

**Mason Clinic Proposed
Private Plan Change**

Transport Assessment

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flow


TRANSPORTATION SPECIALISTS



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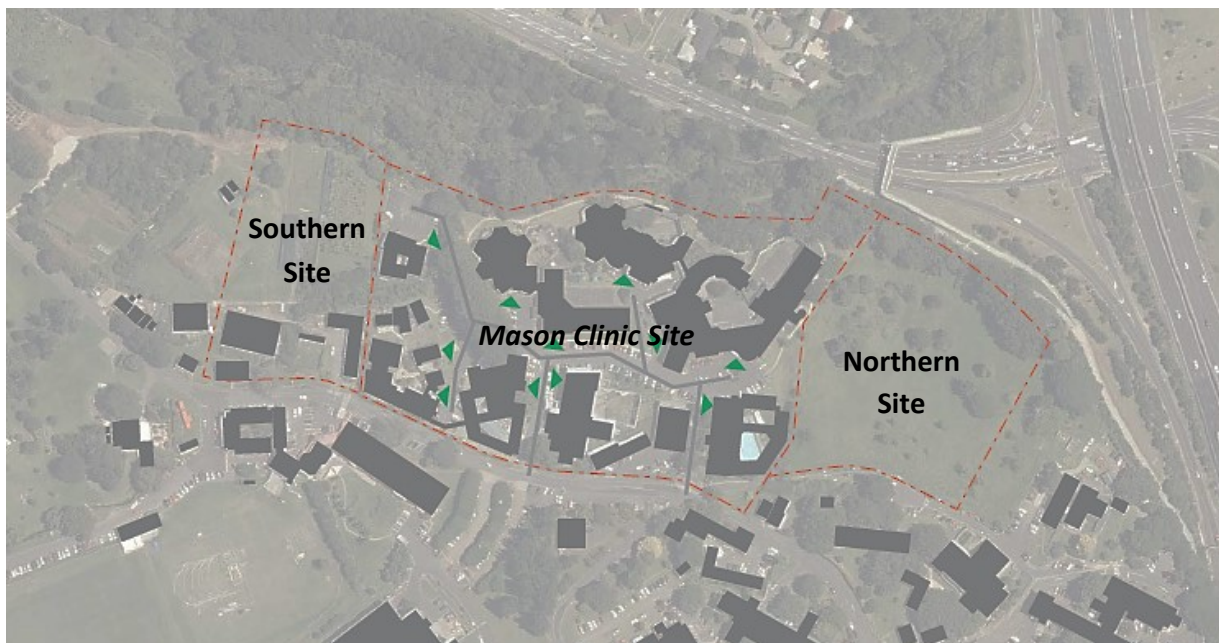
SUMMARY OF THE TRANSPORT ASSESSMENT

Flow Transportation Specialists Ltd (Flow) has been commissioned by Waitematā District Health Board (WDHB) to identify and assess the transport planning and traffic engineering matters relating to the Mason Clinic Proposed Private Plan Change (Proposed Plan Change).

The purpose of the Proposed Plan Change is to

- ◆ enable the rezoning of the existing Mason Clinic campus (Mason Clinic Site) and the expansion of the campus to the north and south to Special Purpose – Healthcare Facility and Hospital zone, (together referred to as the Plan Change Area shown in Figure S1 below)
- ◆ correspondingly adjust the boundaries of the Wairaka sub-precincts in the Auckland Unitary Plan: Operative in Part (AUP: OP) to include the Northern Site and Southern Site into Wairaka Sub-precinct A
- ◆ make a suite of changes to the Wairaka Precinct provisions to enable and manage the development and growth of the Mason Clinic activity within Sub-precinct A.

Figure S1 the extent of Mason Clinic Proposed Private Plan Change



In summary and as described in this report, it is concluded

- ◆ The location of the Plan Change Area provides, at present, good accessibility to various transport modes, including walking, cycling, bus and private vehicles. Future planned transport investment in the Carrington Road corridor will result in improved accessibility for all modes
- ◆ The effects of the proposed increase in vehicle trips resulting from a permitted development that can be enabled by the Proposed Plan Change are expected to be acceptable with the existing roads and intersections being capable of accommodating the additional traffic without resulting in adverse traffic effects

- ◆ The Proposed Plan Change car parking standard is consistent with the National Policy Statement on Urban Development, which requires the removal of all minimum parking standards from the AUP: OP
- ◆ The controls proposed as part of the Proposed Plan Change for all new development in Sub-precinct A in Chapter I334 Wairaka Precinct of the AUP: OP, which will require an assessment of the location and design of vehicle accesses, are adequate to ensure that these matters can be appropriately addressed at the time when consent will be sought to implement a new building under the Proposed Plan Change
- ◆ The existing controls in Chapter E27 of the AUP: OP relating to the provision of appropriate loading facilities, bicycle parking and accessible parking spaces, as well as the design of these transport elements, are adequate to ensure that these matters can be appropriately addressed at the time when consent will be sought to implement a new building under the Proposed Plan Change
- ◆ The Proposed Plan Change is consistent with key regional and local transport policies and plans.

This Transport Assessment concludes that from a transportation perspective, the Proposed Plan Change will not result in any effects to the safety and efficiency of the surrounding transport network that cannot be readily accommodated by the existing and likely future roading network. Accordingly, there are no transport related matters that would preclude the acceptance of this Proposed Plan Change.

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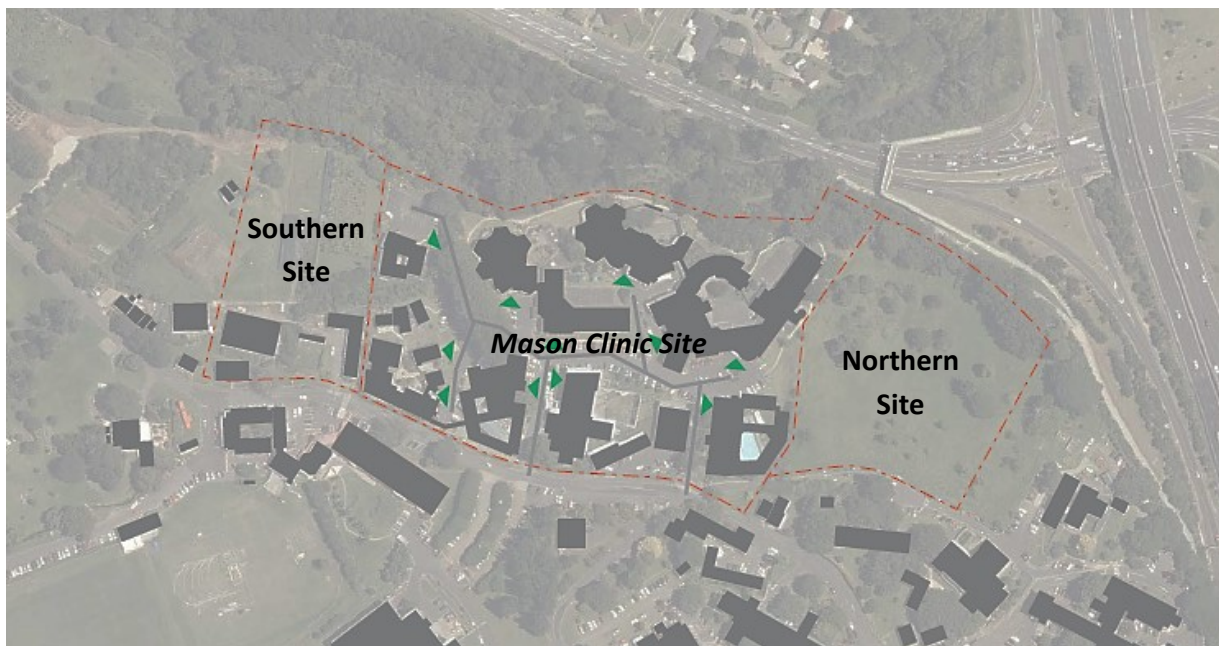
1 INTRODUCTION

Flow Transportation Specialists Ltd (Flow) has been commissioned by Waitematā District Health Board (WDHB) to identify and assess the transport planning and traffic engineering matters relating to the Mason Clinic Proposed Private Plan Change (Proposed Plan Change).

The purpose of the Proposed Plan Change is to

- ◆ enable the rezoning of the existing Mason Clinic campus (Mason Clinic Site) and the expansion of the campus to the north and south (together referred to as the Plan Change Area shown in Figure 1 below) to Special Purpose – Healthcare Facility and Hospital zone
- ◆ correspondingly adjust the boundaries of the Wairaka sub-precincts in the Auckland Unitary Plan: Operative in Part (AUP: OP) to include the Northern Site and Southern Site into Wairaka Sub-precinct A
- ◆ make a suite of changes to the Wairaka Precinct provisions to enable and manage the development and growth of the Mason Clinic activity within Sub-precinct A.

Figure 1: The extent of the Mason Clinic Proposed Private Plan Change



This Transport Assessment addresses the transport planning and traffic engineering matters associated with the Proposed Plan Change, including

- ◆ a description of the Plan Change Area, including the site location, planning context, surrounding land use activities, and surrounding road network
- ◆ a description of the existing and future transportation accessibility concerning the Plan Change Area, including private vehicles, public transport, and walking and cycling
- ◆ a description of the transport elements of the Proposed Plan Change and the nature of a development proposal that could be enabled under the Proposed Plan Change

- ◆ an assessment of vehicle access/egress options to AUP: OP support the Proposed Plan Change and the identification of a preferred option
- ◆ a summary of the traffic effects of the Proposal, including
 - the predicted traffic generation of the future expansion and intensification of the activity (relative to that enabled by the current zoning)
 - the results of the traffic modelling undertaken and the impact that predicted traffic generation may have on the operation of the surrounding road network during the peak traffic hours.
- ◆ a safety assessment of the internal and surrounding road network, including an analysis of historic crash records, and an assessment as to the effect the additional traffic predicted to be generated by the Proposed Plan Change may have on the safety of the road network
- ◆ a brief car parking assessment relative to the recently released National Policy Statement on Urban Development (NPS-UD)
- ◆ an assessment of the Proposed Plan Change against various regional and local transport planning policy documents and strategies
- ◆ an assessment of the AUP: OP to review the appropriateness of the transport provisions that apply to the Proposed Plan Change.

These and other transportation matters will be addressed in the following details of this report. By way of summary, this Transport Assessment concludes that from a transportation perspective, the Proposed Plan Change will not result in any effects to the safety and efficiency of the surrounding transport network that cannot be readily accommodated by the existing and likely future roading network. Accordingly, there are no transport related matters that would preclude the acceptance of this Proposed Plan Change.

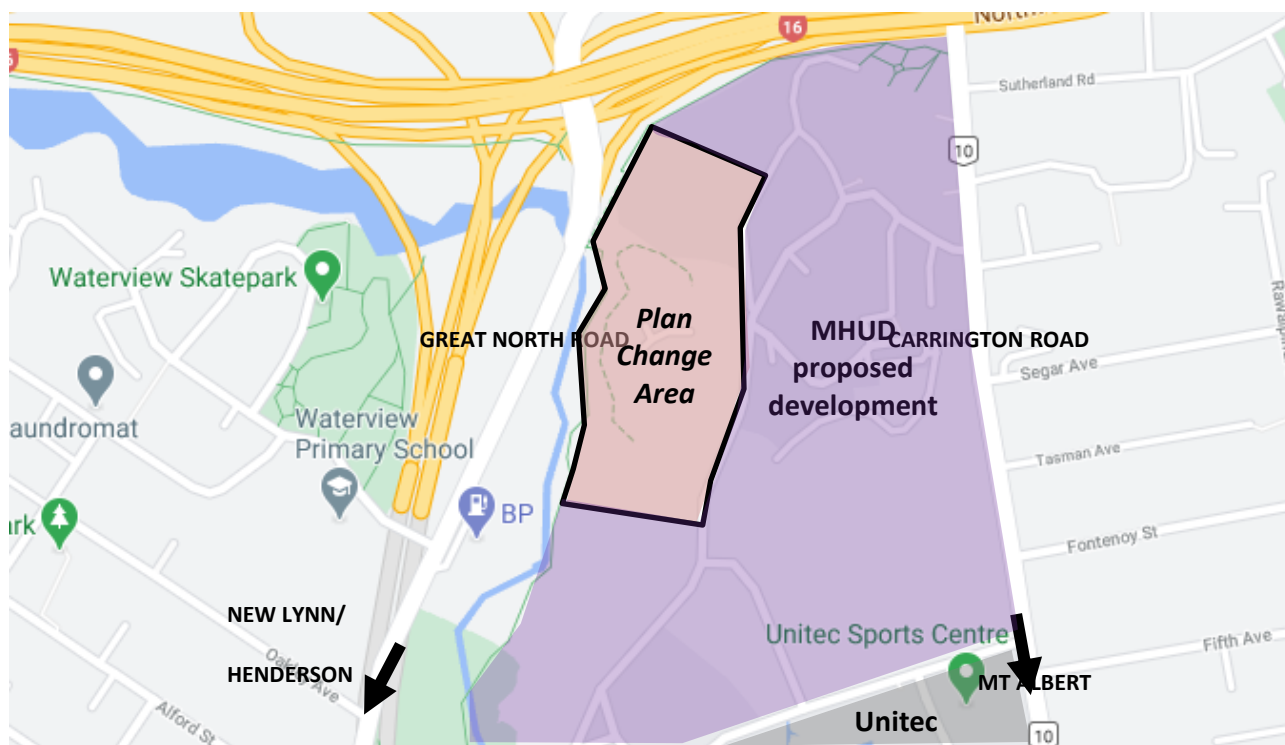
2 THE PLAN CHANGE AREA

2.1 Site location

As shown in Figure 2, the Mason Clinic site is located in Mount Albert at the edge of the Auckland Inner Isthmus. The Plan Change Area is legally accessed from Carrington Road Gate 2, and then via the private roading network within the adjacent Ministry of Housing and Development (MHUD) site.

The Plan Change Area is well located with access to/from the strategic road network, with Carrington Road intersecting with Great North Road and New North Road. Great North Road and New North Road in turn, provide linkages to Auckland City Centre as well as New Lynn. Great North Road extends to Henderson and also provides connections to the North-Western Motorway at the Great North Road and St Lukes Interchanges.

Figure 2: Location of the Plan Change Area¹



2.2 Planning context

The existing Mason Clinic Site is zoned as Special Purpose – Healthcare Facility and Hospital in the AUP: OP. This zone is described as

"generally large, land-extensive facilities with a range of activities related to their primary function. The sites generally consist of extensive and highly visible buildings and substantial parking areas."

The Northern Site and Southern Site are zoned Business – Mixed Use. This zone is described as

"typically located around centres and along corridors served by public transport It also applies to areas where there is a need for a compatible mix of residential and employment activities."

While all the land is subject to the Wairaka Precinct, only the existing Mason Clinic Site is subject to Wairaka Sub-precinct A (see Figure 3). The Proposed Plan Change will adjust the sub-precinct boundaries, so that the entire Plan Change Area (including the Northern Side and Southern Site) will

- ◆ be within Sub-precinct A
- ◆ remove an 'open space' element from the Southern Site
- ◆ rezone the Northern Site and Southern Site to Special Purpose – Healthcare Facility and Hospital.

¹ Source from Google Maps

Figure 3: Existing Wairaka Precinct plan²



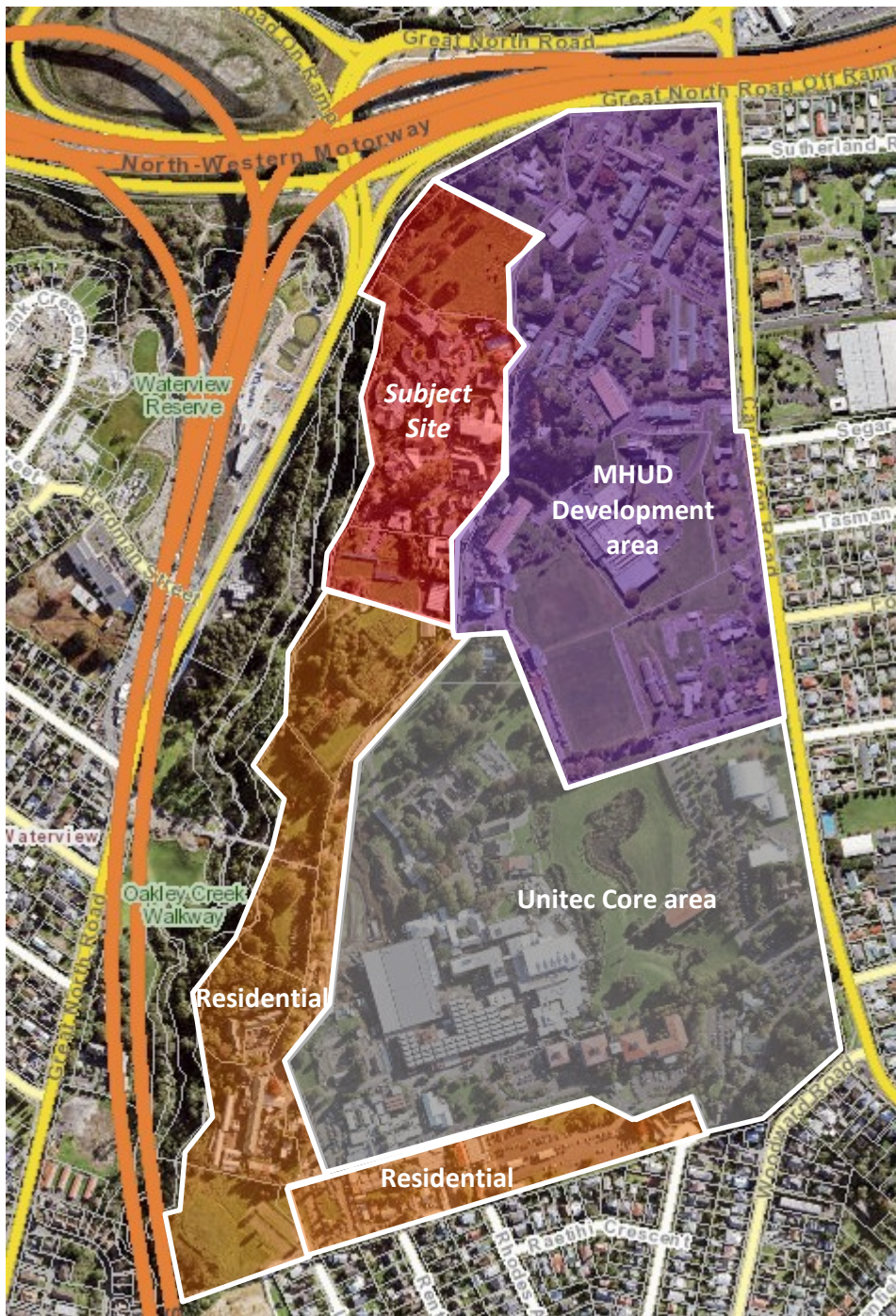
² Auckland Council. AUP: OP I334 Wairaka Precinct.

2.3 Surrounding land use activities

2.3.1 Existing surrounding land use

As shown in Figure 4, the Plan Change Area is located in the northwest of the Wairaka Precinct.

Figure 4: Existing surrounding land uses³



The adjacent land to the east (labelled 'MHUD Development area') is the Crown land managed by MHUD in partnership with Ngā Mana Whenua o Tāmaki Makaurau, in the northern and central Wairaka

³ Auckland Council Geomaps. <https://geomapspublic.aucklandcouncil.govt.nz/viewer/index.html>

Precinct. The majority of this area was formerly owned by Unitec and formed part of the Unitec Campus, while these activities have consolidated within the core Unitec Campus. The land is occupied by a range of buildings, which are mostly unused currently. This land also includes a commercial development (Taylors Laundry) as well as other existing businesses along Carrington Road near Gate 3/Farm Road.

The largest piece of land in the Wairaka Precinct is the 'Unitec Core area' in the south. Along the western edge of the Plan Change Area, a residential zone runs along Oakley Creek/Te Auaunga, with mixed ownership, including Ngati Whatua Orakei.

Finally, another residential area with specific height limits is located along the southern boundary of Wairaka Precinct, on Crown land, which is currently used for car parking for Unitec.

2.3.2 Proposed surrounding land use

MHUD and its development partners Nga Mana Whenua o Tāmaki Makaurau are responsible for facilitating the development of land owned by the Crown within the Wairaka Precinct (see Figure 2) and have appointed Stantec to prepare an Integrated Transport Assessment⁴ (Stantec ITA), which has been prepared with inputs provided by WDHB to account for the growth of the Mason Clinic and the resulting traffic volume increases this will generate. The Stantec ITA is currently under review by stakeholders, and is potentially subject to change. This document is referred to throughout this Transport Assessment, and is attached at the end of the report as Appendix C.

Within the Stantec ITA, an indicative plan has been developed to identify the various land parcels expected to be developed in the next 8 to 10 years. These general areas are shown in Figure 5.

As shown in the figure, the key MHUD land development areas include

- ◆ **Northwest**, west of the heritage-protected former Unitec hospital main building
- ◆ **Northern and Carrington**, both along Carrington Road
- ◆ **Te Auaunga North** in the western centre of the Precinct, along Oakley Creek/Te Auaunga
- ◆ **Southern** along the southern edge of the Precinct, adjacent to the existing residential areas.

Additionally, the Unitec Core is expected to see some changes within the Stantec ITA timeframe but do not form part of the MHUD development areas. Based on previous work by Wairaka Land Company for Unitec, some further transformation and site consolidation is expected.

The Ministry of Education through its transport consultant (Jacobs), have indicated their intention to establish a Primary School, that is co-located in the Precinct with an Early Childhood Education Centre and Special Needs Education Centre. The exact location and timing are still to be confirmed between the Ministry of Education and MHUD. In the Stantec ITA, it has been assumed to be located in the centre of the Precinct, in the wider vicinity of Gate 3/Farm Road.

⁴ Stantec ITA: Wairaka Precinct: Integrated Transport Assessment, prepared for the Ministry of Housing and Development, June 2020

Figure 5: MHUD Masterplan key land development areas⁵



2.4 Surrounding road network

2.4.1 Existing surrounding road network

The Plan Change Area, as described above, is located at the edge of the Auckland Inner Isthmus, in a well-connected part of Auckland with good provisions for all travel modes.

In relation to surrounding road connections, the Plan Change Area is 'landlocked' and only legally accessible via private roads which are accessed from one of the four Unitec campus gates (Gate 2) on

⁵ Source from Stantec ITA Figure 3-3. Note that the boundaries of the development areas are indicative only, and do not accurately reflect the boundaries of land parcels, including the Mason Clinic boundaries.

Carrington Road (the Certificates of Title for the Plan Change Area are subject to a right-of-way which provides for legal access via the private roads). Having said that, the internal road network of the wider precinct is such that access to the Plan Change Area can be obtained from all of the Unitec campus gates from Carrington Road.

Carrington Road is classified as an arterial road in the AUP: OP and it connects the Mount Albert town centre in the south with Point Chevalier town centre in the north. As shown in Figure 6, Carrington Road at present provides one traffic lane in each direction. On-road cycle lanes are provided on both sides of Carrington Road and as such on-street parking is not permitted. The majority of the length of Carrington Road includes a flush median which separates the two vehicle lanes providing an informal turning bay for vehicles turning in and out intersection roads, except for a 130m stretch between Fifth Avenue and the Unitec squash courts where the carriageway includes parallel parking on the eastern side, and does not include a median separating the traffic lanes.

Figure 6: Carrington Road Typical Cross Section



Unitec Gates 1, 2 and 3 are all priority-controlled intersections located on Carrington Road. The intersection of Gate 4 (the main entrance to Unitec) with Carrington Road is signalised, providing a safe location for pedestrians to cross Carrington Road as well as a safe location for vehicles to turn right in and out of the Unitec grounds. A zebra crossing is provided to the south of Sutherland Road, providing a safe pedestrian crossing location at the northern end of Carrington Road.

2.4.2 Future surrounding road network

Carrington Road will be upgraded as part of the Regional Land Transport Programme 2018 – 2028 and funding has been allocated, with primary construction works starting in 2025⁶. The works are described as

Provision of intersection improvements, bus lanes and new bus facilities to support the UNITEC precinct redevelopment, which is expected to provide 3000-4000 new homes in addition to servicing the current 19,000 students on campus.

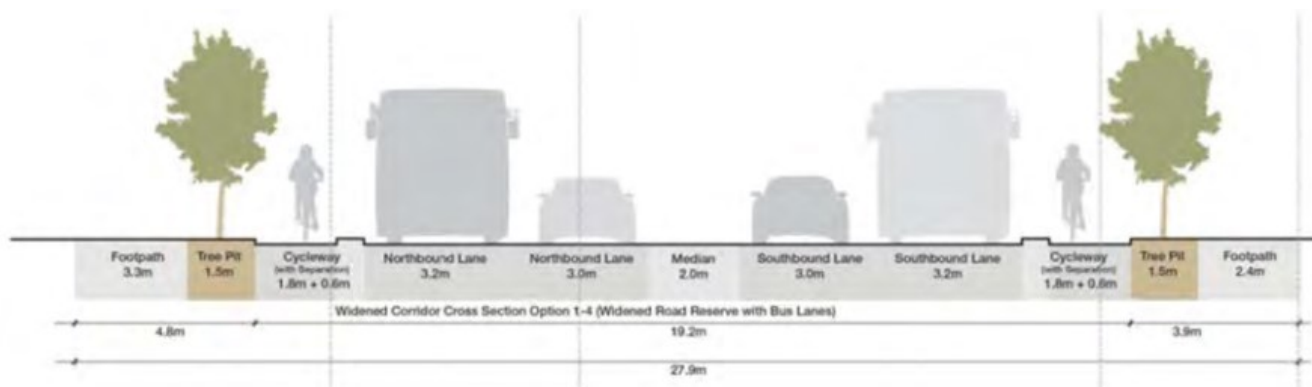
⁶ Auckland Transport. Regional Land Transport Programme 2018 – 2028. Page 60.

The design for these works has yet to be completed; however, previous draft design work undertaken by Auckland Transport identifies the following key improvements that will likely be incorporated into the upgrade⁷

- ◆ Improved pedestrian crossing (and where appropriate, cycle crossing) over Carrington Road
- ◆ Improved footpaths, particularly on the western side
- ◆ Upgrading the narrow, paint-only, cycle lanes to cycle lanes with protective separators
- ◆ Provision of bus priority (exact form to be confirmed)
- ◆ Improving landscaping / tree planting / stormwater treatment.

The previous Auckland Transport corridor management plans for Carrington Road provided the example cross-section shown in Figure 7, noting that this is a recommended design rather than an approved design.

Figure 7: Future Carrington Road cross section⁸



Further, with the implementation of the MHUD development, it is proposed to signalise at least one intersection on Carrington Road. The traffic modelling undertaken for MHUD development in the Stantec ITA includes the signalisation of Gate 2 (just north of Segar Avenue) and Gate 3/Farm Road. Gate 4 is presently signalised. Gate 1 is expected to remain as a priority- controlled intersection⁹.

2.4.3 Historic road safety assessment of the surrounding road network

A historical search of the New Zealand Transport Agency's Crash Analysis System (CAS) has been completed for the 5-year period from 2015 to 2019, and up to November 2020, to identify the details of all reported crashes in the internal road network within the Mason Clinic Site as well as the wider road network along Carrington Road.

The results of this CAS assessment are summarised in Figure 8 and Figure 9.

⁷ Source from Stantec ITA Section 4.6.1

⁸ Source from Stantec ITA Figure 4-10

⁹ Source from Stantec ITA Section 4.6.3

Roads internal to the Wairaka Precinct

The CAS result shows that 2 minor injury crashes were recorded on the internal road network in the vicinity of the Plan Change Area

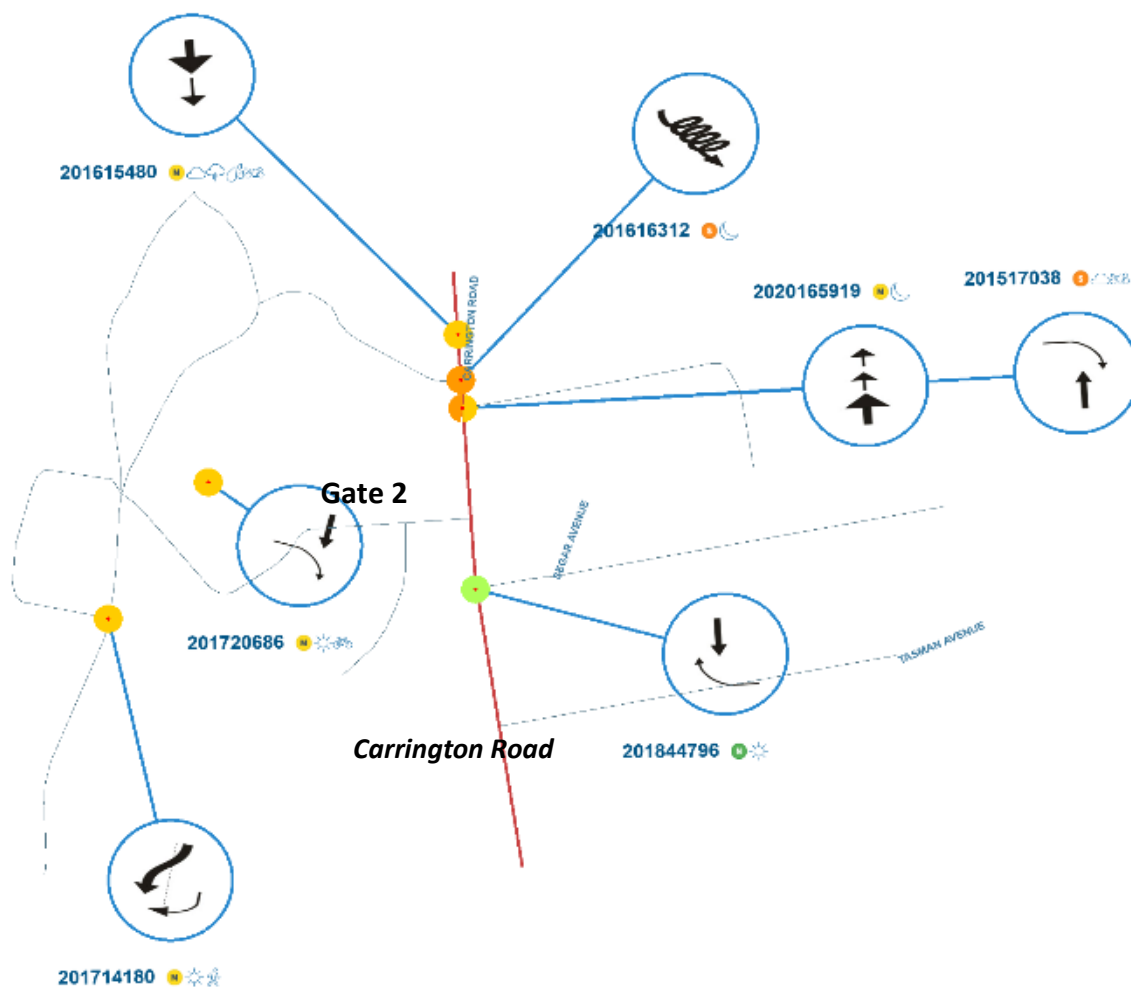
- ◆ One of these crashes (marked as '#1' in Figure 8) occurred on the Mason Clinic Site. This crash was caused by a car overtaking another car when it was turning right and therefore is considered to be as a result of human error
- ◆ The second crash (marked as '#2' in Figure 8) happened on the internal roadway adjacent to the Mason Clinic Site and resulted in a minor injury to a cyclist. This was due to the driver who was exiting the Mason Clinic Site, failing to give way to a cyclist travelling down the hill. Given that it is a priority-control intersection with a "stop" sign, this crash is also considered to be as a result of human error.

In summary, the type of crashes and the crash distribution do not indicate any inherent safety concerns with the design of the existing internal road network.

Figure 8: CAS results - Crash distribution and severity (S=severe injury crash; M=moderate injury crash; N=non-injury crash)



Figure 9: CAS results - type of crash



Carrington Road

Further CAS analysis has been completed for the section of Carrington Road in the vicinity of Gate 2. In total, 5 crashes were recorded on this part of Carrington Road as follows.

- ◆ 2 serious-injury crashes were recorded in the vicinity of the Gate 1/ Carrington Road intersection
 - 1 crash was due to alcohol-related driving where the driver lost control on Carrington Road
 - 1 crash involved a motorist turning out of an access onto Carrington Road and failing to give way to a through vehicle on Carrington Road.
- ◆ 1 minor-injury crash was recorded just to the north of the Gate 1/ Carrington Road intersection where the driver of a vehicle was following too closely to another vehicle, resulting in a rear-ended crash
- ◆ 1 minor injury crash was recorded at the intersection of the Gate 1/ Carrington Road, which was a rear-end crash involving a car failed to stop and hit the back of a van which stopped and waited for another car doing a three-point turn on Carrington Road
- ◆ 1 non-injury crash involved a motorist turning out of an access onto Carrington Road and failing to give way to a through vehicle on Carrington Road.

These crashes appear to be typical of the type and severity of crashes that are expected on a busy urban road in a central suburb, such as Carrington Road, and none of them related to the vehicle movements through the Gate 2. As such, the crash analysis has not shown any inherent safety concerns with the existing road operation of Carrington Road in the vicinity of Gate 2.

In summary, very few crashes have been reported in the vicinity of the Plan Change Area. The crashes on Carrington Road appear typical of a busy arterial route and do not indicate any safety concerns. The cyclist crash occurring in the internal road network, appears to be an isolated event at a priority-controlled intersection, not indicating any safety concerns for cycling.

2.5 The existing transport characteristics of the existing Mason Clinic site

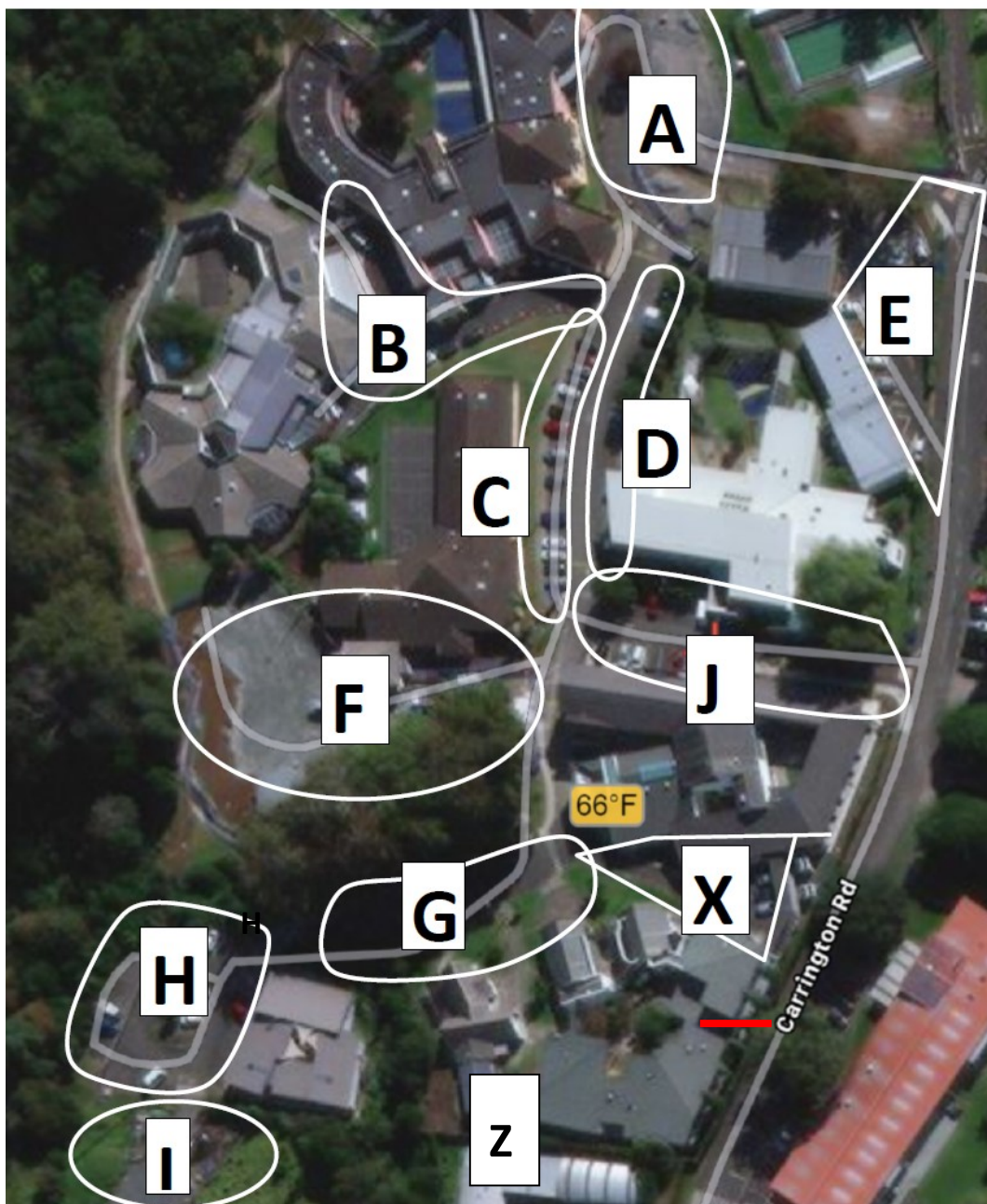
2.5.1 Existing onsite parking provision

Figure 10 and Table 1 shows an overview of the existing parking provided on the Mason Clinic Site. A total of 216 spaces is presently provided.

Table 1: June 2020 onsite parking provisions

Parking Area	General Parking
A – Mason Clinic	16
B – Rata Unit	9
C – Kahikatea Unit	18
D – Pohutukawa Unit	24
E – Kowhai Centre	17
F – Tanekaha Unit	39
G – Te Miro	15
H – Rimu	31
I – Temporary Car Park	25
J - Pohutukawa	15
X and Z	7
TOTAL	216 spaces

Figure 10: Mason Clinic Onsite parking provision (June 2020)



2.5.2 Existing vehicular trip generation

Traffic surveys of the use of the Mason Clinic vehicle access were undertaken on 30 November 2016. This included traffic counts of the one-way road through the site as well as the two-way access to the parking area in front of the Kowhai building. Figure 11 shows these existing accesses to the Mason Clinic Site.

Figure 11: Existing vehicle accesses to and from the Mason Clinic Site

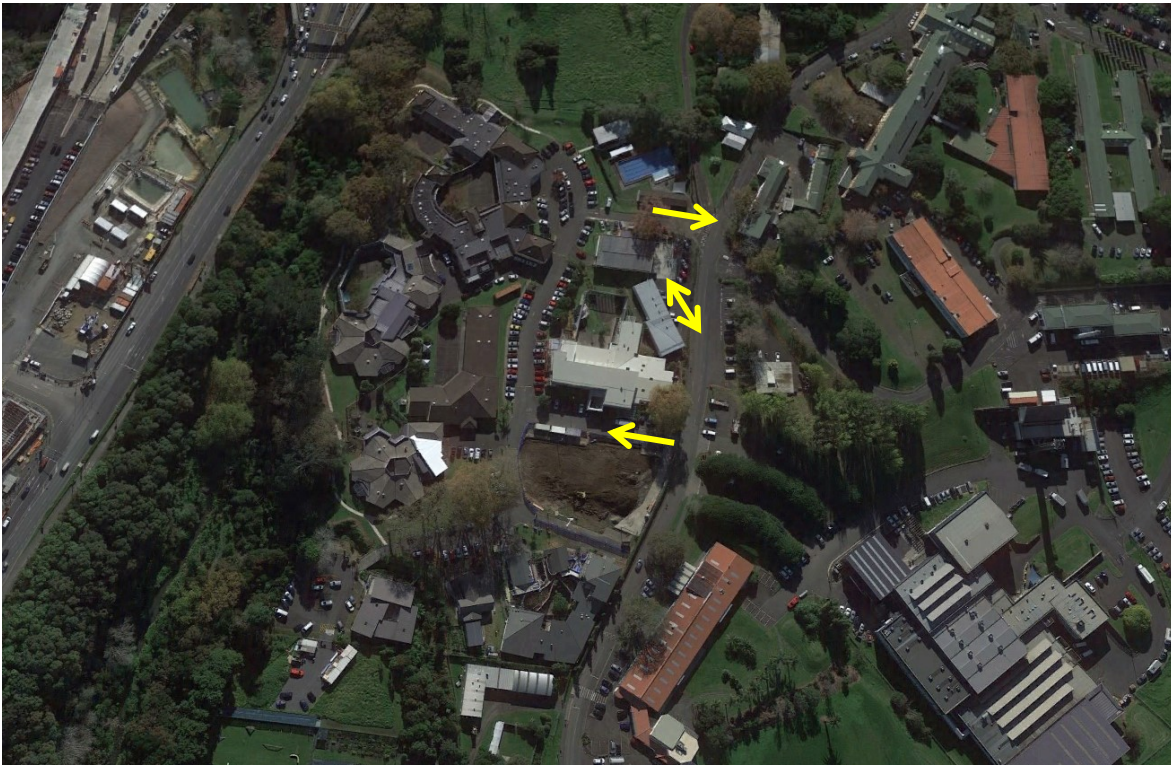
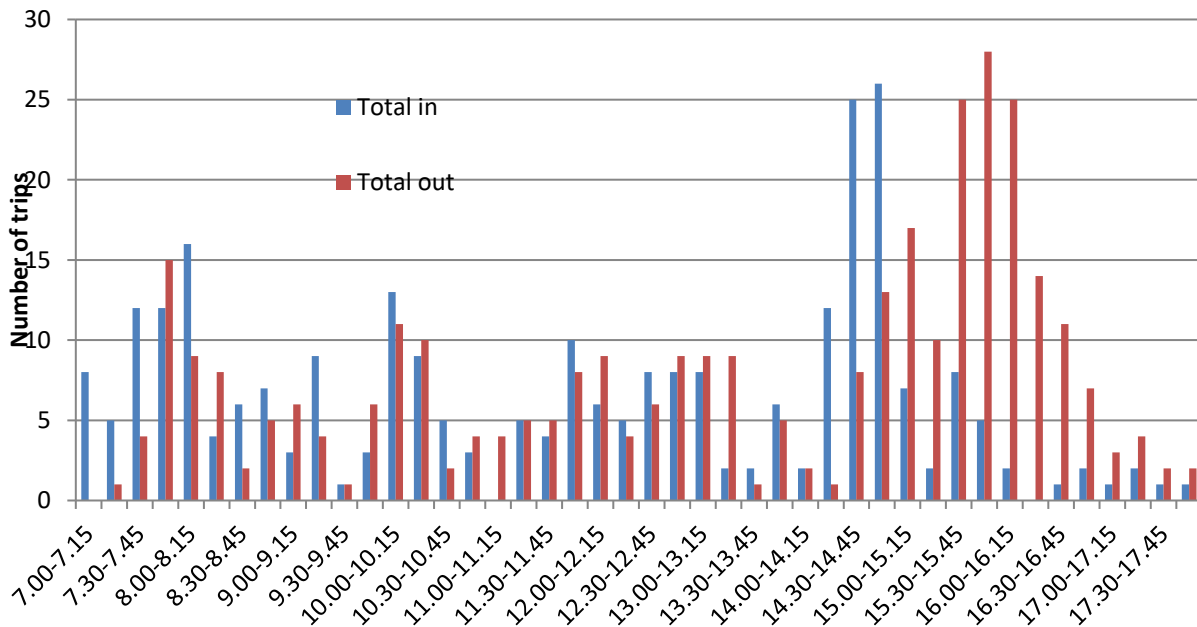


Figure 12 shows the total traffic movements recorded to be generated by the site, separated into entering and exiting movements.

Figure 12: 30 November 2016 traffic survey results for the number of trips in and out



The peak traffic generating hour of the site occurred between 2:15 and 3:15 pm, with the Mason Clinic Site generating 109 vehicle trip movements in and out of the site. This traffic generation remains relatively consistent through to 4:30 pm and correlates with the clinical shift change on the site, as well as clerical staff leaving the site later in the afternoon. Between 7:30 and 8:30 am the morning shift

change also generates a peak in the traffic accessing the site; however, this peak is considerably smaller with the site generating 84 vehicle trips.

The results of the surveys also show that the Mason Clinic activity generates the following total trips and associated trip rates per bed, in association with the peak commuter hours of the surrounding road network.

- ◆ Morning peak hour (7:30 to 8:30 am): 84 trips resulting in a trip generation rate of 0.88 trips per bed
- ◆ Evening peak hour (4:30 to 5:30 pm): 32 trips resulting in a trip generation rate of 0.33 trips per bed.

2.5.3 Existing walking and cycling trip generation

Pedestrian and cyclist movements in and out of the Mason Clinic Site were also recorded during the traffic survey. It was difficult to distinguish between staff accessing the site for the first time and staff walking between facilities on the site. As such, it is estimated based on observations that approximately ten staff walk to the site.

The survey results found the site to generate four cyclist movements a day, with two movements in and out of the site, respectively. Both cyclists arrived in the morning, around 8:00 am and left at differing times, leaving around 11:00 am and 5:30 pm respectively. It is understood that there are a few additional staff who regularly cycle to the site who were not captured on the survey day.

3 TRANSPORT ACCESSIBILITY OF THE MASON CLINIC SITE

3.1 Private vehicle accessibility

3.1.1 Existing private vehicle accessibility

As outlined above, the Plan Change Area is extremely well located in a well-connected part of Auckland. It has good private vehicle accessibility to the surrounding arterial road network. In particular, it provides connections to the following surrounding arterial and state highway road network.

- ◆ Carrington Road
- ◆ Point Chevalier Road
- ◆ Mount Albert Road
- ◆ Great North Road, which in turn connects to the North-Western Motorway/State Highway 16.

3.1.2 Future private vehicle accessibility

As mentioned previously, MHUD is proposing residential development in the northern and central parts of Wairaka Precinct. As the Plan Change Area is in close proximity to the MHUD development area, the transportation upgrades intended within the Wairaka Precinct as specified in Stantec ITA will also be applicable to the Plan Change Area. The high-level future general and vehicular network are presented in Figure 13, with more information can be founded in Stantec ITA Section 4.3.1.

The locations of the proposed vehicle connections are intentionally high-level. Similarly, minor roads or accesses (such as vehicle crossings) are not shown, as these will be designed as part of the detailed development proposals within each area. However, none of these is expected to provide through traffic connections across the red “boundary” lines shown in Figure 13 above or allow direct access into the Unitec Core from the southern local roads. Therefore, private vehicle access to the Plan Change Area will continue to be exclusively from Carrington Road in the future.

Figure 13: Future road network provisions¹⁰



3.2 Public transport accessibility

3.2.1 Existing public transport accessibility

There are five northbound and five southbound bus stops on Carrington Road. Four bus stops in each direction are located along the Carrington Road frontage of Wairaka Precinct. There are also two bus stops on Great North Road by Alford Street on each side of the Waterview Shared Path bridge that provides for active mode connection to the bus stops.

The Central Auckland Bus New Network was implemented in 2018. The network surrounding the Plan Change Area is shown in Figure 14.

¹⁰ Source from Stantec ITA Figure 4-1

Figure 14: Existing public transport provisions¹¹



There are various frequent services (at least every 15 minutes, 7 am to 7 pm) and connector services (at least every 30 minutes, 7 am to 7 pm) on the surrounding arterial roads, including

- ◆ **Outer Link:** Frequent service cross-town circular through Westmere, the City Centre, Parnell, Newmarket, Mt Eden, St Lukes and Mt Albert town centre
- ◆ **Route 66:** Frequent service between Mount Wellington and Point Chevalier through Mt Albert town centre and along Carrington Road
- ◆ **Route 18:** Frequent service between New Lynn and City Centre via the direct route, accessible from the Plan Change Area via Point Chevalier town centre or Great North Road stops

¹¹ Auckland Transport, 2018. Central Auckland Route Map. <https://at.govt.nz/media/1977158/nnc-map-and-legend-050618.pdf> Accessed 13/09/2020.

- ◆ **Route 195:** Frequent service between New Lynn and City Centre via Green Bay and Blockhouse Bay Road, accessible from the Plan Change Area via Point Chevalier town centre or Great North Road stops
- ◆ Various other services running between West Auckland, Point Chevalier, and the City Centre.

There are also two rail stations in the vicinity, namely the Mt Albert Station and Baldwin Avenue Station, which are consecutive stations along the Western Rail Line of the Auckland Rail network. The Western Rail Line runs every 10 minutes (during peak hours) between Swanson in the west and Newmarket and City Centre in the east. Two frequent bus routes (Outer Link and Route 66) connect the Mount Albert Train Station with the Plan Change Area, providing connections to high frequency and quality public transport.

3.2.2 Future public transport accessibility

Future improvements of relevant public transport infrastructure include the proposed City Rail Link project, which will significantly improve travel time via trains, with the anticipated travel time between Mt Albert and the new Aotea Station resulting in approximately a 20-minute travel time reduction¹². This travel time reduction is largely a result of the ability to route trains directly to the central city, as opposed to the Western Line having to pass through Newmarket to reach the central city. Furthermore, the frequency of train movements will increase, as the current Britomart dead end constrains the number of trains that can operate on the network. This improved accessibility will further encourage public transport trips to and from the Mount Albert train station and the Plan Change Area.

In addition, bus lanes will be provided on Carrington Road between Woodward Road and Point Chevalier Town Centre, as part of the Carrington Road Upgrade by Auckland Transport as discussed earlier. Another new southbound bus lane will be proposed on Point Chevalier Road, from near Formby Avenue to the town centre (consulted on in December 2019)¹³.

Furthermore, Auckland Transport recently consulted on proposed changes to the circular route of Outer Link, which are expected to improve journey times and the reliability of the overall journey. The route will still pass through Carrington Road and New North Road as per the current operation¹⁴.

Another potential improvement, a Frequent Transport Network along SH16, will also assist the area (proposed as Light Rail, but potentially a Busway as an initial or alternative solution that also provides many of the relevant benefits). Benefits will particularly accrue if a Point Chevalier station is included, as seems likely. However, this transport infrastructure is considered unlikely to be in place within the 8- to 10- year timeframe.

Figure 15 shows the proposed high-level connectivity of public transport in the Wairaka Precinct.

¹² City Rail Link. <https://www.cityrailink.co.nz/crl-travel-times/> Accessed 06/08/2020.

¹³ Auckland Transport. Point Chevalier improvements. <https://at.govt.nz/projects-roadworks/point-chevalier-improvements/> accessed 07/08/2020

¹⁴ Auckland Transport. Central crosstown bus changes. <https://at.govt.nz/projects-roadworks/central-crosstown-bus-changes/#> Accessed 07/08/2020.

Figure 15: Future public transport network provisions ¹⁵



Overall, the Wairaka Precinct will be very well served by high-frequency public transport within a convenient walking distance. The areas least accessible to public transport are the west and southwest of the precinct, including the Plan Change Area, due to the distance of this part of the precinct from the main access points to the precinct.

It is understood that the development planned for the Wairaka Precinct does consider the possibility for a bus route via the western spine road adjacent to the Plan Change Area to Carrington road at Gate 1. This proposition has not been formalised, however the route could be implemented at a future stage should demand make it sensible. More information about future public transport connectivity can be found in Stantec ITA Section 4.3.2.

¹⁵ Source from Stantec ITA Figure 4-2

3.3 Cycling and walking accessibility

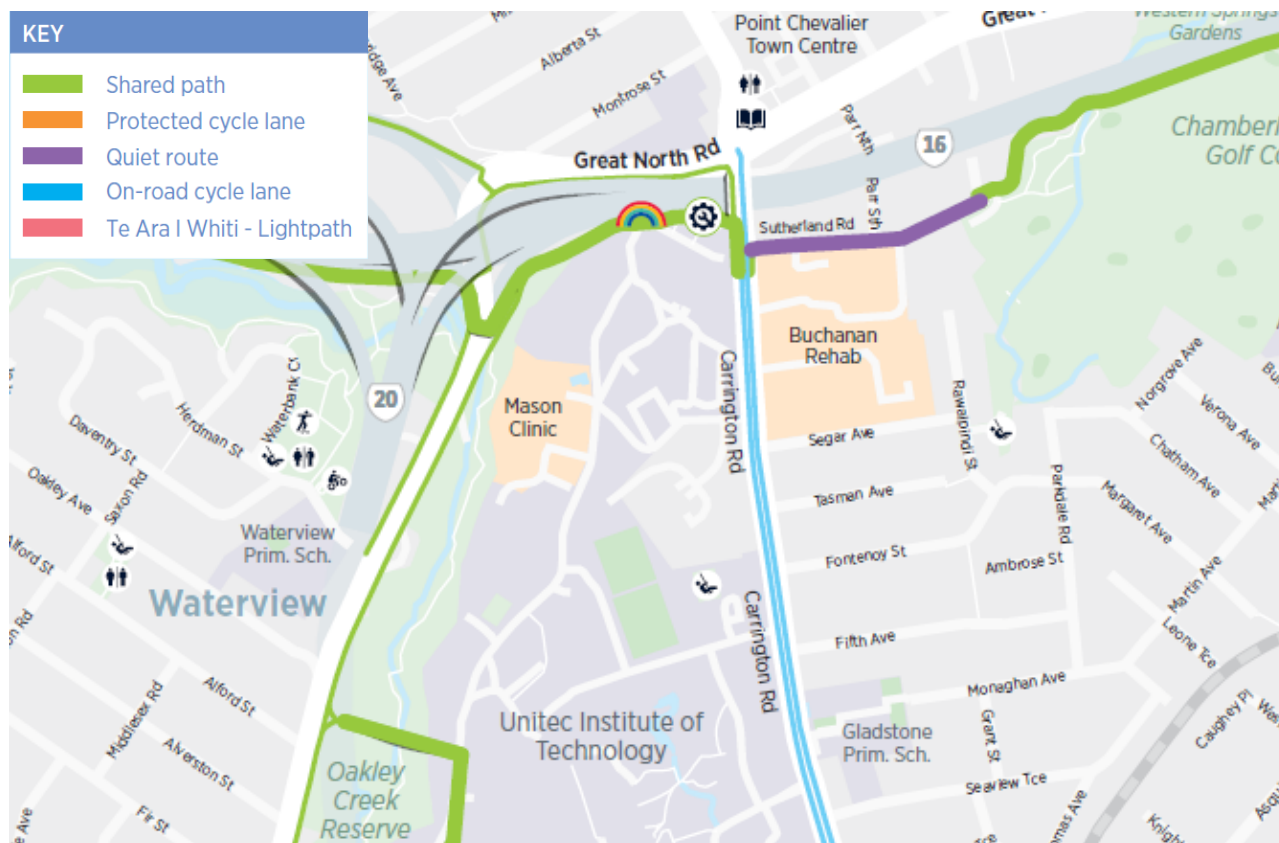
3.3.1 Existing cycling and walking accessibility

Carrington Road is served with painted on-road cycle lanes provided on both sides. This provides a cycle connection to the wider Cycle Metro route, which runs parallel to the North Western motorway.

The North-western cycleway runs parallel to SH16, and provides an almost fully off-road cycle route between Westgate and the Auckland City Centre.

Other existing walking and cycling connections are mainly narrow and/or circuitous, and not very attractive to active mode users. However, the Waterview Shared Path opened in 2017 provides improved local/regional walking and cycling connectivity to the west, via a bridge (the Waterview Shared Path) over the Oakley Creek near Alford Street in Waterview and to the south, the neighbouring suburbs and Avondale on the eastern edge of Oakley Creek. The facility is approximately 3.5 m wide and has a low gradient to ensure accessibility for all users. A new bike fix-it station is provided in the vicinity as well, which enables the convenience of cycling. Figure 16 below shows the walking and cycling facilities in the vicinity of the site.

Figure 16: Waking and cycling facilities in the vicinity of the Plan Change Area¹⁶



¹⁶ Auckland cycleway map. <https://at.govt.nz/media/1977770/cycle-network-map-c1-central-auckland.pdf> Accessed 07/08/2020.

In the south, the Waterview Shared Path will link to the future Avondale to New Lynn Shared Path that is currently under construction, providing good links to these suburbs as well as various town centres, schools and event or sports locations along the route.

3.3.2 Future cycling accessibility

As summarised in Figure 17, existing/future cycling routes converge on to the Precinct from all directions, with improvements planned to include the following projects.

- ◆ Carrington Road Upgrade changing the existing painted cycle lanes to protected bike lanes offering much greater amenity and safety
- ◆ Point Chevalier Road / Meola Road providing new protected cycle lanes
- ◆ Avondale to New Lynn Shared Path with a continuation of Waterview Shared Path.

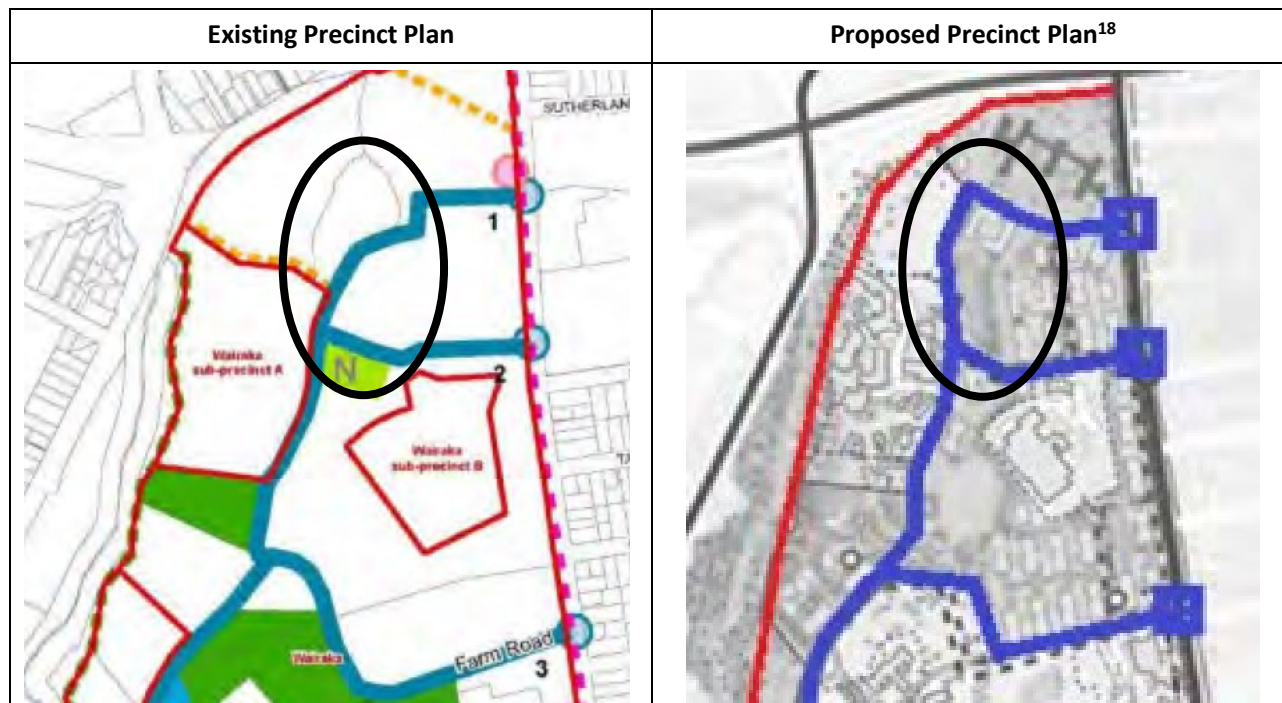
Figure 17: Future cycling network provisions ¹⁷



¹⁷ Source from Stantec ITA Figure 4-3

Within the Wairaka Precinct, the Stantec ITA proposes a few minor changes to the internal roading layout of the Wairaka Precinct Plan. As a result, the alignment of the internal north-south road past the Plan Change Area may be altered. The proposed changes are indicated in Figure 18.

Figure 18: Changes proposed to Wairaka Precinct roading in the vicinity of the Mason Clinic



Key design standards for the main internal streets are:

- ◆ 20 m road reserve width, widening to 25 m on the approach to Carrington Road (allowing for additional turning lanes/solid medians)
- ◆ 3.0 m traffic lanes, allowing for rubbish/furniture trucks
- ◆ protected cycleways with a minimum 0.8 m separator
- ◆ minimum of 2.2 m footpaths on each side
- ◆ landscaping/rain gardens, 2.0 m or more, allowing for larger street trees
- ◆ limited vehicle crossings.

The new protected cycleways will provide safer and better connectivity to and from the Plan Change Area, encouraging people to cycle. An indicative future cycling provision plan is provided in the Stantec ITA and presented in Figure 17, with more information detailed in Stantec ITA Section 4.3.3.

3.4 Walking accessibility

3.4.1 Existing walking accessibility

The Plan Change Area is well served by existing pedestrian facilities being located in an urban area. Pedestrian footpaths are provided on both sides of Carrington Road, supported by a signalised crossing

¹⁸ Source from Stantec ITA Figure 4-

and a zebra crossing. These existing facilities ensure the safety of pedestrians who travel to and from the Mason Clinic.

The Oakley Creek Esplanade to the west of the site provides a direct connection between Great North Road to the Unitec campus. This improves the walkability of the site for users travelling to and from the Plan Change Area. The speed limit within the Unitec campus is 30 km/hr, and as such, the road environment places a relatively high emphasis on pedestrian amenity and safety. Notwithstanding this, pedestrian facilities within the Unitec campus are limited, with footpaths only provided on one side of the internal road network.

Carrington Road adjacent to Wairaka Precinct has footpaths on both sides of the road, albeit the footpaths, particularly on the western side, are relatively narrow, and in some areas, hidden by hedges from the road.

Pedestrian connectivity across Carrington Road and over side streets and site accesses in the surrounding area varies between adequate and poor.

- ◆ Signalised crossings are provided at the signalised Gate 4 / Carrington Road (albeit a signalised pedestrian crossing is missing on the northern Carrington Road approach to this signal as well)
- ◆ There is also a raised walk/cycle priority crossing over Carrington Road south of Sutherland Road, connecting the North-western Cycleway across the road
- ◆ For the rest of the Precinct's Carrington Road frontage, no other crossing assistance is provided across the relatively wide and busy road except for a flush median, including no specific provisions to enable pedestrians to cross easily at bus stops.

The side road intersections with Willcott Street, Woodward Road, Fifth Avenue, Fontenoy Street, Segar Avenue, and Sutherland Road all have pedestrian refuge islands to assist pedestrians, albeit some of the intersections allow fast turns due to their large geometry.

On the western side, the existing Unitec gates are generally very wide, often with multiple approach lanes meaning fast vehicle turns are possible with limited to no assistance for pedestrians to cross the gate entrances.

3.4.2 Future walking accessibility

In the wider environment, walking benefits from more connectivity options to and from the Plan Change Area than driving because of the Plan Change Area being 'landlocked'. It is intended to upgrade both pedestrian facilities along and across Carrington Road as part of the Carrington Road Upgrade, as discussed earlier. However, it is recognised that the increasing popularity of the surrounding shared paths offers challenges to pedestrians on these routes, as they have to compete with increasing numbers of people using other transport modes, such as bikes and e-scooters.

As noted previously, the Stantec ITA proposes a few minor changes to the internal roading layout of the Wairaka Precinct Plan. As a result, the internal north-south pathway past the Plan Change Area may be altered, with a minimum of 2.2 m footpath provided on each side of the pathway. It will provide a better walking environment and safer walking connections to the Plan Change Area.

4 THE PROPOSED PLAN CHANGE

As described above, the Proposed Plan Change seeks to rezone the Northern Site and Southern Site to Special Purpose – Healthcare Facility and Hospital Zone and adjust the boundaries of the Wairaka sub-precincts to include the Northern Site and Southern Site within Sub-precinct A. The Proposed Plan Change also seeks to adjust the Wairaka Precinct provisions to better provide for the Mason Clinic to grow and intensify and to manage the adverse effects of such development.

4.1 The proposed Mason Clinic development

The Proposed Plan Change enables the WDHb’s planned expansion of the Mason Clinic from the existing facility of 111 beds to 246 beds over some 30 years.

The re-development of the Plan Change Area, which could be enabled by the Proposed Plan Change, is expected to be carried out in stages as summarised in Table 2. It is anticipated that these numbers will slightly change as the update/rezoning work progresses. However, if any development enabled by the Proposed Plan Change needs to be assessed against the standards of Chapter E27 of the AUP: OP, they will be at the time of applying for resource consent.

Table 2: Proposed staged implementation of the Mason Clinic expansion

Stage Description	Number of beds	Indicative Timing
Existing	111	2020
Stage 1	121	2024
Stage 2	198	2027
Stage 3	246	2049

4.2 Proposed transport provisions of the Proposed Plan Changes

The Proposed Plan Change inserts an additional activity table (Table I334.4.4 Wairaka Precinct sub-precinct A) to reflect the activity and the status of new development that can be enabled within Sub-Precinct A. In this table, all new buildings will have (at least) a Controlled activity status.

A new matter of control relating to the location and design of vehicle accesses serving the Mason Clinic is proposed at I334.7.1 (d), as follows.

I334.7.1 (d)

Effects of the location and design of access to the sub-precinct on the safe and efficient operation of the adjacent transport network having regard to:

- (i) visibility and safe sight distances;*
- (ii) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring;*
- (iii) proximity to and operation of intersections;*

- (iv) *existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Precinct; and*
- (v) *existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways;*

This matter will then be assessed according to the new assessment criteria inserted in I334.7.2 (c), which considers the extent of which effects of the location and design of the access have been adequately assessed and managed, as follows.

I334.7.2 (c)

The extent to which effects of the location and design of access to the sub-precinct on the safe and efficient operation of the adjacent transport network have been adequately assessed and managed having regard to:

- (i) *visibility and safe sight distances;*
- (ii) *existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring;*
- (iii) *proximity to and operation of intersections;*
- (iv) *existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Precinct; and*
- (v) *existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways;*

A new standard relating to the provision of onsite parking is proposed at I334.6.16 Parking as follows.

- (1) *No minimum and no maximum parking is required in Sub-precinct A.*

5 TRANSPORT ASSESSMENT OF THE PROPOSED PLAN CHANGE

5.1 Assessment of vehicle access arrangement

The expansion of the Mason Clinic is likely to remove the existing onsite car parking areas, which are located within the central area of the existing campus, and provide parking at the north and south of the site.

Accordingly, the existing vehicle access/egress provisions serving the Plan Change Area are required to be altered to provide access/egress to and from these two new car parking areas/buildings, with the existing accesses potentially being downgraded to service lanes or relocated and/or disestablished.

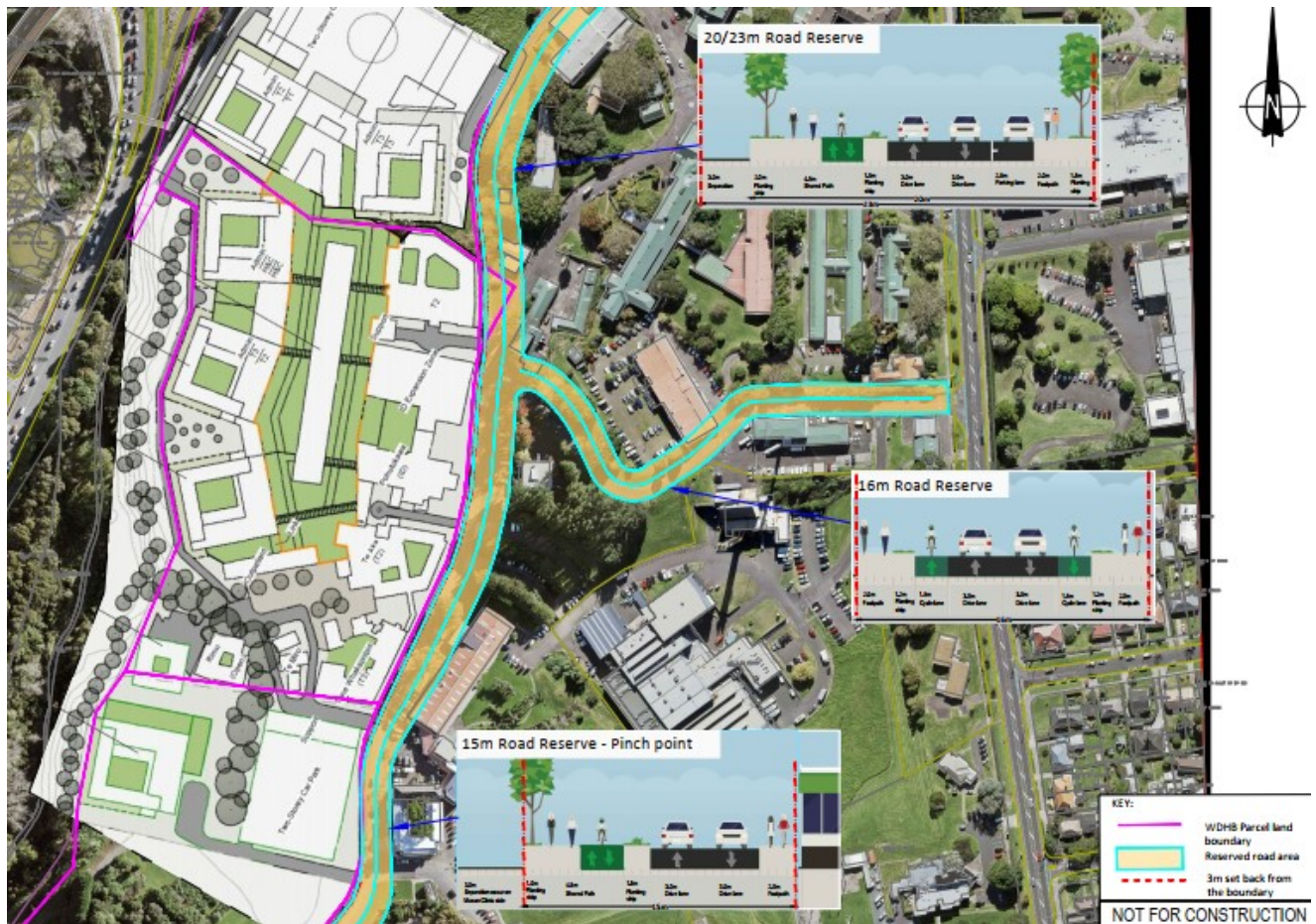
Two options for vehicle access have been considered to inform the Mason Clinic development and Proposed Plan Change. Both options assume that the road network adjacent to the Mason Clinic Site will be upgraded to support the re-development of MHUD's adjacent landholding. More information on this option development is provided in Appendix A.

In summary, both options will allow for the Precinct 20 m road reserve for the north/south road adjacent to the eastern edge of the Plan Change Area (plus 3 m separation resulting in 23 m road reserve), as well as a 16 m road reserve for the Gate 2 road. These road reserve widths are consistent with the future

design of the internal roads of MHUD development. However, Option 1 includes a proposed realignment of the section of the north/south road, while Option 2 follows the existing alignment.

The preferred option is Option 2, which is presented in Figure 19.

Figure 19: Mason Clinic: Preferred roading option



In the preferred option, north of the Gate 2 Road junction, the north/south road follows the alignment of the existing southbound one-way, allowing a 20 m/23 m road reserve and the removal of the existing north-south road. Access to the parking areas in the northern part of the site will likely be taken from this road as a standard vehicle crossing. As shown previously in Figure 18, the Stantec ITA proposes these changes to the internal roading layout of the Wairaka Precinct Plan.

With regard to vehicle access, the matters of control for new buildings that are proposed to be inserted through the Proposed Plan Change will cover the design and safety of access of the existing and future transport environment, as and when any new development occurs.

Any road network design internal to the Plan Change Area enabled by the Proposed Plan Change will need to be assessed against the standards of Chapter E27 of the AUP: OP.

5.2 Assessment of traffic effects

5.2.1 Traffic generation predicted to result from the Proposed Plan Change

The predicted traffic generation resulting from the Proposed Plan Change has been based on a realistic redevelopment proposition for the Mason Clinic.

Based on the trip generation rate per bed measured in 2016 and assumptions with regard to changes in the use of public transport, walking and cycling over time, the number of trips generated by the implementation of the various stages are predicted to be as shown in Table 3. In summary, deducting the existing vehicle trips generated from the current site (96 beds in 2016), the complete development is predicted to generate additional 116 trips and 32 trips in the morning and evening peak hour, respectively in 2049.

Table 3: Predicted peak hour trip generation for the staged implementation of the Mason Clinic expansion

Stage Description	Timing	Morning peak hour			Evening peak hour		
		In trips	Out trips	Total trips	In trips	Out trips	Total trips
96 beds	2016	46	38	84	6	26	32
Stage 1: 121 beds	2024*	56	46	100	8	31	39
Stage 2: 198 beds	2027**	86	70	156	12	49	61
Stage 3: 246 beds	2049**	110	90	200	12	52	64

* Sustainable travel increases from 11 % to 15%

** Sustainable travel increases from 11 % to 20%

*** Sustainable travel increases from 11 % to 25%

5.2.2 Traffic generation without the Proposed Plan Change

A prediction of the additional traffic generation of the Plan Change Area without the implementation of the Proposed Plan Change has also been completed. This has been based on a development proposition which could be implemented on the Northern Site and Southern under the current AUP: OP zoning of Business- Mixed Use.

It is understood that the intention of the wider Wairaka Precinct redevelopment for these sites (if not rezoned) is to achieve a residential density of between 94 to 113 dwellings per hectare (gross)¹⁹. This equates to a gross ratio of 1 dwelling per 88 to 106 m², which is considered high-density. As such, the Northern Site and Southern Site could be redeveloped to accommodate between 267 to 321 dwellings. While the Southern Site is currently identified as an 'open space', MHUD's reference plan accounts for the open space provision throughout the wider precinct, and therefore the gross density ratio can be applied to the Southern Site.

¹⁹ MHUD development reference plan

For trip generation rate of high-density residential development, reference has been made to the updated Guide to Traffic Generating Developments²⁰ published in 2013, which gives the following trip peak hour trip generation rates.

- ◆ Morning peak hour: 0.53 trips per unit
- ◆ Evening peak hour: 0.32 trips per unit.

Applying these rates, the Northern Site and Southern Site could together generate some 142 to 170 trips during the morning peak and some 85 to 103 trips during the evening peak. These additional trips are significantly higher than those predicted to result from the Proposed Plan Change (additional 116 trips during the morning peak hour and 32 trips during the evening peak hour).

5.2.3 Mason Clinic Plan Change traffic assessment with MHUD development

The MHUD traffic model

A large microsimulation traffic model has been developed by MHUD to assess the morning and evening peak hour traffic effects of the proposed re-development of the Wairaka Precinct. The extent of the traffic model is shown in Figure 20 overleaf, which includes the area of this Proposed Plan Change.

The development and calibration of these peak hour traffic models are reported on in the Stantec ITA,²¹ with the models being used to assess two scenarios for the re-development of the Wairaka Precinct.

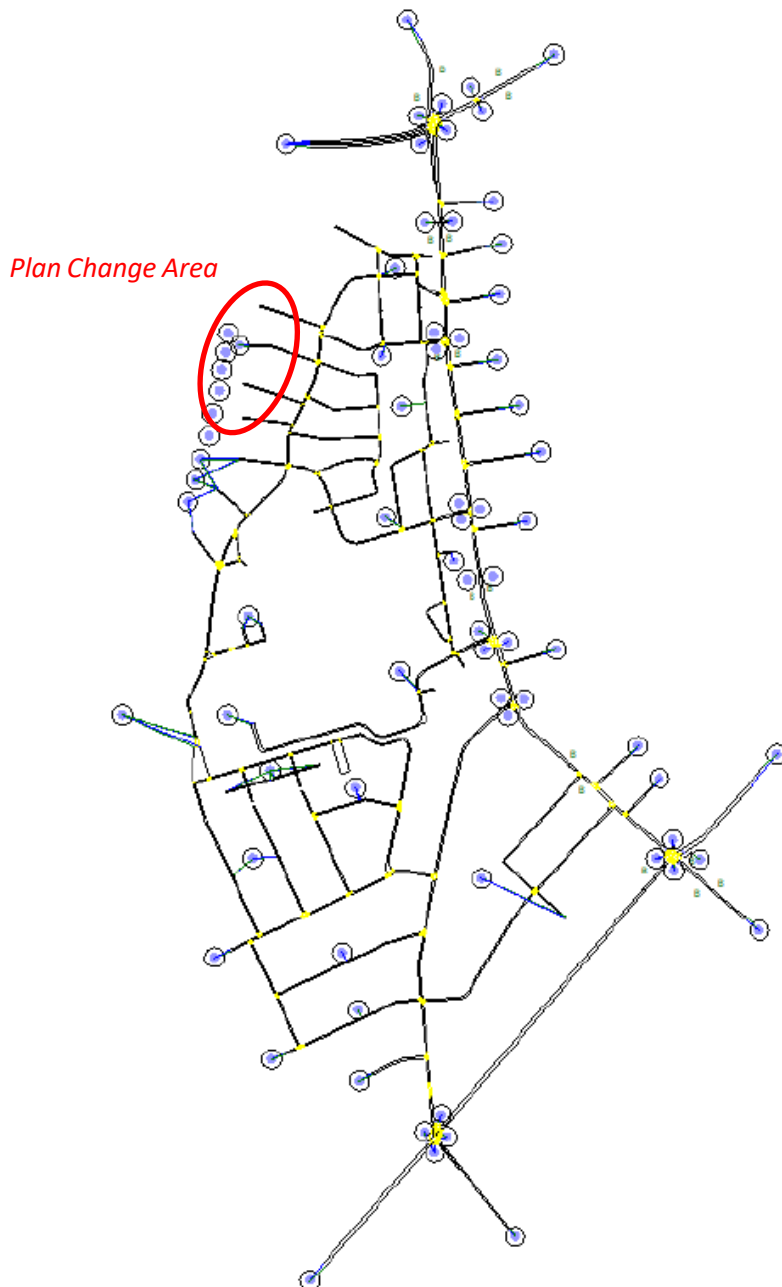
- ◆ Scenario A (Year 2024)
 - Focuses on the re-development of the southern MHUD area and some initial development in the central and northern MHUD areas
 - Includes 41% of all the 2,500 dwellings envisaged for the Crown land and the implementation of Stage 1 of the Mason Clinic development
 - Includes traffic demands of 1,670 trips during the morning peak hour, of which 100 (6.0%) are predicted to be generated by Stage 1 of the Mason Clinic development
 - Includes traffic demands of 1,624 trips during the evening peak hour, of which 39 (2.4%) are predicted to be generated by Stage 1 of the Mason Clinic development.
- ◆ Scenario B (Year 2028)
 - Focuses on the re-development of the central and northern MHUD areas
 - Includes 82% of all the 2,500 dwellings envisaged for the Crown land and the implementation of Stage 2 of the Mason Clinic development
 - Includes traffic demands of 2,089 trips during the morning peak hour, of which 156 (7.5%) are predicted to be generated by Stage 1 of the Mason Clinic development
 - Includes traffic demands of 1,813 trips during the evening peak hour, of which 61 (3.4%) are predicted to be generated by Stage 1 of the Mason Clinic development.

²⁰ NSW Transport Roads & Maritime Services. Guide to Traffic Generating Developments. Updated traffic surveys. TDT 2013/04a.

²¹ Stantec ITA: Wairaka Precinct: Integrated Transport Assessment, prepared for the MHUD, June 2020

The Mason Clinic traffic generation is a small proportion of the overall traffic demand predicted to be generated by the entire Precinct re-development proposed in the Stantec ITA for the MHUD.

Figure 20: Extent of Wairaka Precinct AIMSUN model



The following table summarises the key transport upgrade assumptions that have been included in the Stantec ITA of each development scenario.

Table 4: Summary of transport upgrades proposed to facilitate the re-development of the Precinct

Assumption	Responsibility	Base	Scenario A	Scenario B
Active mode assumptions				
Internal network design prioritising walking and cycling	Developers	✓ (partial)	✓	✓
Internal 30 kph speed environment design	Developers	✓ (partial)	✓	✓
Walk/cycle link from Southern development area to central / northern / Unitec areas, (even where vehicle traffic discouraged)	Developers	✓	✓	✓
Northwestern Cycleway	NZTA	✓	✓	✓
Waterview Shared Path	AT	✓	✓	✓
Avondale to New Lynn Shared Path	AT	✗	✓	✓
Point Chevalier Rd/Meola Road Cycleway (incl related changes at Carrington / GNR)	AT	✗	✓	✓
Carrington Road painted cycle lanes	AT	✓	✓	✗
Carrington Road protected cycle lanes along Precinct (as part of Carrington Rd Upgrade)	AT	✗	✗	✓
Car share, bike share and travel demand management initiatives readily accessible	Developers / 3 rd parties	✗	✓ (partial)	✓
Reduced parking rates per dwelling (≤1), unbundling parking from apartment purchase	Developers	✗	✓	✓
Public transport assumptions				
Point Chevalier Rd southbound bus lane	AT	✗	✓	✓
Carrington Road bus lanes along Precinct (as part of Carrington Rd Upgrade)	AT	✗	✗	✓
Reduced train journey times from Mt Albert town centre to City Centre due to City Rail Link	CRL	✗	✗	✓

Assumption	Responsibility	Base	Scenario A	Scenario B
Rapid Transport (likely Light Rail) with Point Chevalier station	MoT / NZTA	✗	✗	✗
General network assumptions				
Signalisation of raised table Carrington Rd walk/cycle crossing south of Sutherland Rd	AT	✗	✗	✓
Gate 1 / Carrington Road signalisation	AT / Developers	✗	✗	✗
Gate 2 / Carrington Road signalisation	AT / Developers	✗	✗	✓
Gate 3 (Farm Road) / Carrington Road signalisation	AT / Developers	✗	✗	✓
Mid-block signalised pedestrian crossing at main Unitec Core bus stop	AT / Unitec	✗	✗	✓
Gate 4 signalisation	N.A.	✓	✓	✓
Woodward Road / Carrington Road traffic signalisation	AT / Developers	✗	✗	✓
Connections from Southern development area to southern existing local roads	Developers	✗	✓	✓
Connection (vehicular) from the Southern or western (Oakley Creek / Te Auaunga - adjacent) development areas to Unitec Core	Developers / Unitec	✓	✗	✗
Level crossing at Woodward Road	KiwiRail	✓	✓	✓

Gate 2, the legal access onto Carrington Road for the Mason Clinic traffic, will remain a priority-controlled intersection under Scenario A and will become a signalised intersection under Scenario B.

The traffic model results

The modelling results of the Carrington Road/Gate 2 intersection operation are summarised in Table 5 below.

Table 5: Stantec ITA SIDRA results: Gate 2 / Carrington Road intersection

Peak Hour	Movement (into or out of Gate 2)	Base – Priority-controlled		Scenario A (2024) – Priority-controlled		Scenario B (2028) – Signalised	
		Ave delay ²²	LOS ²³	Ave delay	LOS ²⁴	Ave delay	LOS ²⁵
AM	Left in	5	A	10	A	36	D
	Right in	11	B	12	B	53	D
	Left out	14	D	29	D	33	C
	Right out	27	D	33	D	34	C
	Intersection Total	27	D	33	D	26	C
PM	Left in	1	A	13	B	11	B
	Right in	7	A	9	A	59	B
	Left out	9	C	29	D	39	D
	Right out	18	C	35	E	49	D
	Intersection Total	18	C	35	E	13	B

The above results show that the number of movements in and out of Gate 2 will remain low and can be easily accommodated through the intersection.

- ◆ All movements are predicted to operate at an acceptable LOS, with no LOS F predicted and only the right turn out of Carrington Road during the evening peak predicated to just operate at LOS E (average delay 35-50 seconds)
- ◆ The signalisation of the intersection results in overall improved operation during both peak hours compared to the operation of the existing priority-controlled intersection.

5.2.4 Mason Clinic Plan Change traffic assessment without the MHUD development

Additional traffic modelling has been undertaken by Flow to assess the operation of the Carrington Road/Gate 2 intersection, assuming that the MHUD development and associated signalisation of the intersection will not occur.

Two scenarios have been tested.

- ◆ Short term (2024). This includes
 - the additional demands through the intersection resulting from the implementation of Stage 1 of the Mason Clinic

²² Seconds per vehicle

²³ Level of Service (LOS) for priority-controlled intersection: LOS A <10 seconds; LOS B 10-15 seconds; LOS C 15-25 seconds; LOS D 25-35 seconds; LOS E 35-50 seconds; LOS F >50 seconds

²⁴ Ibid.

²⁵ LOS for signalised intersection: LOS A <10 seconds; LOS B 10-20 seconds; LOS C 20-35 seconds; LOS D 35-55 seconds; LOS E 55-80 seconds; LOS F >80 seconds

- with no improvements to Carrington Road
- Carrington Road/Gate 2 intersection remains a priority-controlled intersection.
- ◆ Longer term (2049). This includes
 - the additional demands through the intersection resulting from the implementation of the full Mason Clinic expansion
 - Carrington Road has been upgraded to improve bus, cycling and pedestrian infrastructures. A 20% reduction has been applied through traffic on Carrington Road during both peak periods, as per the assumption²⁶ made in Stantec ITA
 - Carrington Road/Gate 2 intersection remains a priority-controlled intersection.

The modelling results of the operation of the intersection in the morning and evening peak hours are summarised in Table 6 and Table 7, with the detailed results given in Appendix B.

Table 6: SIDRA results: Carrington Road/Gate 2 intersection, morning peak hour

Approach	Movement	Short term (2024)		Longer term (2049)	
		LOS	Ave delay	LOS	Ave delay
Carrington Road	Left turn in	A	4.7	A	4.7
Carrington Road	Right turn out	A	7.8	A	7.1
Gate 2	Left turn out	B	11.3	A	10.2
	Right turn out	C	15.7	B	13.9

Table 7: SIDRA results: Carrington Road/Gate 2 intersection, evening peak hour

Approach	Movement	Short term (2024)		Longer term (2049)	
		LOS	Ave delay	LOS	Ave delay
Carrington Road	Left turn in	A	4.7	A	4.6
Carrington Road	Right turn out	A	7.0	A	6.3
Gate 2	Left turn out	B	10.8	B	9.9
	Right turn out	B	13.5	B	11.6

The SIDRA results reveal that

- ◆ Carrington Road/Gate 2 intersection currently operates within capacity. All movements are either operating in LOS A, LOS B or the lower end of LOS C.
- ◆ In the short term (2024) scenario, the average delays and LOS of all movements at this intersection are predicted to remain the same, except a one-second increase in the left turn into and right turn out of Gate 2 in the morning peak, which is negligible.

²⁶ Stantec has applied a 25 % reduction in through traffic on Carrington Road during both peak periods for both long-term and short-term scenarios. Therefore, our traffic assessment based on a 20% reduction and only for the long-term scenario is considered conservative.

- ◆ In the long term (2049) scenario, the intersection is predicted to operate slightly better than current. This is due to the right turn vehicles from Gate 2 turning to flush median on Carrington Road will have fewer conflicting movements due to the 20% reduction in through traffic.

Overall, should the MHUD development not proceed, the Carrington Road/Gate 2 intersection will continue to operate satisfactorily with no changes or upgrades needed in either the short term or long term to accommodate the predicted traffic generation of the development that can be enabled by the Proposed Plan Change.

5.3 Safety assessment

As detailed previously in Section 2.4.3, very few crashes have been reported in the vicinity of the Plan Change Area over the past 5 years. The crashes on Carrington Road, in the vicinity of Gate 2, appear typical of a busy arterial route and do not indicate any safety concerns. The cyclist-involved crash that occurred on the internal road network of the Wairaka Precinct in the vicinity of the Mason Clinic appears to be an isolated event at the priority-controlled intersection, resulting from driver error.

Given the low volume of additional traffic estimated to be generated by the Proposed Plan Change, it is concluded that the Proposed Plan Change is not anticipated to generate any new safety concerns on the roads internal to the Wairaka Precinct, nor at the Carrington Road/ Gate 2 intersection and Carrington Road.

5.4 Car parking assessment

The recently released NPS-UD requires territorial authorities to remove minimum parking requirements from their district plans, other than for accessible parking, by 20 February 2022.

No minimum and no maximum parking controls are proposed as part of the Proposed Plan Change, which is consistent with this NPS-UD requirement. Parking on the Mason Clinic Site will be managed by the WDHB to respond to parking demand on a flexible basis, relative to changes in demand into the future.

6 UNITARY PLAN PROVISIONS ASSESSMENT

6.1 I334 Wairaka Precinct

This section addresses the transport matters in the context of a precinct which is being comprehensively developed. The Proposed Plan Change inserts an additional activity table (Table I334.4.4 Wairaka Precinct sub-precinct A) in I334 to reflect the activity and the status of new developments that can be enabled within Sub-Precinct A.

In this table, all new buildings will have a Controlled activity status and, as such, will require a Controlled activity resource consent. A new matter of control is proposed to be inserted at I334.7.1 (d), where Council will have control on the location and design of the vehicles access on the safe and efficient operation of the transport network as follows. The new provision requires a suitable assessment at each stage of new development, which is appropriate as the internal road network is upgraded over time,

such that the location, design and function of any vehicle accesses to new development at the Mason Clinic will require ongoing consideration. In the event that a new development does not seek any new vehicle access, or alterations to an existing access, the assessment can be suitably detailed to ensure existing access arrangements will continue to service the site efficiently and safely.

I334.7.1 (d)

Effects of the location and design of access to the sub-precinct on the safe and efficient operation of the adjacent transport network having regard to:

- (vi) visibility and safe sight distances;*
- (vii) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring;*
- (viii) proximity to and operation of intersections;*
- (ix) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Precinct; and*
- (x) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways;*

This matter will then be assessed according to the new assessment criteria inserted in I334.7.2 (c), which considers the extent to which effects of the location and design of the access have been adequately assessed and managed, as follows.

I334.7.2 (c)

The extent to which effects of the location and design of access to the sub-precinct on the safe and efficient operation of the adjacent transport network have been adequately assessed and managed having regard to:

- (vi) visibility and safe sight distances;*
- (vii) existing and future traffic conditions including speed, volume, type, current accident rate, and the need for safe manoeuvring;*
- (viii) proximity to and operation of intersections;*
- (ix) existing pedestrian numbers, and estimated future pedestrian numbers having regard to the level of development provided for in this Precinct; and*
- (x) existing community or public infrastructure located in the adjoining road, such as bus stops, bus lanes and cycleways;*

6.2 E27 Transport

With regard to other transport matters, the E27 transport provisions will form an appropriate basis for the assessment of a resource consent, where necessary. Any development enabled by the Proposed Plan Change will be assessed against the standards of Chapter E27 of the AUP: OP, if required.

6.3 H25 Special Purpose Zone

The transport provisions in Chapters E27 and I334 are appropriate to manage the transport effects of the Plan Change Proposal on the network. No changes are proposed or necessary to Chapter H25.

7 STRATEGIC INTEGRATION ASSESSMENT OF THE PROPOSED PLAN CHANGE

The following section provides a review of established policy and plans in relation to the Proposed Plan Change to assess the strategic integration of the Proposed Plan Change with future transport network planning. The relevant documents reviewed comprise of:

- ◆ NPS-UD
- ◆ Auckland Plan 2050
- ◆ Auckland Regional Public Transport Plan 2015 - 2025
- ◆ Auckland Unitary Plan (Operative in Part) (AUP: OP).

7.1 National Policy Statement on Urban Development 2020

New Zealand Government's NPS-UD is a recently released national direction that sets out objectives and policies for urban development under the Resource Management Act 1991. One of the policies in the NPS-UD is that there will be no parking minimum standards for future development within Auckland.

The purpose of this policy is to make it easier for people to build and live where they want; improve the accessibility to employment, education and social services; encourage a shift away from private vehicles towards public transport; and provide flexibility for development by allowing landowners to determine their own parking requirements based on market factors and to maximise the efficiency of land development.

The NPS-UD requires territorial authorities to remove all minimum parking requirements from their district plans by 20 February 2022.

The Proposed Plan Change is consistent with this policy because it does not provide a minimum onsite parking requirement for development within the Mason Clinic.

7.2 Auckland Plan 2050

The Auckland Plan 2050 is the long-term spatial plan which sets the strategic direction for Auckland to ensure Auckland grows in a way that will meet the opportunities and challenges during the next 30 years. The Auckland Plan comprises six main topics, with a specific area for Transport and Access. One of the three strategic directions identified in the Transport and Access area of the Auckland Plan 2050 is to *"better connect people, places, good and services"*²⁷.

It further recognises that *"it is vital that people can easily, safely and sustainably reach the things that matter most to them, such as work, school, friends, recreation and healthcare"*. The healthcare services enabled by the Mason Clinic expansion enabled by the Proposed Plan Change gives effect to the strategic direction mentioned above, specifically increasing the capacity of healthcare activity to meet future

²⁷ Auckland Council. 2018. Auckland Plan 2050. <https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/about-the-auckland-plan/docsprintdocuments/section-5-transport.pdf>

demand, in a location in close proximity to surgeons, employees and patients, and served by existing public transport networks.

7.3 Auckland Regional Public Transport Plan 2015 – 2025

The Auckland Regional Public Transport Plan 2015 (RPTP) seeks to deliver an improved and more integrated public transport network in Auckland to offer a wider range of trips and services that align with future land use patterns and meet customer needs. The RPTP sets out the statutory obligations to consider the needs to travel to basic community activities and services, including work, education, healthcare, welfare, and shopping²⁸. Of note, health services have been identified as critical access needs for people with disabilities and the elderly.

The RPTP further suggests that public transport services that focus on meeting access needs to these facilities and services should try to connect people with their nearest town centre. Considering the close proximity of the Proposed Plan Change area to Carrington Road, which is programmed to be significantly improved to support public transport and active transport modes, this will assist in providing access to healthcare facilities, meeting more people's needs, encouraging people to use public transport, and increasing passenger numbers. The Proposed Plan Change is, therefore, considered to be supportive of the vision of the RPTP.

7.4 Auckland Unitary Plan

The AUP: OP Chapter E27 has the following objectives with regard to the Auckland region's transport infrastructure²⁹

“(1) Land use and all modes of transport are integrated in a manner that enables:

(a) the benefits of an integrated transport network to be realised; and

(b) the adverse effects of traffic generation on the transport network to be managed

(2) An integrated transport network including public transport, walking, cycling, private vehicles and freight, is provided for

(3) Parking and loading support urban growth and the quality compact urban form

(4) The provision of safe and efficient parking, loading and access is commensurate with the character, scale and intensity of the zone

(5) Pedestrian safety and amenity along public footpaths is prioritised

(6) Road/rail crossings operate safely with neighbouring land use and development.”

Further discussion on the relationship between the AUP: OP provisions and the Proposed Plan Change is outlined in Section 6 of this report. Overall, the development of the Plan Change Area and the proposed zoning is considered to align well with the transport objectives of the AUP: OP.

²⁸ Auckland Transport. 2015. <https://at.govt.nz/media/1220235/regional-public-transport-plan-update-july-2015.pdf>

²⁹ AUP: OP E27.2. Objectives

8 SUMMARY AND CONCLUSIONS

In summary and as described in this report, it is concluded

- ◆ The location of the Plan Change Area provides, at present, good accessibility to various transport modes, including walking, cycling, bus and private vehicles. Future planned transport investment in the Carrington Road corridor and other elements of the wider transport system will result in improved accessibility for all modes
- ◆ All new buildings of the development that can be enabled by the Proposed Plan Change within Sub-Precinct A will have at least a Controlled activity status. The effects of the proposed increase in vehicle trips resulting from such a new development are expected to be acceptable with the existing roads and intersections being capable of accommodating the additional traffic without resulting in adverse traffic effects
- ◆ The Proposed Plan Change car parking standard is consistent with the NPS-UD, which requires minimum parking standards to be removed from the AUP: OP
- ◆ The controls proposed as part of the Proposed Plan Change in Chapter I334 Wairaka Precinct of the AUP: OP, which require an assessment of the effects of access, including the location and design of vehicle accesses, are adequate to ensure that these matters can be appropriately addressed at the time when consent will be sought to implement a new building under the Proposed Plan Change
- ◆ The existing controls given in Chapter E27 of the AUP: OP relating to the provision of appropriate loading facilities, bicycle parking and accessible parking spaces, as well as the design of these transport elements, are adequate to ensure that these matters can be appropriately addressed at the time when consent will be sought to implement a new building under the Proposed Plan Change
- ◆ The Proposed Plan Change is consistent with, and encourages key regional and local transport policies and plans.

This Transport Assessment concludes that from a transportation perspective, the Proposed Plan Change will not result in any effects to the safety and efficiency of the surrounding transport network that cannot be readily accommodated by the existing and likely future roading network. Accordingly, there are no transport related matters that would preclude the acceptance of this Proposed Plan Change.

APPENDIX A

Access options

Two concept options have been developed to inform the potential layout of the expansion of the Mason Clinic and are given in Figure 3 and Figure 4. These options both assume that the roading network surrounding the Mason Clinic will be upgraded to support the re-development of the Ministry of Housing and Urban Development's adjacent landholding.

Option 1

The first option allows for the Precinct 20m road reserve for the north/south road adjacent to the eastern edge of the Mason Clinic site, plus an additional 3m separation between the western edge of the road reserve and the Mason Clinic eastern boundary, resulting in a total width of 23 m. This effectively allows for a 5 m landscaping/buffer strip to be implemented between the edge of the shared path and the Mason Clinic eastern boundary.

Flow notes that if the U shape building is to be retained on the eastern side of the north-south road, the road reserve that can be accommodated between this building and the Mason Clinic road reserve measures at around 15m. This reduced cross-section is acceptable as the on-street parking can be removed and the landscaping strip can be reduced, but no additional separation can be achieved. As such any buffering landscaping will have to accommodate on the Mason Clinic site.

Option 1 also includes the proposed re-alignment of the section of the north /south road, north of the intersection with Gate 2 road, to the northeast to allow for a cross junction to be formed with the Gate 2 road and the road proposed to serve the Mason Clinic northern parking building. This junction could be designed as a slow speed raised roundabout or as a raised slow speed priority intersection. What will be important in the final design of the intersection is that speeds through the intersection are kept very low.

Further, this option includes the widening of the existing southbound one-way road, to two-way at a proposed road reserve of 12m, plus a further 3m separation, resulting in 15m. It is the intention that this road will only serve the Mason Clinic northern parking building and will not link through to the wider precinct roading network.

Finally, this option includes the widening and upgrading of the Gate 2 Road to a 16 m cross-section to allow for accessibility to and from Mason Clinic for all modes of transport. While this upgrading will also be beneficial to the community of the wider Precinct, it is considered to be an essential piece of infrastructure to provide for cycling and walking accessibility between the Mason Clinic site and bus services and cycle infrastructure on Carrington Road.

Option 2 (preferred option)

The second option is similar to Option 1 as it allows for the Precinct 20m road reserve for the north/south road adjacent to the eastern edge of the Mason Clinic site (plus 3 m separation resulting in 23 m road reserve), as well as a 16m road reserve for Gate 2 road.

However, north of the Gate 2 Road junction, the north/ south road follows the alignment of the existing southbound one-way, allowing a 20/ 23m road reserve and the removal of the existing north-south road. Access to the Mason Clinic northern parking building will be taken from this road as a standard vehicle crossing.

Figure B1: Mason Clinic Access Option 1



Figure B2: Mason Clinic Access Option 2



APPENDIX B

Sidra model results

Scenario 1: 2024: Stage 1 Mason Clinic

AM peak hour

Site: 101 [Gate 2_Stage 1 (2024)_AM (Site Folder: Stage 1 2024)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Carrington Rd S														
1	L2	31	0.0	33	0.0	0.357	4.7	LOS A	0.0	0.0	0.00	0.03	0.00	49.2
2	T1	629	0.0	662	0.0	0.357	0.1	LOS A	0.0	0.0	0.00	0.03	0.00	49.7
Approach		660	0.0	695	0.0	0.357	0.3	NA	0.0	0.0	0.00	0.03	0.00	49.7
North: Carrington Rd N														
8	T1	645	0.0	679	0.0	0.351	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
9	R2	41	0.0	43	0.0	0.050	7.8	LOS A	0.2	1.4	0.57	0.72	0.57	44.6
Approach		686	0.0	722	0.0	0.351	0.6	NA	0.2	1.4	0.03	0.04	0.03	49.5
West: Gate 2														
10	L2	12	0.0	13	0.0	0.019	11.3	LOS B	0.1	0.5	0.57	0.89	0.57	43.6
12	R2	19	0.0	20	0.0	0.055	15.7	LOS C	0.2	1.3	0.69	1.00	0.69	41.2
Approach		31	0.0	33	0.0	0.055	14.0	LOS B	0.2	1.3	0.65	0.96	0.65	42.1
All Vehicles		1377	0.0	1449	0.0	0.357	0.8	NA	0.2	1.4	0.03	0.06	0.03	49.4

PM peak hour

Site: 101 [Gate 2_Stage 1 (2024)_PM (Site Folder: Stage 1 2024)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Carrington Rd S														
1	L2	8	0.0	8	0.0	0.312	4.7	LOS A	0.0	0.0	0.00	0.01	0.00	49.3
2	T1	569	0.0	599	0.0	0.312	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	49.8
Approach		577	0.0	607	0.0	0.312	0.2	NA	0.0	0.0	0.00	0.01	0.00	49.8
North: Carrington Rd N														
8	T1	656	0.0	691	0.0	0.354	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.8
9	R2	6	0.0	6	0.0	0.006	7.0	LOS A	0.0	0.2	0.53	0.60	0.53	45.0
Approach		662	0.0	697	0.0	0.354	0.2	NA	0.0	0.2	0.00	0.01	0.00	49.8
West: Gate 2														
10	L2	34	0.0	36	0.0	0.049	10.8	LOS B	0.2	1.3	0.55	0.92	0.55	43.8
12	R2	21	0.0	22	0.0	0.050	13.5	LOS B	0.2	1.2	0.62	0.96	0.62	42.1
Approach		55	0.0	58	0.0	0.050	11.8	LOS B	0.2	1.3	0.58	0.94	0.58	43.1
All Vehicles		1294	0.0	1362	0.0	0.354	0.7	NA	0.2	1.3	0.03	0.05	0.03	49.5

Scenario 2: 2049: Mason Clinic Development

AM peak hour

Site: 101 [Gate 2_Future (2049)_AM (Site Folder: Future 2049)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Carrington Rd S														
1	L2	54	0.0	57	0.0	0.302	4.7	LOS A	0.0	0.0	0.00	0.05	0.00	49.1
2	T1	503	0.0	529	0.0	0.302	0.1	LOS A	0.0	0.0	0.00	0.05	0.00	49.6
Approach		557	0.0	586	0.0	0.302	0.5	NA	0.0	0.0	0.00	0.05	0.00	49.5
North: Carrington Rd N														
8	T1	516	0.0	543	0.0	0.280	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
9	R2	73	0.0	77	0.0	0.076	7.1	LOS A	0.3	2.2	0.53	0.69	0.53	45.0
Approach		589	0.0	620	0.0	0.280	1.0	NA	0.3	2.2	0.07	0.09	0.07	49.2
West: Gate 2														
10	L2	29	0.0	31	0.0	0.037	10.2	LOS B	0.1	1.0	0.52	0.89	0.52	44.1
12	R2	46	0.0	48	0.0	0.111	13.9	LOS B	0.4	2.8	0.64	1.00	0.64	41.9
Approach		75	0.0	79	0.0	0.111	12.4	LOS B	0.4	2.8	0.59	0.96	0.59	42.7
All Vehicles		1221	0.0	1285	0.0	0.302	1.5	NA	0.4	2.8	0.07	0.12	0.07	48.9

PM peak hour

Site: 101 [Gate 2_Future (2049)_PM (Site Folder: Future 2049)]

New Site
Site Category: (None)
Stop (Two-Way)

Vehicle Movement Performance														
Mov ID	Turn	INPUT VOLUMES		DEMAND FLOWS		Deg. Satn	Aver. Delay	Level of Service	95% BACK OF QUEUE		Prop. Que	Effective Stop Rate	Aver. No. Cycles	Aver. Speed
		[Total veh/h	HV] %	[Total veh/h	HV] %				[Veh. veh	Dist] m				
South: Carrington Rd S														
1	L2	12	0.0	13	0.0	0.252	4.6	LOS A	0.0	0.0	0.00	0.01	0.00	49.3
2	T1	455	0.0	479	0.0	0.252	0.1	LOS A	0.0	0.0	0.00	0.01	0.00	49.8
Approach		467	0.0	492	0.0	0.252	0.2	NA	0.0	0.0	0.00	0.01	0.00	49.8
North: Carrington Rd N														
8	T1	525	0.0	553	0.0	0.283	0.1	LOS A	0.0	0.0	0.00	0.00	0.00	49.9
9	R2	10	0.0	11	0.0	0.009	6.3	LOS A	0.0	0.3	0.47	0.58	0.47	45.4
Approach		535	0.0	563	0.0	0.283	0.2	NA	0.0	0.3	0.01	0.01	0.01	49.8
West: Gate 2														
10	L2	53	0.0	56	0.0	0.064	9.9	LOS A	0.2	1.7	0.50	0.90	0.50	44.2
12	R2	33	0.0	35	0.0	0.063	11.6	LOS B	0.2	1.6	0.56	0.94	0.56	43.0
Approach		86	0.0	91	0.0	0.064	10.5	LOS B	0.2	1.7	0.52	0.92	0.52	43.7
All Vehicles		1088	0.0	1145	0.0	0.283	1.0	NA	0.2	1.7	0.05	0.08	0.05	49.3

APPENDIX C

Stantec ITA
