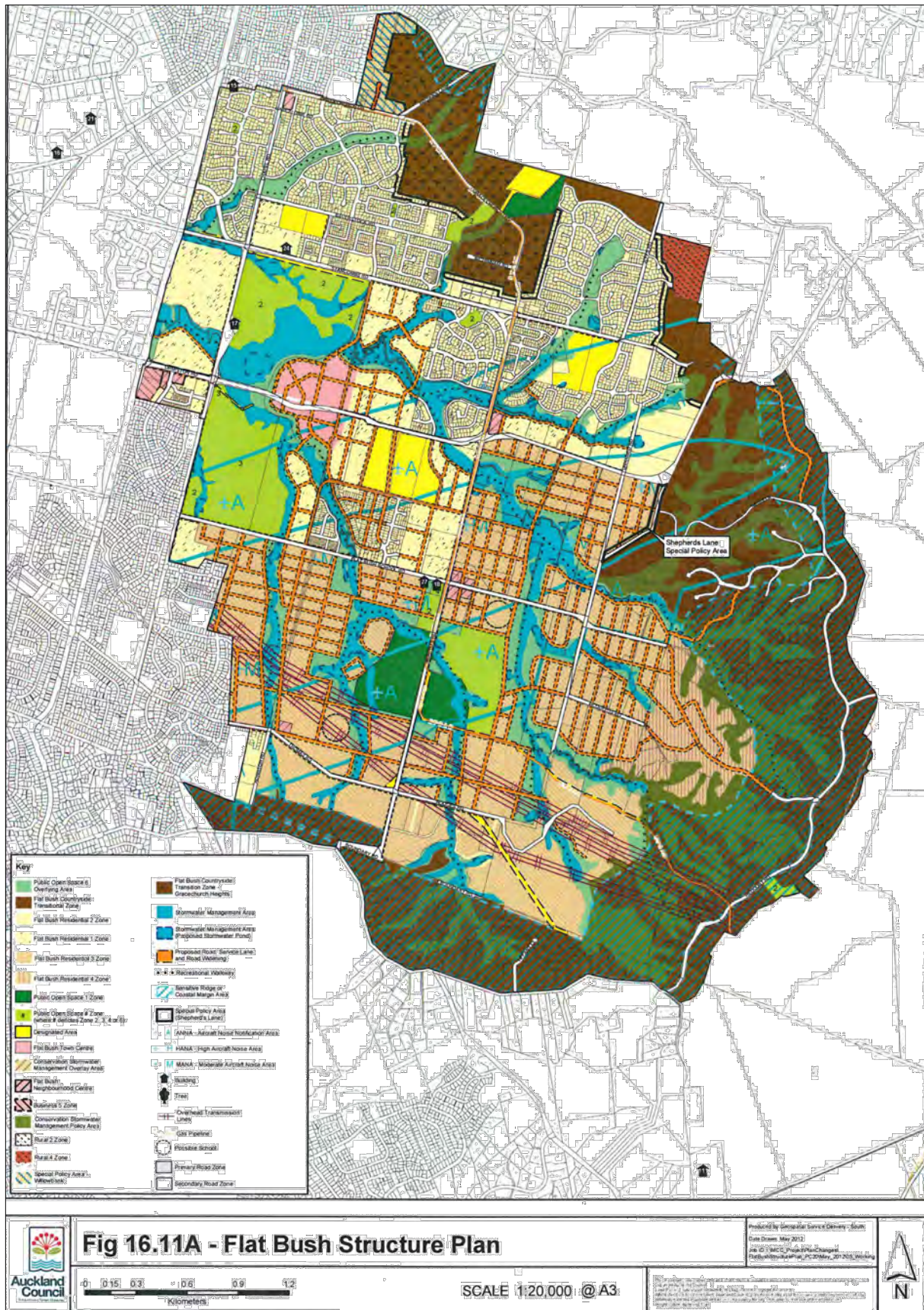
Murphys Road is similar to Flat Bush School Road in that there are no footpaths or pedestrian facilities. Cycle lanes have been constructed on the approach to the intersection between Murphys Road and Flat Bush School Road and it is planned for these to be extended in the future along the full length of Murphys Road.

2.5 Road Safety

A search was made of the New Zealand Transport Agency's Crash Analysis System for all reported crashes for the full five year period from 2010 to 2014 including all available results for 2015 on Flat Bush School Road from its intersection with Murphys Road to McQuoids Road. The search found that a total of 15 crashes were reported within the study of which eight resulted in minor injuries.

Only one crash occurred on Flat Bush School Road that was not at the intersection with Murphys Road. This crash was due to a driver's attention being diverted by an animal or insect in the car and losing control of the vehicle. The car went off the road to left and hit a ditch. No crashes were reported along the frontage of the site. No crashes were reported that involved pedestrians or cyclists.

As such, there are no road safety issues observed relating to the site.



MOE Primary School, Flatbush School Road: ITA for NOR

Flat Bush Structure Plan



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3. Proposal

3.1 School and Childcare

The Notice of Requirement would enable a primary school and a childcare centre to be built on the southern side of Flat Bush School road approximately 300m east of its intersection with Murphys Road. It is likely that school would start with a small number of students serving the first nearby residential developments in the Flat Bush area, and eventually accommodate up to 700 students. The childcare centre, which will operate like a pre-school, will be designed to accommodate up to 50 children.

It is expected that at least one pedestrian crossing will be required around the school. The exact location of the crossing cannot be determined until the school design is complete and pedestrian access to the school is identified. This process comes after the Notice of Requirement and forms part of the subsequent Outline Plan of Works.

In addition to providing education for children during the day the school may also offer after school educational programs for children and adults. The school may also be used as venue for sporting and cultural activities that may take place outside of school hours.

3.2 Proposed Road Improvements

Flat Bush School Road to the west of Murphys Road has been recently upgraded to cater for the new developments along this section of road. The upgrades included the installation of kerbs, channels, berms and footpaths on both sides of the road. It is understood that Auckland Transport proposes to continue this arrangement on Flat Bush School Road on the eastern side of Murphys Road, although the timing or funding of this has not yet been fixed.

Based on the structure plan shown in Figure 4, the site is likely to front roads on all of its boundaries. Currently there are only plans to construct the road along the western boundary of the site by the time the school opens. The time frames for the remaining two roads are not yet known. The school is not dependant on any of these surrounding roads to be completed prior to opening day.

4. Trip Generation and Expected Mode Share

4.1 Primary School

The school will prepare and maintain a School Travel Management Plan. This will be implemented within the first term of the school opening and will have as an objective the safe transportation of students to and from school that does not depend on private vehicles. Walking school buses and covered bicycle parking areas will be included as part of the plan. The plan will be monitored and updated over time as the travel needs change.

4.1.1 Mode Share

The Ministry of Transport publishes on its website a sample of surveyed travel patterns for school students since 1989. The data for children aged 5 to 12 is shown in **Table 3** below.

Mode	1989/90	1997/98	2003-07	2004-08	2005-09	2006-10	2007-11	2008-12	2009-13	2009-13
Walk (only)	42%	30%	26%	25%	24%	23%	22%	24%	28%	29%
Car Passenger	31%	45%	55%	56%	55%	57%	58%	58%	56%	55%
Car Passenger + Walk	1%	2%	1%	1%	1%	1%	1%	2%	2%	2%
Bicycle	12%	7%	5%	4%	4%	3%	3%	3%	2%	2%
Public Transport	7%	7%	6%	5%	6%	6%	7%	7%	4%	4%
Walk + PT	4%	6%	4%	7%	6%	6%	6%	4%	4%	5%
Car Passenger + PT	2%	2%	2%	2%	2%	2%	2%	3%	2%	3%
Other	1%	1%	1%	1%	1%	1%	0%	1%	1%	1%
Total	100%	100%	100%	100%	100%	100%	100%	100%	100%	100%

Table 3: Ministry of Transport Journey to School (Ages 5-12)

For the latest period (2010-2014) the Auckland Region data is provided and can be compared with the national data, as shown below in **Figure 5** below.

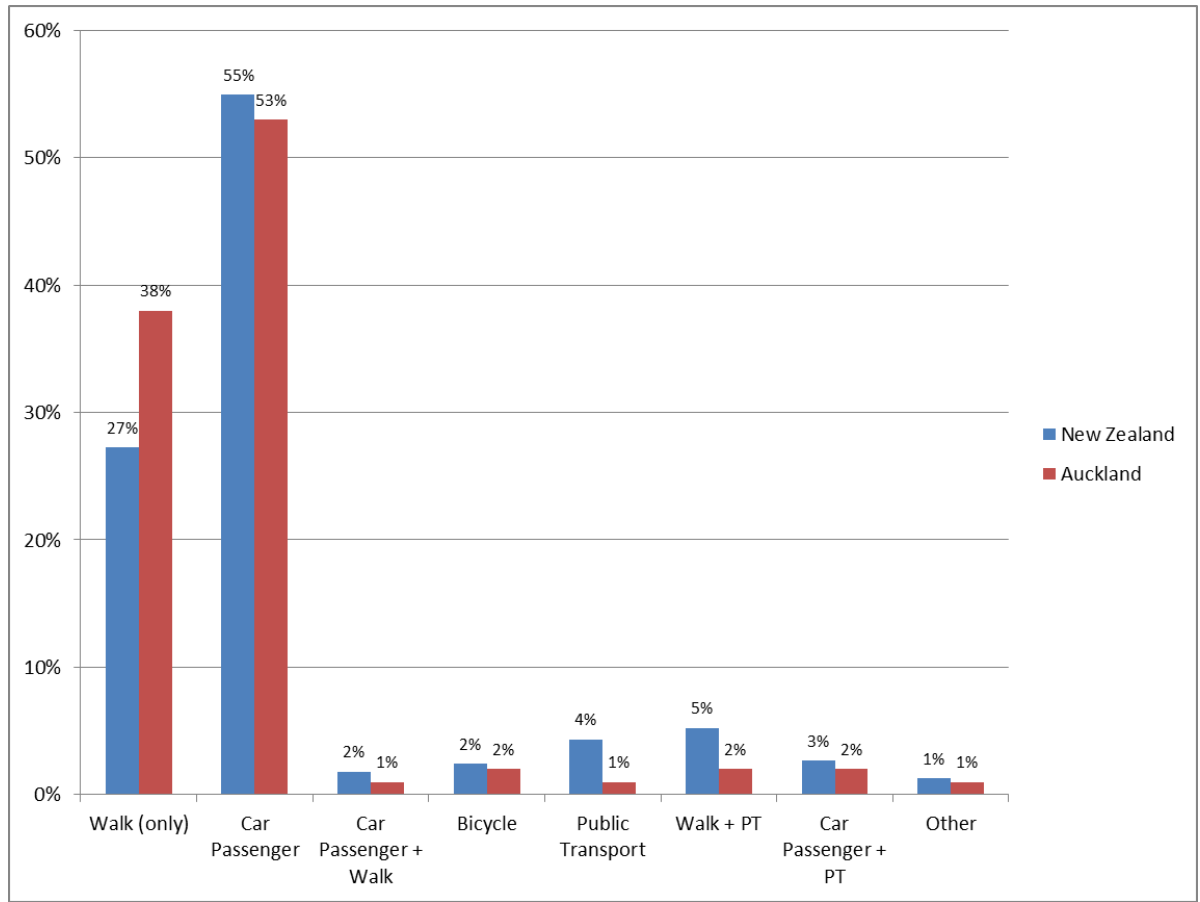


Figure 5: Mode Share for Journey to Auckland Schools (Ages 5-12)

This data gives a reasonable basis for estimating future travel to the school by car, walking cycling and public transport.

4.1.2 School Traffic Generation

For the Auckland Region, the number of students cycling to school was measured at 0%. For the other regions surveyed this percentage is 3%-4%. Given that the school is being built to serve the local community and that cycling facilities are proposed to be created it is considered that there will be students that will cycle to school. Therefore, for cyclists, the national average of 2% will be considered. This 2% will be taken from trips made by car passengers.

Using the observed Auckland mode share (slightly adjusted to account for cyclists) and applying that to the estimated 700 students who will ultimately attend the school, the number of person trips generated can be calculated. These are shown in **Table 4** below:

Mode	Mode Share Percentage	Person Trips Generated
Walk (only)	38%	266
Car Passenger	53%	371
Car Passenger + Walk	1%	7
Bicycle	2%	14
Public Transport	1%	7
Walk + PT	2%	14
Car Passenger + PT	2%	14
Other	1%	7
Total	100%	700

Table 4: Person Trips by Mode

Of the 371 children likely to be dropped at the school gate by car, it is considered that many of these children will be in the same car as a sibling. Statistics NZ suggest there is an average of 1.9 children per household in New Zealand. Of these children in the household, some families will have a second or third child that is either too young or too old to attend the same school. Hence the number of children being dropped off from the same vehicle will be reduced by 10% and taken as 1.7. No allowance has been made for any potential car sharing which will reduce the number of trips generated even further. This equates to a total of 436 trips (218 vehicles) generated by private vehicle every morning and afternoon in the peak period.

The number of car trips generated by the school staff member is likely to be influenced by the number of car parks provided on-site. Staff members are likely to not arrive before students start arriving and depart after students have departed. Hence these trips are not likely to add to the peak period trips.

In the longer term, as the area around the school develops, it is expected that more children will walk or cycle to school and the number of children being driven to school will decrease. This is more likely as the school will be serving a local catchment.

4.2 Childcare Centre

The New South Wales Road and Traffic Authorities Guide to Trip generating Developments ("RTA Guide") provides trip generation for childcare centres. The childcare centre will operate like a pre-school facility and the trip generation rates for such an activity are 1.4 trips per child. For a centre with 50 children in attendance, 70 vehicular trips are expected to be generated in the peak hour.

4.3 Trip Generation Summary

Based on the 436 vehicular trips generated by the primary school and the 70 trips generated by the childcare centre, the total number of trips expected to be generated by the site is 506. The vast majority of these will be made by parents dropping off their children at school and therefore we can consider that half of these trips will be made to the site and the remainder will be from the site. Currently, Flat Bush School Road experiences no congestion and is therefore considered to be able to accommodate the additional trips generated by the school and childcare centre.

4.4 Intersection Modelling

Based on the future flows obtained from the ART3 Model from Auckland Transport and the expected number of trips expected to be generated by the site, a SIDRA model was prepared of the intersection between Flat Bush School Road and Murphys Road. It was conservatively assumed that all trips generated by the site will use this intersection in order to provide a robust assessment. Generated trips were distributed in the same proportion as the traffic volumes from the 2026 ART3 model. The morning and evening peak periods were modelled and the results are shown in **Table 5** below.

The geometric design of the intersection was not changed from its current layout. The performance measures shown below are the average delay experienced by vehicles due to waiting at the intersection, the queue length for each movement and the LOS rating which gives an A-F grade for each movement where A is a really good performance.

Approach	Movement	AM Peak			PM Peak		
		Ave Delay (s)	LOS	95% Q (m)	Ave Delay (s)	LOS	95% Q (m)
Murphys Road (South)	Left	25.9	C	11.4	23.8	C	16.1
	Through	21.8	C	34.0	21.8	C	56.1
	Right	37.6	D	29.5	36.2	D	54.7
Flat Bush School Road (East)	Left	34.9	C	74.2	33.7	C	42.5
	Through	29.3	C	74.2	28.1	C	45.5
	Right	38.6	D	39.7	38.7	D	43.2
Murphys Road (North)	Left	32.7	C	74.2	35.6	D	61.6
	Through	27.0	C	76.7	29.7	C	64.2
	Right	36.0	D	22.6	28.9	C	10.7
Flat Bush School Road (West)	Left	27.7	C	23.8	32.4	C	40.0
	Through	22.1	C	23.8	26.8	C	40.0
	Right	34.4	C	21.6	29.6	C	17.5
All Vehicles		30.9	C	-	30.9	C	-

Table 5: Intersection Performance

The modelling results show that the intersection performs adequately for an urban intersection. As such it is considered that this intersection will be able to accommodate the trips generated by the proposed school and childcare facility.

5. Assessment of Effects

5.1 Walking and Cycling Effects

It is considered important for the school, and for the safety of children walking to school, that a good walking environment exists in the vicinity and on the main routes to school. This is currently not provided, but it is understood that development planned by Council and Auckland Transport for the area includes a variety of changes that should help ensure adequate or even good walking environments. When the school reaches its maximum intended roll size of 700 students, it is expected that approximately 266 children will walk for at least part of their trip.

In particular it will be important that, by the time the school is operational, most or all of the following has occurred:

- Flat Bush School Road in the vicinity of the site has been reduced from a 100 km/h speed limit to 50 km/h or less.
- Footpaths to the school exist on both sides of the surrounding roads, ideally on both sides as good practice recommends for a safe and convenient walking network.
- Bus stops are in place along or near the school frontage on Flat Bush School Road.
- One or more dedicated pedestrian crossing points are implemented over Flat Bush School Road in the direct school vicinity.
- The proposed off-road path network (mainly located along stormwater and parks reserves) proposed for Flat Bush (see black dotted lines in Figure 1) is being developed progressively to follow development, and provides a good local connection to the school site.
- The existing narrow road bridge to the east of the school in the road dip has been replaced by a new bridge which provides footpaths – currently there is very little settlement to the east, but this is planned to change, and at that stage the existing bridge would form a serious safety barrier to walking to school from there.

In summary, the existing pedestrian environment around the site at the moment is poor due to the lack of facilities and the 100 km/h speed environment; however, this is expected to be changed substantially as part of the development of the wider area. Incorporating design of the school routes into the area design and ensuring the staging of these upgrades matches the school needs would be the key requirements. However, for the purposes of the NOR, it is concluded that from a walking perspective, the site will be suitable.

The data taken from the Ministry of Transport suggests that there will be a negligible amount of trips made by bicycle. Auckland Transport are however creating policies and strategies to encourage cycling to school and increase this mode share. A safe cycle lane would be the single greatest improvement that could be made to encourage cycling to and from the school. Many of the improvements that are planned, or already developed around Flat Bush, are paint-only on-road cycle lanes, which will see little uptake by primary school children, and only some limited uptake by secondary school children.

Unless Auckland Transport upgrades these facilities further than currently appears to be planned (to protected cycle lanes or off-road cycle paths), cycling to school along the main roads will likely remain limited.

A more promising possibility would be the proposed walking and cycling network Council is planning to progressively develop along the parks and stormwater reserves of Flat Bush. Such a shared path system – one of whose major branches is proposed to pass just east of the school, would be likely to offer a much more attractive route for cycling to school, and could potentially see greater levels of cycling uptake.

In particular it will be beneficial if, by the time the school is operational, most or all of the following has occurred:

- The existing cycle lanes on Flat Bush School Road have been extended to at least as far east as the school frontage.
- The walking and cycling network in the stormwater reserves is extended as far as possible (in line with development occurring around it) and provides a safe connection to the school at Flat Bush School Road or along the eastern site frontage. This would require a shorter cycle path rising out of the lower-level storm water reserve.

In summary, as is the case for walking, the cycling environment around the site at the moment is poor (due to the lack of facilities and the 100 km/h speed environment); however, this is expected to be changed somewhat as part of the development – details to be dealt with under the OPW. Incorporating design of the school routes into the area design and ensuring the staging of these upgrades matches the school needs would be the key requirements.

5.2 Public Transport

As mentioned in section 2.2, Auckland Transport is in the process of upgrading the bus network for Auckland. The new network for East Auckland is expected to be implemented in 2017. The current consultation documents outlining the proposed network note that the route passing the frontage of the school will take effect once the area develops however there may be sufficient development in place already once the network is implemented for the route to be running.

Buses could be significant for the school if a bus service dedicated to school runs is implemented for the surrounding areas. If this is considered, the later design of the school grounds should allow for bus circulation / bus stops. There is nothing in the site location or proposed transport network that would be considered to prevent such school bus services in the near or long term.

5.3 Traffic Capacity

Flat Bush School Road does not currently experience any traffic issues as it carries low traffic volumes. The intersection between Flat Bush School road and Murphys Road also experiences very low levels of congestions. As growth occurs in the local area, traffic volumes will increase. The arterial classification of Murphys indicates that this route is intended to accommodate reasonably high traffic flows. Accounting for the current intended levels of future development it is unlikely that Flat Bush School Road will become congested.

5.4 Parking

The Outline Plan of Works will need to address the specific details of how and where parking is to be provided for the school and childcare centre. The current Notice of Requirement process needs to provide an assessment of the likely parking issues and present conditions to ensure that adequate parking and access is provided.

5.4.1 Primary School

In carrying out this assessment it is considered that there will be approximately one teacher for every 25 students (28 teachers in total in 28 classrooms), a principal, a care taker, two office administration staff and five teacher aides. This equates to a total of 37 staff.

The District Plan requires a minimum parking rate of two spaces for every three staff members employed on site or operating from the site at any one time and a suitable drop off area. Based on having 37 staff on-site, the school would need to provide at least 25 parking spaces.

The parking rates for land that is designated for education purposes by the Ministry of Education are separate and independent of the stand parking rates that apply Auckland wide. The minimum number of parking spaces for school facilities is two spaces per classroom. For a school of 28 classrooms this equates to a minimum parking space provision requirement of 56 spaces.

Given that the maximum number of staff is expected to be 37 people and considering that every staff member drives their own vehicle to the school, a car park of 44 spaces is expected to adequately meet the requirements of the school during the day. As the school caters for children within the primary school age bracket, there will be no students driving to school.

The peak parking time for a primary school typically occurs in the afternoon when children are collected at the end of the school day. It would not be reasonable to build an off-street car park to deal with an intense short-lived peak parking demand of that nature. While modern best-practice recommends encouraging methods of school travel such as walking, cycling or public transport, it is considered likely that for the near future, a significant part of children at a school in this location would arrive by private car. As such, any school's design needs to balance providing for the safety of such private car traffic without degrading other modes or access, or wasting large parts of the site on car parking.

5.4.2 Childcare Centre

To carry out the assessment of the childcare centre, it is considered that there will be five staff members employed on-site. This is in accordance with the minimum staff member requirements for childcare centres as stipulated by New Zealand Legislation.

The District Plan requires a minimum parking rate of one space for every staff member employed on-site plus one for every ten children where there is parental participation. Considering the conservative assumption that there is parental participation, the childcare centre would be required to provide ten parking spaces.

The Ministry of Education has also designated parking rates for childcare centres (pre-schools) that are independent of the standard parking rates that apply in Auckland. In addition to any parking required for a school, one space should be provided for every ten children the facility is designed to accommodate plus one for every full time equivalent staff member operating on-site. These rates are concordant with the District Plan rates; hence the requirement for the childcare centre is still to provide a minimum of ten parking spaces.

The provision of ten parking spaces is considered suitable for a childcare centre with a maximum of 50 children in attendance.

5.4.3 Parking Summary

The total number of spaces that is likely to be required to be provided by the site is 54 spaces, 44 for the primary school and ten for the childcare centre. The final and exact parking numbers will be determined at a later stage of the design and consenting process once there is more certainty around the final scope and layout of the school and childcare centre. Some spaces will be dedicated for staff usage and remainder will be primarily used by parents picking up or dropping off their children. It is considered that the size of the site, and the various surrounding existing and future roads, provides enough flexibility to accommodate these requirements, including the potential for dedicated drop-off zones.

5.5 Access

The site currently has one road frontage and that is onto Flat Bush School Road. Based on the future road network plans for the area, the site will likely have frontage on all four sides. However these new roads are unlikely to have been constructed by the time the school opens. In the meantime, Flat Bush School Road will be the primary access point for the school both for pedestrians and vehicular traffic.

6. Mitigation of Impacts

The transportation effects of the proposed development can be mitigated through the development of the following works:

- Posted speed to limit reduction along Flat Bush School Road from 100km/h to 50km/h.
- Kerb and Channel is to be provided on Flat Bush School Road across the site frontage.
- Installation of bus stops near the frontage of the site on Flat Bush School Road to cater for the future bus routes serving the area.
- Construction of footpaths on both sides of Flat Bush School that extend east and west to provide pedestrian access to the surrounding neighbourhoods.
- Construct a pedestrian crossing across Flat Bush School road to provide a safe pedestrian crossing point including catering for primary school children.
- Provide a vehicle access point to the school with parking suitable to meet the expected demand. A suitable drop off and pick area should also be included on-site.
- Addition of bike racks within the school grounds to provide storage for bikes when children are in class.

Discussions relating to how these aspects will be designed or funded will be undertaken during the Outline Plan of Works stage. For the purposes of this report and the NOR, it is considered that each of these are achievable, and therefore the site is suitable for a school and childcare centre.

7. Integration with Future Transport Network

Figure 6 shows the projects that Auckland Transport are currently proposing, investigating, designing and constructing in the Flat Bush area. The figure shows that the intersection between Flat Bush School Road and Murphys Road is in the construction phase of its upgrade. The remaining projects along Murphys Road are still in the design phase. A bridge on a new road that will connect to the proposed along the eastern boundary of the site is proposed to begin construction sometime around 2019 to 2021. It is unlikely that the proposed road connecting this bridge to the surrounding road network would be completed before this date.

Other than the intersection with Murphys road, no projects are currently planned for the Flat Bush School Road corridor. The construction of a school may result in a change in Auckland Transport priorities for the area.

The proposed new bus network for the Auckland region does not result in any new or improved routes in the vicinity of the site. No extension to the rail network is proposed through the Flat Bush area. The site does not currently integrate well with the future public transport networks as they have been currently proposed however as the area becomes more developed this is likely to change.

As stated previously, for the purposes of this report and the NOR, it is considered that the site is suitable for a school and childcare centre, as it will be able to integrate with the future transport network.

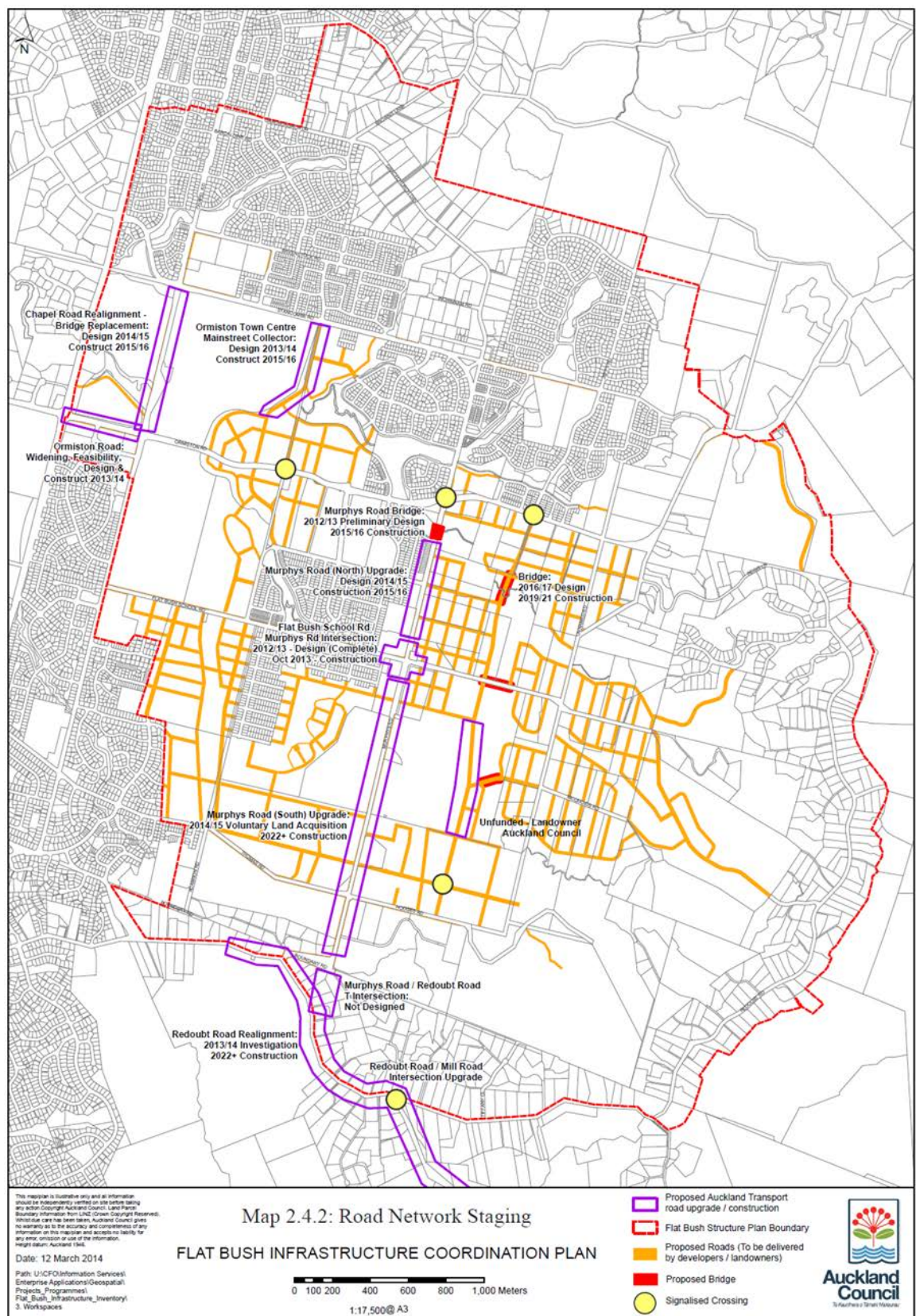


Figure 6: Current Auckland Transport Projects in Flat Bush

8. Consultation with Auckland Transport

A meeting was held on 10 November 2014 with Council specialists, Auckland Transport, and the applicant's consultant team.

Auckland Transport's representative questioned how Flat Bush School Road was to be designed to accommodate a low-speed environment. Such detail is not required for the purposes of this report and the NOR process, however, there are several means that may be adopted during the detailed design and OPW processes that would serve to minimise traffic speeds and enhance overall road safety. These may include carriageway narrowing, or vertical / horizontal traffic calming devices.

Auckland Transport also enquired as to funding arrangements for the construction of Flat Bush School Road. Again, this will be dealt with in subsequent stages, following the NOR process.

9. Conclusions

This report considers the appropriateness of an NOR for a proposed school and childcare centre on Flat Bush School Road in Flat Bush. The following conclusions were reached:

- The provision of a school and childcare centre in the area integrates well with the future transport network as it fulfils an expected need for children to be educated locally without needing to travel to other more distant areas.
- The existing and future roading layouts will enable motorists, cyclists and pedestrians to approach the site from all directions.
- The site can be developed in such a way that adverse effects can be avoided, remedied or mitigated.

The site is therefore considered suitable for the proposed activities and is not likely to lead to adverse effects. The Notice of Requirement is therefore appropriate from a traffic and transport perspective.

TDG