

Transitional Programme – Botanic Garden ki Paekākā to city accessibility audit

Draft

Prepared for: Wellington City Council

Prepared by: MRCagney (NZ) Ltd, Auckland, New Zealand

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Contents

Figures	2
Tables	2
Executive Summary	3
1 Introduction & Context	4
1.1 The Audit Team	4
1.2 Definition & Purpose.....	4
1.3 The auditing framework	5
1.4 Proposed Cycle Route.....	5
1.5 Disclaimer.....	6
2 Design Commentary	6
2.1 General comments	7
2.1.1 Footpaths.....	7
2.1.2 Road crossings.....	7
2.1.3 Bus Stops.....	8
2.1.4 Wayfinding.....	8
2.1.5 Lighting	8
2.2 Specific comments	8
2.2.1 Botanical Gardens entrance opposite 20 Glenmore Street (C11)	8
2.2.2 Botanical Gardens entrance opposite Kilmister Avenue (C11).....	10
2.2.3 Tinakori Road / Bowen Street intersection (C13).....	10
2.2.4 Sydney Street West / Bowen Street intersection road crossing (C13).....	12
2.2.5 Bowen Street – proposed pedestrian refuge (C14).....	13
2.2.6 Europe Lane Footpath - Bowen Street (C15)	14
2.2.7 Bowen Street / The Terrace Intersection (C16).....	15
2.2.8 Bowen Street Cycle Lane - The Terrace to Lambton Quay (C17)	16
2.2.9 Whitmore Street / Stout Street Intersection (C18).....	17
2.2.10 Whitmore Street / Featherston Street Intersection (C19)	18
2.2.11 Whitmore Street / Waterloo Quay intersection (C19).....	19
4 Conclusions	21

Figures

Figure 1 Botanical Gardens to City - proposed transitional cycleway route.....	6
Figure 2 Bollards at Botanical Gardens entrance opposite 20 Glenmore Street	9
Figure 3 Botanical Gardens access road entrance opposite Kilmister Avenue.....	10
Figure 4 Excerpt from plan - Tinakori Rd / Bowen St intersection (C13).....	11
Figure 5 Sydney Street West / Bowen Street - dropped kerb alignment	12
Figure 6 Excerpt from plan - Bowen Street - proposed pedestrian refuge (C14).....	13
Figure 7 Europe Lane pedestrian only footpath.....	14
Figure 8 Excerpt from plan - Bowen Street / The Terrace intersection (C16)	15
Figure 9 Excerpt from plan - Bowen Street / Lambton Quay intersection (C17).....	16
Figure 10 Excerpt from plan - Whitmore Street / Stout Street intersection (C18).....	17
Figure 11 Excerpt from plan - Whitmore Street / Featherston Street intersection (C19)	18
Figure 12 Excerpt from plan - Whitmore Street / Waterloo Quay intersection (C19).....	19

Tables

Table 1 Accessibility Audit Concern Categories	4
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Executive Summary

This report presents the findings of an accessibility audit that was carried out on a cycleway designed for Wellington City Council's transitional programme. The Audit was conducted by staff at MRCagney in partnership with staff from Blind Low Vision New Zealand and CCS Disability Action. Connecting the Botanical gardens through to Waterloo Quay, the proposed route provides cycling access from suburbs including Kelburn and Northland to the city centre and the Great Harbour Way.

Commented [CP1]: Bike and bus improvements

The purpose of the audit is to assess the accessibility of the plans and outline opportunities the designers have to make the route welcoming and usable to everyone including cyclists, micromobility users, public transport users and pedestrians who are disabled and non-disabled. Three principles were used to measure accessibility; whether the design was Safe for everyone, Obvious to everyone and Step-free (SOS)¹ so that as many people as possible can use the route, as easily as possible. Specifically, the footpaths, road crossings, bus stop infrastructure and cycleways were assessed using the SOS lens.

Overall, the plans do a lot to improve the accessibility of the route for more people. By providing an improved facility for cyclists, the footpath is preserved for pedestrians. The cycleway is also likely to attract a wide range of people riding bicycles as it is largely separated and will feel much safer than an on-road, unseparated facility.

Commented [CP2]: Mention of impact of bus lanes

Comments throughout this report relate primarily to provision of safe and obvious road crossings, where it is clear to everyone using the streets who has priority, and clear aligning of kerb cuts with road crossings, so that it is obvious to everyone, including blind and low vision people, where and in what direction to cross streets. There is also commentary about consistency of protection of cycleways, so that they are welcoming to as many people as possible.

The 30% design drawings do not provide enough information to know how accessible the streets will be post-construction. It is therefore recommended that another accessibility audit is scheduled before construction. It is also recommended that local disabled people are recruited to be involved in design iterations of the cycleway after it has been constructed so that their lived experience can inform the best possible outcomes for the project.

¹ SOS Principles of Inclusive Access, Waka Kotahi Pedestrian Network Guide 2021 <https://www.nzta.govt.nz/walking-cycling-and-public-transport/walking/walking-standards-and-guidelines/pedestrian-network-guidance/planning/pedestrian-planning-principles/principles-of-safe-obvious-and-step-free-sos/>

1 Introduction & Context

Wellington City Council has developed a cycleways programme that plans to build over 147 kilometres of cycling infrastructure over the next ten years. The purpose of the programme is to develop a network of cycle routes that are safe and easy for people to use no matter their age or ability. As the first step in that programme, transitional cycleways are intended to improve safety and accessibility for people on bicycles along these routes in a quick build, interim fashion.

Commented [CP3]: Changes here same as Newtown comments.

The fast-paced nature of the projects is intended to allow improvements to be implemented quickly, with on-site refinements rather than lengthy design iterations. As part of the design process, this report specifically focuses on auditing the cycle routes and their street environment through an accessibility lens. This considers the mobility and ability of every citizen and visitor, whether they travel by foot (including with a mobility aid), bicycle or public transport. This accessibility audit focuses on the proposed cycleway from the Botanical gardens to the city centre.

1.1 The Audit Team

The audit team consisted of:

- Bridget Burdett, Principal Researcher, MRCagney (lead auditor/reviewer)
- Jo Gascoigne, Senior Transport Planner, MRCagney (auditor/reporting)
- Allie Knight, Researcher, MRCagney (reporting)
- Amber Carran-Fletcher, Operations Manager / Senior Consultant, MRCagney (review)
- Carina Duke, Blind Low Vision (auditor)
- Raewyn Hailes, CCS Disability Action (auditor)

1.2 Definition & Purpose

The purpose of this accessibility audit is to review the 30% design drawings for the proposed transitional cycleway from Botanical Gardens to Waterloo Quay. Our recommendations promote access for all, with a focus on pedestrians and cyclists. Accessibility opportunities are listed according to which principle they relate to (safe, obvious, and/or step-free) and whether they present a major or a minor opportunity to improve the proposed design. We have also included comments for broader consideration of the design team.

Access principle(s)	Safe / Obvious / Step-free
Risk	Suggestion Action
Major	Major concern that should be addressed and requires changes to avoid serious access constraints.
Minor	Minor concern that should be addressed where practical to improve access or to mitigate an issue that will only occur rarely.
Comment	General comments regarding access issues which should be taken into consideration during the detail design phase.

Table 1 Accessibility Audit Concern Categories

1.3 The auditing framework

This audit was carried out by staff at MRCagney using the guidance of the Safe, Obvious and Step-free framework (SOS)². The designs were also reviewed by specialist advisors from the disability sector, including advisors from Blind Low Vision NZ and CCS Disability Action.

The SOS framework was designed to inform streets that are universally accessible for all humans with various capabilities. The first principle, 'safe', makes sure pedestrians are both free from harm and feel safe in each environment. Various aspects are looked at under this principle, such as whether appropriate separation and space is given to different road users, an area is free of hazards or has good lighting.

Secondly, whether routes and wayfinding are obvious and accessible to everyone is assessed. Assessed aspects under this principle include whether clear, consistent information is provided and that there is clear separation between different transport modes. Under the "obvious" principle for assessment, the audit considers whether priority crossings such as zebra crossings or traffic signals are emphasised as the most obvious road crossings.

Thirdly, the "step-free" principle checks that step-free route choices are available for anyone who needs them. This last aspect is to ensure routes can be navigated by everyone, including those using wheelchairs or other devices with small wheels, such as scooters or prams. Step-free routes must be free of obstacles, not too steep, and smooth (that is, sealed or paved without defects that could create trip hazards). For this assessment we focused on footpaths, road crossings, bus stop infrastructure, and cycleways.

1.4 Proposed Cycle Route

The proposed cycleway shown in Figure 1 is approximately 1.4km long and connects Thorndon to the city centre as part of a longer route towards Karori. It starts at 20 Glenmore Street leading to Tinakori Road, following the entire length of Bowen Street, and ending at the intersection of Whitmore Street and Waterloo Quay near the waterfront. The route creates connections to the Te Araroa Trail and the City to Sea walkway.

Commented [CP4]: Inclusion of bus lanes.

Commented [CP5]: Does it? Not sure we're creating any additional connection to this trail.

² [\(Principles of Safe, Obvious and Step-free \(SOS\) | Waka Kotahi NZ Transport Agency \(nzta.govt.nz\)\)](#)



Figure 1 Botanical Gardens to City - proposed transitional cycleway route³

The route includes the following road sections as outlined on the following plans:

- Glenmore St, Tinakori Rd - Proposed Cycleway Bowen Street - Sheet 1 – C11 UR
- Tinakori Rd, Bowen St - Proposed Cycleway Bowen Street - Sheet 2 – C12 UR
- Tinakori Rd, Bowen St - Proposed Cycleway Bowen Street - Sheet 3 – C13 UR
- Bowen St - Proposed Cycleway Bowen Street - Sheet 4 – C14 UR
- Bowen St - Proposed Cycleway Bowen Street - Sheet 5 – C15 UR
- Bowen St / The Terrace - Proposed Cycleway Bowen Street - Sheet 6 – C16 UR
- Bowen St / Lambton Quay / Whitmore St - Proposed Cycleway Bowen Street - Sheet 7 – C17 UR
- Whitmore St / Stout St / Featherston St - Proposed Cycleway Bowen Street - Sheet 8 – C18 UR
- Whitmore St / Featherston St / Waterloo Quay - Proposed Cycleway Bowen Street - Sheet 9 – C19 UR

1.5 Disclaimer

The findings and recommendations in this report are based on an examination of the 30% design drawings supplied while taking into consideration observations of the street environment using Google Street View where necessary to provide context. As the designs are still in an early stage of development, we note that several aspects of the design are yet to be confirmed or configured and therefore a subsequent accessibility audit is recommended to review the designs prior to construction.

2 Design Commentary

The following provides an overview of the accessibility audit and the findings that were noted on these 30% design drawings. The general comments relate to issues or concerns identified where further investigation and review may be required to confirm any actions to promote access for everyone along the route. The specific comments relate to concerns at specific locations along the route.

³ WCC GIS Viewer

2.1 General comments

The following comments relate to multiple sections of the proposed route and should be taken into consideration for the review and submission of the detailed design phase.

2.1.1 Footpaths

- **Footpath gradient and crossfall** – the gradient and crossfall of footpaths are key design features that enable people with disabilities to be able to use the footpath comfortably. Crossfall in particular is important to people using mobility aids or who have limited balance. Footpath crossfall should be less than 2% throughout the route, and zero percent where the gradient exceeds 3% (that is, where crossfall is not necessary for drainage, it should be zero).
- **Detectable kerbs** – all kerbs along the entire route need to be detectable to provide visually impaired persons information on their location in relation to the vehicle lanes and cycle lanes. This enables those who are blind, deafblind or have low vision to detect the edge of the continuous accessible path of travel with confidence.
- **Footpath surface** – the use of paving stones, bricks or tiles can cause trip and/ or slip hazards under certain weather conditions or because of movement (i.e. tree roots or seismic movement). It is recommended all footpath surfaces are inspected to mitigate risks of trips, slips, or falls.
- **Footpath clearway and width** – it is preferable that all footpaths are kept clear of obstructions and a 2-metre clear width is maintained where possible. The clear width should not include any utility boxes, power/lighting poles, signposts, rubbish bins, and private street furniture such as shop sandwich boards and items for sale on-street. It is recommended that the route is reviewed in full to identify potential pinch points and obstructions likely to effect access of the route.
- **Wayfinding** is a valuable tool in assisting people of all age and ability to navigate the streets. Signposting all streets, off road paths and identifying their destination if applicable provides users with necessary information to make informed choices about their journey.

2.1.2 Road crossings

There are some key elements that make road crossings for pedestrians safe, obvious and step free.

- **Low vehicle speeds** - speeds of less than 30km/hr. near pedestrian crossings will significantly reduce the risk of serious injury or death to pedestrians in the event of crash. Low traffic speeds help to improve both objective and subjective crash risk, because crash risk is low, and people are likely to feel that the environment is safe.
- **Smooth kerb cuts** - Pedestrian crossings with dropped kerb cuts should not have any deviation or channel lips greater than 6mm, so that people using devices with small wheels can move across them easily. It is recommended that dropped kerbs along the entire route are audited to confirm step-free accessibility for everyone.
- **Tactile ground surface indicators (TGSIs)** - It is recommended that all crossing locations and bus boarding locations are installed with TGSIs to enable people with vision impairments to navigate the road environment safely.
- **Non-priority pedestrian crossings** – In the 300m section of Tinakori Road between the zebra crossing located at 20 Glenmore Street and the Tinakori / Bowen Street signalised intersection, there are no pedestrian refuge crossings. It is likely that installation of refuge islands would improve safety for those people who choose to cross in this section of Tinakori Road.

- **Step-free access** – a review of the route to identify locations where roads users are required to navigate steps and where there is no alternative option (ramp or dropped kerb) is available.
- **Pedestrian refuges** – where possible, retain existing, or install pedestrian refuges at road crossings the carriageway is significantly wide or where pedestrians are required to cross multiple lanes of traffic including cycle lanes. Pedestrians who are dependent on mobility aids and the elderly maybe significantly slower to cross and may find busier crossing locations intimidating to cross in one movement.

2.1.3 Bus Stops

Cycleway bypasses of bus stops are almost always difficult for blind people and people with vision impairment to navigate, so careful design is required. It is recommended that detailed design of bus stop bypasses is reviewed for accessibility before they proceed to construction. Further detail is required regarding the redesign or relocation of the following bus stops.

- Outside no. 20 Glenmore Street (C11)
- Outside no. 360 Tinakori Road (C12)
- Opposite no. 352 Tinakori Road (C12)
- Bowen Street east of motorway underpass (C15)
- Outside no. 33 Bowen Street (C16)
- Outside no. 38 Bowen Street (C16)

2.1.4 Wayfinding

It is unclear from the plans how people might find their way along the route and to their destinations. Consideration should be given to clearly sign post all off-street paths and steps to inform road users of their direction and destination. Where steps are located, information should be provided as to the nearest accessible path to accommodate people who use wheelchairs, mobility scooters, prams and those people who would prefer a step-free route for comfort or convenience.

2.1.5 Lighting

Lighting levels along the route are unclear from the plans. Sufficient lighting of all paths should be provided so that people feel safe using them at any time of the day.

2.2 Specific comments

The following show specific locations identified that require further investigation, design, or review.

2.2.1 Botanical Gardens entrance opposite 20 Glenmore Street (C11)

Figure 2 shows the bollards located at the proposed popup activation may be hazardous to people with vision impairment, or who are distracted. It is recommended that the need for bollards is reconsidered. If they are used, a bright colour that contrasts the surrounding surface is recommended.



Figure 2 Bollards at Botanical Gardens entrance opposite 20 Glenmore Street⁴

Botanical gardens entrance bollards	
Access principle(s):	Safe
Overall Rating	Minor
Designer response	Outside of scope for Transitional Cycleways Programme which is kerb to kerb
Safety Engineer	Agree with Designer.
Action taken	Out of scope no action required.

⁴ Streetview photos supplied by Google Maps

2.2.2 Botanical Gardens entrance opposite Kilmister Avenue (C11)

Right of way should be established at the Botanic Gardens entrance. It is unclear whether this is a private accessway or public road. TGSIs are recommended on both footpath approaches.

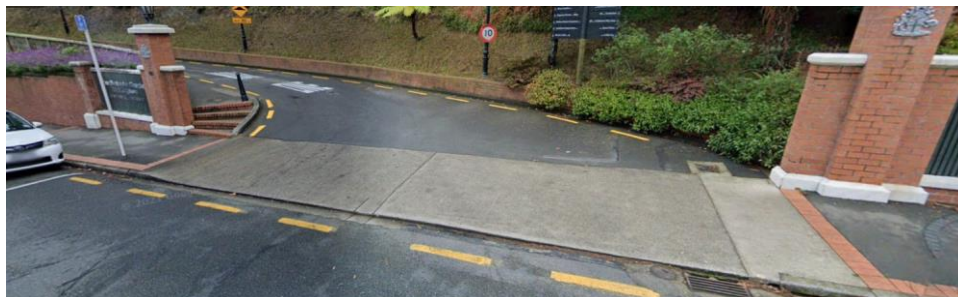


Figure 3 Botanical Gardens access road entrance opposite Kilmister Avenue⁵

Botanical gardens accessway	
Access principle(s):	Safe / Obvious
Overall Rating	Major
Designer response	Botanic Gardens Centennial entrance is a driveway and therefore does not warrant tactile pavers
Safety Engineer	Agree with Designer. However, traffic volumes on the driveway should be checked. If significant the need for tactiles should be revisited.
Action taken	No action required.

2.2.3 Tinakori Road / Bowen Street intersection (C13)

Cycle lane

Figure 4 shows the northbound cycle lane on Tinakori Road cross from the outer edge of the carriageway to the centre of the traffic lane to enable cyclists to complete a right turn into Bowen Street. This design is likely to discourage cyclists from using this cycle lane especially during busy periods where they are required to navigate across a traffic lane and then required to wait flanked by vehicles on either side. It is recommended that this design is reconsidered to mitigate conflict between cyclists and vehicles. This is an inclusion issue because less confident cyclists are not likely to use this section comfortably. It conflicts with the project goal of encouraging all people who want to, to ride bicycles along the route.

Signalised pedestrian crossing locations

Figure 4 shows the signalised intersection with pedestrian phases on the northern arm of Tinakori Road only. This requires pedestrians needing to use a controlled crossing have to make a significantly longer journey to

⁵ Streetview photos supplied by Google Maps

cross Tinakori Road. It is recommended an additional pedestrian crossing/phase is considered on the southern arm of Tinakori Road.

Lewisville Terrace intersection

The Lewisville Terrace intersection with Tinakori Road is located within the signalised intersection. The Lewisville approach is controlled by a stop sign and is not phased into the signals controlling all other approaches. It is recommended that signals are considered for the Lewisville Terrace approach to the intersection to make the crossing priority safer and more obvious for pedestrians.



Figure 4 Excerpt from plan - Tinakori Rd / Bowen St intersection (C13)

Cycle lane at intersection	
Access principle(s):	Safe / Obvious
Overall Rating	Major
Designer response	Design of the cycleway in this location has been changed in subsequent design iterations so that cyclists are not between the traffic lanes
Safety Engineer	Agree with Auditors and Designer.
Action taken	Designs updated.

Signalised pedestrian phase crossings	
Access principle(s):	Safe / Obvious
Overall Rating	Minor

Signalised pedestrian phase crossings	
Designer response	There is no footpath on the western side of Bowen St and therefore the pedestrian crossing would have low use
Safety Engineer	Agree with Designer. Currently not an apparent problem, however it can be monitored.
Action taken	Out of scope of project. LGWM to investigate.

Lewisville Tce intersection	
Access principle(s):	Safe / Obvious
Overall Rating	Major
Designer response	Is outside of scope to signalise the Lewisville Tce approach which is low volume and would add delay to the intersection
Safety Engineer	Agree with Designer.
Action taken	Out of scope of project. LGWM to investigate.

2.2.4 Sydney Street West / Bowen Street intersection road crossing (C13)

It is important that all dropped kerbs at road crossings are aligned directly across the road to enable visually impaired persons to cross as safely as possible, with assistance from TGSi. Figure 5 shows the Sydney Street West crossing at Bowen Street intersection. It is recommended that the kerb cuts are realigned and TGSi installed.



Figure 5 Sydney Street West / Bowen Street - dropped kerb alignment⁶

Sydney Street West intersection	
Access principle(s):	Safe / Obvious

⁶ Streetview photos supplied by Google Maps

Sydney Street West intersection	
Overall Rating	Major
Designer response	Is outside of scope of the Transitional Cycleways Programme which is to reallocate road space
Safety Engineer	Agree with Designer. However, this issue should be passed to Transport and Infrastructure for further consideration outside of the Cycleway Programme.
Action taken	Out of scope of project. LGWM to investigate.

Commented [CP6]: Have we added these things to the list of things for LGWM? Need to make sure they get these docs. They have a new project manager now taking on this project so we should meet with him to go through all the feedback to date.

Commented [RC7R6]: yep have passed on but to Sharleen only

2.2.5 Bowen Street – proposed pedestrian refuge (C14)

The design includes a new pedestrian refuge approximately 180 metres east of the Tinakori / Bowen Street intersection. The proposed refuge is on a bend to provide access to steps to the Botanic Gardens. Consideration should be given towards ensuring the refuge is safe with appropriate visibility maintained on both approaches within a suitably low speed environment. The crossing in its current design is unlikely to feel safe for all pedestrians.

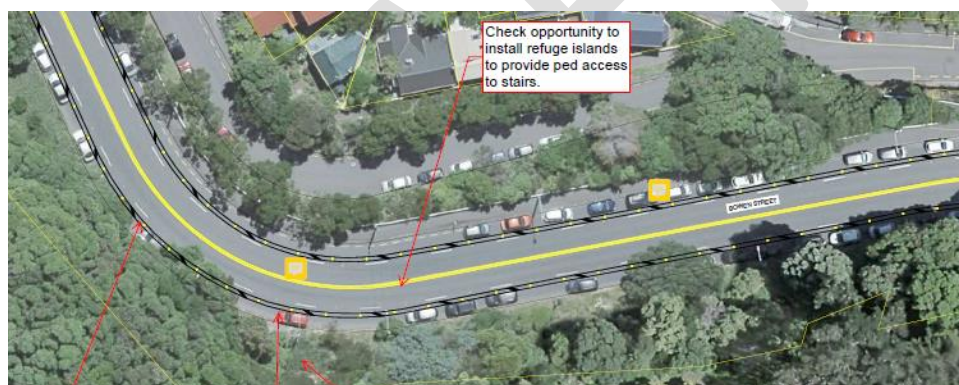


Figure 6 Excerpt from plan - Bowen Street - proposed pedestrian refuge (C14)

Proposed pedestrian refuge	
Access principle(s):	Safe / Obvious / Step free
Overall Rating	Major
Designer response	Unable to install pedestrian refuge due to vehicle tracking and sightlines around the corner
Safety Engineer	Agree with Designer. This issue is currently under review by Transport and Infrastructure outside of the Cycleway Programme.

Proposed pedestrian refuge	
Action taken	Out of scope of project. LGWM to investigate

2.2.6 Europe Lane Footpath - Bowen Street (C15)

The Europe Lane footpath connects to Bowen Street but has no TGSI or dropped kerb installed. It is also unclear where pedestrians are intended to cross to or from this location. It is recommended that further consideration be given as to the intended direction for pedestrians at this location.



Figure 7 Europe Lane pedestrian only footpath⁷

Europe Lane footpath	
Access principle(s):	Safe / Obvious / Step Free
Overall Rating	Minor
Designer response	Designs include a pedestrian refuge at Europe Lane which can be installed once construction of office block is complete
Safety Engineer	Agree with Designer. Issue previously noted and under consideration.
Action taken	Part of construction work to reinstall.

⁷ Streetview photos supplied by Google Maps

2.2.7 Bowen Street / The Terrace Intersection (C16)

Bus Lane / Cycle Lane Merge

The eastbound cycle lane approach to The Terrace proposes to merge with the bus lane due to vehicle capacity issues and carriageway width constraints. Cyclists may not feel safe merging and may choose to avoid conflict with buses and use the adjacent footpath to safely navigate past this intersection. It is recommended to reconsider the proposed design of merging cyclists with buses.

It is unclear whether advanced cycle boxes will be retained for right turning cyclists on the Bowen Street eastbound approach.

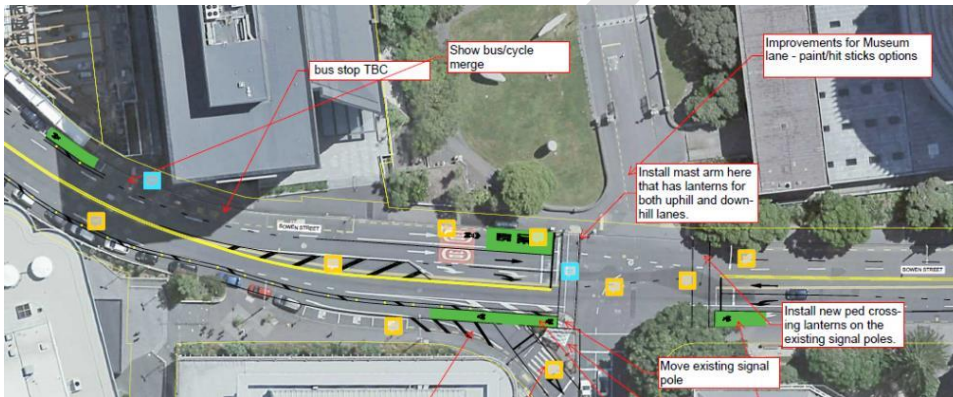


Figure 8 Excerpt from plan - Bowen Street / The Terrace intersection (C16)

Bus Lane / Cycle Lane Merge	
Access principle(s):	Safe / Obvious
Overall Rating	Major
Designer response	Is not enough space of separate cycleway in this location whilst also providing public transport priority. Speed difference between cyclists and traffic in this location is minimal
Safety Engineer	Agree with Designer. Issue to be monitored and addressed as necessary.
Action taken	Monitor and pass to LGWM to investigate.

2.2.8 Bowen Street Cycle Lane - The Terrace to Lambton Quay (C17)

It is unclear whether the cycle lane is re-established along Bowen Street between The Terrace and Lambton Quay or if cyclists continue to share a lane with buses. If the cyclists are continuing to share a traffic lane with buses, this may not be obvious to cyclists, and they may not feel safe using this lane therefore choosing to use the footpath adjacent. It is recommended that it is made clear to cyclists where they are intended to cycle, and in doing so, to communicate their likely presence to other road users, particularly bus drivers if they are intended to share the bus lane.

The southbound cycle lane on Whitmore Street does not appear to be separated from traffic lanes. Cycle lanes that are not physically separated (through delineators) from other traffic can feel unsafe to cyclists where they may choose not to use them and use the footpath instead.

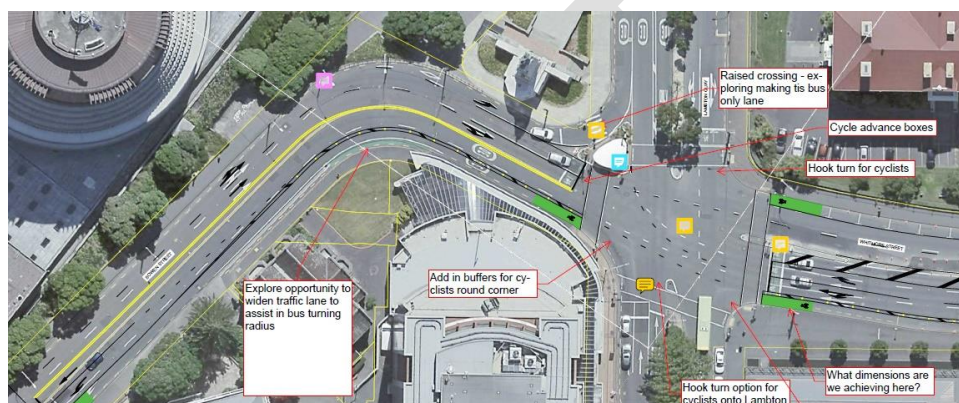


Figure 9 Excerpt from plan - Bowen Street / Lambton Quay intersection (C17)

Bowen Street cycle lane	
Access principle(s):	Safe / Obvious
Overall Rating	Major
Designer response	Cycleway commences at Whitmore St and cyclists on Bowen St share the lane. Is not enough space on Bowen St for separate cycleway in both directions
Safety Engineer	Agree with Designer. Issue to be monitored and addressed as necessary.
Action taken	Monitor and pass to LGWM to investigate.

2.2.9 Whitmore Street / Stout Street Intersection (C18)

Confirm that the southbound cycle lane on approach and exit meets minimum width standards to ensure it is safe for cyclists to use. There also does not appear to be physical separation (delineators) between the cycle lane and traffic lane which may deter cyclists from using the cycle lane.

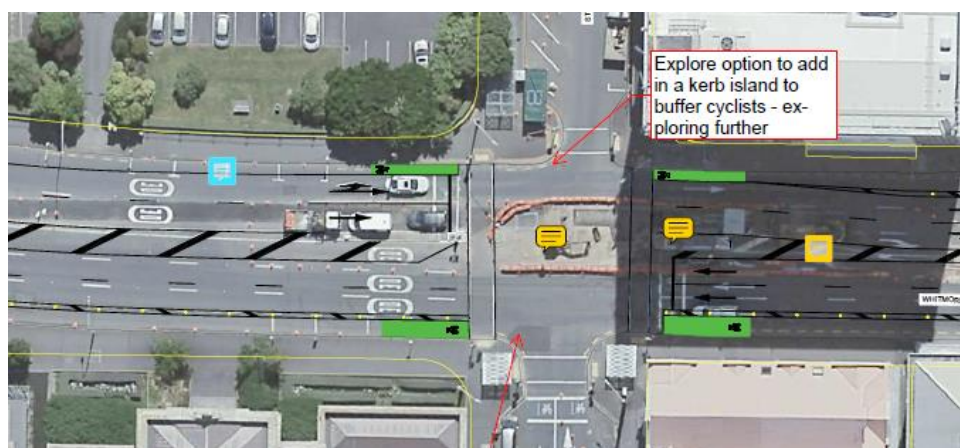


Figure 10 Excerpt from plan - Whitmore Street / Stout Street intersection (C18)

Cycle lane at Stout Street	
Access principle(s):	Safe
Overall Rating	Major
Designer response	Cycleway width of 1.2m in this location has been used to avoid impacting on central islands. WCC to investigate whether central islands can be moved or removed as part of civil works design.
Safety Engineer	Agree with Designer.
Action taken	Monitor and pass to LGWM to investigate.

2.2.10 Whitmore Street / Featherston Street Intersection (C19)

There is potential conflict between vehicles turning left from Whitmore Street into Featherston Street and cyclists heading north through the intersection on Whitmore Street.

There is also a pinch point for cyclists turning left into Featherston St who are not protected from left turning traffic.

Sections of both cycle lanes do not appear to have physical separation from vehicle lanes. It is recommended that delineators are considered to provide protection and improve cyclists' perception of safety.

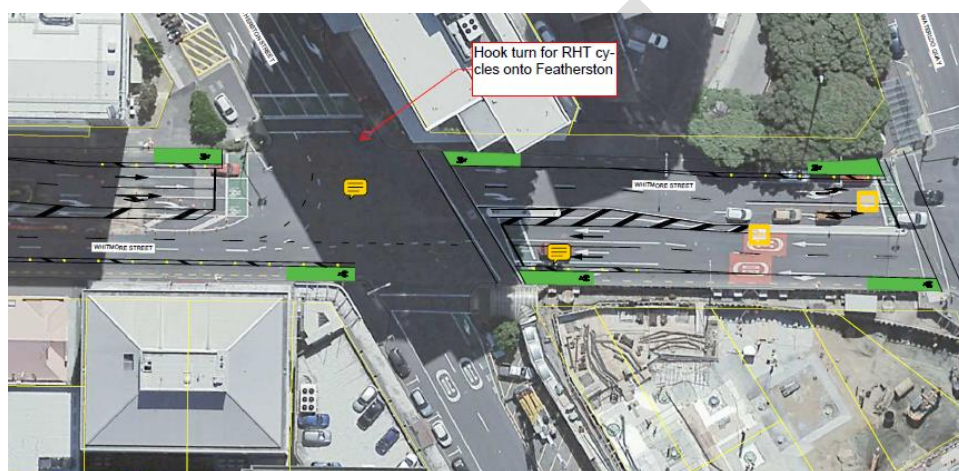


Figure 11 Excerpt from plan - Whitmore Street / Featherston Street intersection (C19)

Cycle lane at Featherston Street	
Access principle(s):	Safe
Overall Rating	Major
Designer response	Cycleway divider will be used in this location which tightens the corner radius for vehicles turning left into Featherston St
Safety Engineer	Agree with Auditors and Designer.
Action taken	Designs updated.

2.2.11 Whitmore Street / Waterloo Quay intersection (C19)

Pedestrian/cycle crossing

The proposed option to increase the width of the signalised pedestrian crossing across Waterloo Quay should consider allowing pedestrians to cross either west or east of Whitmore Street.

Wayfinding

It is not clear whether the design includes signage or prompts to inform cyclists (make it obvious) that the cycle lane has ended. It is recommended that wayfinding for cyclists at the end of the route be considered.

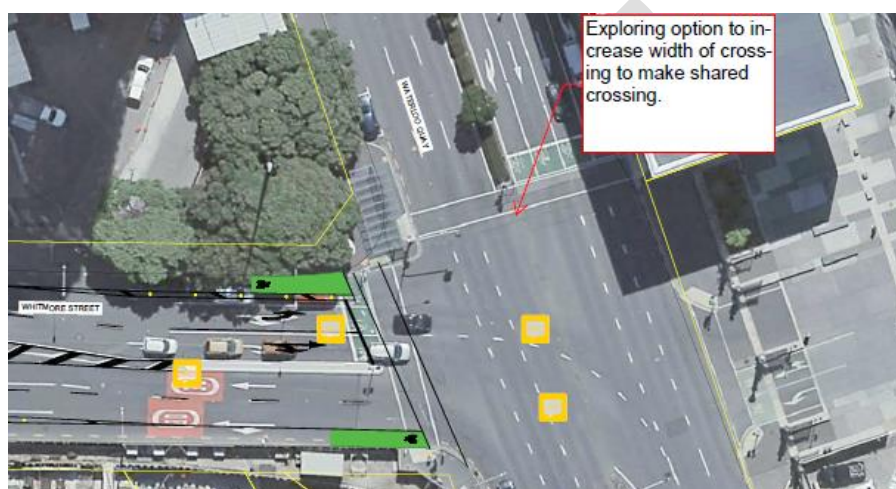


Figure 12 Excerpt from plan - Whitmore Street / Waterloo Quay intersection (C19)

Pedestrian / cycle crossing at Waterloo Quay	
Access principle(s):	Safe / Obvious
Overall Rating	Minor
Designer response	Subsequent design amendments have replaced shared pedestrian/ cyclist crossing with an on road cycle crossing
Safety Engineer	Agree with Designer on design amendments. However, the feasibility of a pedestrian crossing east of Whitmore should be checked outside of the Cycleway Programme. It may be that the signal design is at its limits and pedestrians cannot be accommodated on that leg.
Action taken	Designs update.

Wayfinding at Waterloo Quay	
Access principle(s):	Safe / Obvious
Overall Rating	Comment
Designer response	Wayfinding signage to be provided with cycleway implementation
Safety Engineer	Agree with Auditors and Designer.
Action taken	Investigate wayfinding signage.

DRAFT

3 Conclusions

By providing clear routes for cyclists between the Botanic Gardens and Wellington city, the proposed design improves safety for everyone. However, there are several design details that could be clarified or improved. In doing so, the route is likely to be attractive to a wider range of cyclists. By incorporating the safe, obvious and step free principles into the detailed design of all infrastructure, this will assist towards creating an inclusive and equitable street environment for all.

Commented [CP8]: Mention of bus lanes would be good.

3.1 Safety Engineer's Comment

I have studied and considered the auditors' accessibility concerns and recommendations for accessibility improvements set out in this accessibility audit report together with the designer's responses. Where appropriate, I have added comments to be taken into consideration by the project manager when deciding on the action to be taken.

Signed  Date 13/07/22
Dennis Davis, Principal Transport Engineer, Wellington City Council

DRAFT