



Island Bay Cycleway Post-Construction Road Safety Audit

PEER REVIEW

PREPARED FOR THE WELLINGTON CITY COUNCIL

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Contents

1. Background	5
1.1. Purpose	5
1.2. Scope of Peer Review	5
1.3. Peer Review Procedure	5
1.4. Report Format	5
1.5. Documents Provided	6
1.6. Disclaimer	6
1.7. Project Description	6
2. Review Findings.....	7
2.1. General Issues (Project Wide).....	7
2.1.1. Ghost Markings.....	7
2.1.2. Extent of Green Cycleway Markings and Cycle Symbols	7
2.1.3. Belisha Beacons at Pedestrian Crossings.....	7
2.1.4. Bus Shelter Intervisibility.....	8
2.1.5. Parking Bay Bollards.....	8
2.1.6. Cycle Friendly Sump Grates	9
2.1.7. Cycleway Directional Guidance.....	9
2.1.8. Intervisibility sightlines at residential driveways	9
2.2. Specific Findings.....	10
2.2.1. Pedestrian Crossing South of Humber Street.....	10
2.2.2. Humber Street intersection.....	10
2.2.3. Northbound Cyclists entering the traffic flow from the left.....	11
2.2.4. School Signage sign located South of Mersey Street.....	11
2.2.5. Directional Tactile Paving at Pedestrian Crossing South of Dee Street.....	11
2.2.6. Pedestrian Refuge Central Island located south of Mersey Street.....	12
2.2.7. Pedestrian Zebra Crossing located north of Mersey Street	12
2.2.8. Disabled Parking Spaces and Fire Hydrant outside the Medical Centre	12
2.3. Comments	13
2.3.1. Bend south of Medway Street.....	13
2.3.2. Consistency of Yellow No-parking Line Marking.....	13
2.3.3. Mersey Street Bus Stop Bypass.....	13
2.4. Reviewer Additional Findings.....	13
2.4.1. Transitions between cycle lane and footpath.....	13
2.4.2. Buffer Zone marking	14

2.5. Reviewer Additional Comments 15
2.5.1. Road layout and speed limit 15

1. Background

1.1. Purpose

The purpose of this report is to document the findings of a peer review of MWH's post construction safety audit report of the Island Bay Cycleway.

1.2. Scope of Peer Review

The scope of the peer review included reviewing each finding of the audit and:

- Stating whether the review agreed with the assessment of frequency and severity,
- Stating whether the review agreed with the recommended approach to addressing the finding, and
- Providing an assessment of any additional findings

Note that recommended approach for each finding is intended to be indicative only, and to focus the designer 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.

1.3. Peer Review Procedure

The procedure to complete the review involved the following steps:

- Reviewing the post construction safety audit report
- Visiting the site on 14 June 2016 and driving the project length and cycling the project length

There is a separate procedure for completing the road safety audit process that includes a decision tracking process. This report is not part of that process.

The peer review was completed by Sam Wilkie, Director, Wilkie Consultants.

1.4. Report Format

The report follows the same format as the post construction road safety audit report, using the same headings and order.

The assessments made in the safety audit are compared side by side with the review assessments. The rating provided is the rating associated with the review assessment.

The recommendation includes a short comment whether the review recommendation agrees with the safety audit, and if not provides a description of an alternative approach.

1.5. Documents Provided

The following document has been provided for this review:

- Post Construction Road Safety Audit Island Bay Cycleway prepared for Wellington City Council dated 11 May 2016 rev 1 Final Report R1

1.6. Disclaimer

The findings and recommendations in this report are based on an examination of available relevant plans, the specified road and its environs, and the opinions of the reviewer. However, it must be recognised that eliminating safety concerns cannot be guaranteed since no road can be regarded as absolutely safe and no warranty is implied that all safety issues have been identified in this report. This review does not constitute a design review nor an assessment of standards with respect to engineering or planning documents.

Readers are urged to seek specific technical advice on matters raised and not rely solely on the report.

While every effort has been made to ensure the accuracy of the report, it is made available on the basis that anyone relying on it does so at their own risk without any liability to the reviewer or their organisations.

1.7. Project Description

The project concerns The Parade in Island Bay, Wellington, from Dee Street at the northern extent to Reef Street at the southern extent.

The project includes the following:

- putting in new kerbside cycle lanes between Shorland Park and the Dee Street roundabout,
- installing four new pedestrian crossings near Dee, Humber, Mersey and Tamar streets,
- altering intersections to make them safer,
- developing new-look bus stops with cycle by-passes, and
- raising the existing zebra crossings in the main shopping centre to footpath height, and putting in speed humps (cushions) on either side of these two crossings

2. Review Findings

2.1. General Issues (Project Wide)

2.1.1. Ghost Markings

Significant

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Common	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Common	Likely

Review Recommendation:

Agree with the safety audit recommendation.

2.1.2. Extent of Green Cycleway Markings and Cycle Symbols

Moderate

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Infrequent	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Infrequent	Likely

Review Recommendation:

Agree with the safety audit recommendation. While on site, the reviewer noted that some of the areas shown in the safety audit where green markings were missing are now in place. However a consistent application of these markings is recommended.

2.1.3. Belisha Beacons at Pedestrian Crossings

Select concern rating

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Infrequent	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	-	-

Review Recommendation:

The reviewer noted these were all operational during the night site visit. Concern assessment rating removed.

2.1.4. Bus Shelter Intervisibility

Minor

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Occasional	Unlikely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Occasional	Very Unlikely

While on site, the reviewer noted a sign stating the area around the Empire Theatre is a “shared space”. As such, cyclist speed should be slower and cyclists should be prepared to give way to pedestrians. Improving intervisibility is likely to increase cyclist speed.

Review Recommendation:

Retain the Ad shell in the bus stop as a means to prevent cyclists travelling at higher speeds through this “shared space”. Consider a uniform colour surfacing through this area (e.g. black asphaltic concrete throughout instead of the concrete path), or running the cycle lane between bus stop and kerb.

2.1.5. Parking Bay Bollards

Moderate

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Occasional	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Occasional	Likely

The reviewer observed vehicles parked over the buffer area between the on-street parking bays and the cycle lane. This non-compliance raises a safety concern due to reduced cycle lane width. However installing safe-hit posts to correct parking may not resolve the concern as the reason for the non-compliance may not be as simple as poor parking skills. It may be that vehicles are parked out of the bays (in most cases into the buffer area rather than in the traffic lane) due to a perception of better protection from traffic in the lane striking the parked vehicle, or providing better sight distance for vehicles entering/exiting the adjacent property.

Review Recommendation:

Consider the reasons for the non-compliance in conjunction with the available lane width and sight distance from the property access. Treatments may include speed calming measures and adjusting car parking space locations and numbers, to revisiting the cycleway design - considering a two-way cycleway between kerb and parked cars on one side only, and considering a cycleway on both sides located between parked cars and traffic lanes and separated with solid kerb barriers. Refer to section 2.4 and 2.5 for additional commentary.

2.1.6. Cycle Friendly Sump Grates

Moderate

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Infrequent	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Infrequent	Likely

Review Recommendation:

Agree with the safety audit recommendation.

2.1.7. Cycleway Directional Guidance

Minor

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Infrequent	Unlikely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Infrequent	Unlikely

Review Recommendation:

Agree with the safety audit recommendation.

2.1.8. Intervisibility sightlines at residential driveways

Moderate

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Occasional	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Occasional	Likely

Review Recommendation:

Agree with the safety audit recommendation. Refer to section 2.4 and 2.5 for additional commentary.

2.2. Specific Findings

2.2.1. Pedestrian Crossing South of Humber Street

Serious

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Common	Very Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Common	Very Likely

Review Recommendation:

Agree with the safety audit recommendation. While on site, the reviewer observed that road works were being carried out in this area.

2.2.2. Humber Street intersection

Select concern rating

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Occasional	Very Unlikely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	-	-

Review Recommendation:

Agree with the safety audit recommendation. While on site, the reviewer observed that road works were being carried out in this area, and that the safe-hit posts have been removed, and therefore the review assessment and concern rating is removed.

2.2.3. Northbound Cyclists entering the traffic flow from the left **Moderate**

Safety Audit assessment	<i>Frequency</i> <i>(Crashes are likely to be...)</i>	<i>Severity</i> <i>(Death or serious injury is...)</i>
	Occasional	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Occasional	Likely

Review Recommendation:

Agree with the safety audit recommendation. The design of the green surfacing could be similar to that provided at the south end of the project, i.e. bars of increasing length evenly spaced perpendicular to the direction of travel.

2.2.4. School Signage sign located South of Mersey Street **Minor**

Safety Audit assessment	<i>Frequency</i> <i>(Crashes are likely to be...)</i>	<i>Severity</i> <i>(Death or serious injury is...)</i>
	Infrequent	Unlikely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Infrequent	Unlikely

Review Recommendation:

Agree with the safety audit recommendation.

2.2.5. Directional Tactile Paving at Pedestrian Crossing South of Dee Street **Moderate**

Safety Audit assessment	<i>Frequency</i> <i>(Crashes are likely to be...)</i>	<i>Severity</i> <i>(Death or serious injury is...)</i>
	Infrequent	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Infrequent	Likely

Review Recommendation:

Agree with the safety audit recommendation.

2.2.6. Pedestrian Refuge Central Island located south of Mersey Street

Moderate

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Occasional	Likely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Occasional	Likely

Review Recommendation:

Agree with the safety audit recommendation.

2.2.7. Pedestrian Zebra Crossing located north of Mersey Street

Minor

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Occasional	Unlikely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Occasional	Unlikely

Review Recommendation:

Agree with the safety audit recommendation.

2.2.8. Disabled Parking Spaces and Fire Hydrant outside the Medical Centre

Minor

Safety Audit assessment	<i>Frequency</i> (Crashes are likely to be...)	<i>Severity</i> (Death or serious injury is...)
	Infrequent	Unlikely
Review assessment	<i>Frequency</i>	<i>Severity</i>
	Infrequent	Unlikely

Review Recommendation:

Agree with the safety audit recommendation.

2.3. Comments

2.3.1. Bend south of Medway Street

Select concern rating

Review Recommendation:

Agree with the safety audit recommendation.

2.3.2. Consistency of Yellow No-parking Line Marking

Select concern rating

Review Recommendation:

Agree with the safety audit recommendation.

2.3.3. Mersey Street Bus Stop Bypass

Select concern rating

Review Recommendation:

Agree with the safety audit recommendation.

2.4. Reviewer Additional Findings

2.4.1. Transitions between cycle lane and footpath

Minor

One of the transitions is located at a low point such that surface water and debris is pooling, see photo below. Cyclists, especially those not so sure of themselves, may perceive this as an obstacle (or if debris is built-up it may push the cyclist off course) and swerve away from the transition to the road or the kerb.



Figure 1: Surface water and debris pooling at cycleway transition

Review assessment	Frequency	Severity
	Occasional	Unlikely

Review Recommendation:

Review the drainage design around the transitions of the cycle lane between the road level and footpath level. Regularly sweep the channel area to prevent debris build-up.

2.4.2. Buffer Zone marking

Minor

One area of paint marking for the buffer zone associated with the cycle lane was observed in an obscured/poor condition. Lack of definition of the buffer zone may result in poor parking compliance and provides inconsistent messages to cyclists about where they are expected to ride.



Figure 2: Buffer Zone marking poor condition

Review assessment	Frequency	Severity
	Infrequent	Unlikely

Review Recommendation:

Repaint the buffer zone marking.

2.5. Reviewer Additional Comments

Select concern
rating

2.5.1. Road layout and speed limit

The Parade operates with a 50 km/h speed limit, except for a short 30 km/h speed zone in the village area between Medway Street and Avon Street. In the lower speed zone area, cyclists share the lane with other vehicles, and speed cushions and pedestrian crossing facilities help achieve a slower operating speed.

The lower speed limit could be extended based on the following factors associated with The Parade and the project:

- Vehicle speeds outside of the lower speed area were observed to vary, with higher speeds (nearer 50 km/h) near the northern extent of the project, and some lower speeds (nearer 30 km/h) south of the designated 30 km/h speed limit area. In general the reviewer felt safe driving between 35 km/h and 40 km/h through the posted 50 km/h areas
- The project has resulted in narrower lanes throughout, with some lane widths narrower than 3.0m. Also the current spacing of on-street car parks means slow access to properties is required.
- Ribbon-style development along The Parade creates side friction that lowers the operating speed. As this type of development continues the operational speeds will continue to decrease.

Extending the lower speed limit (along with any appropriate physical works and promotional material) could help address some of the findings identified by the safety audit including proximity of on-street parking spaces to property accesses, striking median refuges, and parking bay bollards.

Review Recommendation:

Consider extending the 30 km/h speed limit to include areas with kerbside cycle lanes installed.