

Memo

To s 9(2)(a) (Chinamans Hill Limited); s 9(2)(a) (Ohaupo Land Limited Partnership)
From s 9(2)(a)
Reviewed by s 9(2)(a)
Date 24 November 2025
Job No. 149250
Job name SL1 Houchens
Subject **SL1 Houchens Development Transportation Assessment for Fast Track Application**

1. Introduction

This is a high-level Transportation Assessment to support a referral application to the Fast Track consenting panel for the SL1 Houchens Development located at the southwest end of Glenview, in Hamilton. The area is bordered by Houchens Road to the north, Ohaupo Road (SH3) to the east and the future Hamilton Southern Links (HSL) to the south which is a Road of National Significance (RoNS). The extent and locality of the site is shown in Figure 1. The area is situated in Waipa District and borders Hamilton City territorial area.

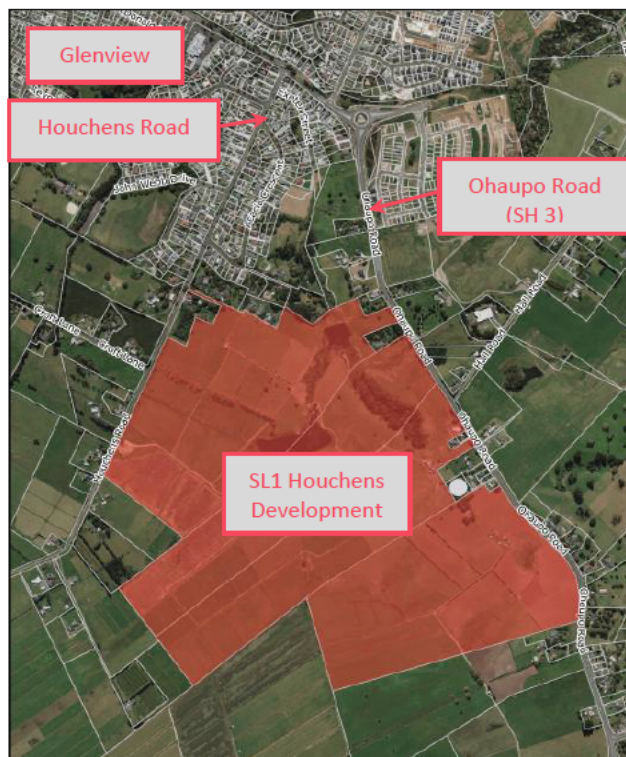


Figure 1: SL1 Houchens Development Locality

This memorandum firstly describes the strategic transport network considerations influencing connectivity to the SL1 Houchens Development, followed by an overview of the infrastructure upgrades considered necessary to sustainably integrate the development with the present and future transport network surrounding the site.

It then provides a greater detail concerning the proposed Stage 1 scenarios for the SL1 Houchens Development and the expected transport effects and infrastructure provisions to address those effects.

2. Proposal

2.1 Overview

The SL1 Houchens Development is a proposed combined residential and industrial development that comprises circa 145 hectares (ha), which will be split into a mix of residential densities and industrial development. The residential component comprises circa 55 ha of net residential, including 1,300 residential units of varying typologies (including single detached, duplex, terraced apartment), a 400-unit retirement village, along with two supporting mixed-use neighbourhood centres, open spaces, waterbodies and infrastructure devices including wetlands. The proposed development also includes a net 25 ha of industrial land use, generating between 24 – 47 industrial sized lots for industrial activities.

The concept subdivision design of SL1 Houchens Development is underpinned by good transport planning and urban design principles including observing appropriate transport corridor hierarchy and connectivity, integration and accessibility for public transport accessibility supported by intentional walking and cycling infrastructure, open spaces, stormwater wetlands and a mix of dwelling typologies to support a well-functioning urban environment.

Located on the eastern and central portions of the SL1 Houchens Development are neighbourhood centres that will provide a range of amenities and services to support the residential and industrial developments. These neighbourhood centres will likely include commercial properties, childcares, cafés, and a local superette.

Sitting at the lower, southern point of the site is a retirement village that comprises approximately 15 ha and provides 400 units of varying typologies, including traditional villa and apartment typologies which will predominantly be accessed by a private internal road network that connects at several locations to the public road network.

The proposed industrial land is strategically located on the north-western extent of the site providing key connectivity to the potential HSL Houchens Road interchange.

Refer to Planning Report for full project description.

2.2 Access and Connectivity Strategy

Key aspects of the internal transport network are described below and illustrated in the high-level Masterplan shown in Figure 2.

- The proposed transport network is under-pinned by a proposed 30 m wide minor arterial road (referred to as the Spine Road) running northwest-to-southeast with a connection to existing Houchens Road.



- The Spine Road will support a network of proposed collector roads and local roads throughout with one of the collector roads connecting to Ohaupo Road (SH3) via a proposed new roundabout intersection adjacent to the proposed retirement village site.
- The Spine Road separates the future residential and industrial areas. The industrial land is flanked on its south side by the future HSL and proposes connections to this future highway via a potential new interchange with Houchens Road. This potential interchange is identified in the recent NZ Transport Agency Waka Kotahi (NZTA) board decision for the Southern Links Investment Case.
- Provision of a safe and efficient road network within the subject site that supports the types of vehicles and movements associated with industrial and residential activities.
- Provision of a safe and convenient walking and cycling network throughout the subject site connecting to existing active mode infrastructure on the wider road network.

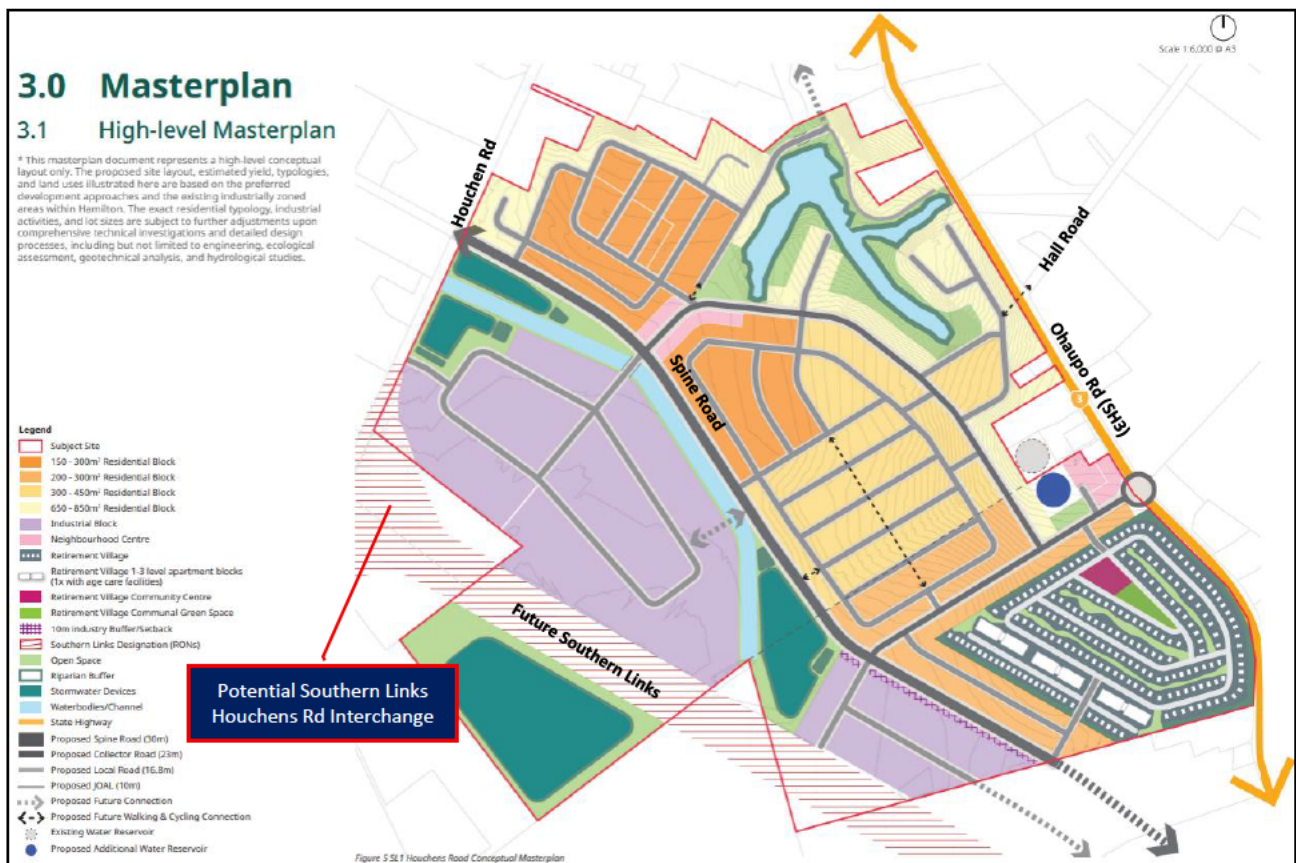


Figure 2: SL1 Houchens Development – High-level Masterplan

The Peacocke Structure Plan in the Hamilton City Operative District Plan shows an indicative Collector Road intersecting with Ohaupo Road (SH3) at a location where sight lines are likely to be restricted due to the crest curves on Ohaupo Road (SH3) either side of it. It is stated in the Hamilton City Operative District Plan that Collector Roads and Key Local Roads shown in the Peacocke Structure Plan are conceptual and new intersections on the state highway network require the approval of NZTA.

This assessment recommends that the opportunity to connect the future Peacocke Structure Plan Collector Road as a fourth arm to the SL1 Houchens Development roundabout intersection be investigated with NZTA during the substantive consenting and detailed design process.



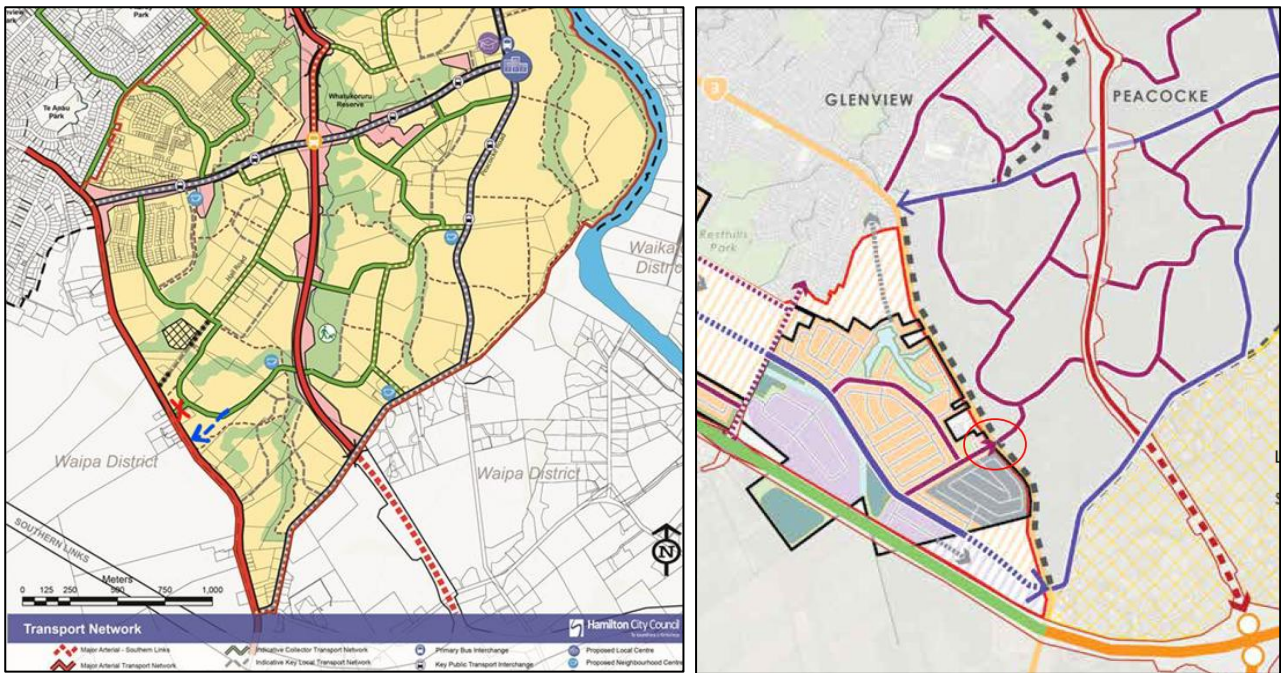


Figure 3: Peacocke Structure Plan (Left) and SL1 High-Level Masterplan (Right)

3. Existing Transport Network

The site has frontage to both Ohaupo Road (SH3) and Houchens Road. Average daily traffic (ADT) volumes including the proportion of heavy commercial vehicles (HCVs) have been sourced from the Mobile Road website for these roads.

- Ohaupo Road (SH3) has an estimated ADT volume of 15,300 vehicles per day (vpd) with 10.7% HCVs.
- Houchens Road has an estimated ADT volume of 2,091 vpd with 5% HCVs.

3.1 Network Constraints

Ohaupo Road (SH3) is a major arterial corridor with its primary function being for the movement of people and freight locally and as an inter-regional and strategically critical connection between Hamilton and New Plymouth. It also connects the nearby towns of Ohaupo, Te Awamutu and Otorohanga to Hamilton, and as a result carries a significant volume of commuter traffic during the peak periods.

Locally, Ohaupo Road (SH3) is also a primary transport corridor connecting the residential suburbs of Glenview, Melville and Deanwell, (and the future Peacocke Structure Plan Area) to central Hamilton. It is also one of two primary routes connecting the city with Hamilton Airport and Titanium Business Park.

A primary purpose of the HSL project between Ohaupo Road and Kahikatea Drive is to enable residential growth in the southern areas of Hamilton by relieving pressure on Ohaupo Road and improving network resilience for freight and public transport.

Current network constraints on Ohaupo Road that impact accessibility for new trips from SL1 Houchens Development includes the Ohaupo Road (SH3) / Houchens Road intersection. The intersection is currently a stop-controlled T-intersection, but the Houchens Road Structure Plan in the Waipa District Plan identifies that prior to the issue of section 224(c) for any lot, future improvements are required at this intersection to support the 199-lot large lot residential development. The structure plan area is now included in SL1 for future medium density residential, so it is reasonable to expect that improvements are required at the Ohaupo Road (SH3) / Houchens Road intersection to support SL1 Houchens Development.



4. Trip Generation

4.1 Trip Generation Rates

4.1.1 Residential

The trip generation rates obtained from the RTA Guide to Traffic Generating Developments for medium density residential flat and dwelling houses were considered more applicable to the proposed residential land use. As the split of residential detached dwellings, duplexes and terraced apartments are unknown at this stage, an average trip generation rate between the medium density residential flat and dwelling house trip rates was considered more applicable to the subject site.

Thus, a daily trip generation rate of 7.75 per dwelling unit and a peak hour trip generation rate of 0.75 per dwelling were adopted for this assessment.

4.1.2 Industrial

The trip generation rates surveyed at the Central Precinct of the Airport Business Zone (Hamilton Airport – Titanium Park) were considered applicable to the proposed industrial land use. The Airport Business Zone has been gradually developed into one of the region's strategic industrial nodes and therefore provides a reasonable proxy to predict the number of trips that are likely to be generated by SL1 Houchen Development industrial activities.

Thus, a daily trip generation rate of 138.5 per developable hectare and a peak hour trip generation rate of 15.7 per developable hectare were adopted for this assessment.

4.1.3 Retirement Village

The trip generation rates obtained from the Institute of Transportation Engineers Trip Generation Manual 7th Edition (ITE Manual) for senior adult housing was adopted for this assessment as it was considered more conservative than the rate obtained from NZTA research report 453: Trips and parking related to land use, November 2011 (RR453).

Thus, a daily trip generation rate of 3.71 per unit, and a peak hour trip generation rate of 0.20 (morning peak) and 0.26 (afternoon peak) per unit were adopted for this assessment.

4.2 Predicted Trip Generation

Table No: 1 below shows the total number of trips generated by SL1 Houchens Development.

Table No: 1

Trip Generation									
Source	Land Use	Yield (Number)	Unit	Trip Rate			Trip Generation		
				AM	PM	Daily	AM	PM	Daily
RTA Guide	Residential	1,300	Dwelling	0.75	0.75	7.75	975	975	10,075
ITE Manual	Senior Adult Housing - Detached	400	Unit	0.20	0.26	3.71	80	104	1,484



Airport Business Zone	Industrial	25	Ha (net)	15.7	15.7	138.5	393	393	3,463
Total Development Trips							1,448	1,472	15,022

4.3 Travel Mode Splits

Travel mode splits were based on the 2023 Census data on how people who live in Glenview travel to work which is applicable to the proposed residential land use as well as on how people working in Glenview travel to work which is applicable to proposed industrial land use.

Table No: 2 below provides a breakdown of the anticipated travel mode splits during the weekday commuter peak periods.

Table No: 2

Travel Mode Splits		
Travel Mode	SL1 Houchens Development	
	AM Peak Hour	PM Peak Hour
Private Vehicle (Driver)	1,017	1,036
Public Transport	41	42
Walking	35	35
Cycling	23	23
Private Vehicle (Passenger)	44	45
Working from Home	272	274
Other	16	17
Total	1,448	1,472

Therefore, it is anticipated that SL1 Houchens Development will generate approximately 1,030 new private vehicle trips during commuter peak periods.

5. Trip Distribution

The ITE Manual was used to understand the inbound and outbound directional split for all proposed land use activities, as shown in Table No: 3.

Table No: 3

Inbound and Outbound Directional Split			
Peak Period	Land Use	Incoming	Outgoing
AM	Residential	25%	75%
PM	Residential	75%	25%
AM	Industrial	88%	12%
PM	Industrial	12%	88%
AM	Retirement Village	38%	62%



PM	Retirement Village	61%	39%
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Trip distribution at intersections on the adjoining road network has been based on the turning movement percentages obtained from the Waikato Regional Transport Model (WRTM) vetted with engineering judgement to result in an intuitive origin and destination pattern.

The derived peak period turning movement percentages at the Ohaupo Road (SH3) / Houchens Road intersection and the new roundabout intersection on Ohaupo Road are presented in Figure 4 and Figure 5.

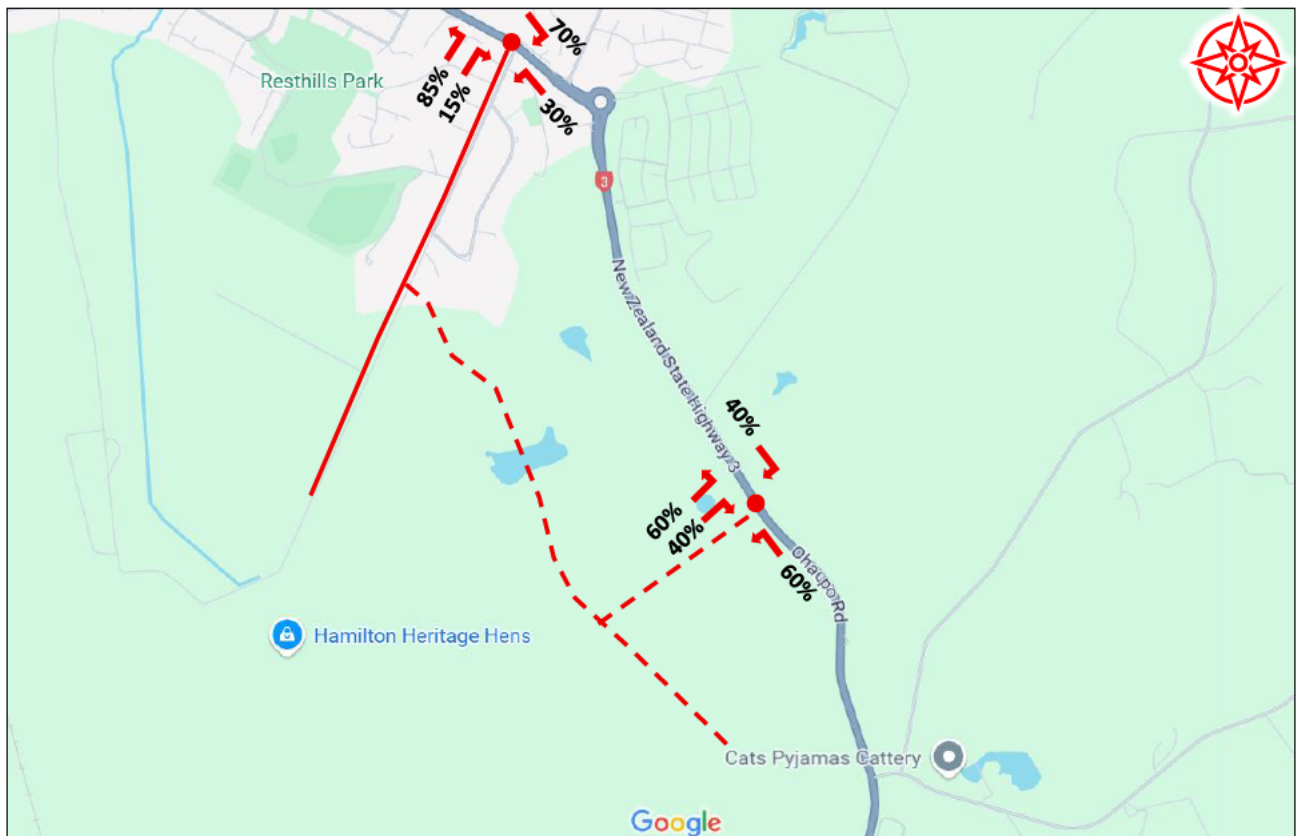


Figure 4: AM Peak Hour Trip Distribution



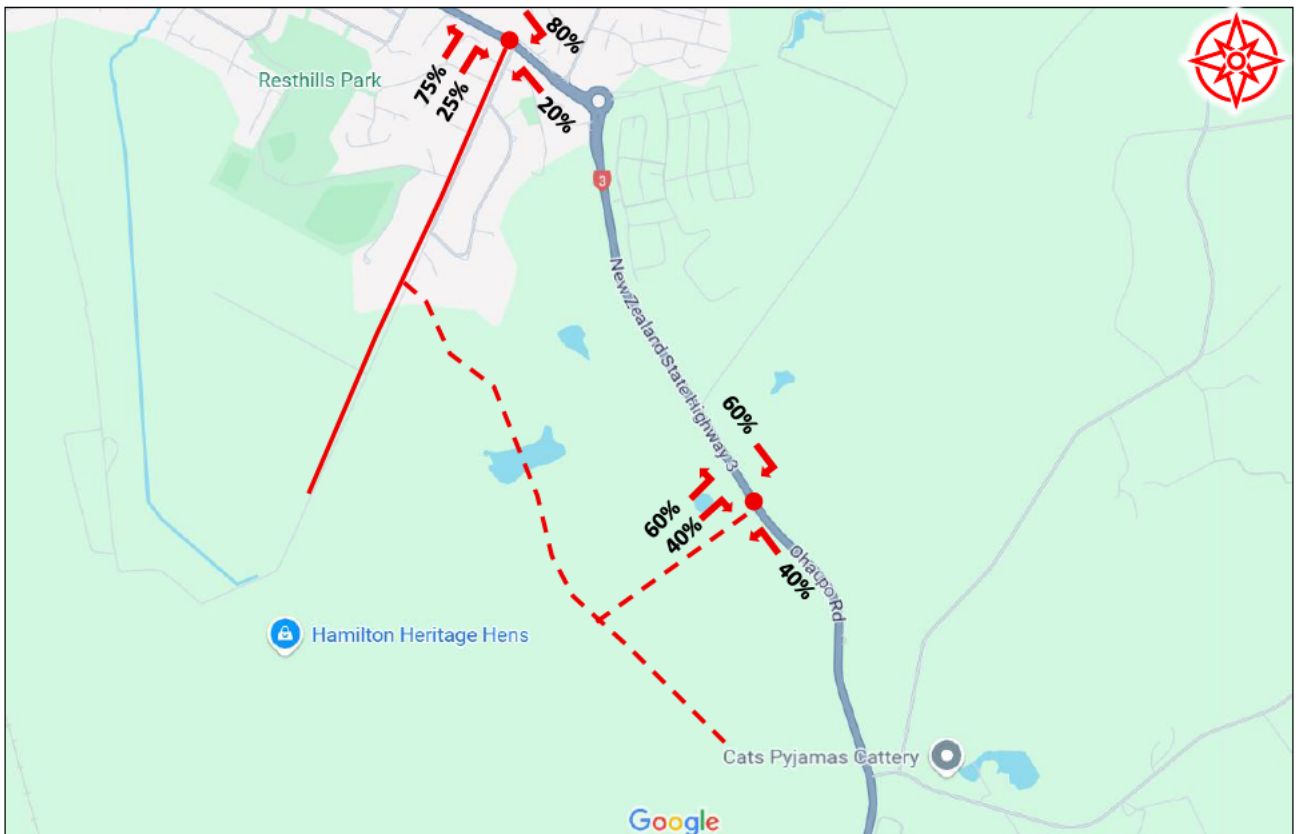


Figure 5: PM Peak Hour Trip Distribution

6. Public Transport

6.1 Waikato Metro Spatial Plan

The Waikato Metro Spatial Plan (MSP) identifies “Short list Option C”¹ as the recommended programme to “support a radical transport shift and support the transformative move to a Rapid Transit Network future” in Hamilton. The MSP illustrates the Rapid Transit Network² (RTN) components of this programme as follows:

¹ Waikato Metro Spatial Plan Programme Business Case report. Revision D, Section 6.2.2

² Waikato Metro Spatial Plan Executive Summary report. Revision C, Figure 1-8



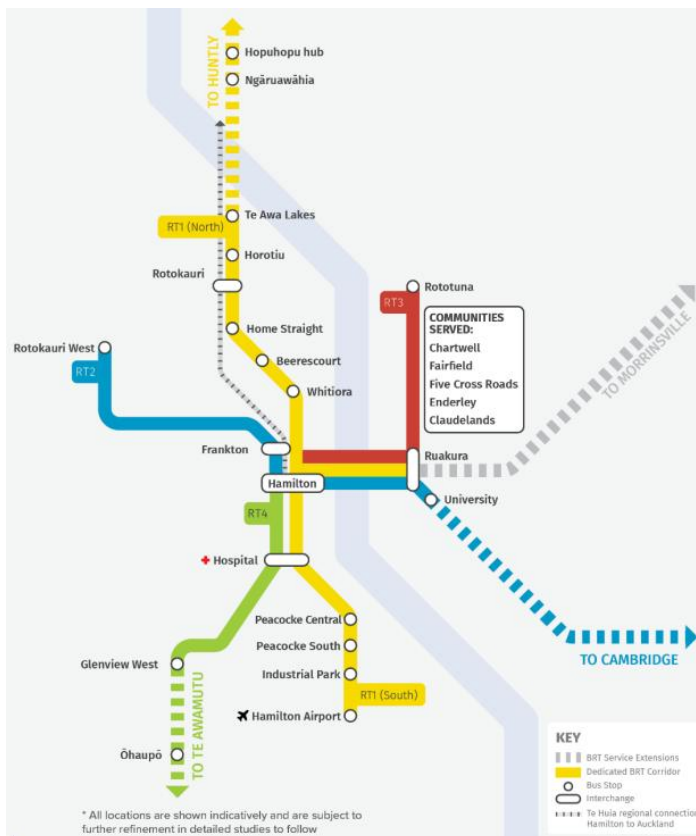


Figure 6: Waikato Metro Spatial Plan - Rapid Transit Network

RTN 4 is one of four key Rapid Transit routes across Hamilton. It will service Waikato Hospital and Glenview West, with potential to be extended in the long-term to Te Awamutu. Glenview West is immediately north of the SL1 Houchens Development which means the site is highly accessible to Hamilton’s “transformative” RTN network.

The MSP also identifies a recommended timeframe to implement the recommended programme³. This indicates RTN4 coming online from Year 20 onwards (year 1 is 2025). While not ideal for supporting rapid growth of new homes in SL1 Houchens Development, the timeframe could potentially be accelerated with contributions from new development such as SL1 Houchens Development instead of investing in upgrades to road capacity for vehicles.

6.2 Integration with Existing Public Transport Short Term

Existing public transport (PT) services operate near the site as shown in Figure 7.

The Comet is a high-frequency service which travels north-south through Hamilton. The nearest bus stop located for this service is at 14 Houchens Road which is approximately 1 km from the SL1 Houchens Development access on Houchens Road (i.e. Spine Road / Houchens Road intersection).

The following three regional bus services on Ohaupo Road currently have no bus stops near the SL1 Houchens Development:

- 24 Te Awamutu service travels between Kihikihi, Te Awamutu and Hamilton – in both directions, seven days per week.

³ Waikato Metro Spatial Plan Programme Business Case report. Revision D, Figure 6-9



- 25 Taumarunui service travels between Taumarunui, Te Kūiti and Ōtorohanga to Waikato Hospital and Hamilton - in both directions, weekdays only.
- 26 Te Kūiti Connector service travels between Te Kūiti, Ōtorohanga, Kihikihi, Te Awamutu, Ōhaupō and Wintec Rotokauri Campus (Foreman Rd), via Hamilton Transport Centre - in both directions, weekdays only.

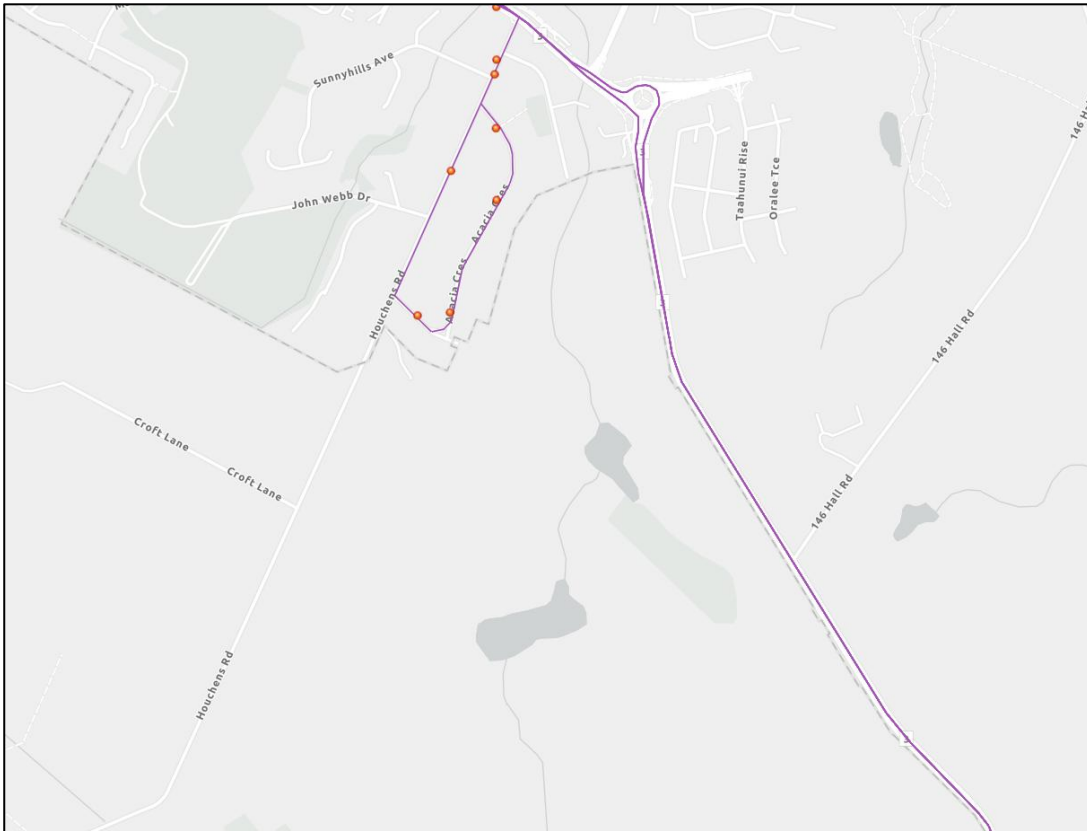


Figure 7: Existing Public Transport Services near the SL1 Houchens Development

SL1 Houchens Development could be serviced by PT in the short term via the Comet Bus and first and last mile use of cycling or micro-mobility (e-scooters etc) to reach existing bus stop on Houchens Road.

There also appears to be potential to extend the existing PT services into SL1 Houchens Development as it develops via the proposed Spine Road. The typical cross-section of the Spine Road in Figure 9 illustrates how the 30 m road could operate as a minor arterial road with bus lanes for public transport and integration with active modes for first and last mile connectivity.

7. Walking and Cycling Network Connectivity

Footpaths currently exist on both sides of Houchens Road. The paths on Houchens Road are generally 1.5m to 1.8m wide. No cycle facilities are currently provided on Houchens Road.

Ohaupo Road (SH3) south of Whatukooruru Drive is currently rural of nature with no infrastructure for active modes. The existing walking and cycling shared path begin at 3006 Ohaupo Road, heading north.

Off-road walking and cycling shared paths and on-road cycle lanes currently exist on both sides of Ohaupo Road (SH3), north-west of Whatukooruru Drive roundabout. These shared paths and cycle lanes provide direct connection to the Glenview bus hub as shown in Figure 8.



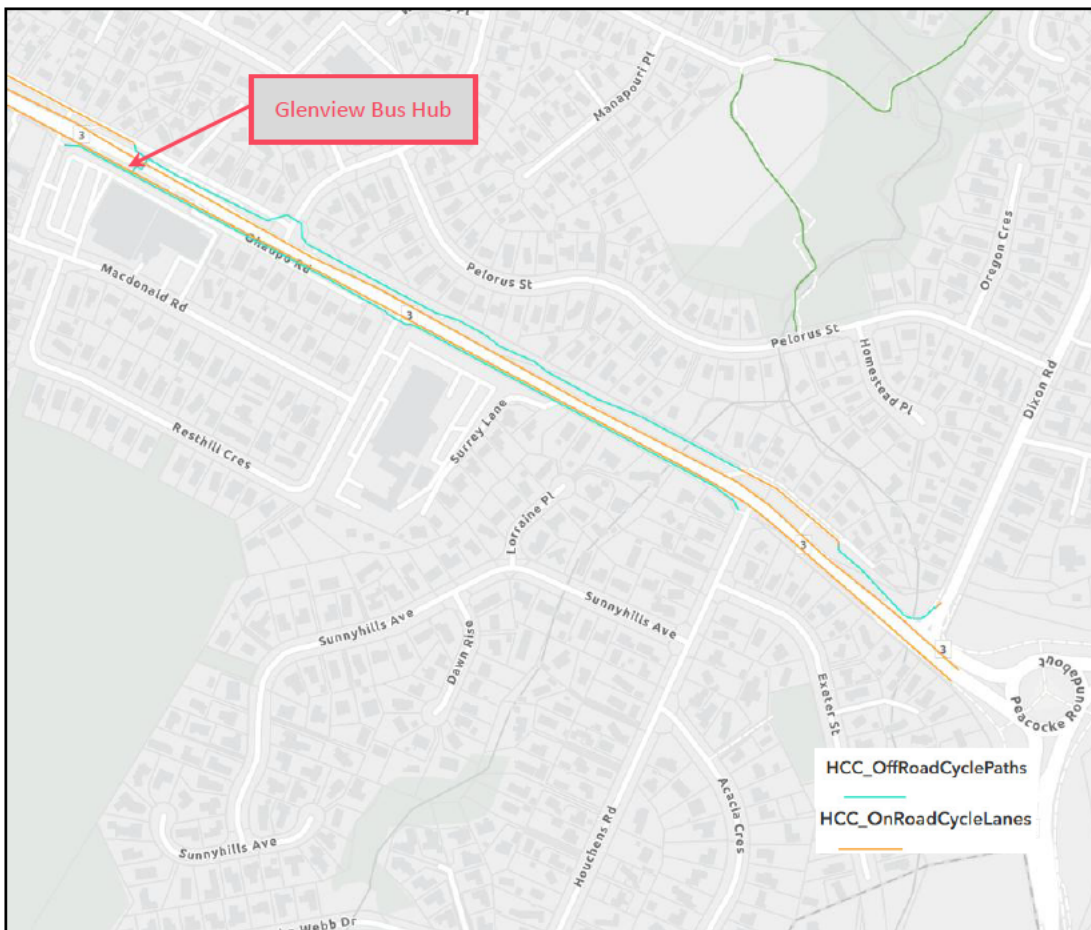


Figure 8: Existing Walking and Cycling Facilities near the SL1 Houchens Development

The proposed Spine Road through the site provides an opportunity for a shared walking and cycling path or a protected bi-directional cycleway and footpath to be provided on one side of the road along the full length of the road as illustrated by the indicative typical cross-section in Figure 9.

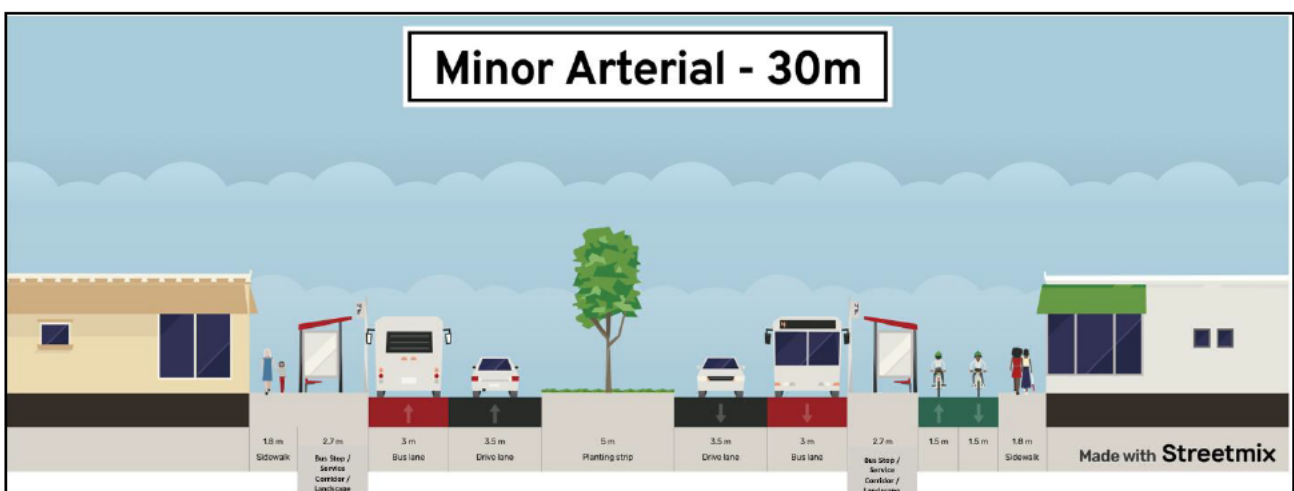


Figure 9: Indicative Typical Cross-section – Minor Arterial

Walking and cycling shared paths are also proposed on the collector roads within the site as shown by the indicative typical cross-section in Figure 10.



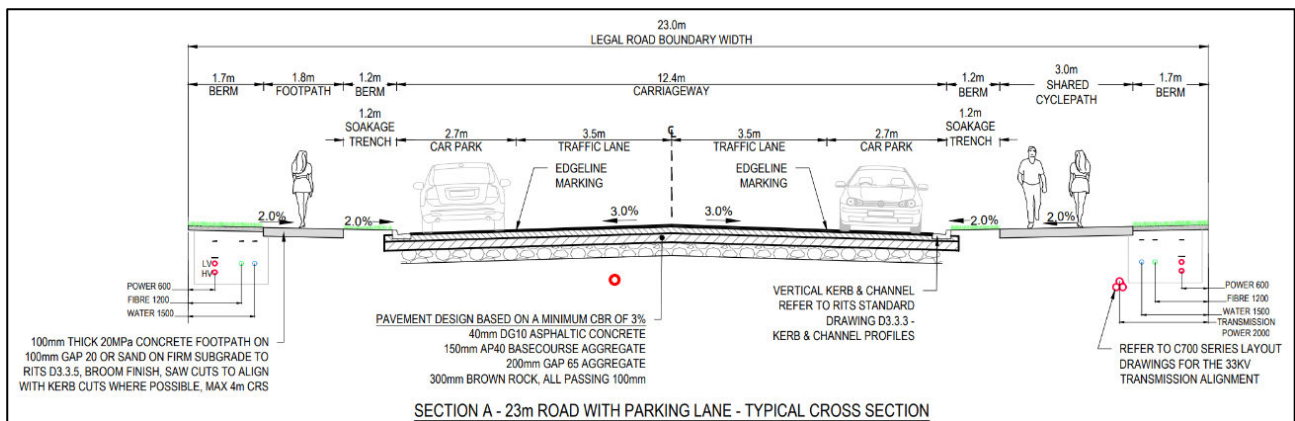


Figure 10: Indicative Typical Cross-section – Collector Road

The residential roads are expected to be constructed to facilitate slow vehicle speeds and promote walking and cycling for short trips. An indicative typical cross-section is presented in

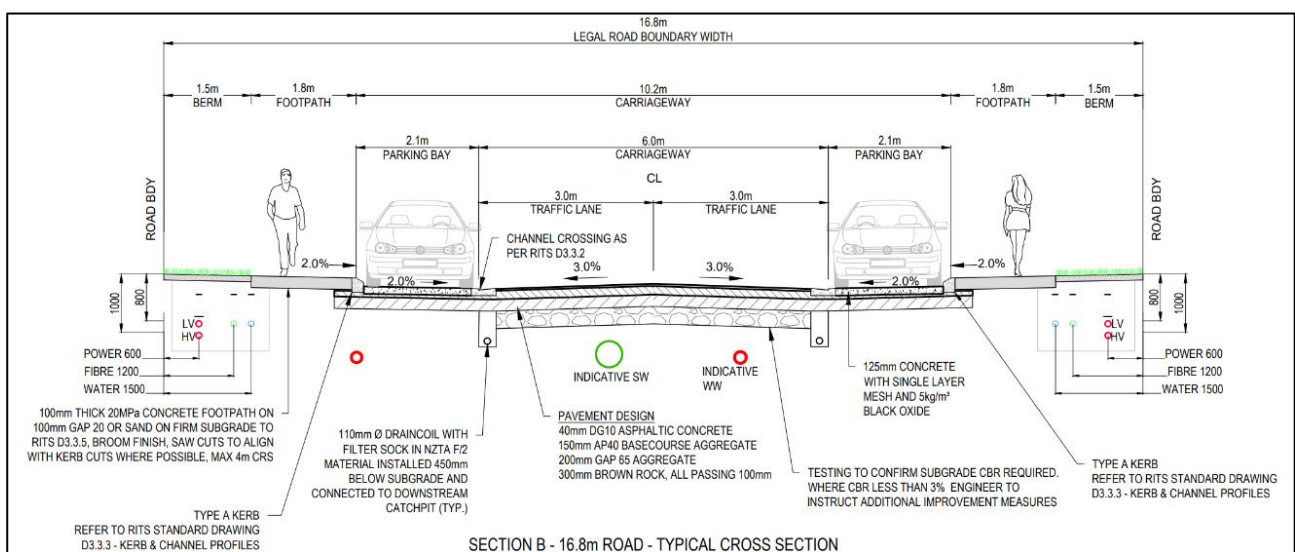


Figure 11: Indicative Typical Cross-section – Local Residential Road

It is also recommended that the walking and cycling shared path or a protected bi-directional cycleway and footpath be extended northwards on Houchens Road to connect to the existing paths on Ohaupo Road (SH3). Safe system crossing points can be considered on Houchens Road such that this route will support and encourage active modes as a first and last mile connectivity to public transport. BBO recommends this opportunity be investigated in greater detail during the substantive consenting and detailed design process.

8. Stage 1 Transport Infrastructure Assessment

High-level capacity assessments for SL1 Houchens Development Stage 1 scenarios have been carried out with baseline volume input from the WRTM developed in 2022 for the Northern Precinct Airport Business Zone plan change at Hamilton Airport. Two WRTM model versions were refined by BBO for that plan change; 2031 without HSL, and 2031 with HSL.

These are the most accurate models currently available in terms of the future traffic volume predictions for Ohaupo Road as they take account of the full development of the Peacocke Structure Plan Area land-use predictions and road infrastructure (currently under construction) and the zoned but not developed employment land around the airport. Both are committed developments that will add to the future traffic volumes at intersections on Ohaupo Road that carry traffic from the SL1 Houchens Development.



2031 is six years from now, which generally aligns with the timeframe anticipated for developing the residential and industrial areas in both SL1 Houchens Development Stage 1 scenarios.

For clarification, no WRTM scenarios have been run with the proposed SL1 Houchens Development. This will be undertaken as part of the detailed transport assessment if SL1 Houchens Development is referred as part of the Fast Track consenting process.

8.1 SL1 Houchens Development Stage 1 Proposal

Stage 1 of the SL1 Houchens Development has considered two potential development outcomes, referred to as Option 1A and Option 1B. As with all masterplans, it will continue to evolve to respond to opportunities and constraints as they are identified through the substantive consent application and detailed design processes.

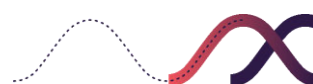
8.1.1 Stage 1 Option 1A

Figure 12 presents the Masterplan and potential yield for SL1 Houchens Development Stage 1 Option 1A. The following access strategy is proposed for Option 1A.

- A section of Spine Road fronting the residential development in Chinamans Hill Limited's land be provided with a connection to Houchens Road.
- A section of Spine Road fronting the residential development in Ohaupo Land Limited Partnership's land be provided. A new Collector Road between the Spine Road and Ohaupo Road (SH3) be provided with a proposed new roundabout intersection on Ohaupo Road (SH3).
- An industrial road connection in close proximity to the potential Southern Links Houchens Road interchange.

The SL1 Houchens Development Stage 1 Option 1A industrial activities have the potential to increase heavy vehicle volumes on Houchens Road if connectivity to the potential Southern Links Houchens Road interchange is not provided. This could create adverse amenity and safety effects for residents of the numerous existing residential properties along Houchens Road, and the need to mitigate this with significant road upgrade, requiring more land on Houchens Road to mitigate these effects. Therefore, access to industrial activities off Houchens Road should only be provided when the potential Southern Links Houchens Road interchange is opened.

If the development of the industrial land in Stage 1 Option 1A is to proceed prior to the opening of the potential Southern Links Houchens Road interchange, then no access should be provided to Houchens Road. Instead, the remaining section of the Spine Road between Chinamans Hill Limited's land and Ohaupo Land Limited Partnership's land (represented by blue dotted line in Figure 12) is to be constructed as part of Stage 1 to ensure that access to the northern residential and industrial development areas is provided via the proposed new roundabout intersection on Ohaupo Road (SH3).



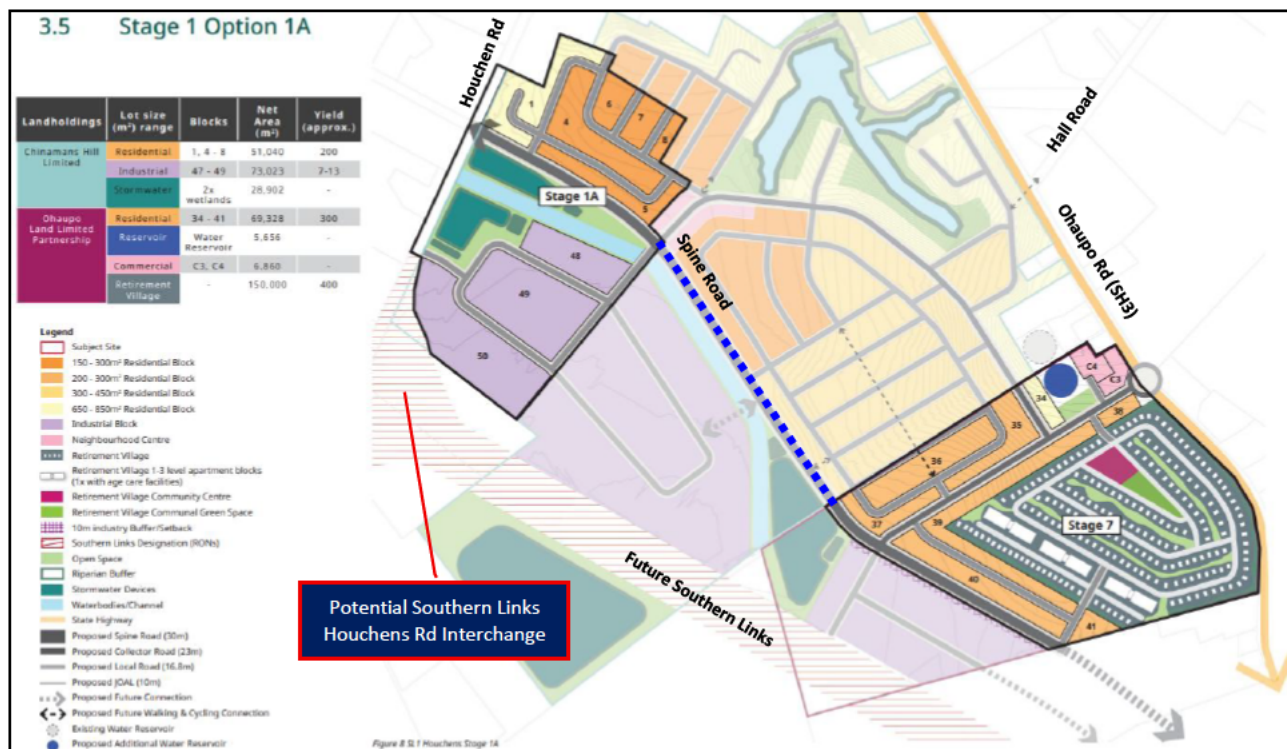


Figure 12: SL1 Houchens Development Stage 1 Option 1A Masterplan

8.1.2 Stage 1 Option 1B

Figure 13 presents the Masterplan and potential yield for SL1 Houchens Development Stage 1 Option 1B. The following access strategy is proposed for Option 1B.

- A section of Spine Road fronting the residential development in Chinamans Hill Limited's and Ohaupo Land Limited Partnership's land be provided.
- A new Collector Road between the Spine Road and Ohaupo Road (SH3) be provided with a proposed new roundabout intersection on Ohaupo Road (SH3).



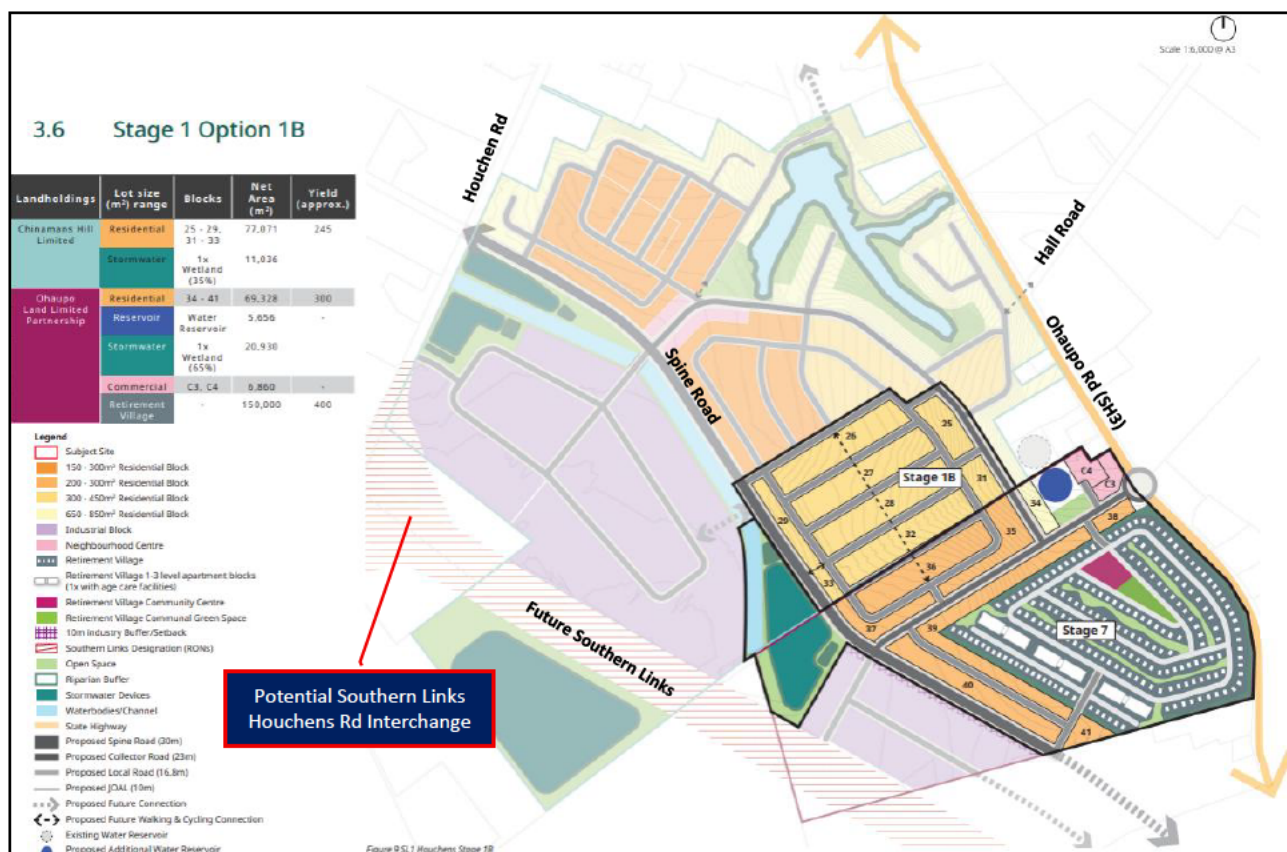


Figure 13: SL1 Houchens Development Stage 1 Option 1B Masterplan

8.2 SL1 Stage 1 Trip Generation

Table No: 4 below summarises the estimated trip generation for SL1 Houchens Development Stage 1 Options 1A and 1B. Stage 1 Option 1A is projected to generate approximately 5% more daily trips than Stage 1 Option 1B due to its proposed industrial land use component.

Table No: 4

Private Vehicle Trip Generation for Stage 1			
Option	Private Vehicle Trips		
	AM Peak Hour	PM Peak Hour	Daily Trips
Stage 1 Option 1A	411	430	4,680
Stage 1 Option 1B	382	401	4,458

Table No: 5 below provides an estimate of the anticipated demand for public transport, walking and cycling during the weekday commuter peak period. It is anticipated that Stage 1 Option 1A will generate between 40 to 43 public transport and active modes trips during the peak periods while Stage 1 Option 1B is expected to generate between 36 to 37 trips public transport and active modes trips during the peak periods.

Table No: 5

Travel Mode Split for Stage 1				
Travel Mode	Stage Option 1A		Stage Option 1B	
	AM Peak Hour	PM Peak Hour	AM Peak Hour	PM Peak Hour
PT	18	19	18	19



Walking	13	14	9	9
Cycling	9	10	9	9
Total	40	43	36	37

8.3 SL1 Houchens Development Infrastructure Requirements

8.3.1 Ohaupo Road (SH3) / Houchens Road Intersection

The high-level capacity assessments indicated that the existing stop-controlled intersection of Ohaupo Road (SH3) with Houchens Road is expected to perform at unacceptable Level of Service (LOS) F, during the AM and PM peak periods for the 2031 baseline (i.e. without the traffic associated with SL1 Houchens Development Stage 1). Adding the trips generated by Stage 1 onto the adjoining road network only results in the performance of the intersection becoming worse.

As indicated in Section 3.1, the Houchens Road Structure Plan identifies that improvements are required at this intersection to support the 199-lot large lot residential development. Therefore, it is reasonable to expect that improvements are also likely required to support SL1 Houchens Development.

Figure 14 presents an indicative signalised intersection upgrade layout. The signalised intersection is expected to operate at LOS C during the PM peak period (i.e. worst-case scenario) with an average delay of 24 seconds per vehicle. The through movements on Ohaupo Road (SH3) are expected to perform no worse than LOS C. Although the right turn movements from Ohaupo Road (SH3) and Houchens Road perform at LOS E during peak periods, the average delay per vehicle on all approaches to the intersection are no greater than 55 seconds which is aligned with Hamilton City Operative District Plan Appendix 15, Table 15-2b, Note 3. While the SL1 Houchens Development area falls within Waipa District, the Ohaupo Rd (SH3) / Houchens Road intersection is in Hamilton City boundary. Therefore, the Hamilton City Operative District Plan guidance on 'efficiency' remains applicable.

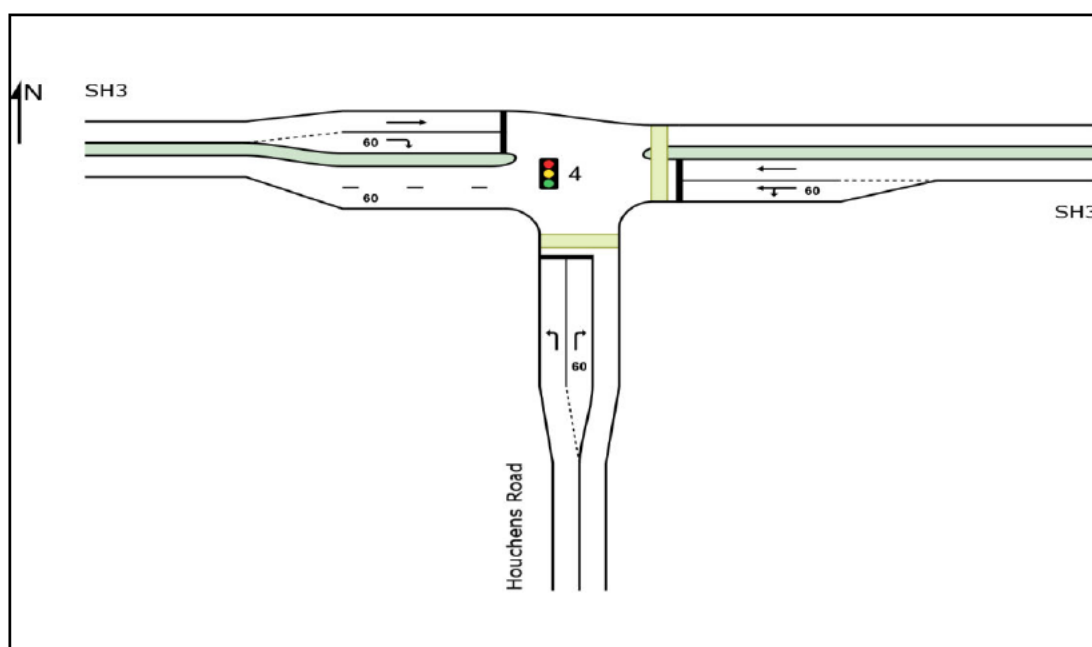


Figure 14: Indicative Ohaupo Rd (SH3) / Houchens Rd Signalised Intersection Upgrade Layout



8.3.2 New Roundabout Intersection on Ohaupo Road (SH3)

The proposed roundabout intersection layout is presented in Figure 15. The roundabout intersection is expected to operate satisfactorily during both the peak hours with all movements performing no worse than LOS C.

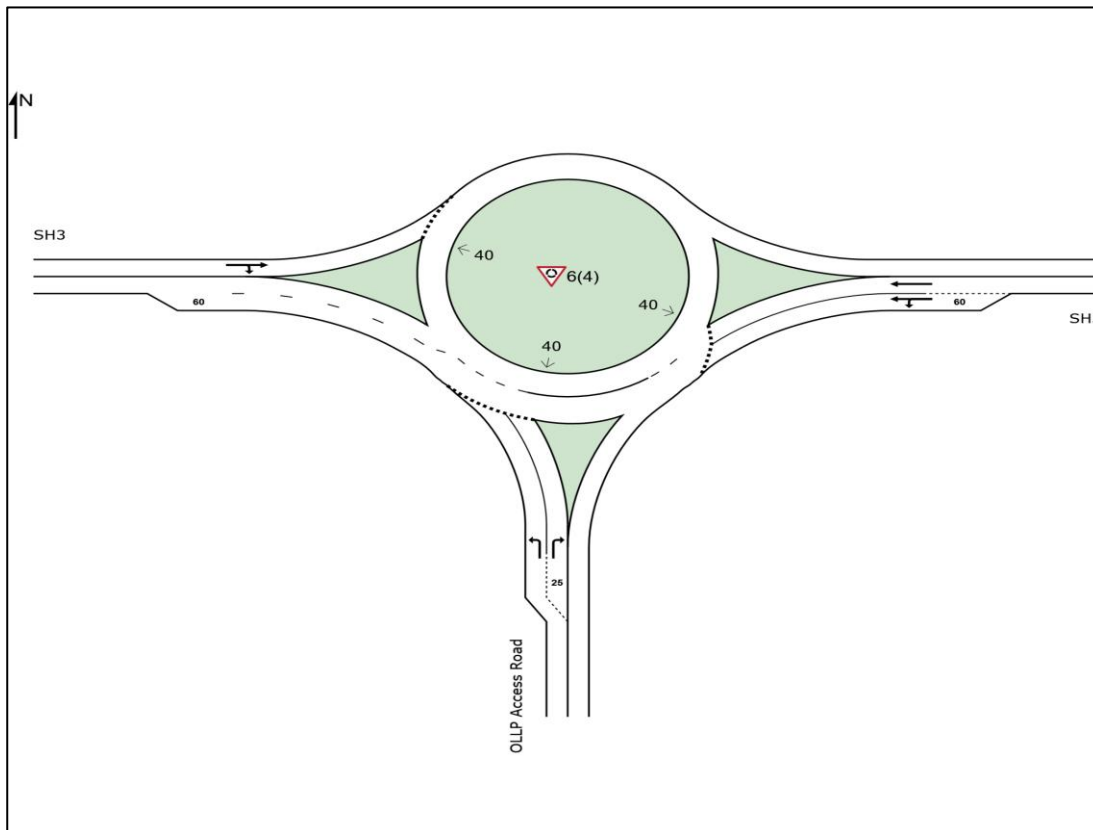


Figure 15: Indicative Roundabout Access Intersection Layout on Ohaupo Rd (SH3)

9. Conclusions

The following key conclusions are established from this assessment:

- SL1 Houchens Development yield of up to 1,300 new residential units, a 400-unit retirement village and 25 net hectares of industrial land is a significant development undertaking requiring transport infrastructure upgrades and contributions to future public transport (the Rapid Transit Network) to support it.
- SL1 Houchens Development is predicted to add around 1,030 new vehicle trips to the surrounding road network during the commuter peak periods.
- SL1 Houchens Development Stage 1 is predicted to add approximately 380 to 430 new vehicle trips to the adjoining road network during the commuter peak periods.
- The proposed access points to the site include a new 3-arm roundabout connection on Ohaupo Road (SH3) and connection to Houchens Road via the proposed 30 m wide Spine Road.
- This assessment recommends that the opportunity to connect the future Peacocke Structure Plan Collector Road as a fourth arm to the SL1 Houchens Development roundabout intersection be investigated with NZTA during the substantive consenting and detailed design process.
- The industrial activities proposed in SL1 Houchens Development Stage 1 Option 1A should only be developed when the potential Southern Links Houchens Road interchange is opened. If the



development of the industrial land in Stage 1 Option 1A is to proceed prior to the opening of the potential Southern Links Houchens Road interchange, then no access should be provided to Houchens Road. Instead, the remaining section of the Spine Road between Chinamans Hill Limited's land and Ohaupo Land Limited Partnership's land is to be constructed as part of Stage 1 to ensure that access to the northern residential and industrial development areas is provided via the proposed new roundabout intersection on Ohaupo Road (SH3).

- The infrastructure improvements identified in Section 8.3 (intersection upgrades) are likely to be required to support the SL1 Houchens Development. Further detailed assessment during the substantive consenting stage is required to determine the staging and development triggers.
- In addition, significant investment in walking and cycling path infrastructure identified in Section 7 is likely to be required to support medium and high-density living to make it easy for day-to-day errands to be undertaken without a car. Further detailed assessment during the substantive consenting stage is required to determine the staging and development triggers.
- It is recommended that the walking and cycling shared path or a protected bi-directional cycleway and footpath be extended northwards on Houchens Road to connect to the existing paths on Ohaupo Road (SH3) such that this route will support and encourage active modes as a first and last mile connectivity to public transport. BBO recommends this opportunity be investigated in greater detail during the substantive consenting and detailed design process.

Yours sincerely

Bloxam Burnett & Olliver

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Senior Transportation Engineer

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