

20 April 2026

Justin McDonald and Brad Wilson
John Paterson Estates Limited

Attention: Justin McDonald and Brad Wilson

TRANSMITTAL: Email

Dear Justin and Brad

John Paterson Estates – High-Level Assessment for Fast-track Referral Application

Thank you for inviting me to provide high-level feedback on the traffic and transportation aspects of the John Paterson Estates Fast Track Referral Application. I understand that John Paterson Estates Limited intend to lodge a Private Plan Change application under the Resource Management Act (1991) and a referral application under the Fast Track Approvals Act 2024. I have undertaken a high-level assessment of the transport elements and extent to which I can support the proposal in the context of both applications. This letter documents the findings of my assessment.

By way of background, I am a transportation professional with over 25 years of experience. I have:

- been admitted as a Member of Engineering New Zealand (including the Transportation and NZMUGS sub-groups)
- been Chartered as a professional member of the Institute of Logistics and Transport
- been accredited as an independent hearing commissioner
- provided transportation engineering and planning advice including as an expert witness to a range of other public and private sector clients including NZ Transport Agency, Auckland Transport, Auckland Council, Taupo District Council, Selwyn District Council, Central Otago District Council, Fulton Hogan, Foodstuffs, Fonterra, Ports of Auckland and many others.

Transport Elements of the Application

I have reviewed the material shared in relation to the proposal and consider that the key transportation elements are as follows:

- 501 residential lots are to be established in the vicinity of John Paterson Drive at an average density of 15 lots per Ha, with total site area (including stormwater basins at 479 Marshs Road) of 37.7296 Ha with location shown in Figure 1.
- New roads are to be constructed in accordance with CCC requirements to provide access to the dwellings.
- Access to the wider network for all modes will be provided via a new access on Richmond Avenue and via the existing John Paterson Drive connection to Richmond Ave.
- Future roading connections for all modes will be enabled to the west of the site providing direct connections to potential future growth areas.
- Additional pedestrian and cycle connections will be provided to Springs Road, Tongariro Street, and to potential future development areas to the south.
- The site is currently zoned Rural Urban Fringe Zone and is adjacent to Residential Suburban Zone to the east and southeast.



Figure 1 Application site

I undertook a site visit on Tuesday 16th December 2025 and observed the operation of the current transport network in vicinity of the site including the location of the proposed accesses off Richmond Avenue and John Paterson Drive. My site visit included a walkover of the proposed location of future pedestrian and cycle connections to assess their suitability.

Road safety assessment

A search of the NZTA Waka Kotahi Crash Analysis System (CAS) database of the surrounding roads, shown in Figure 2, was conducted in the vicinity of the site. The analysis reveals a total of five crashes have been reported over the past five years, between 2021 and 2025 inclusive. Only one crash occurred on John Paterson Drive and four at the Halswell Junction Road Roundabout. All crashes were non-injury as follows:

- A non-injury crash was reported on John Paterson Drive in 2025. A driver conducting illegal behaviour (intentional wheelies/wheelspins) lost control of their vehicle, going off the road to the left, and colliding with a ditch. No damage to property or people occurred. The crash conditions were wet, contributing to the loss of control.
- At the Halswell Junction Road roundabout:

- In 2023, one driver hit another vehicle while merging from the right. The driver failed to give way to priority traffic at a priority traffic control.
- A second crash in 2023 occurred as a driver failed to notice a slowing vehicle and collided when the vehicle became stationary in the roundabout.
- A non-injury crash was reported in 2022, when a driver collided with a slowing vehicle in front. The driver was following too closely, not allowing for enough reaction time. The driver had slowed for cross traffic.
- A non-injury crash was reported in 2021, when a driver collided with a slowing vehicle in front. The driver failed to notice the slowing vehicle.

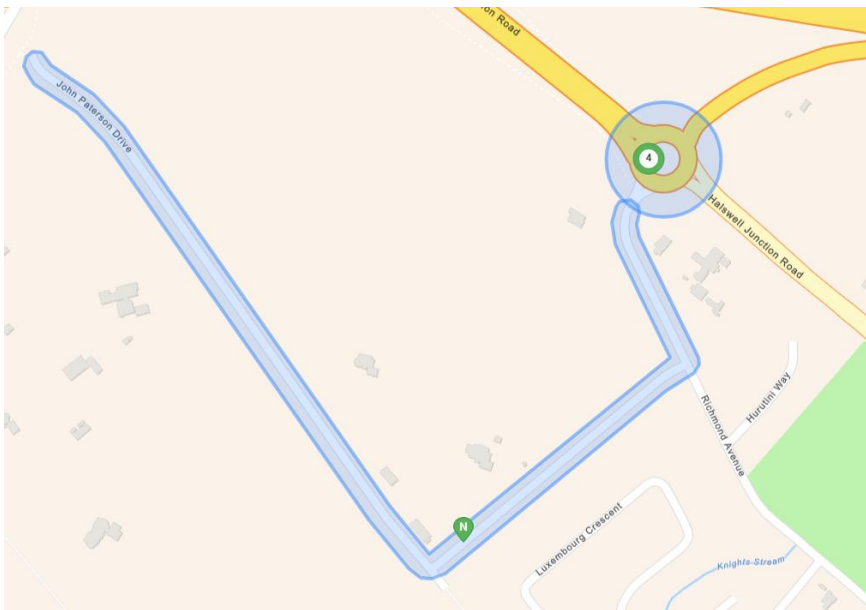


Figure 2 CAS search study area and results

On the basis of the historical crash records there is no evidence of a safety concern regarding John Paterson Drive. The crash record of the Halswell Junction Road Roundabout shows that some drivers are too closely following vehicles ahead. This is typical of roundabout crashes and not due to the geometry of the roundabout or any associated safety risks.

Vehicle access assessment

I have reviewed the vehicular access connections to the wider network and recommended that a new direct connection onto Richmond Ave be included midway between the Halswell Junction roundabout and the John Paterson Drive / Richmond Ave intersection. I have checked the available sight distances at this location (including during my site visit) and can confirm that minimum required distances can be achieved for this to be a primary access which will be attractive for lots in the north of the site.

Other vehicular access is onto John Paterson Drive with remaining traffic from the centre and southern end of the site accessing the wider network via the John Paterson Drive / Richmond Ave intersection.

The site is bounded by Knights Stream to the south and southeast of the site, Springs Road (which is grade separated along the site frontage) to the north of the site and undeveloped rural land to the west. Subsequently access to the wider network is limited to the east, however future roading connections are included to enable connectivity for all modes with any future greenfield development to the west.

Walk / cycle assessment

Provision for walking and cycling is currently excellent with cycle lanes on Halswell Junction Road, a major cycleway (Little River Link) running past the north of the site connecting to the CBD, and shared paths to the north and east of the site connecting to neighbouring areas. These are shown on CCC's cycle network with excerpt presenting here as Figure 3. During my site visit I also observed shared paths further to the south on Richmond Ave which are not shown in CCC's network map.

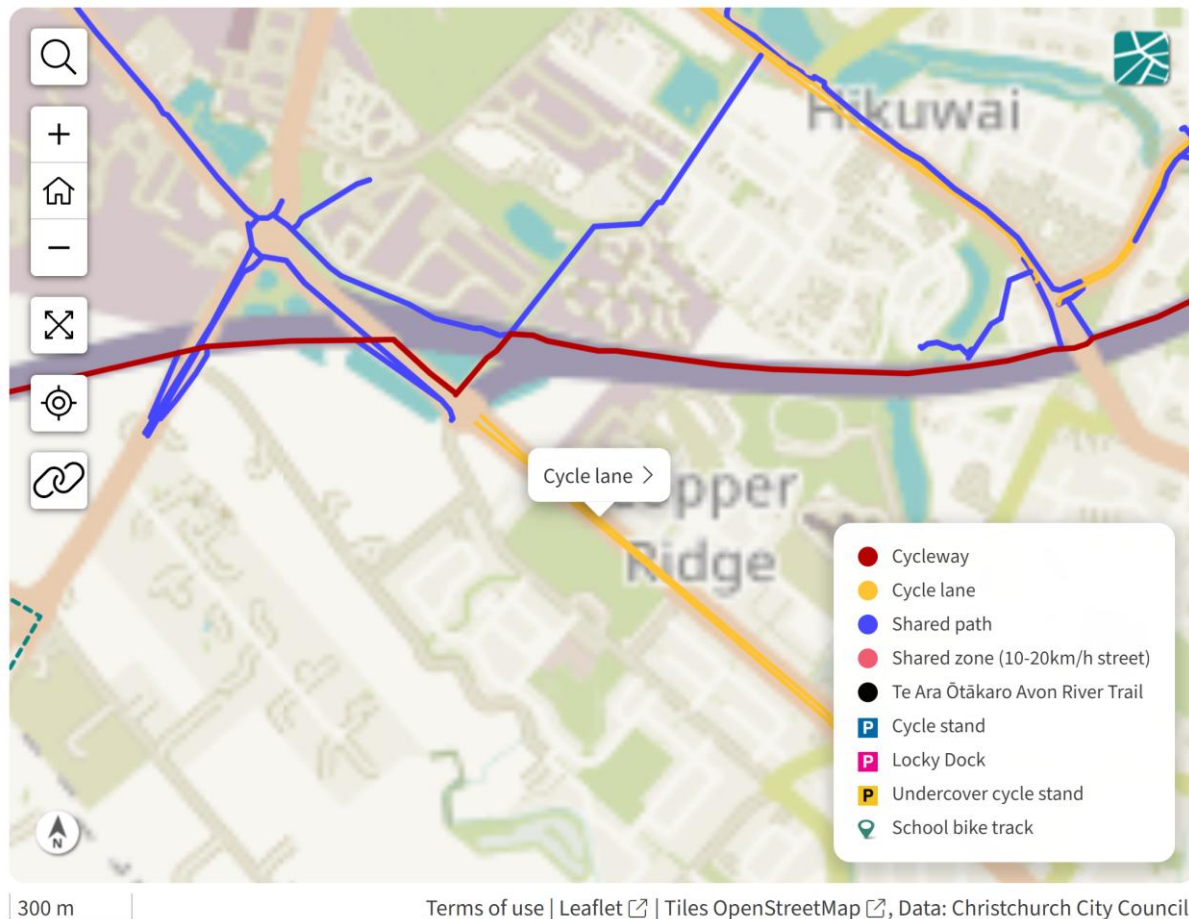


Figure 3 Current cycle network in vicinity of site (source: CCC)

I have reviewed the plans and made several recommendations to further improve walk and cycle connectivity to the site including connections directly to the south and east (in vicinity of Knights Stream) connecting to neighbouring suburbs and the local school on Richmond Ave. Footpaths are proposed to be included on both sides of each street, and a slow speed environment is recommended to support safe cycling.

Public transport assessment

The nearest public transport service (7 Halswell to Queenspark) currently terminates on Richmond Ave south of Killarney Ave which is approximately 400m from the edge of the site at the intersection of Richmond Ave and John Paterson Drive. Pedestrian connections to Tongariro Street are also proposed which reduce the walk distance and time to reach existing bus stops. The current service is a high frequency route with weekday peak and offpeak services every 10 minutes and weekend services every 15 minutes.

It is recommended that the service at least be extended to provide set of bus stops with associated infrastructure adjacent to this intersection improving public transport access to the site. During the site

visit it was observed that the bus continued northbound past the site and used the Halswell Junction Rd roundabout to undertake a U-turn and drive past the site, so this would not create an additional travel time or distance for existing bus services. The current bus route in relation to the site location is shown in Figure 4.

When the site is suitably developed the service could be extended into the site such that buses can loop through the local roads. It is recommended that the road cross sections provide for bus manoeuvring and space be set aside for a set of future bus stops should they be required on John Paterson Drive within the site.

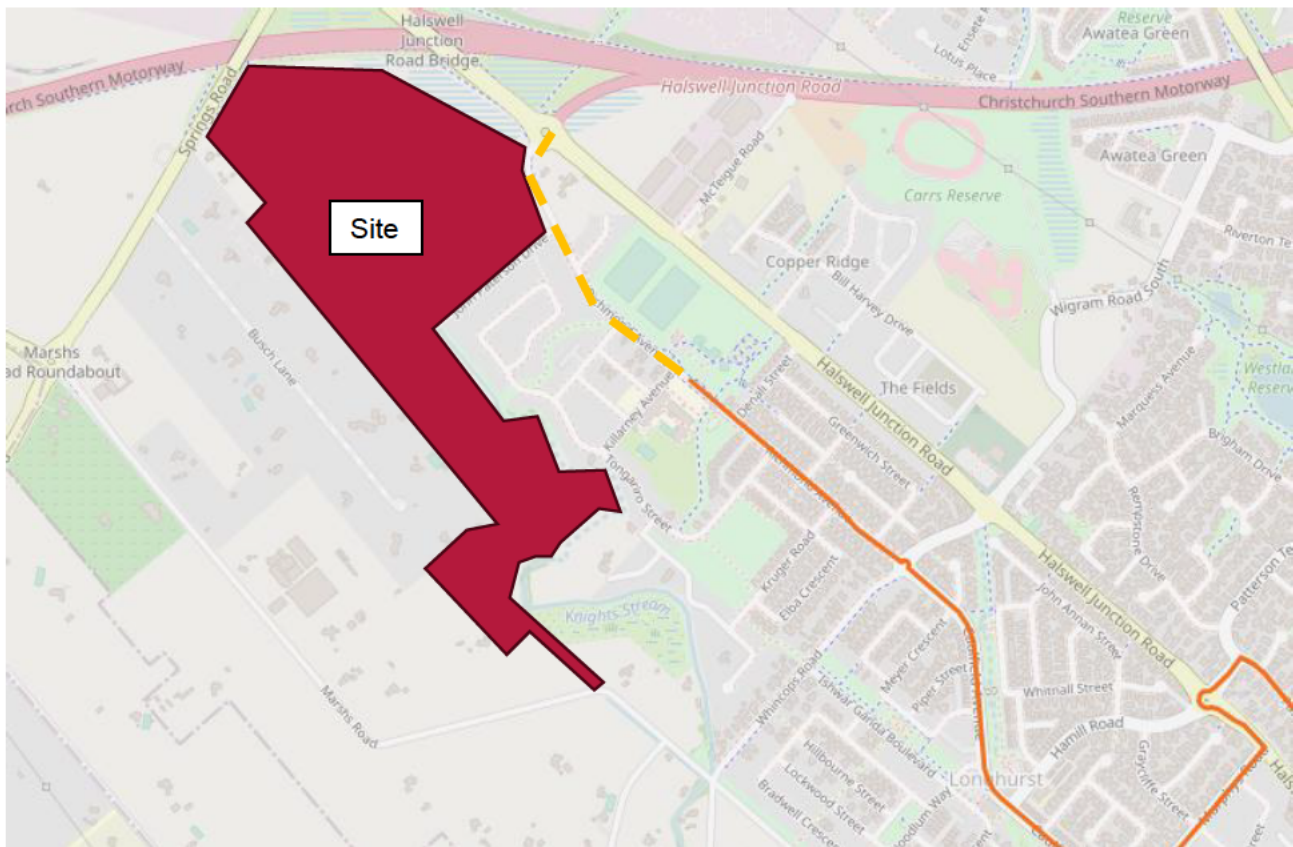


Figure 4 Current high-frequency bus service, observed turnaround routing in dashed orange

Internal roading assessment

The proposed internal roading layout is shown in Figure 5. As the application progresses this will be developed further, however for the purposes of this high-level assessment I anticipate that:

- All internal roads will be classified as local roads which connect to Richmond Ave (currently a local road) and Halswell Junction Road which is classified as a Major Arterial under the Christchurch District Plan (CDP).
- The internal roads will be a slow speed environment with posted speed limit of no more than 50 kph. There is the potential to introduce traffic calming and a speed environment of 30 kph on some links where cycling is encouraged. The lower speeds will also assist with supporting appropriate sight distances between intersections.
- Internal intersections would generally be priority control with the option of including a mini roundabout at the intersection of John Paterson Drive and main north/south internal road (this is

the current elbow in the John Paterson Drive corridor) to manage conflicts and manage vehicle speeds. Appropriate pedestrian crossing facilities could be engineered into the design.

- Pedestrian connections internal and external to site will maintain excellent pedestrian and cycle connectivity with surrounding areas. There are connections to the north, east, south and connections to potential future development to the west.
- Setting aside space for potential future bus stops within the site will futureproof for an extension of the 7 Halswell to Queenspark service. These are recommended to be included as indicative future stops within the development plan.

Having reviewed the proposed layouts Although there will be more detail available at the substantial assessment stage, I consider that the internal layout will comply with CDP transport rules and meet policies and objectives in the CDP.

Traffic Generation Assessment

Average trip rates have been extracted for low density and medium density development from Trips Database Bureau which holds a repository of New Zealand and Australian surveys. The query results are shown in Appendix A, with the database demonstrating average New Zealand trip rates of:

- 0.563 trips per household in the morning peak hour (medium density)
- 0.691 trips per household in the evening peak hour (medium density)
- 0.756 trips per household in the morning peak hour (low density)
- 0.721 trips per household in the evening peak hour (low density)

Noting the proposed density of 15 households per hectare, a trip rate in the low-medium range is anticipated. A representative trip rate of 0.7 trips per household is assumed. This equates to 351 two-way trips in peak hour which would access the wider network via Richmond Ave. This corresponds to one vehicle movement every 10-11 seconds and is split across two accesses (the direct connection to Richmond Ave and via the John Paterson Drive / Richmond Ave intersection). As such each connection will accommodate one vehicle movement every 20-22 seconds or three vehicles per minute.

Local and Wider Network Effects

To understand the current performance of the road network, the CCC website has been accessed to source recent traffic counts on Richmond Ave to the north and south of John Paterson Drive. These are included in Appendix B and demonstrate that:

- The daily traffic volume is 2577 (to the north) and 2516 (to the south) vehicles per day
- Approximately 8-9% of vehicles are heavy vehicles
- The peak hourly directional flows are up to 150 vehicles per hour (or 2-3 vehicles per minute)
- Mean and 85thile speeds are 45 kph and 50 kph respectively.



Figure 5 Development site plan (source:Davie Lovell-Smith)

Based on the current level of traffic on Richmond Ave and anticipated traffic generation of the site, the current priority control intersection at Richmond Ave / John Paterson Drive and a future new connection to Richmond Ave of similar standard would operate safely with good level of service and minimal delays to vehicles existing the site. This can be confirmed through traffic modelling in subsequent assessment.

Much of the traffic is expected to travel north on Richmond Ave to one or both Halswell Junction Road roundabout to access the wider transport network. The actual distribution of traffic and assessment of wider effects on the transport network is proposed to be undertaken using the Christchurch Transport Model (CTM) in later assessment. This will estimate flows, delays and level of service at local and wider networks and can be supplemented with Sidra Intersection analysis where required for a more refined assessment. This will confirm any infrastructure requirements external to the site.

For the purposes of this high-level assessment the performance of the adjacent Halswell Junction Road / CSM2 (SH76) offramp / Richmond Ave roundabout has been considered in detail. We have extracted TomTom analytics data to understand current peak hour delays and LoS on each of the intersection approaches. The peak hourly delays and LoS are summarised in Table 1 below.

Table 1 Halswell Road roundabout delays and level of service

Peak Hour	Richmond Ave		HJ Road northbound		SH76 Offramp		HJ Road southbound	
	Ave delay (sec)	LoS	Ave delay (sec)	LoS	Ave delay (sec)	LoS	Ave delay (sec)	LoS
7-8am	35	C/D	35	C/D	8	A	7	A
8-9am	26	C	22	C	8	A	8	A
4-5pm	11	B	12	B	17	B	8	A
5-6pm	8	A	10	A	19	B	7	A

The results demonstrate that in the morning peak hour the worst approaches are on the LoS C/D boundary with average of 35 seconds delay with minimal delays on other approaches and during the evening peak. In the context of an urban arterial network in peak hour the current delays are considered modest with LoS E and F conditions frequently being experienced on the network. LoS F at roundabouts corresponds to delays of greater than 70 seconds at which point an intersection approach is considered to operate at capacity. I have concluded that the intersection has amply spare capacity to accommodate traffic associated with the John Paterson Drive site.

Further afield, the Halswell Junction Road / Springs Road roundabout will be an important connection for traffic heading into central Christchurch. It currently experiences delays and queuing due to conflicting approaches which is managed by traffic signals on the Halswell Junction Road northbound (from the development site) approach. This improves the intersection performance by managing delays and queuing on the Springs Road eastbound approach.

Christchurch City Council have approved Abley extracting data from the CAST model to understand the likely distribution of traffic and current modelled performance of the roundabout. A full modelling assessment was unable to be undertaken as Council's modelling consultant did not have availability to resource this. However we propose that this be assessed in more detail a part of a substantive application.

The CAST model outputs correspond to peak hour travel in 2028 and forecast that approximately two thirds of the traffic from the development is likely to travel north along Halswell Junction Road of the Christchurch Southern Motorway and one third via Richmond Ave or Halswell Junction Road to travel south. The outputs also indicate that delays at the roundabout are anticipated to be modest however no local area validation of the CAST model in this vicinity has been undertaken. Whilst the detailed modelling is yet to be undertaken, the impact on traffic associated with the development is anticipated

to be small in the context of the wider cumulative effects of development elsewhere in Halswell, and in Prebbleton and Lincoln townships.

It is also noted that the Shands Road corridor is the primary connection from Selwyn District with recent intersections upgrades providing improved access and connectivity via the Shands Road corridor to the CSM2 (SH76) and central Christchurch. As traffic grows in the vicinity it is anticipated that more traffic will shift to Shands Road and other adjacent corridors, or choose alternate times to avoid travel during peak periods where possible, and I note that the signals installed on the Halswell Junction northbound approach will assist in managing conflicts during peak periods.

A comprehensive modelling assessment using the CAST model will be a suitable tool to understand how this will change over time, but irrespective the impact of traffic associated with the site is anticipated to be a relatively small component of anticipated future growth in traffic volumes.

Infrastructure requirements

No specific roading upgrades or intersection improvements are required to support the application. The only external infrastructure which is recommended for consideration is the installation of bus stops and associated infrastructure (seats) in vicinity of the Richmond Ave / John Paterson Drive. This would be under the jurisdiction of Christchurch City Council.

Future Assessment and Traffic Modelling Approach

Should the proposal successfully move forward to the substantive application stage I recommend that an Integrated Transportation Assessment (ITA) report be prepared based on industry best-practice guidance and include:

- a detailed description of the current and future receiving environments
- a description of the transport elements of the proposal including access and connectivity for all modes.
- the delivery of a trip generation assessment and comprehensive traffic modelling to inform the assessment of effects.
- an assessment of the standard of the roads and suitability of other transport infrastructure including against the Council standards.
- an assessment of the proposal against relevant transport-related policies and objectives.
- identify any mitigation requirements or recommended provisions / conditions of consent as required in relation to transportation matters.

One of the key components to the preparation of a future ITA will be the scoping and delivery of transportation modelling to:

- forecast the anticipated level of uptake for each transport mode and understand impacts on the local and wider transport network.
- consider opportunities to extend the current 7 Halswell to Queenspark bus service should the Environment Canterbury choose to do so in the future.

I propose that the current CAST model and SIDRA Intersection would be the primary modelling tools, and we would continue to engage with Council to determine the most appropriate modelling approach and tools.

Summary of My Assessment

My assessment indicates that the development can be supported from a transport perspective, subject to the considerations and recommendations outlined in this letter. The site's location is well connected for all transport modes with opportunities for a well-integrated and resilient transport outcome through improved public transport coverage and new pedestrian and cycle connections into neighbouring areas.

I have also provided an overview of the scope of future transport assessment including traffic modelling requirements. This would be delivered for a future ITA supporting a resource consent application under the Resource Management Act (1991) or substantive assessment under the Fast Track Approvals Act (2024).

Please do not hesitate to contact me should you require any additional information in relation to my assessment including the recommendations put forward in this letter.

Regards,

Abley Limited



Dave Smith

Technical Director, Transportation Planning

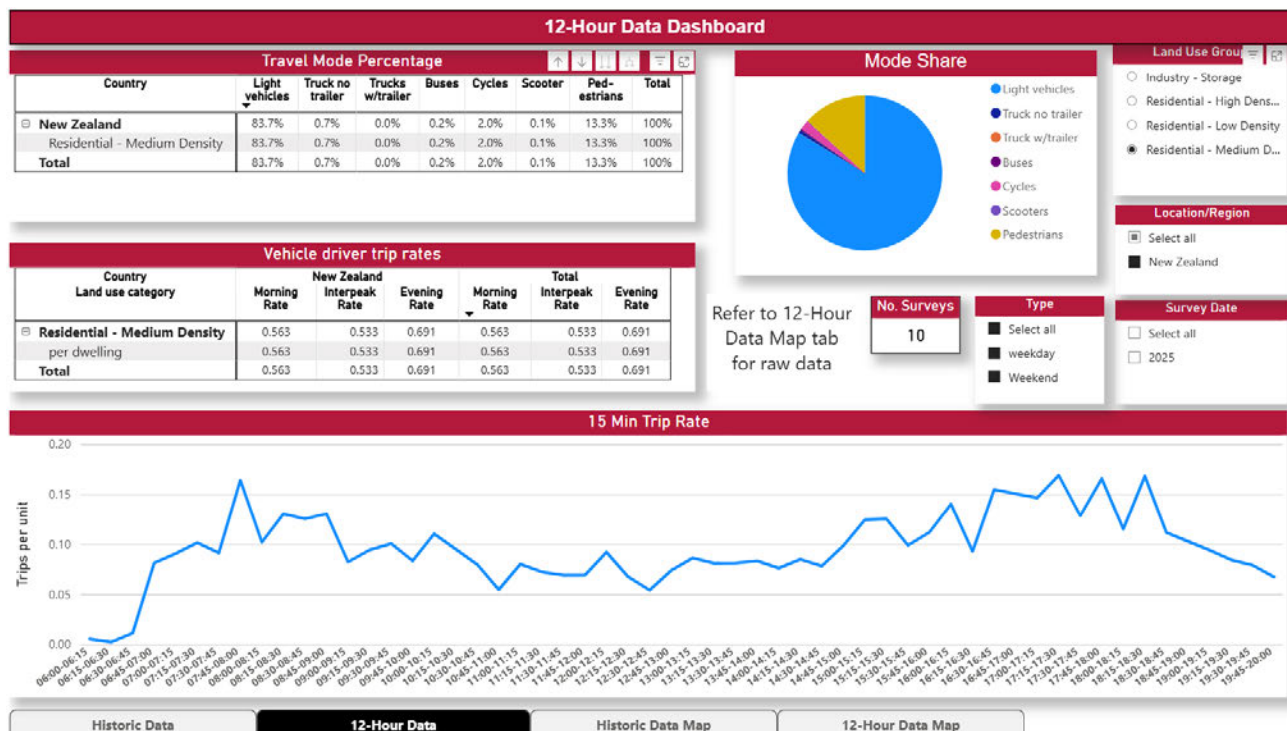
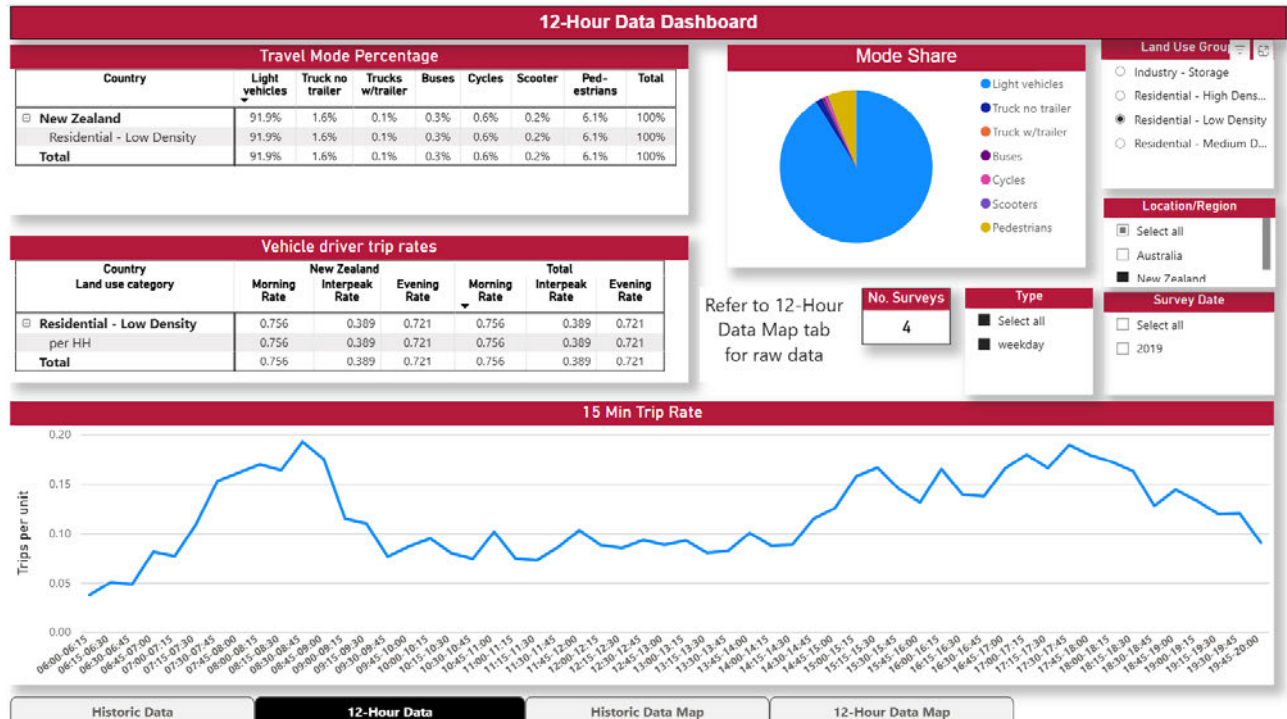
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Appendix A.
Trips Database Bureau query results

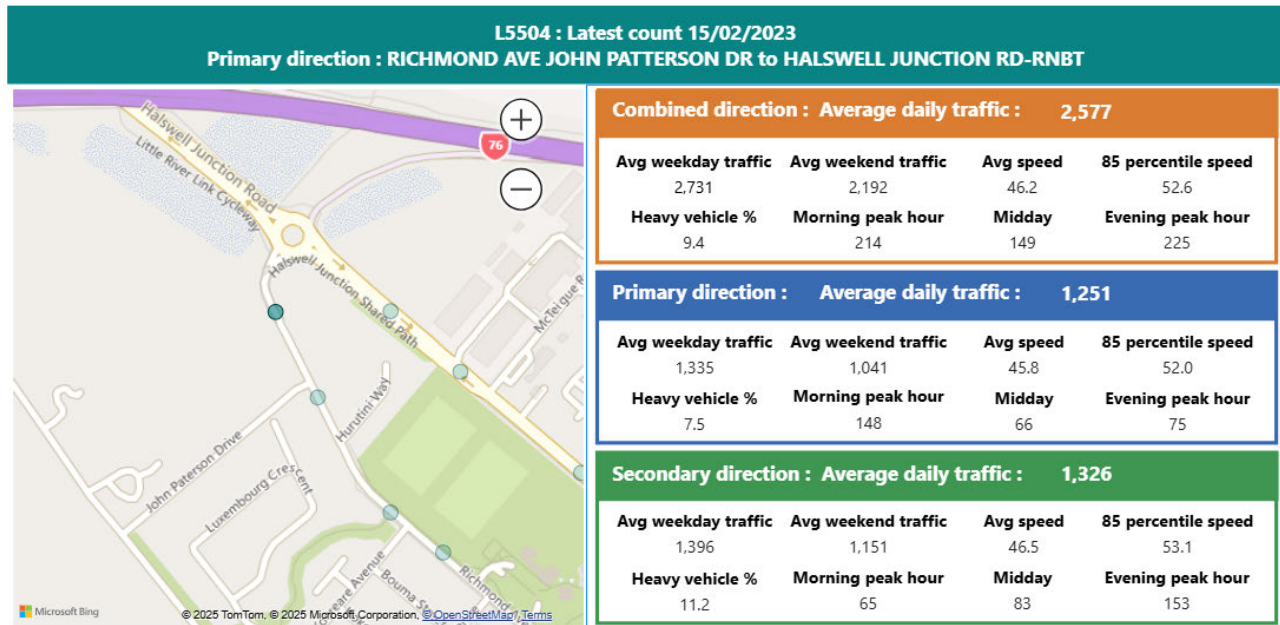




Appendix B.
Richmond Ave traffic counts



Traffic link counts database



Traffic link counts database

