Wellington City Council
Co No.: N/A

Thorndon Quay Cycleway Safe System Audit Report

Safe System Audit Post Construction

14-Aug-2025

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Client: Wellington City Council

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Job No.: 60681824

Table of Contents

1.0 Safe System Auditing for Transport Projects

A Safe System audit is an independent review of a future transport project to identify any safety concerns that may affect the safety performance and alignment to a Safe System. The audit team considers the safety of all road users and qualitative reports on road safety issues or opportunities for safety improvement.

A Safe System audit is therefore a formal examination of a transport project, or any type of project which affects road users (including cyclists, pedestrians, mobility impaired, etc). The audit is carried out by an independent and competent team who identify and document Safe System alignment and road safety concerns.

A Safe System audit is intended to help deliver a safe road system based on international best practice and is not a review of compliance with standards or policy.

1.1 Safe System Audit Procedure

The primary objective of a Safe System audit is to deliver a project that achieves an outcome consistent with the Safe System approach, that is, minimisation of death and serious injury. The Safe System audit is a safety review used to identify all areas of a project that are inconsistent with a safe system. Its purpose is to highlight areas of concern to the client so that they can make a value judgement and take appropriate action(s) based on the risk guidance provided by the safety audit team.

The key objective of a Safe System audit is summarised as:

> *To deliver completed projects that contribute towards a Safe System by identifying and ranking potential safety concerns for all road users and others affected by a transport project.*

A Safe System audit should be undertaken at project milestones such as:

- Concept Stage (part of Business Case)
- Scheme or Preliminary Design Stage (part of Pre-Implementation)
- Detailed Design Stage (Pre-implementation / Implementation)
- Pre-Opening / Post-Construction Stage (Implementation / Post-Implementation).

A Safe System audit is not intended as a technical or financial audit and does not substitute for a design check on standards or guidelines.

Any recommended treatment of an identified safety concern is intended to be indicative only, and to focus the design team on the type of improvements that might be appropriate. It is not intended to be prescriptive, and other ways of improving the road safety or operational problems identified should also be considered.

In accordance with the procedures set down in the “Waka Kotahi NZ Transport Agency Safe System Audit Guidelines” the audit report should be submitted to the client who will instruct the design team to respond. The design team should consider the report and comment to the client on each of any concerns identified, including their cost implications where appropriate, and make a recommendation to either accept or reject the audit report recommendation.

For each audit team recommendation that is accepted, the client shall make the final decision and brief the design team to make the necessary changes and/or additions. As a result of this instruction the design team shall action the approved amendments. The client may involve a safety engineer to provide commentary to aid with the decision.

Decision tracking is an important part of the Safe System audit process. A decision tracking table is embedded into the report format at the end of each set of recommendations to be completed by the design team, safety engineer and client for each issue documenting the design team’s response, client decision and action taken.

A copy of the report including the design team’s response to the client and the client’s decision on each recommendation shall be given to the Safe System audit team leader as part of the important feedback loop. The Safe System audit team leader will disseminate this to team members.

1.2 Road safety risk ratings

Audit findings are ranked in accordance with the Safe System graph shown in Figure 1.

The expected crash frequency is qualitatively assessed based on expected exposure (how many road users will be exposed to a safety issue) and the likelihood of a crash resulting from the presence of the issue. The severity of a crash outcome is qualitatively assessed based on factors such as speed, type of collision, and type of vehicle involved.

Reference to historic crash rates or other research for similar elements of projects, or projects as a whole, have been drawn on where appropriate to assist in understanding the likely crash types, frequency and likely severity that may result from a particular concern.

The frequency and severity ratings are used together to develop a combined qualitative risk ranking for each safety issue using the Safety concern risk rating matrix below. The qualitative assessment requires professional judgement and a wide range of experience in projects of all sizes and locations.

		Severity outcome				
		Non-injury	**Minor**		**Serious**	**Fatal**
		Property damage only (PDO)	Injury which is not 'serious' but requires first aid, or which causes discomfort or pain to the person injured.	**Safe System injury threshold**	Injury (fracture, concussion, severe cuts or other injury) requiring medical treatment or removal to and retention in hospital.	A death occurring as the result of injuries sustained in a road crash within 30 days of the crash.
Probability of a crash	**Very likely**	Minor	Moderate		Serious	Serious
	Likely	Minor	Moderate		Serious	Serious
	Unlikely	Minor	Minor		Significant	Serious
	Very unlikely	Minor	Minor		Significant	Significant

Figure 1. Safety concern risk rating matrix

2.0 Safe System Audit Details

2.1 Type of Audit

The Safe System Audit is being undertaken as Post Construction Stage audit and was undertaken by the audit team walking the site and reviewing areas of concern. No drawings or models were considered as part of this audit.

2.2 Audit Team

The Safe System Audit was carried out in accordance with the "NZTA Safe System audit guidelines – Road to Zero edition July 2023", by:

- Mike Pilgrim, Associate Director (AECOM) - Team Leader
- Deborah Keary, Senior Transport Planner (AECOM)

The Safety Audit Team conducted a site visit on Thursday 17 July 2025.

Previous audits undertaken at the Scheme and Detailed Design phases were available to the auditors.

3.0 Project Description

3.1 Project Background and Objective

The Thorndon Quay Hutt Road project formed part of the Let's Get Wellington Moving programme of transport improvements. The project was designed to contribute towards improved walking and cycling connections between Wellington and Hutt City, connecting to Te Ara Tupua, and Wellington's northern suburbs. In addition to walking and cycling, the project includes improvements to bus lanes along the corridor by providing part time bus lanes.

The project included signalising the Thorndon Quay/ Tinakori Road intersection and providing several midblock signals for pedestrian crossings. A number of the pedestrian crossings were proposed to be on raised tables to improve pedestrian safety.

The original project extent is shown as the red line in Figure 2 below.

Following the completion of the last Safe System Assessment, the scope of the project was reduced with most works taking place between Tinakori Road and Bunny Street. Works to the northern half of the project area were removed from scope with the exception of improvements to the bus stop at Omega Car Rentals. The updated scope is shown in the blue polygons in Figure 2.

In addition to the reduction in length of the project, several changes were made including the removal of raised tables at some crossing points and change of pedestrian crossing control from signalised to uncontrolled at Omega Car Rentals.

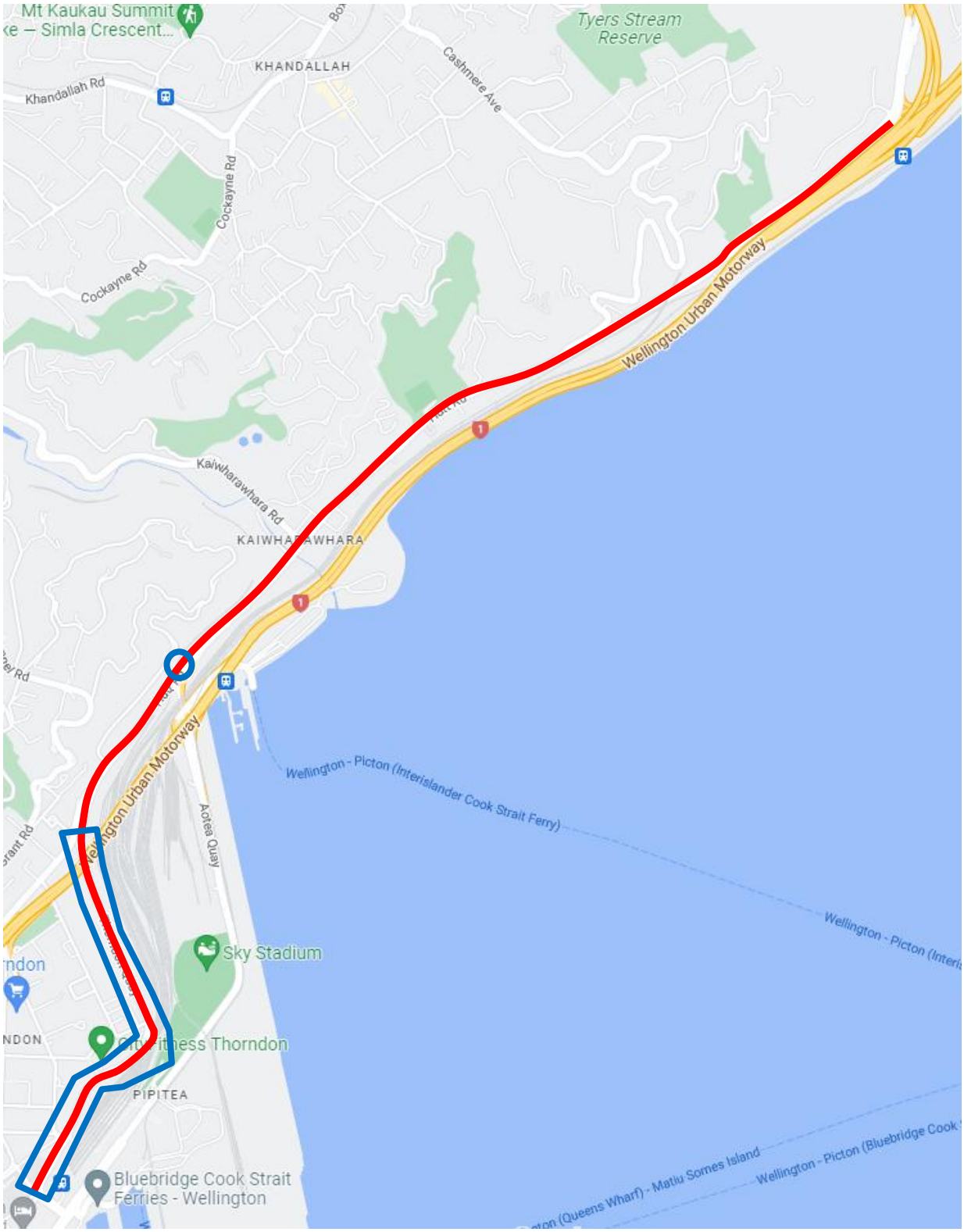


Figure 2 Location Plan

4.0 General Safety Concerns

4.1 Developing safety issues — Comment

The Safe System Audit Team SSAT have reviewed the operation of the cycleway and its vehicle and pedestrian crossing locations at number of different times of the day, both during daylight hours and in the dark. Notwithstanding this, it is difficult to fully understand how users of the area such as pedestrians, mobility impaired, cyclists, vehicle drivers or people on scooters will use the infrastructure. The interactions of these users are complex and some issues will only become apparent with time. Ongoing analysis of emerging risks and behaviours should be undertaken to ensure that there are no safety hazards that only become apparent over time with increased use of the facility.

4.2 Crossing of Hutt Road at Omega Car Rentals — Serious

The design provided to the SSAT at detailed design included a raised and signalised crossing point for the bus stops near Omega Car Rentals. Following the detailed design stage audit, the raised crossing and the traffic signals were removed.

This section of Hutt Road has no shops or other destinations on the eastern side of the road, however there is a bus stop on the eastern side of the road. This suggests that people using / visiting the business on the western side of Hutt Road will need to cross Hutt Road to get to the bus stop or vice versa. The addition of the build out for the bus stop on the east side of the road has resulted in the narrowing of the flush median in the area. The flush median is now too narrow for pedestrians to wait in when crossing the road, and there is no room for someone with a bike to wait in the centre if they are crossing the road to access the bus stop.

The safest location to cross Hutt Road is at the median island at the rail overbridge. The column for the bridge restricts visibility to the north at this point making it difficult to cross the road.

With southbound vehicles having just passed a speed limit reduction, and with car parking starting in this area, resulting in vehicles merging, driver workload is higher, meaning drivers may be less aware of pedestrians crossing the road. There is an additional risk that a pedestrian waiting in the flush median could get hit by a vehicle if a merge vehicle moves into the median, as a result of a conflict with another merging vehicle.

Recommendation

Provide a pedestrian crossing facility.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Likely	*Death or serious injury is* Fatal
Design Team Response: No Design response proposed. Design change instructed by Wellington City Council, despite noted advice from Design team of the same concerns as those raised by the Audit team.	
Safety Engineer: *Agree with SSA. This issue should be revisited by WCC.*	
Client Decision: *This item is to be considered as a future minor improvement project outside of the current project..*	
Action Taken: This item is to be considered as a future minor improvement project. Click here to enter text.	

4.3 Removal of speed tables Serious

The crossing at Omega Car Rentals and the former Bordeaux Bakery site were on raised tables, which have been removed following the detailed design audit. Raised tables reduce operating speeds of vehicles on the road; as travel speeds increase, drivers' willingness to yield to pedestrians decreases.

During the audit the SSAT crossed the road several times at these locations and observed a number of vehicles that failed to stop for a yellow light when there was sufficient time for them to safely do so. In addition to these incidents, there was one case of a bus running a red light at a pedestrian crossing; however, this occurred at a crossing with a table and was at relatively low speed. The presence of both the yellow and red light running occurring during what is a limited review of driver behaviour at these sites, indicates that there is a risk of vehicles running red lights when there are pedestrians present.

Impacts with pedestrians at speeds greater than 30km/h are likely to result in at least serious injuries, thus travel speeds in the areas near and at the crossing locations need to be 30km/h or less.

Recommendation

Consider measures to manage speed at and near road crossings.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Likely	*Death or serious injury is* Fatal
Design Team Response: No Design response proposed. Design change instructed by Wellington City Council, despite noted advice from Design team of the same concerns as those raised by the Audit team at the council meeting in which the raised tables were removed from the design. *After the tables were removed a rework considered other speed reduction measures. Lane widths are already at the narrowest possible width, additional signs were not considered effective in a cluttered urban environment. No horizontal deflection measures will fit in the corridor. Rumble strips are considered inappropriate in an area with residential dwellings, and are not effective at these slow speeds.*	
Safety Engineer: *Agree with SSAT. WCC should revisit this issue.*	
*Client Decision:*As outlined in the designer response, this item was addressed previously by Council, though can be considered as a future minor project outside of the scope of this project.	
Action Taken: *No further action as required as part of the project. However, this item is to be considered as a future minor improvement project.* Click here to enter text.	

4.4 Cycle path centre line **Minor**

A centreline and edge lines have been added to the cycle path under the rail overbridge near Gun City. The edge line moves from the back of the kerb around the column for the bridge and then back to the kerb line. The centreline starts out in the centre of the path and stays at the same offset from the kerb line resulting in a cycle lane that is so narrow it cannot be ridden in.

Figure 3. Centre line marking around bridge column

Recommendation

Remove the centreline marking.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Unlikely	*Death or serious injury is* Minor
Design Team Response: Agree with SAT	
Safety Engineer:	*Agree with SAT and Designer response.*
Client Decision:	*Agree with safety engineer.*
Action Taken:	*Designer to review centre line and make recommendations on corrective action.*

4.5 Tactile paver locations Significant

Tactile pavers at bus stops should be located approximately 450mm back from the kerb face. This ensures visually impaired people are located a safe distance back from the kerb line and therefore any approaching buses. The tactiles at the bus stops on both sides of the road at Omega Car Rentals appear to be too close to the kerb line.

Figure 4. Tactile pavers at Omega Car Rentals Bus Stop

Recommendation

Review position of tactile pavers at the Omega Car Rentals bus stops.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Unlikely	*Death or serious injury is* Serious
Design Team Response: RTS14 recommends the tactile stop 300mm behind the kerb face. Tactiles have been checked against this. No Change proposed.	
Safety Engineer:	*Agree with Designer response. .*
Client Decision:	*Agree with Safety Engineer.*
Action Taken:	*No further action required.*

4.6 Mobility impaired access to bus stop Significant

The bus stop on the city bound side of Hutt Road at Omega Car Rentals has a streetlight column and a bus stop sign located in the bus stop island. The SSAT are unsure that someone in a wheelchair would be able to manoeuvre around the sign and light column to get to the bus stop. With the bus stop sitting on a raised island this creates a risk that the wheelchair user would fall off the island as they attempt to manoeuvre through the gap which could result in serious injuries.

Figure 5. Sign and streetlight at bus stop

Recommendation

Review the position of the street light column and bus stop sign to confirm wheelchair users can access the bus stop.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Unlikely	*Death or serious injury is* Serious
Design Team Response: To be reviewed.	
Safety Engineer:	*Comment pending Design Team response.*
Client Decision:	*Comment pending design team response.*
Action Taken:	*Pole location to be reviewed by Designer and recommendation to resolve the issue.*

4.7 Waitomo petrol station entry Serious

The entry to Waitomo petrol station has a speed hump located at the back of the footpath. Some drivers entering the accessway are doing so at speeds that are too high for conflicts with pedestrians and cyclists. These drivers then slow rapidly as they cross the cycleway/ footpath before hitting the speed hump. In order to reduce speeds at the conflict point the speed hump should be located on the approach side of the petrol station entry.

Figure 6. Waitomo petrol station entry

Recommendation

Provide a speed hump on the approach side of the entry to the petrol station.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Likely	*Death or serious injury is* Serious
Design Team Response: Outside of project scope, as this path wasn't modified. Refer decision to WCC	
Safety Engineer: *Agree with SSAT, this issue should be revisited by WCC.*	
Client Decision: *This location is outside the scope of the project. Pass to WCC transport engineers for consideration.*	
Action Taken: *This item is to be passed to the transport team for consideration as a safety concern separate to this project.*	

4.8 Tinakori Road intersection lane assignment Minor

The left turn from Thorndon Quay into Tinakori Road is made from the left lane with a second lane provided for through traffic. While on site the SSAT saw numerous vehicles having difficulty making this left turn. Some vehicles that made the turn got part way around the corner and had to reverse and then go forward again to get around the corner, effectively a three-point turn. Others turned from the through lane rather than the left turn lane.

These two different ways of getting around the corner could result in crashes between vehicles in a number of ways such as backing into another turning vehicle or turning left from the left lane in front of a vehicle that is also turning left but from the left turn lane.

To address this, all movements, through and left turn, should be made from what is currently the northbound through lane.

Recommendation

Review lane assignment for left turning traffic from Thorndon Quay on to Tinakori Road.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Likely	*Death or serious injury is* Minor
Design Team Response: Now resolved with new line marking and closure of the kerbside lane.	
Safety Engineer:	*Agree with Designer response.*
Client Decision:	*Agree with Safety Engineer*
Action Taken:	*No further action required.*

4.9 Pedestrian waiting areas Comment

In some locations along the project extent there is minimal space for pedestrians to wait for the signals to allow them to cross the road, such as at Tinakori Road in Figure 7 below. This may lead to conflicts between pedestrians and cyclists and between cyclists waiting to cross and other cyclist using the path.

The SSAT acknowledge that there is limited space in this area and despite this concern when onsite the SSAT received positive feedback on the crossing from a member of the public.

The operation of this crossing point and others where there is limited space should be monitored to ensure that these spaces operate safely especially if cycle speeds are high in the area.

Figure 7. Thorndon Quay pedestrian crossing at Tinakori Road

Recommendation

Monitor crossing points for developing safety issues.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Comment	*Death or serious injury is* Comment
Design Team Response: Agree with SAT	
Safety Engineer:	*Agree with SSAT and Designer response. Add this to the Monitoring Plan.*
Client Decision:	*Agree with the Safety Engineer.*
Action Taken:	*Add the item to the monitoring plan.*

4.10 Tactile paver proximity to kerb line **Significant**

Tactile pavers at some of the crossing points at the Tinakori Road/ Thorndon Quay intersection are located too close to the traffic lane. The hazard warning pavers should be set back a minimum of 300mm from the kerb line.

Figure 8. Tactile pavers at Tinakori Road

Recommendation

Ensure tactiles are located a safe distance back from the kerb line.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Unlikely	*Death or serious injury is* Serious
Design Team Response: Agree with Audit team. Check compliance and consider repair. Designer to review issued design files to confirm compliance.	
Safety Engineer:	*Agree with SSA. Ensure that the 300mm offset is achieved.*
Client Decision:	*Agree with safety engineer.*
Action Taken:	*Designer to review the compliance of the tactile pavers and provide recommendations*

4.11 Service cover levels **Minor**

The cycleway is used by cyclists and by scooter riders. Some of the service covers are not flush with the pavement which can lead to instability for people on scooters due to their small wheels. While outside of the SSA scope, there are some service covers in the area of road that has been resurfaced that have similar issues. Again, these can be a hazard for small motorbikes using the road.

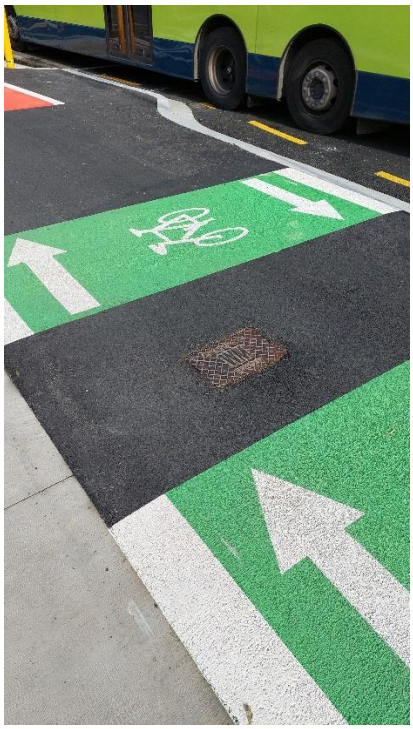


Figure 9. Service cover at Guthrie Bowron that is not flush

Recommendation

Check the level of service covers along the project length to ensure they are flush with the surrounding pavement and relevel if required.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Likely	*Death or serious injury is* Minor
Design Team Response: No Design response.	
Safety Engineer:	*Agree with SSAT.*
Client Decision:	*Agree with safety engineer.*
Action Taken:	*Design Team to review the level of the service covers and provide recommendation.*

4.12 Non-compliance with signals Comment

While on site the SSAT noticed several instances of drivers either not complying with signals at Tinakori Road and still driving as if the intersection is a give way, or, stopping forward of the limit line in the advance stop box. Despite the above comment the behaviours didn't necessarily result in an unsafe situation that would require changes to the construction of the project. Changes in how intersections operate can take time to settle in and the operation of the intersection should be monitored to ensure that it does settle down over time and does not result in unsafe behaviours.

Figure 10. Vehicle using the intersection as a give way .

Recommendation

Monitor the intersection to check for unsafe behaviours

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Comment	*Death or serious injury is* Comment
Design Team Response: No design response required	
Safety Engineer:	*Agree with SSAT, add this issue to the Monitoring Plan.*
Client Decision:	*Agree with Safety engineer.*
Action Taken:	*The item is to be added to the monitoring plan.*

4.13 Cycle friendly sump grates Serious

Outside Guthrie Bowron and the exit from Capital Gateway are sump grates that are not cycle friendly. This is a hazard for riders with narrow wheels on their bikes. While the grates are up against the kerb line, when cyclists pass each other or have interactions with pedestrians on the cycle path or illegally parked vehicles on the cycle path, cyclists can end up riding over these grates.

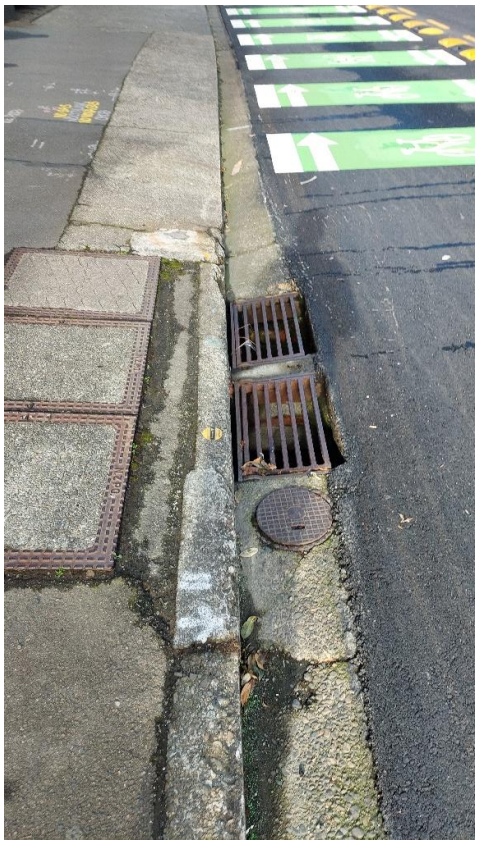


Figure 11. Sump grate at Guthrie Bowron

Recommendation

Ensure all sump grates along the cycle path are cycle friendly.

Probability Rating:		*Severity Outcome Rating:*
Crashes are likely to be	Likely	*Death or serious injury is* Serious
Design Team Response: Agree with SAT. These should be replaced.		
Safety Engineer:	*Agree with SSAT and Designer response.*	
Client Decision:	*Sumps to be upgraded to cycle safe sump grates.*	
Action Taken:	*Sumps to be upgraded to cycle safe grates.*	

4.14 Tactile pavers at non crossing point Significant

The mobility carpark near Hirepool has a pram crossing point with tactile pavers. This may indicate to a visually impaired person that this is a crossing point rather than the adjacent signalised crossing. It is unlikely that a mobility impaired person, who is also visually impaired, would be using this kerb drop by

themselves. While the likelihood of an event occurring is very unlikely, crossing the road at this point could lead to serious injuries particularly when drivers are accelerating to avoid stopping at the signals, something the SSAT observed when on site.

Figure 12. Tactile pavers at mobility carpark.

Recommendation

Remove tactile pavers.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Unlikely	*Death or serious injury is* Serious
Design Team Response: We understand this is a correct interpretation of RTS14. The tactiles indicate a hazard, not a crossing.	
Safety Engineer:	*Agree with SSAT. These tactiles should be removed.*
Client Decision:	*Tactile pavers to be removed.*
Action Taken:	*Tactile pavers to be removed.*

4.15 Kerb width at iRide *Minor*

The kerb between car parks and the cycle lane at iRide is narrower than throughout the rest of the project. When passengers open their door, they will be doing so into the cycle lane which will cause cyclists to move right, and into conflict with cyclists approaching from the other direction. In addition to this risk, the narrow island between the car park and the cycle lane is difficult to stand on and may result in people slipping off the kerb. In a previous SSA the audit team noted that islands between car parking and the cycle lane should be at least 800mm wide.

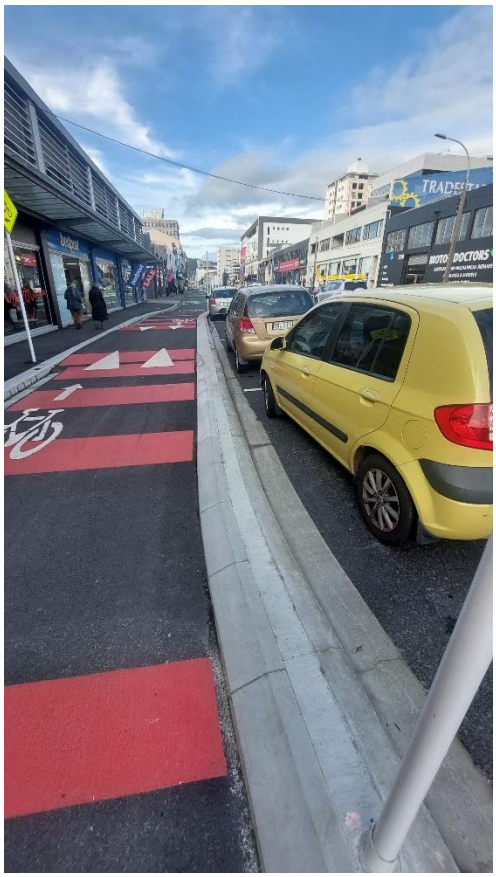


Figure 13. Kerb between parking and cycle lane.

Recommendation

Widen the islands to a minimum of 800mm.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Unlikely	*Death or serious injury is* Minor
Design Team Response: Island here was reduced as there is insufficient corridor width for footpath, cycle, parking and 4 lanes as required. Parking here is very narrow. Propose no change.	
Safety Engineer: *Agree with Designer response. Add this issue to the Monitoring Plan.*	
Client Decision: *Agree with Safety Engineer.*	
Action Taken: Item to be added to monitoring	

4.16 Shop advertising **Moderate**

Bedpost has installed flags on the side of their building that obstruct the footpath past the store. Because of the way the flags are constructed, it is not possible to walk under most of the flag which effectively half's the width of the footpath. This could result in pedestrians stepping out onto the cycle path and being hit by a cyclist. As volumes on the path increase with the opening of Te Ara Tupua the likelihood of this crash type occurring will increase.

Figure 14. Flags hanging over footpath

Recommendation

Work with Bedpost to have the flags removed or installed in such a way that they do not reduce the width of the footpath.

Probability Rating:		*Severity Outcome Rating:*
Crashes are likely to be	Likely	*Death or serious injury is* Minor
Design Team Response: Refer to WCC		
Safety Engineer:	*Agree with SSAT and Designer response. Refer to WCC Street Activities.*	
Client Decision:	*Agree with Safety Engineer.*	
Action Taken:	*Item to be referred to WCC Street activities team.*	

4.17 Alignment of pram crossing and mobility park access *Minor*

The pram crossing for the mobility carpark at MacKenzie and Willis is not aligned with the mobility carpark. These should be aligned to allow a straight path to be taken across the cycleway to the carpark.

As previously noted, there are tactile pavers at the pram crossing which may be misleading to a visually impaired person.

Figure 15. Mobility carpark access

Recommendation

Provide a straight path from the pram crossing to the carpark.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Unlikely	*Death or serious injury is* Non-injury
Design Team Response: Access compliant with disability standard. No Change.	
Safety Engineer:	*Agree with Designer response. Add to Monitoring Plan.*
Client Decision:	*Agree with Safety Engineer.*
Action Taken:	

4.18 Mobility carpark at the Bed Company ***Minor***

The mobility carpark at the Bed Company does not have a pram crossing to allow access to the carpark.

Figure 16. Mobility carpark at the Bed Company

Recommendation

Provide a pram ramp at the back of the mobility park.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Unlikely	*Death or serious injury is* Non-injury
Design Team Response: Park is 7m unobstructed from a kerb ramp for the crossing at this location. Compliant with mobility parking requirements. No Change..	
Safety Engineer:	*Agree with Designer response.*
Client Decision:	*Agree with Safety Engineer.*
Action Taken:	*No further action required.*

4.19 Pedestrians crossing the cycle path ***Serious***

There are a number of locations along the route that pedestrians cross the cycle path. At some locations there is a formal pedestrian crossing where pedestrians have right of way and at others there are informal crossings where cycles will have right of way, as illustrated in Figure 17 below. An informal crossing is considered to be one where there is a raised table but no zebra.

At formal crossings, cyclists are not always slowing or stopping to allow pedestrians to cross the cycle path. Consideration should be given to adding permanent warning signage on the cycle path for the zebra crossing with a subplate or separate sign for cyclists to give way to pedestrians.

In locations where crossings are informal, it may not be clear to pedestrians that they need to give way to cyclists. To avoid this, consideration should be given to making informal crossing points zebra crossings. This will provide the same type of treatment along the corridor and provide clarity on who gives way.

Figure 17. Pedestrian crossing of the cycle path

Recommendation

1. Provide additional signage on the approach to pedestrian crossings of the cycle path
2. Consider making informal crossings as zebra crossings

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Likely	*Death or serious injury is* Serious

Design Team Response: Disagree with Audit team. This is intended to be an informal crossing, informed by trials at other childcare centres. Changing the crossing to a Zebra was specifically excluded at the design stage, as there are too many other zebra crossings on the cycleway.

This crossing is at a narrowing of the path, is lit, has extensive coloured surfacing and is active generally in daylight hours. There are multiple other zebra crossings on this path, and the addition of more may discourage the use of this path, as it will be slower than using the road.

Safety Engineer:	*Agree with Designer response. Add to Monitoring Plan.*
Client Decision:	*Agree with Safety Engineer.*
Action Taken:	*Add to the monitoring plan.*

4.20 Parking in the cycle path ***Serious***

Some vehicles, in particular rubbish trucks, are parking in the cycleway to access businesses located along the path. This puts cyclists either in conflict with vehicles using the road when they need to use the road to go around the parked vehicle or, results in a conflict between these trucks and cyclists on the path. These vehicles manoeuvre into, along and out of the cycle path in ways that aren't necessarily predictable, such as backing out of the cycleway. Over a number of years there have been several collisions between rubbish trucks and vulnerable road users as they have manoeuvred, that have resulted in the death or serious injury of the vulnerable road user. It is because of this the Severity Outcome rating is ranked as Fatal.

Figure 18. Rubbish truck parked in cycleway

Recommendation

1. Engage with businesses along the cycleway to ensure their rubbish bins are located so that rubbish trucks do not need to park in the cycleway
2. Engage with service providers and remind them not to park in cycleways
3. Undertake monitoring of the issue

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Unlikely	*Death or serious injury is* Fatal
Design Team Response: Refer to WCC	
Safety Engineer:	*Agree with SSA. Refer to WCC Corridor Management.*
Client Decision:	*Agree with Safety Engineer.*
Action Taken:	*Item to be referred to WCC Corridor Manager.*

4.21 Accessways without speed humps *Serious*

Several of the accessways along the corridor do not have speed humps across the accessway. These include the entry to VTNZ and Capital Gateway. The SSAT observed a four-wheel drive turn right into Capital Gateway, at speed, and an approaching cyclist needed to take evasive action/ breaking to avoid a collision.

Figure 19. Entrance to Capital Gateway

Recommendation

Provide speed humps at all entrances along the corridor.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Very Likely	*Death or serious injury is* Serious
Design Team Response: Speed humps have been left off 'intersection' type crossovers like this one and applied to Driveway crossovers. Comfortable to add them based on the observations of the SAT, but recommend they be left off the exit driveways for Capital gateway.	
Safety Engineer: *Agree with SSAT and Designer response. Add the Capital Gateway exit driveway to the Monitoring Plan.*	
Client Decision: *Agree with the Safety Engineer.*	
Action Taken: *Item to be added to the monitoring plan.*	

4.22 Bus stop island height *Moderate*

Several of the bus stop islands are constructed with two mountable kerbs on top of each other. This creates a relatively large height difference between the top of the island and the cycle path. As the islands are relatively narrow and there can be a number of people getting on and off the bus at the same time, there is a risk that someone could fall off the island onto the cycle path.

Figure 20. Drop onto the cycle path

Recommendation

Provide a rail at the back of the island so people can not fall onto the cycle path.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Likely	*Death or serious injury is* Minor
Design Team Response: The provision of safety fences is a post completion item still to be delivered.	
Safety Engineer: *Agree with SSAT and Designer response. This issue should be added to the Monitoring Plan, and closed out when the work is complete.*	
Client Decision: *Agree with Safety Engineer.*	
Action Taken: *Item to be added to the monitoring plan.*	

4.23 Ponding in the cycle path **Minor**

Around the Mulgrave Street area but also at other locations along the path, water is ponding in the cycle path and at times extending over approximately a third of the width of the path. This will result in cyclists moving away from the water and towards oncoming cyclists. By its nature this event will occur when it is raining and as such cyclists are unlikely to be looking as far ahead as usual as they may have their heads down to avoid rain in their face. This increases the risk of them not seeing an oncoming cyclist, which could result in a collision between path users.

Recommendation

Ensure the cycle path does not have areas of excessive ponding.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Unlikely	*Death or serious injury is* Minor
Design Team Response: The nature of this work is that is was working inside of existing kerbs, grades and covers, and significant regrading was impossible. It is likely that much of the ponding is nuisance type (less than 10mm) and is a result of very flat grades (in places around 1 in 400). There is no design response possible within these constraints.	
Safety Engineer: *Agree with Designer response. Add this issue to the Monitoring Plan, with further mitigation as necessary.*	
Client Decision: *Agree with the Safety Engineer.*	
Action Taken:	

4.24 Signal call button Mulgrave St Comment

The signal call button for pedestrians crossing the bus lane at Mulgrave Street is behind the traffic signal pole. This may make it difficult for a visually impaired person to locate the call button.

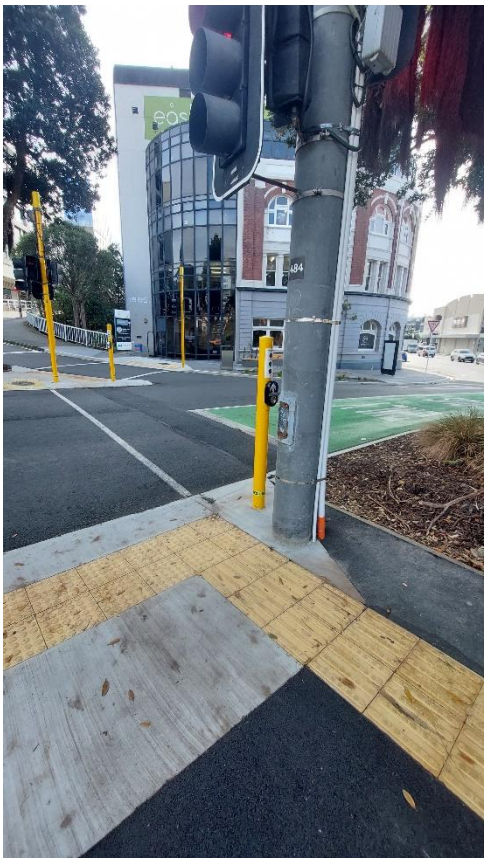


Figure 21. Call button behind signal pole.

Recommendation

Move call button so that it can easily be located by a visually impaired person

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Comment	*Death or serious injury is* Comment
Design Team Response: This issue was picked up in the PC walkover with WCC, and the call button is to be moved.	
Safety Engineer:	*Agree with SSAT and Designer response. Confirmation required that this has been completed.*
Client Decision:	*Call button to be moved.*
Action Taken:	*Add to the monitoring plan to ensure it has been moved.*

4.25 Bunny Street cycle left turn ***Moderate***

For cyclists citybound at the intersection of Thorndon Quay and Bunny Street the green cycle display appears to run at the same time as the pedestrians crossing phase. There is a red left turn arrow at the same time. It is unclear if the red arrow also applies to cyclists and from observations on site, cyclists are turning when there is a green cycle symbol and the red arrow. This will put cyclists and crossing pedestrians into conflict.

Having cyclists turn at the same time as the pedestrian phase runs may provide a safer outcome as it removes the conflict between turning cyclists and turning vehicles but there can still be serious injuries between cyclists and pedestrians.

Consideration should be given to a regulatory sign that requires turning cyclist to give way to crossing pedestrians or providing for these two movements as separate phases.

Recommendation

Review the operation of the left turn for cyclist onto Bunny Street and the crossing of Bunny Street by pedestrians.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Likely	*Death or serious injury is* Minor
Design Team Response: Operation of the left turn is concurrent with the pedestrian crossing and the all directions cycle phase. WCC has been doing communications about this to wellington cycle groups. It is noted that directional cycle lanterns were proposed here,but were not implemented because they are not yet approved for use by NZTA. *No design response proposed, Monitoring by WCC recommended*	
Safety Engineer:	*Agree with Designer response. Add this to the Monitoring Plan.*
Client Decision:	*Agree with the Safety Engineer.*
Action Taken:	*Add Item to the monitoring plan.*

4.26 Right turn from Bunny Street to the cycleway ***Minor***

For cyclists turning right from Bunny Street into the cycleway they need to ride across the path of left turning traffic from Thorndon Quay onto Bunny Street. While the phasing of the signals may not allow these two movements to occur at the same time, this is not clear to cyclists as they only have the green signal for vehicles.

There is a cycle call button located in the median for cyclists turning right onto the path. However, it is not clear if the phase has been called as there is no cycle aspect to illuminate. The SSAT are not sure that this call button is working, as when pushed, and with no vehicles turning right from Bunny Street onto Thorndon Quay, the red right turn arrow stays illuminated through what appears to be several cycles of the signal phasing.

Finally, not all cyclists seem to see the call button as it is not something that would typically be found when cyclists are on the road. Instead, cyclists would expect there to be loops in the ground to detect bikes. The use of both systems would ensure cyclists do get the phase to turn onto the path as not all bikes will be detected by the loops. Without activation of the phase to allow cyclists onto the cycle lane, some cyclists are using the pedestrian crossing to access the cycle lane.

Recommendation

1. Provide a cycle aspect on the traffic signals
2. Provide loops in the ground for cyclist
3. Ensure the call button for cyclist is working.

Probability Rating:	*Severity Outcome Rating:*
Crashes are likely to be Unlikely	*Death or serious injury is* Minor
Design Team Response: Directional cycle aspects are not approved for use on the network. Call button to be fixed. Call button was chosen here in lieu of loops for cycle detection. WCC doing comms to explain the operation of the intersection. Monitoring recommended.	
Safety Engineer: *Agree with Designer response. Confirmation that the call button has been fixed is required. Add this issue to the Monitoring Plan.*	
Client Decision: *Agree with the Safety Engineer.*	
Action Taken: *Item to be added to the monitoring plan.*	

5.0 Additional commentary

The audit has been undertaken with reference to best practice internationally for identifying and managing road safety risks in the context of a Safe System.

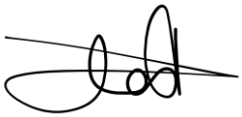
Overall, the project has provided a large improvement to cycle safety along the corridor. The SSAT has undertaken a site visit but has also observed the corridor over several weeks. In this time, issues that were not necessarily obvious at the time of the walkover have become apparent and have been included in this audit. There are areas where ongoing monitoring is needed to ensure that the path operates safely and to address any conflicts between the various modes.

The largest risk remains vehicles entering properties from Thorndon Quay at speed to beat the gap in the traffic. This particularly occurs at areas where there is room for vehicles to slow after crossing the cycle path such as at Waitomo, VTNZ and Capital Gateway.

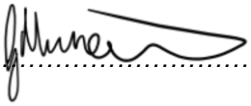
6.0 Safe System Audit Statement

We certify that we have used the available plans and have examined the specified roads and streets to assess the Safe System alignment and identified any safety concerns that could be changed, removed or modified in order to improve road safety outcomes. The safety concerns identified have been noted in this report.

Signed: …….. Date: 14/08/2025
Mike Pilgrim
Associate Director, AECOM



Signed: …… Date: 14/08/2025
Deborah Keary
Senior Transport Engineer, AECOM

Design Team:	*Name…Greg Murison*	*Position: Design Manager*
	Signature….. 	*Date; 19 August 2025*
Safety Engineer:	*Name……Dennis Davis……*	*Position: Principal Transport Engineer,*
	Signature 	*Date: 3.09.2025*
Client: *Infrastructure(interim)*	*Name…Sean Woodcock*	*Position…Mgr Trans &*
	Signature……. 	*Date…12 Dec 25.*
Action Completed:	*Name……*	*Position……..*
	Signature……..	*Date……..*

Project Manager to distribute audit report incorporating decision to design team, Safety Audit Team Leader, Safety Engineer and project file.

Date: ……