Time	Topic and Purpose	Presenter(s)	Format	Time allocated
9.30am	**Transport Projects** The purpose of this briefing is to update Members on regular matters of significance in the transport space and seek feedback on the proposed improvements for walking and cycling on SH 26 Morrinsville Road between Cambridge Road and Silverdale Road.	**Robyn Denton, Gordon Naidoo, Tania Hermann**	**Open Briefing**	**60 Minutes**
Session Ends				

DISCUSSION TOPIC SUMMARY

Topic: Transport Project Updates – SH26 Urban Section

Related Committee: Infrastructure and Transport

Business Unit/Group: Infrastructure and Assets

Key Staff Contact/s: Robyn Denton & George Lane

Direction Discussion recommended?

Status: Open

PURPOSE OF TOPIC/INFORMATION

To provide a presentation on the proposed improvements for walking and cycling on the section of Morrinsville Road (SH26) between Cambridge Road and Silverdale Road ahead of seeking approval from the 28 November 2024 Infrastructure and Transport Committee

WHAT KEY THINGS SHOULD MEMBERS THINK ABOUT/ CONSIDER IN UNDERSTANDING THIS INFORMATION?

Council has a funding agreement with NZTA for improvements to the section of Morrinsville Road (SH26) between Cambridge Road and the Waikato Expressway to make it 'fit for purpose' prior to revocation of the State Highway section.

Approval has been given to date for the other sections of this route including a off road shared path between Silverdale Road and the Waikato Expressway overbridge and a roundabout at the intersection of Silverdale and Matangi Roads.

KEY SUMMARY POINTS

A project report has been completed with looks into the options for improvement in this corridor and two options have been determined for consideration by elected members:

- Option 1 (Safest) - Separated cycle lanes with Raised Safety Platforms on side roads, signalised raised crossing near Cambridge Road, upgrade existing signalised crossing near Mullane Street with raised safety platform
- Option 2 (Alternative) – Separated cycleways, RSP on side roads, signalised at grade crossing near Cambridge Road, kerb build outs to existing Signalised Crossing near Mullane Street

Funding for the completion of this work is via the Agreement with NZ Transport Agency. It is recognized that the funding available for this work will be tight and the final scope of the work will be managed to ensure that the focus of the available funding will be on the installation of the roundabout at Matangi/Silverdale intersection and the off- road shared path between Silverdale Road and the Waikato Expressway.

Based on the funding availability from NZTA and acknowledging the clear direction provided by Council that this project will need to be completed wholly within the available funding agreement with the NZTA, staff are recommending **Option 2**.

WHERE CAN MEMBERS FIND MORE INFORMATION?

A copy of the presentation is attached.
A copy of the SH26 Morrinsville Road Walking and Cycling Improvement Project report will be provided prior to the briefing.

WHAT DIRECTION/FEEDBACK/INPUT DO YOU NEED FROM ELECTED MEMBERS

Staff will be seeking direction from EMs on any additional information that will be required for inclusion in the report requesting approval of this project at the 28 November 2024 Infrastructure and Transport Committee meeting.

Options Report

Morrinsville Road (SH26) Urban Section

Fit for Purpose Improvements
2024/25

Hamilton City Council
Te kaunihera o Kirikiriroa

BACKGROUND

Hamilton City Council (HCC) has entered into a funding agreement with NZTA to deliver the Morrinsville Road Fit for Purpose project associated with the revocation process for the State Highway status of the section of SH26 between Cambridge Road and the Waikato Expressway overbridge.

For the section between Cambridge Road and Matangi Road (the Urban Section), the proposed works identified in the Single Stage Business Case completed by NZTA was:

- Change the existing school speed limit to a variable 30km/h
- Install separated cycleways on each side of the road
- Remove all car parking, and
- Introduce kerb buildouts and raised safety platforms at side road intersections

At the Infrastructure and Transport Committee meeting on 8 August 2024, Elected Members gave macro-scope approval to proceed with a roundabout at the intersection of Morrinsville Road with Matangi Road and Silverdale Road, with staff to report back to approve active mode crossing facilities (form and location) at a future date.

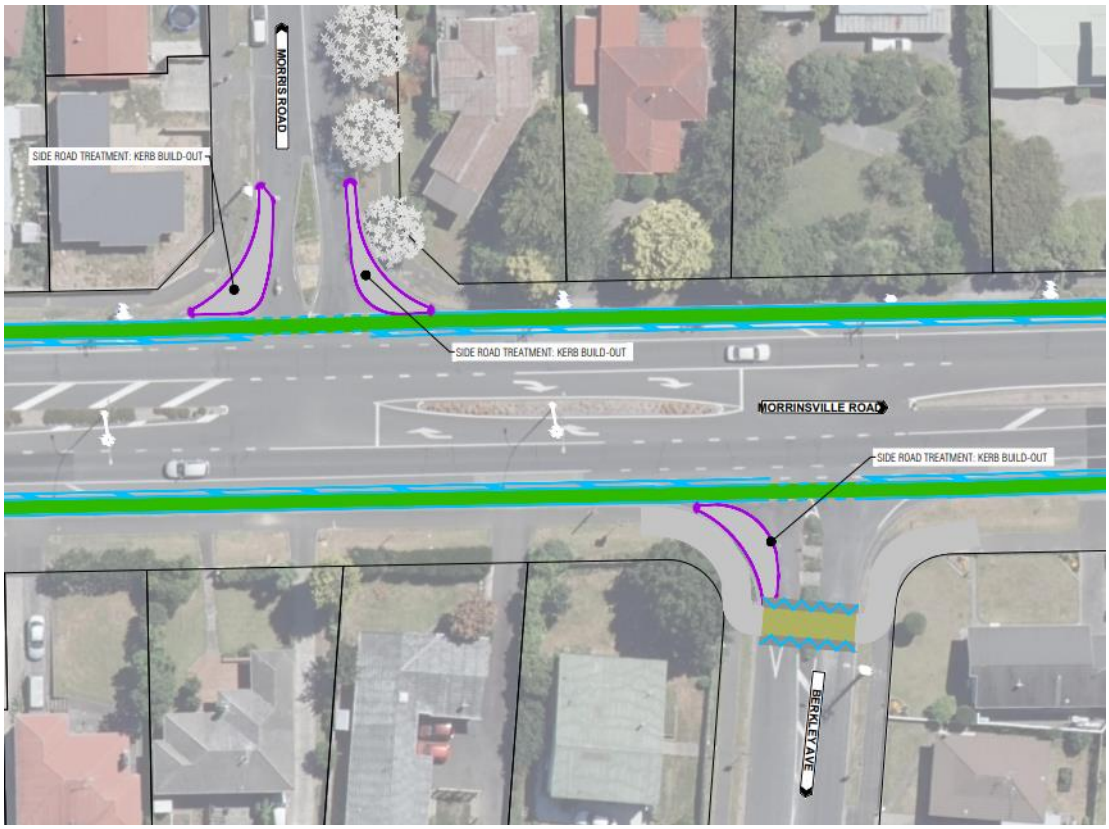
At the Infrastructure and Transport Committee meeting on 26 September 2024, Elected Members gave macro-scope approval to proceed with the following active mode facilities at the intersection of Morrinsville Road with Matangi Road and Silverdale Road:

- Across Silverdale Road: uncontrolled crossings, on raised safety platforms with 1:20 approaches and 1:40 departures
- Across Morrinsville Road (west): A signalised walking and cycling crossing, at-grade.
- Across any left turn slip lane: uncontrolled crossings, on raised safety platforms with 1:20 approaches and 1:40 departures.
- Across Matangi Road and Morrinsville Road (east): no formal facilities

This report describes the option assessment process for the proposed improvements within the Urban Section between Silverdale Road and Cambridge Road and it is noted that any proposed changes to the Urban Section would tie-in to the facilities proposed at the new roundabout and associated facilities approved previously.

BUSINESS CASE CONTEXT

The Fit for Purpose business case includes a proposed design for the Urban Section, with an indicative image shown below.



Preferred scope in the business case, incorporated into the funding agreement. Including complete parking removal, implementation of separated cycleways, kerb buildouts and raised safety platforms at intersections.

In reviewing the proposed concept included in the business case staff have identified a number of issues including:

- safety issues with the proposed treatments at intersections
- budget risks recognising that these were set a few years ago and there has been no inflation adjustment, and
- risks regarding expected community concerns regarding the proposed loss of car parking with this design.

Therefore, staff have considered alternative designs to mitigate these issues and maximise the benefits this funding can provide for those walking and cycling.

Staff have prepared this report to describe the process and outcomes of this consideration of options and seek approval of an option to proceed to design.

The business case includes changing the existing 40 km/h variable school speed limit to 30km/h variable and extending the existing 50km/h speed limit in the urban section through the intersection with Silverdale Road and Matangi Road to just east of the proposed new roundabout.

WHERE?

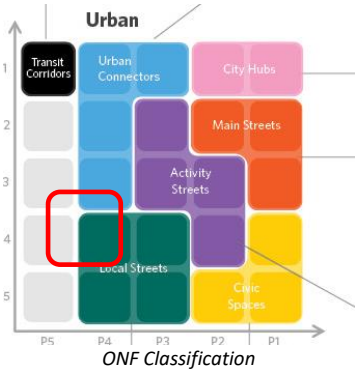
The Urban Section extends along Morrinsville Road from Cambridge Road to the eastern edge of Jansen Park. There are several schools, community facilities, parks, the University of Waikato, and the Hillcrest shops nearby.

Site Location

WHY IS IT IMPORTANT TO ADDRESS THE PROBLEM?

Morrinsville Road is currently a State Highway (SH26) and connects Hamilton to Morrinsville. It has annual average daily traffic of 7,100 vpd (east of the Waikato Expressway) increasing to 13,300 vpd between Silverdale Road and the roundabout on Cambridge Road (SH1C).

It's classification under the One Network Framework is M3, P4 falling within the Urban Connector classification. These can be summarised as a mix of higher volumes of vehicles and people. The existing speed limit is 50km/hr with a variable 40km/h school limit, and the measured mean operating speed varies between 60 km/h (outside Jansen Park) and 42 km/h (approaching Cambridge Road)[1].



ONF Classification

[1] Vehicle operating speed is sourced from the NZTA resource MegaMaps. NZTA's data is sourced from TomTom.

Based on the traffic volumes and speeds observed on this road, separated cycleways are required to accommodate users of all ages and abilities. On road cycle lanes are provided between car parking and the traffic lane. However, they do not meet the minimum width required by best practice standards and guidelines.

At intersections:

- The crossing distance is wide (up to 19m at Mullane Street). This makes it harder for pedestrians to judge whether it is safe to cross the road and increases the *likelihood* of crashes between pedestrians and drivers.
- The kerb radius is wide (approximately 12m) and, combined with the wide roadway on Morrinsville Road, enables drivers to turn at high speeds. This makes it harder for pedestrians to judge whether it is safe to cross the road and increases the *likelihood* of crashes between pedestrians and drivers. It also increases the *severity* of injuries if a collision does occur.

At midblock crossings:

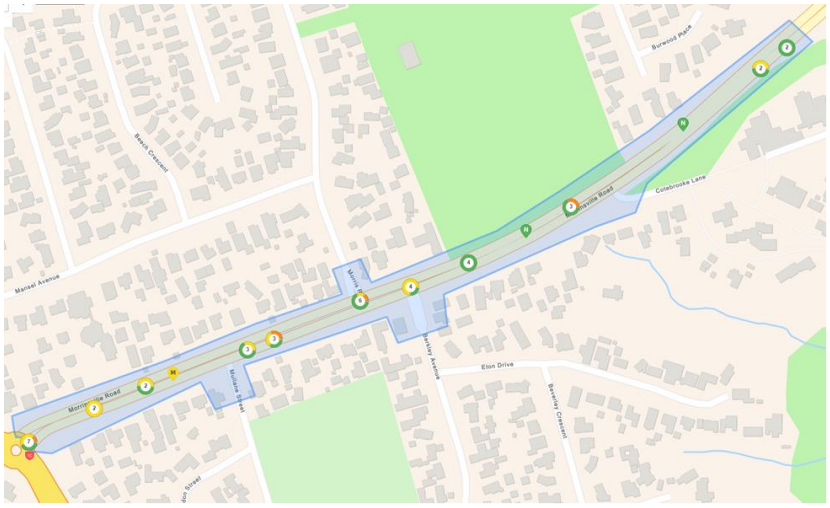
- The roadway is wider than necessary for it's function (over 20 m at some points). This makes it harder for pedestrians to judge whether it is safe to cross the road and increases the *likelihood* of crashes between pedestrians and drivers.
- The wide roadway on Morrinsville Road, encourages drivers to drive faster. This makes it harder for pedestrians to judge whether it is safe to cross the road and increases the *likelihood* of crashes between pedestrians and drivers. It also increases the *severity* of injuries if a collision does occur.

Since 2014 there has been 41 crashes recorded on Morrinsville road between the roundabout and Matangi Road[2] resulting in a social cost of $9.6M. These crashes include:

- 4 serious crashes
- 14 minor injury crashes.
- 23 non-injury crashes.

Out of the 41 recorded crashes

- 4 crashes involving cyclists (four non-injury)
- 3 crashes involving pedestrians (one serious, two minor injuries)



[2] NZTA Crash Analysis System, extracted 1/11/2024

Existing active mode use

Staff have received a road user count completed by a local school on 22 March 2023, for the following periods: 0630 to 0930, 1100-1330, and 1430-1830, with a total of 500 pedestrians recorded.

This count is consistent with our operational data from the signalised crossing. Data from 4-10 November 2024 shows that-

- On every school day, the pedestrian lights ran over 50 times between 0800 and 0900 (pedestrian lights only run if they are called by someone waiting to cross).
- On school days the pedestrian lights ran approximately 150 times across the whole day.

Observations

Site inspections were carried out on 23 October 2024 where the following observations were made:

- Vehicle operating speeds are likely higher than 50 km/h, especially east of Berkley Avenue
- Driver channelisation is inconsistent, i.e. drivers are selecting different positions across the traffic lane, which increases the difficulty for road users selecting gaps to cross the road or turn.
- Some drivers choose to drive unlawfully in the cycle lane, despite the traffic lane being available for them.
- Turning speeds at side road are much higher than on other Urban Connectors as drivers can make sweeping turns due to the large radius corners at the intersections.

Existing road configurations

The roadway on Morrinsville Road is wider than expected for its traffic function being typically 18-22m from kerb to kerb. Currently, the entire width of the road is available to moving vehicles, which requires the full width of the road to be resealed frequently. The District Plan requirements indicate a narrower roadway (10m) with indented parking bays and off-road cycling facilities would be suitable and would to reduce this maintenance burden.

COMMUNITY FEEDBACK

Staff are in regular contact with Hamilton schools in the area – including Berkley Normal Middle School, Silverdale Normal School, Hillcrest Normal School, and Hillcrest High School. Schools outside Hamilton have also been included in early engagement on this project.

The school community for Berkley Normal Middle School is only able to access their grounds via Morrinsville Road. In initial meetings, the school identified the nearest crossings – Mullane Street (kerb crossing), Berkley Avenue (kerb crossing) and Morrinsville Road (signalised crossing) as needing safety improvements. The informal crossing on Morrinsville Road closest to Cambridge Road was also identified as unsafe with near misses and poor decision making.

Mullane Street is used by students who are biking or scootering to enter and exit Berkley Normal Middle School. The intersection with Morrinsville Road is busy – congestion is caused by drivers turning right out of Mullane Street during school pick up, and there are drivers turning left into Mullane Street too fast when coming off Morrinsville Road.

The signalised crossing on Morrinsville Road has had multiple near misses with two serious injury incidents – the most recent in August 2024 where a student sustained leg injuries and ended up in hospital. Berkley Normal Middle School informed staff that these incidents are stressful for students, families and staff – with a noticeable increase in families dropping kids off immediately after the most recent incident in August 2024.

Berkley Normal Middle School have presented staff with an independent report from a transport engineer suggesting a raised safety platform for Mullane Street and the existing signalised crossing on Morrinsville Road. Raised safety platforms have also been suggested for Berkley Avenue and Morris Road. The school are part of a Kaahui Ako (Community of Learning) representing approximately 3,800 students. The community of schools have expressed a strong interest in ensuring that students have safe and connected infrastructure along Morrinsville Road to get to and from their respective schools using their preferred modes of transport.

Employees of Livestock Improvement Corporation (LIC) have been in contact with the project team to offer their support for improved walking and cycling options along Morrinsville Road. We've been informed that LIC has a "very active cycling and walking community" amongst their workforce (who are surveyed annually) and that the "creation of a safe route along Morrinsville Road would support people to take up option of biking or walking to work". We've heard from employees who currently ride along Morrinsville Road or would be a "daily user of the proposed cycleway", through to others who are interested in using active travel but "currently do not because it seems suicidal to either walk or bike that stretch of road in its current state". LIC employees have said that told us that if Hamilton City Council wants to promote a healthier and more sustainable city, then "we need to make cycling and walking safe and desirable".

Feedback received from the wider community (from a resident on Morrinsville Road and a former teacher at Hillcrest High School through to representatives from Tamahere and Matangi) mention noticeable volumes of people walking and biking along Morrinsville Road, particularly with students in and around school drop off and pick up times. In addition to the schools in the area, the community feedback identifies a range of destinations in the area – such as the University of Waikato, churches, libraries, gullies, retirement villages, healthcare and supermarkets – that create a demand for walking and biking. The feedback received refer commonly refers to the area as being dangerous with high traffic volumes (including heavy vehicles) operating at high speeds.

WHAT'S THE PROBLEM?

The Single Stage business case identified the following problem statements:

- "Road configuration leads to a high crash risk at intersections and bends in the road"
- "High traffic flows and operational speeds are reducing safe travel choices for communities".
- "Asset condition does not meet the standard for the road function which leads to higher costs for council of […] (eg infrastructure provision is excessive for road user needs and historic "asset sweating" reduces asset life)."

The business case identified the following outcomes for investment:

- "Ensure that residual safety risks are mitigated to create a road that is safer for all road users resulting in a reduction in deaths and serious injuries (DSIs) to 15% by July 2026"
- "Addressing safety risk arising from traffic flows and speeds to improve travel choices thereby increasing the number of pedestrians and cyclists by 40% on SH26 by July 2026"

Staff have identified additional problems based on the data and observations noted in previous sections.

- There are a high number of pedestrians and cyclists on Morrinsville Road and there currently poor facilities for walking and cycling between Jansen Park and Cambridge Road. This impedes safe access between Hillcrest, Silverdale, Matangi or Newstead and residents (including school

students) who may wish to travel by active modes are forced to accept a high level of road safety risk or drive.

- Intersections with side roads are wide with sweeping kerbs that allow drivers to turn at high speed. This makes it difficult for pedestrians to accurately select a safe gap in traffic and means that impact speeds in any crashes would be likely to result in death or serious injuries.
- Existing on-road cycle lanes are narrower than the minimum widths recommended in national guidance and do not offer protection from the higher traffic volumes and speed observed on this route. This makes cycling an unattractive mode choice for most road users and many cyclists choose to ride on the footpath as a result.

Figure 1: Local schools

RECOMMENDATIONS

A description of the Options and Treatments are provided in the "Treatments Considered" and "Treatment Analysis Matrix" tables together with the Options Considered section at the end of this report.

Preferred (Safest) - Separated cycleway with raised dual priority crossings on side roads, new raised signalised raised crossing near Cambridge Road, RSP and kerb buildouts added to existing signalised crossing near Mullane Street

- Estimated construction cost $2.55M
- Averaged Safe systems score 214
- Estimated combined crash reduction 50% over 10 years= social cost saving $ 4,795,700
- This option has some loss of parking and requires parking manoeuvres in the traffic lane.

Alternative – Separated cycleway with raised dual priority crossings on side roads, new signalised crossing near Cambridge Road, kerb buildouts to existing signalised crossing near Mullane Street

- Estimated Construction Cost $2.05M
- Averaged Safe Systems Score 228
- Estimated combined crash reduction 45%. over 10 years = social cost saving $ 4,316,130
- This option has some loss of parking and requires parking manoeuvre in the cycle lane.

OPTIONS CONSIDERED – LONG LIST

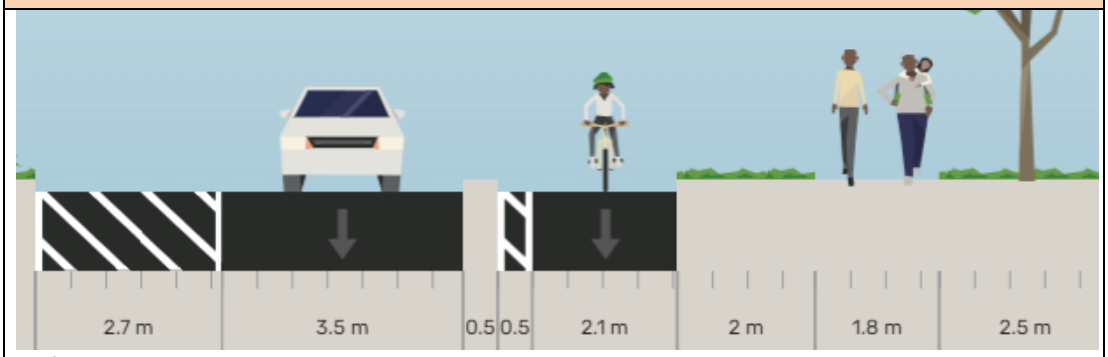
Staff have developed and assessed options for the urban section of Morrinsville Road for delivery as part of the Fit for Purpose Improvements. The treatments were considered for the following elements:

- Facilities for cycling and micromobility. The treatments considered apply throughout the physical extent and tie in to existing shared paths at SH1C and proposed shared paths at the intersection with Matangi Road
- Side road crossings at the intersections with Mullane Street, Morris Road, and Berkley Avenue
- Midblock signalised crossing near Mullane Street (at #34/#35)
- Midblock uncontrolled crossing near Cambridge Road (at #6/#7)

Treatments Considered

- **Cycling facilities along the route and across intersections**

Treatment A - Separated Cycleway with complete removal of car parking (funding agreement)



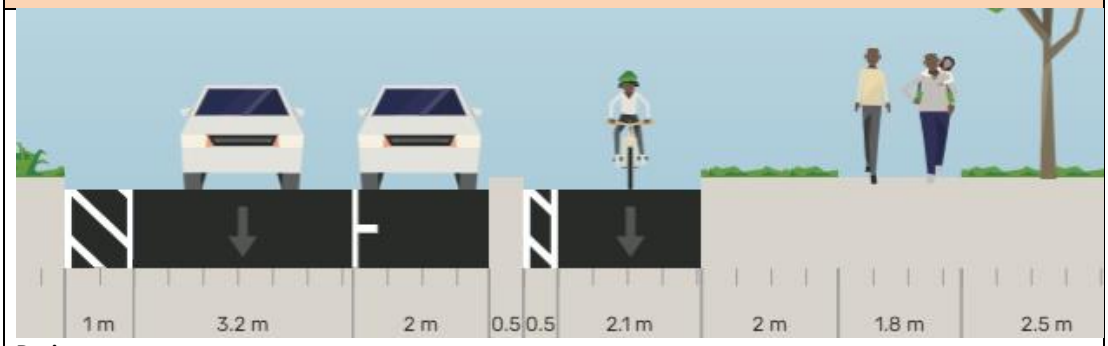
Design notes:

- This design includes a 0.4m wide prefabricated concrete separators in a 1.0m wide separation zone.
- The separation zone is continuous along the corridor; however, the concrete separators stop at driveways.
- This design includes removing all car parking on Morrinsville Road.

Discussion:

- This option is unlikely to be supported by the wider community.
- This option retains a very wide roadway, which contributes to excessive driver speed. Removing all car parking may further contribute to excessive driver speed.
- This option may require right turn lanes to be made shorter or narrower

Treatment B1 – Separated cycleway with most car parking retained (prefabricated separators)



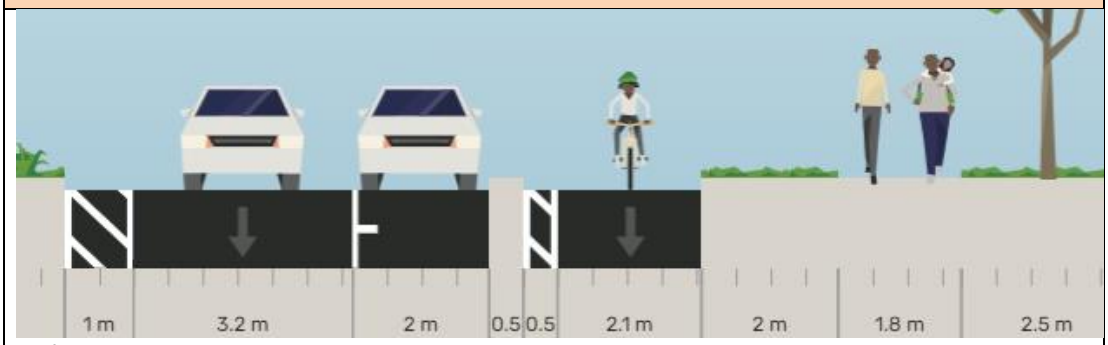
Design notes:

- This design includes a 0.4m wide prefabricated concrete separators in a 1.0m wide separation zone.
- The separation zone is continuous along the corridor; however, the concrete separators stop at driveways.
- This design includes removing some car parking, particularly around the signalised crossing and east of #66.
- This option cannot be safely constructed without some form of treatment at each side road.

Discussion:

- This option includes pre-cast separators which can add extra cost for re-seals
- This option includes pre-cast separators which causes some risk of kerb strike for drivers
- The pre-cast separators must stop at driveways to allow access for residents
- Installation of pre-cast separators is slower than other options, and introduces additional safety risk for contractors
- This option may require right turn lanes to be made shorter or narrower

Treatment B2 - Separated cycleway with most car parking retained (continuous cast in situ separators)



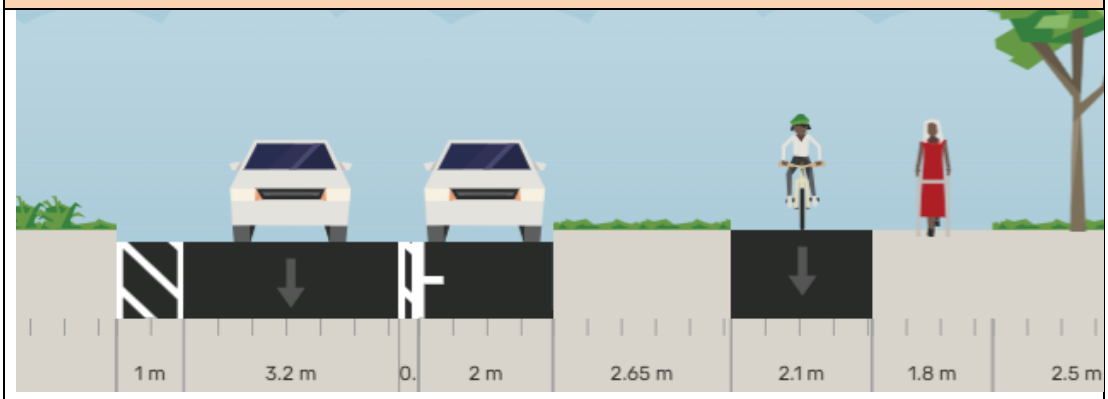
Design notes:

- This design includes a 0.4m wide cast in-situ concrete separators (kerbs) in a 1.0m wide separation zone (refer to Ngatai Road, Tauranga).
- The separation zone is continuous along the corridor; however, the concrete separators stop at driveways.
- This design includes removing some car parking, particularly around the signalised crossing and east of #66.
- This option cannot be safely constructed without some form of treatment at each side road.

Discussion:

- This option can be built with a kerb profile that is much less likely to damage vehicles in the event of a kerb strike.
- This option allows the separator to continue across driveways with a lower profile that residents can drive over.
- This option is likely to be the fastest way to install cycleway separators.
- This option may require right turn lanes to be made shorter or narrower

Treatment C - Separated cycleway or shared path at footpath level with kerb widening, most car parking retained



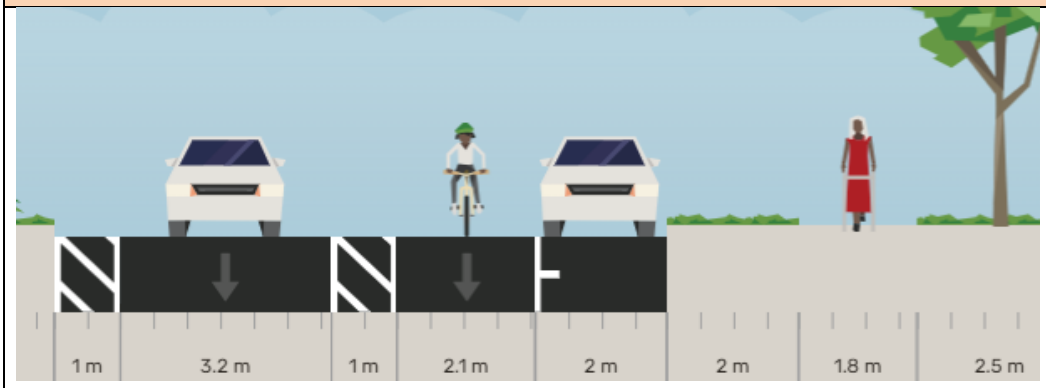
Design notes:

- This design includes a grass berm between the cyclepath and the roadway. The width varies from 1.0m to 4.0m.
- The separation zone is continuous along the corridor.
- This design includes removing some car parking, particularly around the signalised crossing and east of #66.
- This option cannot be safely constructed without some form of treatment at each side road.

Discussion:

- This option is likely to have the greatest cost of all midblock options
- This option provides the best separation between bikes and traffic
- This option may require right turn lanes to be made shorter or narrower

Treatment D - Painted cycle lanes



Design notes:

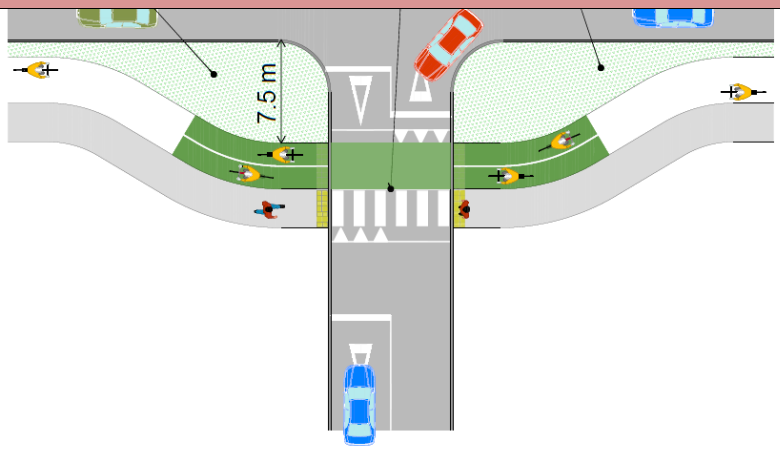
- This design includes a 1.0m wide separation zone
- The separation zone is continuous along the corridor;
- This design includes removing some car parking, particularly around the signalised crossing and east of #66.
- This does not require side road treatments, but could integrate with offset crossings if desirable

Discussion:

- This option is likely to have the lowest cost of all midblock options
- This option does not provide for riders of all ages and abilities.
- This option does not align to the approved Biking and Micro-mobility plan.
- This option does not deliver the benefits identified in the funding agreement and may compromise funding.
- This option may require right turn lanes to be made shorter or narrower

- **Side Road Crossings**

Treatment E - Dual priority crossing on raised safety platform with kerb buildout



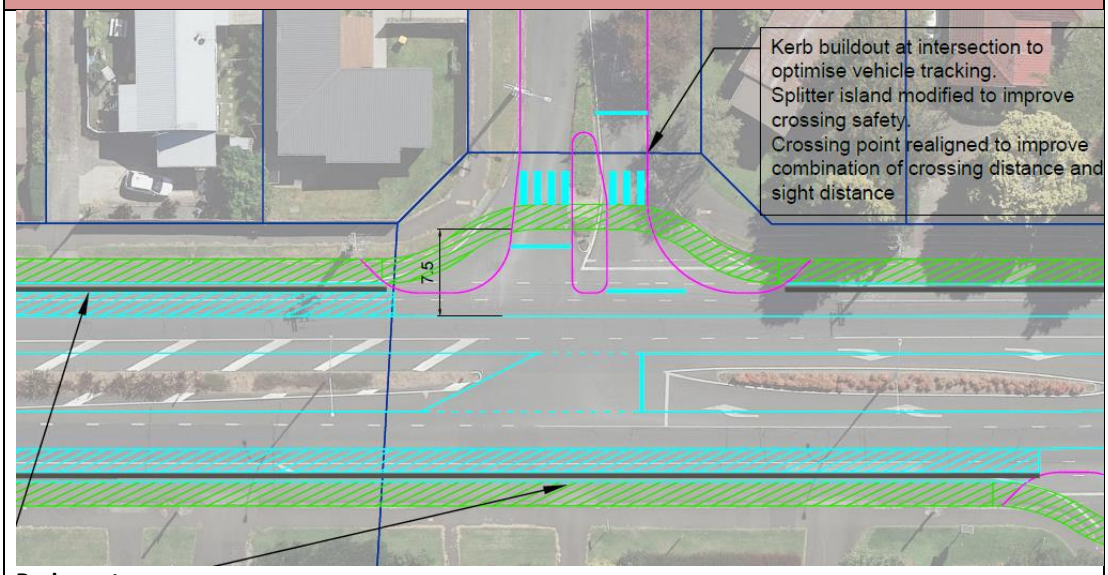
Design notes:

- The image above shows a bi-directional cycleway. However, all cycleways in this area are proposed to be unidirectional.
- This design includes a 7.5m offset between the crossing point and the crossing as agreed in the Code of Practice for Biking and Micromobility
- Platform to be designed for 40km/h approach (1:20) with smooth (1:40) departure.
- This design includes kerb buildouts at each intersection to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- This design can include or exclude median islands at each side road. This will be confirmed through the design process.

Discussion

- This option is likely to have the greatest cost of all side road options

Treatment F - Dual priority crossing at grade with kerb buildout and median refuge island



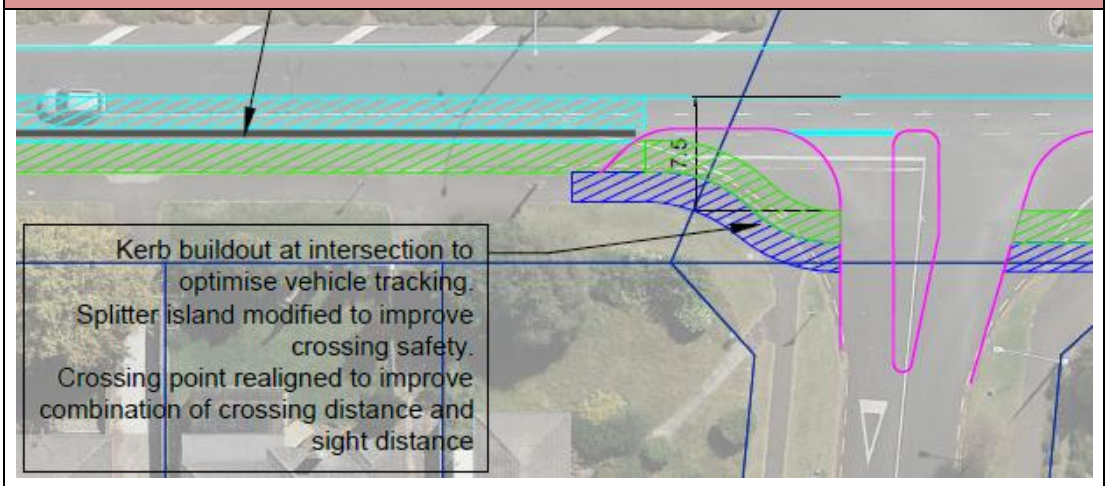
Design notes:

- All cycleways in this area are proposed to be unidirectional.
- This design includes a 7.5m offset between the crossing point and the crossing as agreed in the Code of Practice for Biking and Micromobility
- This design includes kerb buildouts at each intersection to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- This design includes expanded median islands at each side road.

Discussion:

- There is a risk that drivers will be pre-occupied with giving way to oncoming traffic and will fail to give way to pedestrians and/or cyclists, resulting in crashes. While speeds will generally be low, drivers turning right in may reach speed high enough to cause death or serious injury.

Treatment G - Uncontrolled crossing on raised safety platform with kerb buildout and median refuge island (funding agreement)



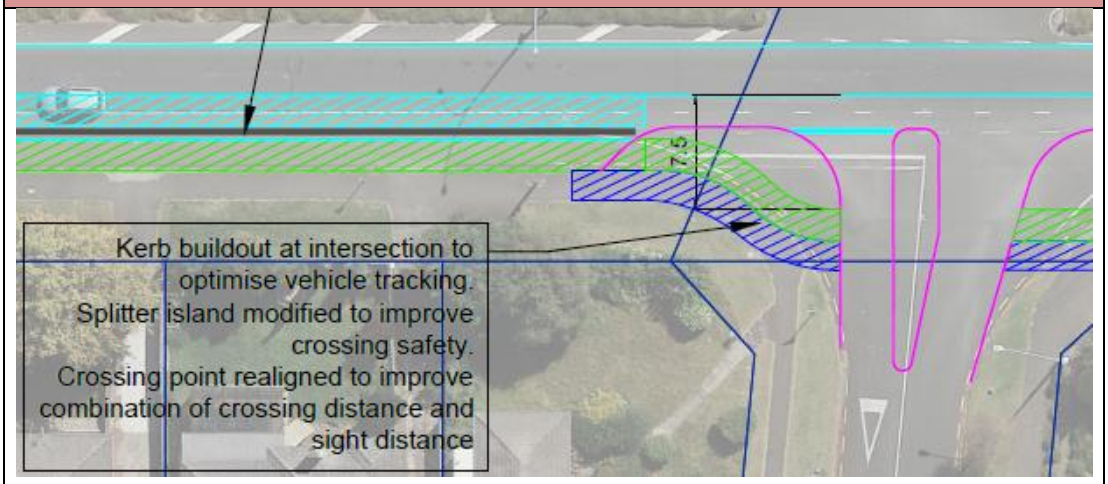
Design notes:

- All cycleways in this area are proposed to be unidirectional.
- This design includes a 7.5m offset between the crossing point and the crossing
- Platform to be designed for 40km/h approach (1:20) with smooth (1:40) departure.
- This design includes kerb buildouts at each intersection to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- This design includes expanded median islands at each side road.

Discussion:

- There is a risk that cyclists will chose to remain on road, where side road traffic is required to give way to them rather than using the crossing where they must give way to side road traffic.

Treatment H - Uncontrolled crossing at grade with kerb buildout and median refuge island



Design notes:

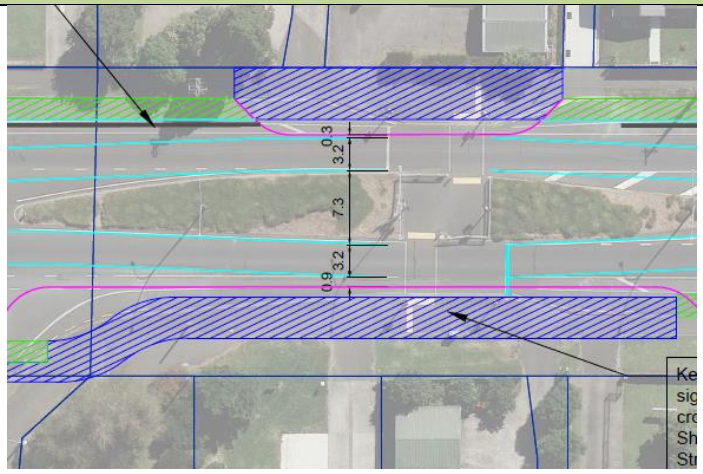
- All cycleways in this area are proposed to be unidirectional.
- This design includes a 7.5m offset between the crossing point and the crossing
- This design includes kerb buildouts at each intersection to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- This design includes expanded median islands at each side road.

Discussion:

- There is a risk that cyclists will chose to remain on road, where side road traffic is required to give way to them rather than using the crossing where they must give way to side road traffic.
- There is a risk that cyclists and/or pedestrians will fail to give way to turning drivers, resulting in crashes. While speeds will generally be low, drivers turning right in may reach speed high enough to cause death or serious injury.

- **Existing Signalised Midblock Crossing near Mullane Street**

Treatment I - Dual signalised crossings on raised safety platform with refuge island and kerb buildout



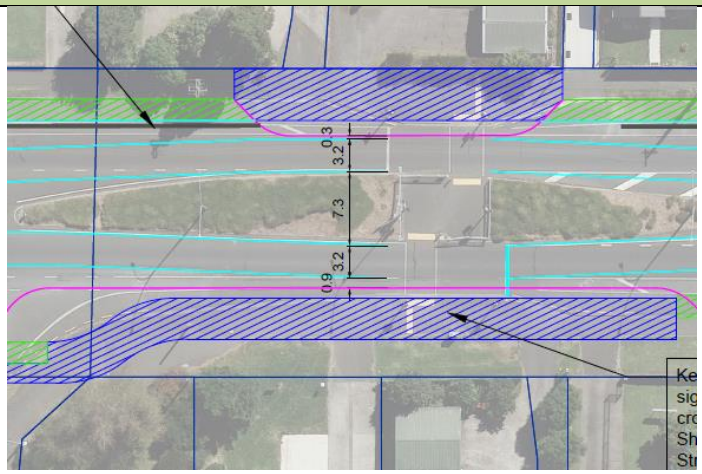
Design notes:

- All cycleways in this area are proposed to be unidirectional, except for a shared path to enable connect between Morris Road and Mullane Street (shown above)
- Platform to be designed for 40km/h approach (1:20) with smooth (1:40) departure.
- This design includes kerb buildouts to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- Signals would be upgraded to allow walking and/or cycling across. This is proposed to be a shared crosswalk
- This option would require an off road provision for cyclists on Morrinsville Road

Discussion:

- There is a risk of negative community and stakeholder (including FENZ) feedback to raised safety platforms on this route.

Treatment J - Dual signalised crossings with kerb buildout



Design notes:

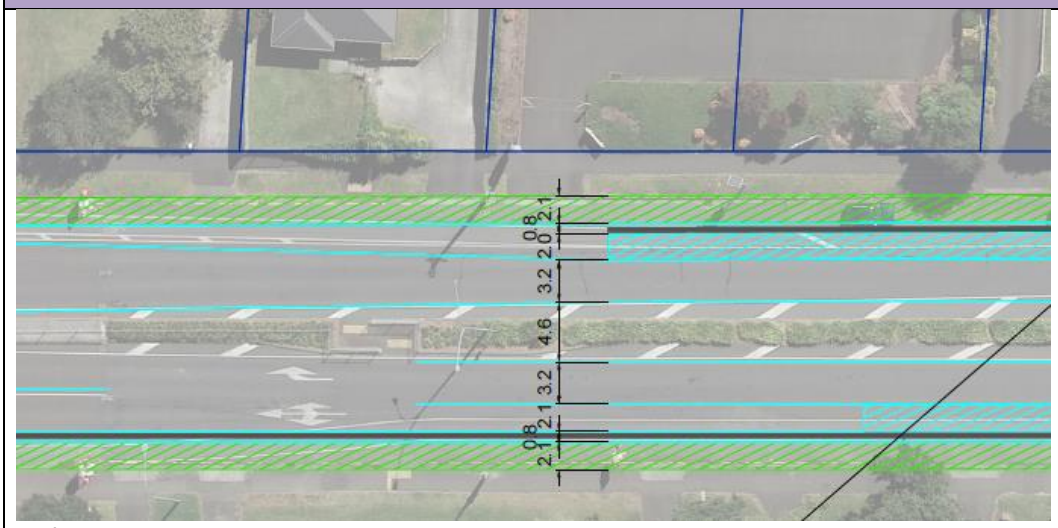
- All cycleways in this area are proposed to be unidirectional, except for a shared path to enable connect between Morris Road and Mullane Street (shown above)
- This design includes kerb buildouts to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- Signals would be upgraded to allow walking and/or cycling across. This is proposed to be a shared crosswalk
- This option would require an off road provision for cyclists on Morrinsville Road

Discussion:

- The local schools have expressed their desire to see this crossing significantly improved and there is a risk that these changes would not meet community expectations for this project.

- **Midblock Crossings near Cambridge Road**

Treatment K - Uncontrolled crossing, at-grade with median refuge (existing)



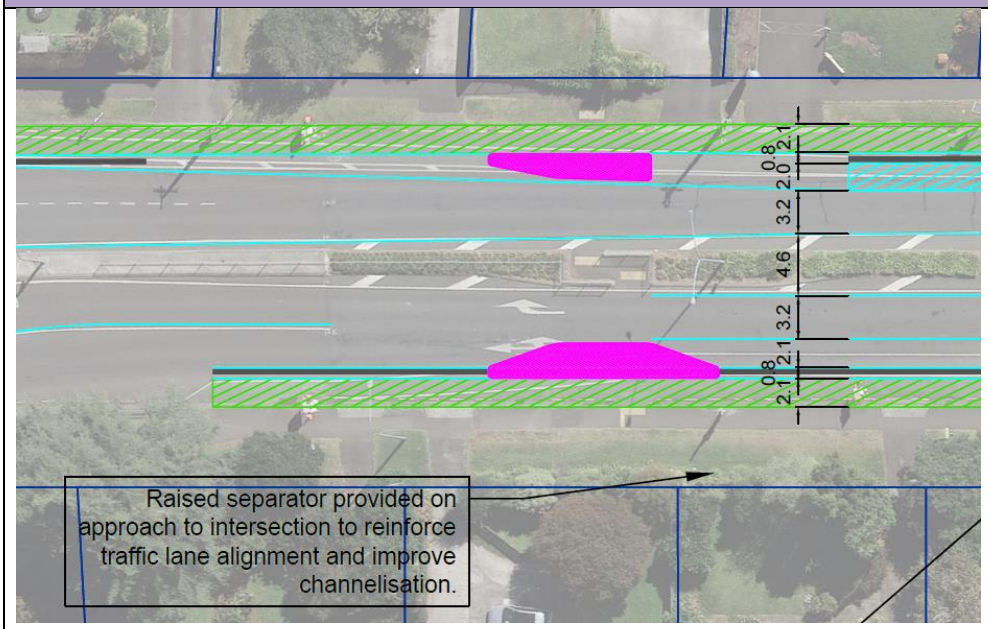
Design notes:

- This is the existing layout

Discussion:

- The local schools have expressed their desire to see this crossing improved and there is a risk that not making changes would not meet community expectations for this project.

Treatment L - Uncontrolled crossing, at-grade, with kerb buildouts and median refuge



Design notes:

- This is the existing layout with bolt down kerb buildouts
- Pedestrians crossing the road would still be required to give way to drivers on Morrinsville Road
- This option would require an off road provision for cyclists on Morrinsville Road

Discussion:

- Improvements at this crossing are not included in the funding agreement with the NZTA. NZTA approval may be required for the extra scope.
- The local schools have expressed their desire to see this crossing significantly improved and there is a risk that these changes would not meet community expectations for this project.

Treatment M - Two stage signalised crossing, at-grade, with kerb buildouts and median refuge

Design notes:

- All cycleways in this area are proposed to be unidirectional
- This design includes kerb buildouts to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- Signals would allow walking and/or cycling across. This is proposed to be a shared crosswalk
- This option would require an off road provision for cyclists on Morrinsville Road

Discussion:

- There is a risk that the signalised crossing may impact the operation of the intersection of Morrinsville Road and Cambridge Road, resulting in delays for drivers.
- There is a risk that drivers travelling eastbound on Morrinsville Road are pre-occupied with the merging traffic lanes and fail to stop at red lights resulting in crashes

Treatment N - Two stage signalised crossing, at-grade, with kerb buildouts and median refuge

Design notes:

- All cycleways in this area are proposed to be unidirectional
- This design includes kerb buildouts to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- Signals would be upgraded to allow walking and/or cycling across. This is proposed to be a shared crosswalk
- This option would require an off road provision for cyclists on Morrinsville Road

Discussion:

- There is a risk that the signalised crossing may impact the operation of the intersection of Morrinsville Road and Cambridge Road, resulting in delays for drivers.
- There is a risk that drivers travelling eastbound on Morrinsville Road are pre-occupied with the merging traffic lanes and fail to stop at red lights resulting in crashes

Treatment O - Zebra crossing on raised safety platform with kerb buildouts

Design notes:

- Platform to be designed for 40km/h approach (1:20) with smooth (1:40) departure.
- All cycleways in this area are proposed to be unidirectional, except for a shared path to enable connect between Morris Road and Mullane Street (shown above)
- This design includes kerb buildouts to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level.
- This design could be a zebra crossing or a dual priority crossing.
- This option would require an off road provision for cyclists on Morrinsville Road

Discussion:

- There is a risk of negative community and stakeholder (including FENZ) feedback to raised safety platforms on this route.
- There is a risk that the signalised crossing may impact the operation of the intersection of Morrinsville Road and Cambridge Road, resulting in delays for drivers.
- There is a risk that drivers travelling eastbound on Morrinsville Road are pre-occupied with the merging traffic lanes and fail to give way resulting in crashes

Treatment P - Zebra crossing on raised safety platform with median refuge kerb buildouts
Design notes: • Platform to be designed for 40km/h approach (1:20) with smooth (1:40) departure. • All cycleways in this area are proposed to be unidirectional, except for a shared path to enable connect between Morris Road and Mullane Street (shown above) • This design includes kerb buildouts to reduce the crossing distance. Kerb buildouts will also allow a direct transition for cycling between the roadway and footpath level. • This design could be a zebra crossing or a dual priority crossing • This option would require an off road provision for cyclists on Morrinsville Road
Discussion: • There is a risk of negative community and stakeholder (including FENZ) feedback to raised safety platforms on this route. • There is a risk that the crossing may impact the operation of the intersection of Morrinsville Road and Cambridge Road, resulting in delays for drivers. • There is a risk that drivers travelling eastbound on Morrinsville Road are pre-occupied with the merging traffic lanes and fail to give way resulting in crashes

TREATMENT ANALYSIS MATRIX

CYCLE FACILITIES & ASSOCIATED SIDE ROAD TREATMENTS

Safe System Assessment

Treatment	Cost Estimate	Social Cost of Crashes	Crash Reduction Estimate	Traffic Delays	Driver Discomfort	5-10 year Maintenance Costs	Active Mode Travel Time	Active Mode Comfort	Safe System Risk	Risk Reduction %	Risk Reduction
Existing	$ -	$ 9,591,400	No Change	No Change	No Change	No Change	No Change	No Change	252	No Change	0
Option 5 off road cycleway (C) with raised dual priority crossings on side roads	$ 2,000,000	$ 8,920,002	7%	Moderate	Moderate	Moderate	High Benefit	High Benefit	214	15%	38
Option 1 Separated cycleway (A/B) with raised dual priority crossings on side roads	$ 1,650,000	$ 8,536,346	11%	Moderate	Moderate	Significant	High Benefit	High Benefit	214	15%	38
Option 2 Separated cycleway (A/B) with at-grade priority crossings on side roads	$ 1,100,000	$ 8,728,174	9%	Moderate	Minor	Significant	High Benefit	High Benefit	262	-4%	-10
Option 3 painted cycle lanes (D) with raised dual priority crossings on side roads	$ 1,250,000	$ 8,920,002	9%	Moderate	Moderate	Moderate	High Benefit	High Benefit	218	13%	34
Option 4 painted cycle lanes (D) with at-grade priority crossings on side roads	$ 900,000	$ 8,728,174	9%	Moderate	Moderate	Moderate	High Benefit	High Benefit	234	7%	18
Option 6 off road cycleway (C) with at-grade priority crossings on side roads	$ 1,600,000	$ 9,111,830	5%	Moderate	Minor	Moderate	High Benefit	High Benefit	262	-4%	-10

Preferred

Cycle and Side Road crossings- Safety scoring assumptions:

- Separated cycleways physically direct cyclists to side road crossings.
- Off road cycleways physically direct users to side road crossings
- Painted cycle lanes assume no facilities to direct users to side road crossings.
- An increase of crash likelihood is anticipated for cyclists on at grade dual priority crossings on side roads given the proximity to the intersection meaning that drivers are pre-occupied with giving way to other drivers and may fail to give way to pedestrians and/or cyclists and turning vehicles, particularly right turn vehicles, will be accelerating.
- Benefits from solid median are not included as there are no mid-block crossings included in this calculation- refer to separate assessment.
- Crash benefit reductions can be accumulated from each matrix to give a total project crash reduction benefit (61% if using the highest crash benefit options from each)- as assessments have already included existing facilities.

EXISTING SIGNALISED CROSSING ON MORRINSVILLE ROAD NEAR MULLANE STREET – OPTIONS

Safe System Assessment

Treatment	Cost Estimate	Social Cost of Crashes	Crash Reduction Estimate	Traffic Delays	Driver Discomfort	5-10 year Maintenance Costs	Active Mode Travel Time	Active Mode Comfort	Safe System Risk	Risk Reduction %	Risk Reduction	
Existing	$ -	$ 9,591,400	No Change	No Change	No Change	No Change	No Change	No Change	252	No Change	0	
Option 1 Dual signalised crossing on raised safety platform with refuge island and kerb buildout (I)	$ 300,000	$ 7,673,120	20%	Minor	Moderate	Moderate	Medium Benefit	High Benefit	224	11%	28	Preferred
Option 2 Dual signalised crossing with refuge island and kerb buildout (J)	$ 100,000	$ 7,960,862	17%	Minor	No Change	Minor	Medium Benefit	High Benefit	239	5%	13	Alternative

EXISTING INFORMAL CROSSING NEAR CAMBRIDGE ROAD OPTIONS

Safe System Assessment

Treatment	Cost Estimate	Social Cost of Crashes	Crash Reduction Estimate	Traffic Delays	Driver Discomfort	5-10 year Maintenance Costs	Active Mode Travel Time	Active Mode Comfort	Safe System Risk	Risk Reduction %	Risk Reduction	
Existing	$ -	$ 9,591,400	No Change	No Change	No Change	No Change	No Change	No Change	252	No Change	0	
Option 1 Dual signalised crossing on raised safety platform with refuge island and kerb buildout (N)	$ 600,000	$ 7,769,034	19%	Moderate	Moderate	Moderate	High Benefit	High Benefit	204	19%	48	Preferred
Option 2 At-grade zebra crossing with refuge island and kerb buildouts (O)	$ 250,000	$ 9,303,658	3%	Moderate	Minor	Moderate	High Benefit	High Benefit	252	0%	0	
Option 3 Raised zebra crossing with refuge island and kerb buildouts (P)	$ 400,000	$ 9,111,830	5%	Moderate	Moderate	Moderate	High Benefit	High Benefit	230	9%	22	
Option 4 Uncontrolled crossing with median refuge and kerb buildouts (L)	$ 100,000	$ 9,111,830	5%	No Change	No Change	Minor	No Change	Low Benefit	252	0%	0	
Option 5 dual signalised crossing at-grade with refuge island and kerb buildout (M)	$ 100,000	$ 7,960,862	17%	Moderate	Minor	Moderate	Medium Benefit	High Benefit	232	8%	20	Alternative

RECOMMENDATIONS

Preferred (Safest) - Separated cycleway with raised dual priority crossings on side roads (Option 1), new raised signalised raised crossing near Cambridge Road (Option 1), RSP and kerb buildouts added to existing signalised crossing near Mullane St (Option 1)

Separated cycleways with raised dual priority crossings on side roads, raised safety platform and kerb build outs added to the existing signalised crossing of Morrinsville Road near Mullane Street. Existing informal crossing of Morrinsville Road near Cambridge Road to be upgraded to a signalised crossing with raised safety platform and kerb buildouts.

- Estimated construction cost $2.55M,
- Averaged Safe systems score 214,
- Estimated combined crash reduction 50% over 10 years= social cost saving $ 4,795,700
- This option has some loss of parking and requires parking manoeuvre in traffic lane.

Alternative – Separated cycleway with raised dual priority crossings on side roads (Option 1), new signalised crossing near Cambridge Road (Option 5), kerb buildouts to existing signalised crossing near Mullane St (Option 2)

Separated cycleways with raised dual priority crossings on side roads, kerb build outs added to the existing signalised crossing of Morrinsville Road near Mullane Street. Existing informal crossing of Morrinsville Road near Cambridge Road to be upgraded to a signalised crossing with buildouts.

- Estimated Construction Cost $2.05M
- Averaged Safe Systems Score 228
- Estimated combined crash reduction 45%. over 10 years = social cost saving $ 4,316,130
- This option has some loss of parking and requires parking manoeuvre in the cycle lane.

Discussion

For both recommendations, the following treatments and assessments will also be considered.

- Traffic lanes to be adjusted to meet best practice guidance and to better encourage drivers to select an appropriate speed.
- Safety and operational impacts of changes to turning facilities to be assessed at preliminary design phase.

Purpose of Briefing

To provide an overview of the final section of work proposed for SH26 Fit for Purpose Improvements project prior to the report to the Infrastructure and Transport committee – in accordance with the Transport Project Decision Making Framework.

SH26 Morrinsville Road (Cambridge to Silverdale)

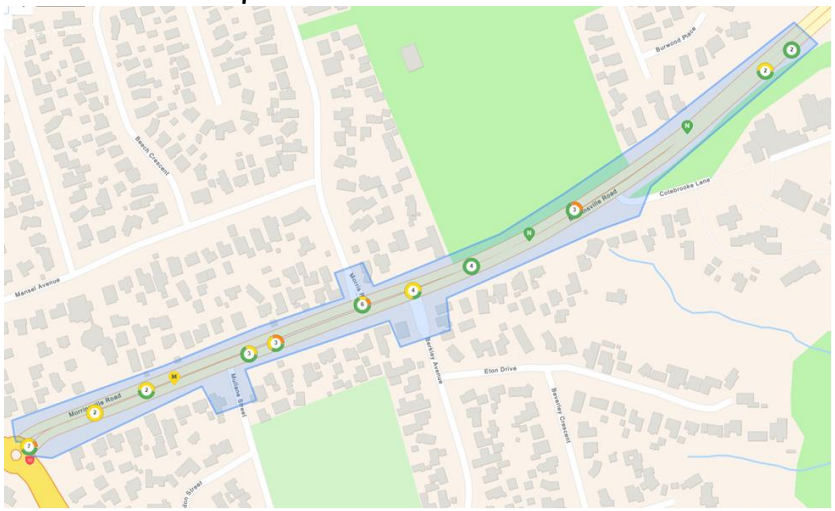
Improving walking and cycling safety in the urban section

SH26 Morrinsville Road (Cambridge to Silverdale)

Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Since 2014 there has been 41 crashes recorded on Morrinsville road between the roundabout and Matangi Rd resulting in a social cost of $9.6M. These crashes include:



- 4 serious crashes
- 14 minor injury crashes.
- 23 non-injury crashes.
- Out of the 41 **recorded** crashes
- 4 crashes involving cyclists (four non-injury)
- 3 crashes involving pedestrians (one serious, two minor injuries)

NZTA Crash Analysis System, extracted 1/11/2024

Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Education facilities in the area result in high numbers of pedestrians and cyclists moving through this section of Morrinsville Road

SH26 Morrinsville Road (Cambridge to Silverdale)

Existing active mode use

A road user count completed by a local school on 22 March 2023, for the following periods: 0630 to 0930, 1100-1330, and 1430-1830, indicated a total of 500 pedestrians crossing.

Our operational data from the signalised crossing from 4-10 November 2024 shows that -

- On every school day, the pedestrian lights ran over 50 times between 0800 and 0900 (pedestrian lights only run if they are called by someone waiting to cross).
- On school days the pedestrian lights ran approximately 150 times across the whole day.

Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Key issues:

- There are a high number of pedestrians and cyclists on Morrinsville Road
- There are poor facilities for walking and cycling between Jansen Park and Cambridge Road.
- Intersections with side roads are wide with sweeping kerbs that allow drivers to turn at high speed. This makes it difficult for pedestrians to cross safely
- Existing on-road cycle lanes are narrower than recommended and do not offer protection from the higher traffic volumes and speed observed on this route.
- There is no safe access between Hillcrest, Silverdale, Matangi or Newstead and residents (including school students) who may wish to travel by active modes
- Many cyclists choose to ride on the footpath.
- People who wish to walk or cycle are forced to accept a high level of road safety risk or drive.
- There have been several crashes involving people walking and biking in the last 5 years

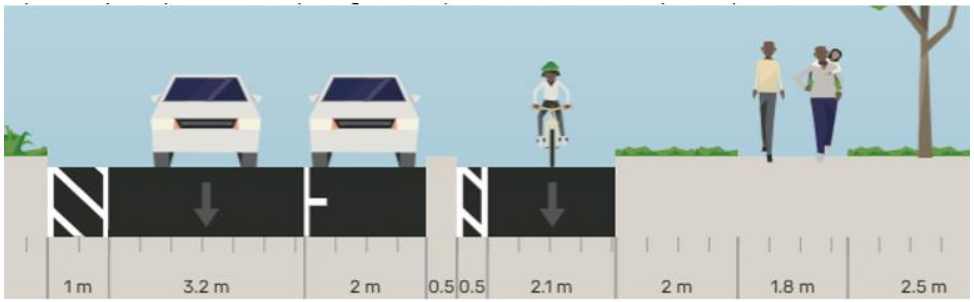
Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Option 1 (Safest) - Separated cycle lanes with Raised Safety Platforms on side roads, signalised raised crossing near Cambridge Road, upgrade existing signalised crossing near Mullane Street with raised safety platform

This option proposes the following:

- introduction of separated cycleways which will sit alongside the on-street parking but require the removal of some carparks.
- raised platform treatments for the side roads (Mullane Street, Morris Road and Berkely Avenue) to provide safe crossing facilities for pedestrians and cyclists. These are low volume residential streets
- installation of a raised safety platform with kerb build outs for the existing signalised crossing across Morrinsville Road just east of Mullane Street
- upgrading the existing informal crossing near Cambridge Road to a signalised crossing with raised safety platform and kerb build-outs



SH26 Morrinsville Road (Cambridge to Silverdale)

Option One

The estimated construction cost of this work is $2.45M (to be funded by NZTA as part of the Fit for Purpose works). This options achieves a safe systems score of 196 and combined with an estimated crash reduction of 51% will result in a social cost saving $4,891,614.

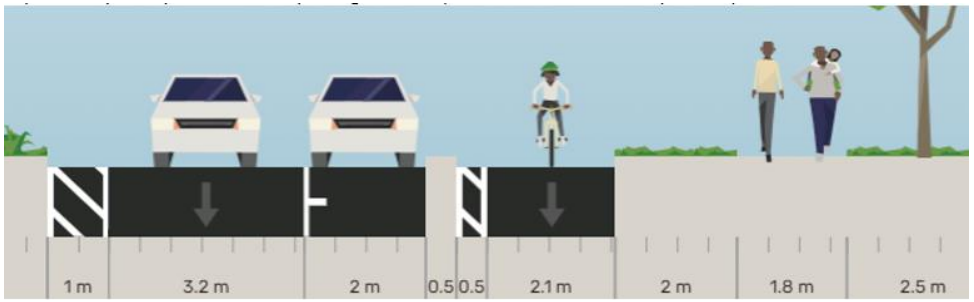
Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Option 2 (Alternative) – Separated cycleways, RSP on side roads, signalised at grade crossing near Cambridge Road, kerb build outs to existing Signalised Crossing near Mullane Street

This option proposes the following:

- introduction of separated cycleways which will sit alongside the on-street parking but require the removal of a small number of carparks.
- raised platform treatments for the side roads (Mullane Street, Morris Road and Berkely Avenue) to provide safe crossing facilities for pedestrians and cyclists. These are low volume residential streets.
- installation of kerb build outs for the existing signalised crossing across Morrinsville Road just east of Mullane Street
- upgrading the existing informal crossing near Cambridge Road to a signalised crossing with kerb build-outs



Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Option Two

This proposal has an estimated construction cost of $1.3M (to be funded by NZTA as part of the Fit for Purpose works). With a Safe Systems Score of 216 and an estimated crash reduction 37% resulting in social cost saving $3,548,818.

Hamilton City Council
Te kaunihera o Kirikiriroa

SH26 Morrinsville Road (Cambridge to Silverdale)

Based on the Transport Project Decision Making Framework (2 May I&T Committee) this has been assessed as YELLOW.

Two viable and safe options have been identified and these will be presented to the 28 November 2024 Infrastructure and Transport Committee for a final decision.

Based on the funding availability from NZTA and acknowledging the clear direction provided by Council that this project will need to be completed wholly within the available funding agreement with the NZTA, staff are recommending Option 2. It is noted that while this is not the safest option, the proposed works will still provide a significant improvements for the safety of users – especially those walking and cycling in this section of Morrinsville Road.

What direction/feedback is needed from Members?

For the Macroscope Approval report for 28 November 2024 I&T Committee:

- SH26 Morrinsville Road – walking and cycling improvements between Cambridge Road and Silverdale Road
  - Staff would like to know if there is anything further that Members would like covered in the staff report?
  - Are there any other options Members would like to see covered in the report?