Wellington City Council

HARBOUR QUAYS OPTIONS ASSESSMENT

13 AUGUST 2024

PUBLIC

HARBOUR QUAYS OPTIONS ASSESSMENT

Wellington City Council

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REV	DATE	DETAILS
1	2 August 2024	Draft for Client comment
2	13 August 2024	Final

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EXECUTIVE SUMMARY

Purpose and background

The purpose of this report is to outline the optioneering process to choose preferred interim and long-term route options for buses and people on bikes along or adjacent to the Harbour Quays.

The identified problems to be addressed in the corridor (and their associated weightings) are:

- Lack of peak time capacity for buses on the central spine of Wellington's bus network along the Golden Mile (50%)
- Temporary network disruption for all modes in the Harbour Quays corridor (40%)
- Poor level of service connections for bikes across the central city area (10%)

Wellington City Council (WCC) and Greater Wellington Regional Council (GWRC) have decided to adopt a staged approach with interim improvements implemented in the short term followed by more permanent improvements in the long-term. The interim improvements may have several stages with the bus route the initial priority.

WCC and GWRC are developing this project in partnership. A series of workshops with representatives of WCC, GWRC, and the NZ Transport Agency (NZTA) were held to determine and assess interim options for short-term implementation, and permanent options for long-term investment.

Interim options

Two interim options were developed:

- T01 – Split Bus Route, which splits northbound and southbound buses between the Harbour Quays and the Featherston route. Bikes are accommodated on the Harbour Quays.
- T02 – Kerbside Bus, which has buses in both directions on the Quays on either side of the road. Bikes are accommodated on the Featherston route.

Permanent options

Eight permanent options were developed:

- P01A – Split Bus Route, which permanently splits northbound and southbound buses between the Harbour Quays and the Featherston route. Bikes are accommodated on the Harbour Quays.
- P01B – Split Bus Route Variant, which is similar to P01A, but has buses travelling on a slightly different route which avoids the City to Sea bridge pinchpoint.
- P02A – Buses Kerbside on Quays, which has buses travelling along kerbside bus lanes on the Harbour Quays, with bikes provided for on the Featherston route.
- P02B – Buses Cityside on Quays, which has buses travelling along a two-way busway on the cityside of the Harbour Quays, with bikes provided for on the Featherston route.
- P02C – Buses Centre-Running on Quays, which has buses travelling along a two-way busway along the centre of the Harbour Quays, with bikes provided for on the Featherston route.
- P03 – Buses on Featherston, which has buses travelling along a two-way busway along the Featherston route, with bikes provided for along the Harbour Quays.

— P04A – Buses and Bikes Cityside on Quays, which has both buses and bike travelling on the Harbour Quays in both directions, reducing traffic capacity to three lanes.

— P04B – Buses Cityside and Bikes Waterfront Side on Quays, which has both buses and bikes travelling on the Harbour Quays in both direction, but with traffic capacity of four lanes

Assessment criteria

Each set of options was assessed against a broad range of criteria divided into seven categories:

— Bus

— Bikes

— Pedestrians

— Place

— Strategic alignment

— Effects

— Implementability

Preferred options

The preferred interim option was T01 – Split bus route. This option avoids the need for bus passengers to cross the Quays to access Golden Mile or nearby destinations. It allows both the Featherston and Quays routes to be tested for traffic and bus travel time impacts. It also avoids the added costs of providing a contra-flow bike facility along the Featherston route.

It is anticipated that this interim option will be implemented in two stages. The first stage will be to implement the bus improvements, given the urgency of having an alternative during Golden Mile construction. Improvements for people on bikes will be implemented as a later stage.

No preferred option was selected for a permanent solution. While options P03, P04A, and P04B scored highest, it was agreed amongst stakeholders that more information is needed to more robustly test the options. It was agreed that all the options tabled through this options assessment process will remain to be considered through a robust Business Case process. No options were fatally flawed based on the available information. However, funding availability may mean some options are not feasible.

While identifying the need for bike provision as part of this process, the addition of bike infrastructure may be done at a later stage of the project.

1 PROJECT BACKGROUND

1.1 PURPOSE

The purpose of this report is to outline the optioneering process to choose a preferred interim and long-term route options for buses and people on bikes along or adjacent to the Harbour Quays.

Options are considered for both an interim solution and a long-term / permanent solution.

1.2 BACKGROUND

Wellington City Council (WCC), in partnership with Greater Wellington Regional Council (GWRC), are investigating the possibilities for an additional bus priority route through the central city parallel to the Golden Mile. Construction on the Golden Mile, expected to begin in 2025[1], will require diversion of buses away from the Golden Mile. Provision of an additional bus priority route could provide an improved level of service for bus users during construction of the Golden Mile and other events which cause disruption on the Golden Mile route. Figure 1-1 shows the project context.

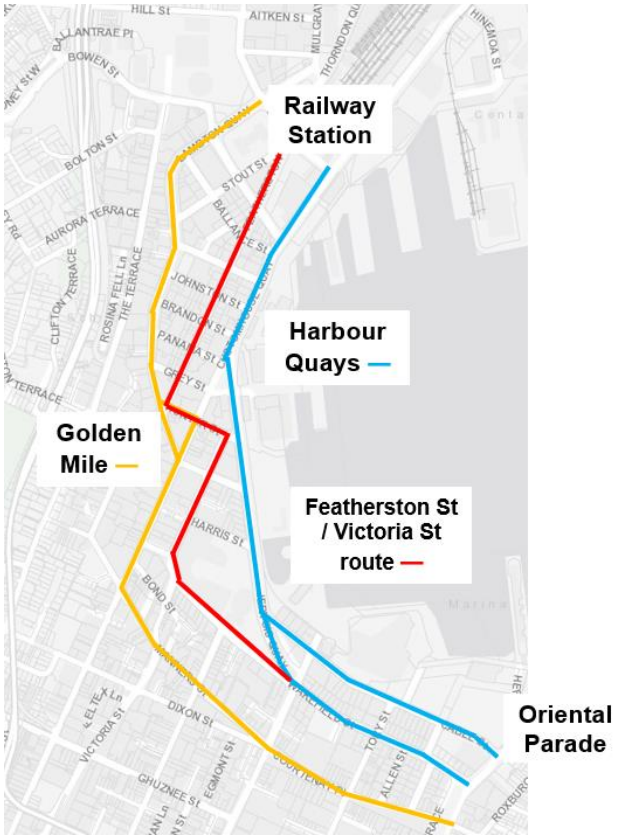

Figure 1-1: Map showing Harbour Quays route in context

[1] https://www.letstalk.wellington.govt.nz/golden-mile

The Harbour Quays route is explicitly mentioned in the Government Policy Statement (GPS) 2024-27 as a priority for public transport funding.[2]

As well providing bus priority, WCC want to implement a north-south facility people on bikes between the Railway Station and Oriental Parade. This was directed by WCC's Environment and Infrastructure Committee on 30 November 2023.[3] Figure 1-2 shows WCC's Paneke Pōneke Bike Network Plan, approved by Councillors in 2022.

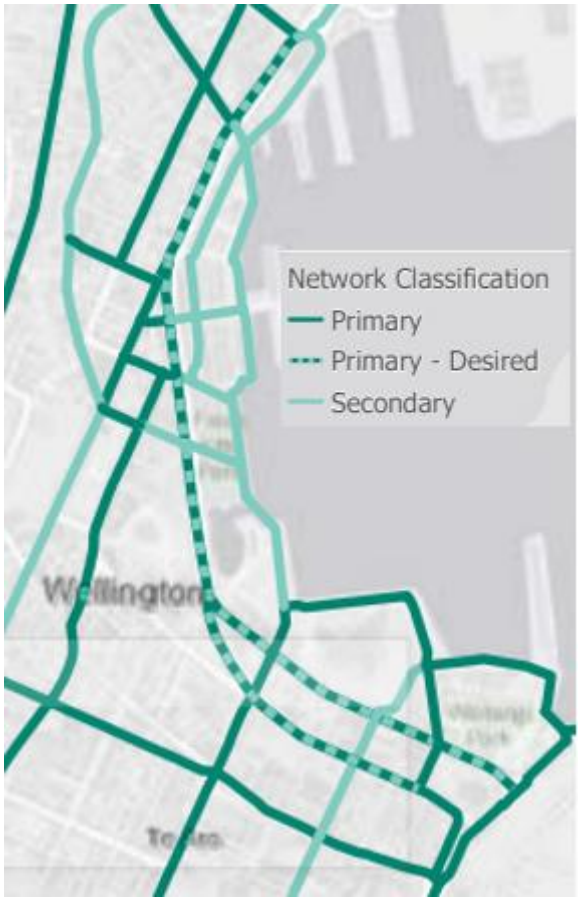

Figure 1-2: Paneke Pōneke - Bike Network Plan along Harbour Quays (Source: WCC)

1.2.1 PROBLEMS TO SOLVE

An integrated transport planning approach is required to deliver the best outcomes for all modes along this important corridor and any adjacent corridors.

At an Investment Logic Mapping (ILM) workshop undertaken by the project partners, it was agreed that the key problems (and their associated weightings) to be solved are:

- Capacity on the Golden Mile for buses at peak times (50%)
- Temporary network disruption for all modes in the corridor (40%)
- Poor bike level of service across the city (10%)

[2] https://www.transport.govt.nz/assets/Uploads/Government-Policy-Statement-on-land-transport-2024-FINAL.pdf

[3] https://wellington.govt.nz/-/media/your-council/meetings/committees/kt-environment-and-infrastructure/2023-11-30-minutes-eic.pdf

The Partners seek to identify the route(s) that can be reconfigured to:

- Reduce bus congestion on the Golden Mile
- Increase the bus capacity through the central city at peak times
- Improve level of service people on bikes travelling between the Wellington Railway Station and Oriental Parade.

1.3 STAGED APPROACH

The improvements for buses and bikes along the Harbour Quays and surrounding streets are expected to be delivered in two or more stages; an interim stage and a long-term / permanent stage. While bike provision has been identified as part of this process, the addition of bike infrastructure may be done at a later stage of the project. The installation of bus priority measures in either the interim or permanent solution is independent of the installation of cycling facilities.

The interim approach will be the first stage and aims to deliver improvements without major civil works within a relatively short timeframe. Some elements (for example bus stops) may be constructed permanently as part of this approach. An interim solution is expected to be implemented in 2025.

The second stage of delivery of bus and bike improvements will be permanent and may involve more substantive civil works, streetscaping, and changes to network circulation. A budget of $57 million has been identified for implementing a permanent solution. The timeframe for the implementation of a permanent solution is to be determined.

1.4 ASSESSMENT APPROACH

Interim and permanent options have been developed and assessed across a series of workshops. Representatives from WCC, GWRC, NZTA, and WSP have attended the following workshops throughout July 2024, as listed in Table 1-1.

Table 1-1: Workshops held throughout the Harbour Quays options assessment

WORKSHOP CONTENT	DATE
Options capture	Tuesday, 2 July
Assessment criteria and options development	Monday, 8 July
Options assessment	Friday, 19 July
Preferred option confirmation	Monday, 29 July

1.5 CONSTRAINTS AND CONSIDERATIONS

This section outlines some of the constraints of implementation along the Harbour Quays and other issues to consider when developing and assessing options.

1.5.1 EXISTING CROSS-SECTIONS

We have selected five locations to demonstrate typical cross-sections of the Harbour Quays corridor and the partly parallel Featherston Street / Victoria Street corridor. Figure 1-3 shows the locations of the five cross-sections.

Figure 1-3: Cross-section locations along the Harbour Quays and Featherston Street / Victoria Street corridors

Figure 1-4 shows the existing cross-section for Featherston Street between Ballance Street and Waring Taylor Street. One-way traffic is southbound. This represents a reasonably typical cross-section of Featherston Street, although parking arrangements and footpath widths vary.

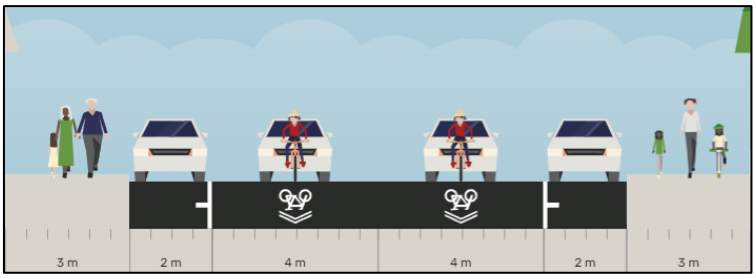

Figure 1-4: Featherston Street existing cross-section

Figure 1-5 shows the existing cross-section for Victoria Street between Harris Street and Hunter Street. One-way traffic is southbound. Note that during re-construction of Te Matapihi Central Library, Victoria Street is temporarily reduced to one southbound traffic lane through the Harris Street intersection as far as Wakefield Street.

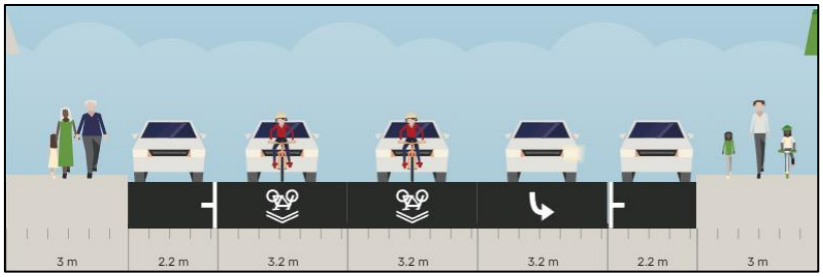

Figure 1-5: Victoria Street existing cross-section

Figure 1-6 shows the existing cross-section for Jervois Quay immediately north of Harris Street. This cross-section is slightly wider than typical two-way sections of the Harbour Quays route which typically have no parking and reduced footpath widths. This section has been chosen as it is a suitable location for bus stops due to the additional width.

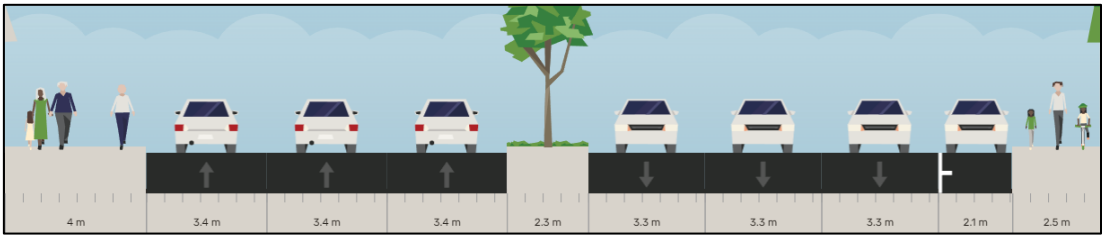

Figure 1-6: Jervois Quay existing cross-section

Figure 1-7 shows the existing cross-section for Cable Street between Taranaki Street and Tory Street. One-way traffic is southbound. This represents a reasonably typical cross-section of Cable Street, although parking arrangements and footpath widths vary. Not shown is the indented parking on the north side between street trees.

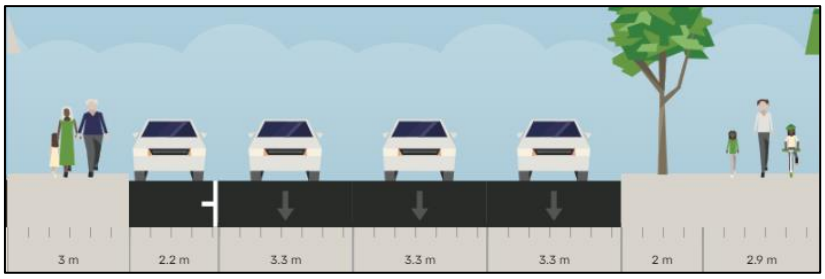

Figure 1-7: Cable Street existing cross-section

Figure 1-8 shows the existing cross-section for Wakefield Street between Taranaki Street and Tory Street. One-way traffic is northbound. This represents a reasonably typical cross-section of Wakefield Street, although parking arrangements and footpath widths vary.

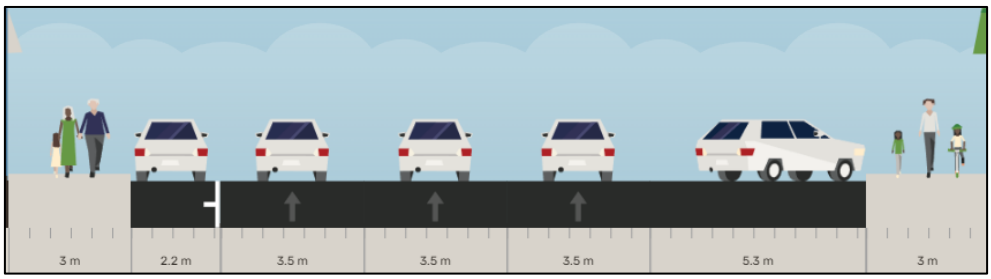

Figure 1-8: Wakefield Street existing cross-section

Table 1-2 displays additional information, such as traffic volumes and speeds, regarding the existing corridors being considered as part of the Harbour Quays option assessment.

Table 1-2: Information regarding corridors under consideration

SEGMENT	ONE NETWORK FRAMEWORK CLASSIFICATION	TRAFFIC VOLUME (AADT)[4]	SPEED LIMIT (KMPH)	MEAN OPERATING SPEED (KMPH)[5]
Waterloo / Customhouse / Jervois Quays	Urban Connector	28,200-36,800 vehicles per day (vpd)	50	40
Wakefield Street (between Jervois Quay and Tory Street)	Main Street	16,600 vpd	50	32
Cable Street	Main Street	20,700 vpd	50	38
Featherston Street (between Bunny St and Whitmore St)	Main Street	11,000-12,000 vpd	30	27

[4] According to Mobile Roads information retrieved July 2024
[5] According to MegaMaps information retrieved July 2024

Featherston Street (between Brandon St and Grey St)	Main Street	8,000-9,000 vpd	30	27
Victoria Street (between Hunter St and Wakefield St)	Main Street	8,000-9,000 vpd	30	29

1.5.2 CITY TO SEA BRIDGE

The City to Sea bridge, shown in Figure 1-9, is a pedestrian bridge over Jervois Quay connecting Te Ngākau Civic Square to the waterfront. Its structure presents a pinch-point for the road corridor which restricts the possibilities for accommodating both buses and people on bikes. It is possible that this bridge will be demolished in future due to its structure being earthquake-prone. Te Ngākau master planning work includes plans for the bridge and the lagoon sea wall which require strengthening. If the bridge is to be demolished, this presents more possibilities for the corridor. Many of the permanent options considered in this report rely on the City to Sea bridge being demolished.

Figure 1-9: City to Sea Bridge over Jervois Quay (Source: Google Maps Streetview and WCC Wellington Maps)

1.5.3 CENTRAL MEDIAN

A central median exists along much of the length Customhouse and Jervois Quays. . Where it exists, the median is built-up and planted with shrubs and pohutakawa trees, as shown in Figure 1-10. The median restricts the ability to quickly implement temporary changes to reallocate road space in the corridor while relocating the median increases the costs for permanent options. The median provides important urban amenity and forms a key green corridor as part of the Green Network

Plan[6] so its removal would be detrimental. Many of the permanent options considered in this report rely on the median being removed or relocated.

Figure 1-10: Median on Jervois Quay

1.5.4 LAND USE DEVELOPMENT

There are developments along the Harbour Quays route and on nearby streets that will limit the ability to implement changes in the short-term. These include:

- Frank Kitts Park redevelopment (including Fale Malae)
- Te Ngākau Civic Square redevelopment (including works to the Central Library, Town Hall and other buildings in the princinct)
- Michael Fowler Centre car park redevelopment
- Large development planned for block between Featherston Street, Balance Street, and Waring Taylor Street
- An expected redevelopment of the Reading Cinema Site on Wakefield Street
- Wellington NZ i-Site relocating to Takina and for the need to accommodate tour coaches, tour vans and cruise ship drop off and pick up on either Cable or Wakefield Streets.

1.5.5 OTHER CONSIDERATIONS

There are a range of policies and strategies to also be considered in the development of options for the corridor. Many of these strategies refer to mode shift as critical to achieving Wellington's goals for a low-carbon future. These include:

[6] https://wellington.govt.nz/your-council/plans-policies-and-bylaws/policies/green-network-plan

- Paneke Pōneke Bike Network Plan (2021)
- Te Atakura First to Zero (updated in 2023)
- Heritage area at Post Office Square
- Te Ara Tatou – Traffic Circulation Plan Investigation (2021)
- Green Network Plan (2022)
- Gehl report (2021)
- Introduction of articulated buses expected in Wellington from 2025 for route #2
- The recommended corridor from the LGWM MRT Business Case

2 OPTION DEVELOPMENT

A workshop to capture interim and permanent options was held on Tuesday 2 July 2024. Options were identified and developed further at a subsequent option development workshop held on Monday 8 July 2024.

For both the interim and permanent options, two high-level road corridors are considered for buses and / or bikes, as shown in Figure 2-1. They are:

- The Harbour Quays route which comprises all or part of Whitmore Street, Customhouse Quay, Jervois Quay, Cable Street, and Wakefield Street. All option will connect to the eastern end of the Golden Mile via Kent and/or Cambridge Terraces
- The Featherston route which comprises all or part of Whitmore Street, Featherston Street, Hunter Street, Victoria Street, and Harris Street before connecting to Jervois Quay and the rest of the Harbour Quays route.

There are some possible variations on these routes as indicated by the dashed lines. Some sections of the route are the same for each option.

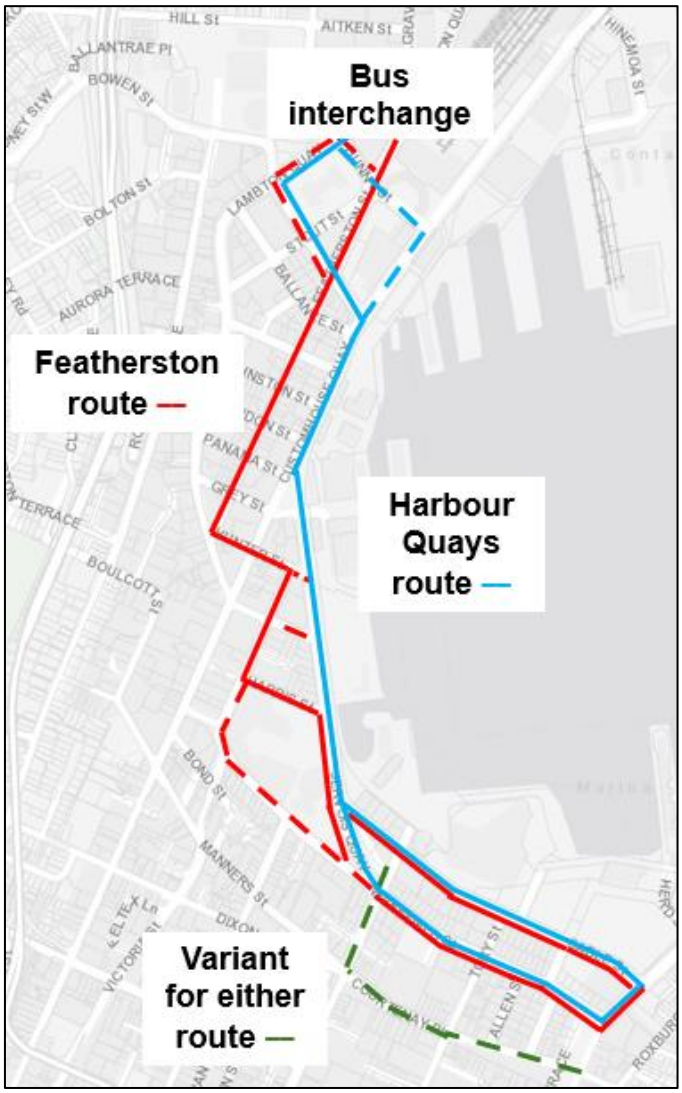

Figure 2-1: North-south routes considered for buses and bikes through option development

2.1 INTERIM OPTIONS DEVELOPMENT

There are two interim options; T01 – Split Bus Route and T02 – Buses Kerbside on Quays. No significant civil works are required for either option. Regardless of option, northbound bus priority is the same.

2.1.1 T01 – SPLIT BUS ROUTE

The T01 – Split Bus Route option has northbound buses travelling along the Harbour Quays, with southbound buses travelling via the Featherston route. Bike facilities are provided for along the Harbour Quays. Figure 2-2 shows the indicative alignment and cross-section of this option.

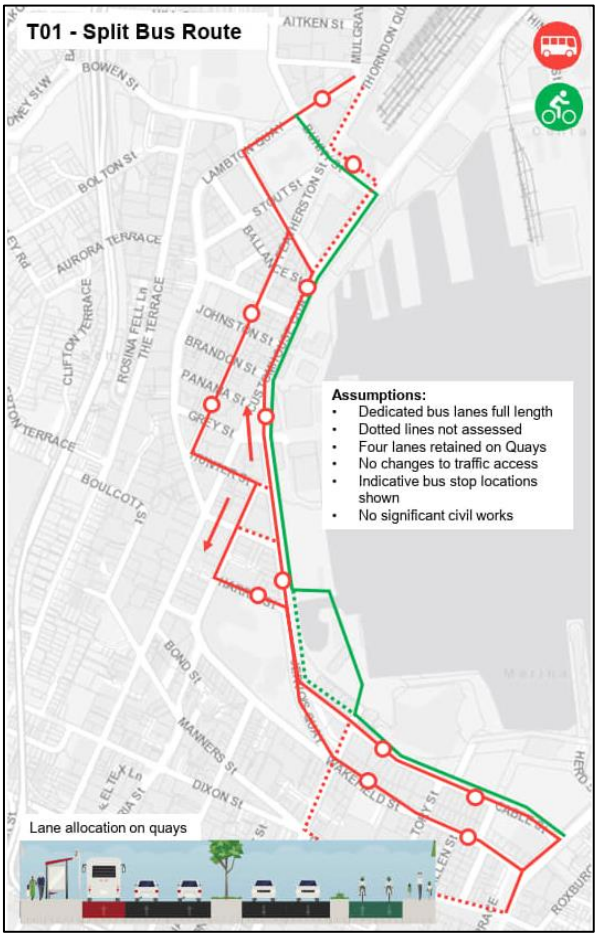

Figure 2-2: T01 – Split Bus Route interim option indicative layout

Table 2-1 provides a description of what this option means for buses, people on bikes, and general traffic.

Table 2-1: T01 - Split Bus Route interim option description

	T01 – SPLIT BUS ROUTE
Buses	— Northbound buses on Wakefield Street, Jervois Quay, Customhouse Quay — Southbound buses on Featherston Street, Victoria Street, Harris Street, Jervois Quay, Cable Street

	— Potential variants around southbound bus route (for example, terminating at Taranaki Street, and use of Willeston Street or Hunter Street) — Indicative bus stops are as shown (red circles)
Bikes	— Bikes on Customhouse Quay, Jervois Quay, Cable Street — Potential for bikes to share southbound bus lane on Featherston Street — Provision of lanes through City to Sea bridge pinch-point to be resolved (potential for bikes to go via existing Whairepo Lagoon bridge)
Traffic	— Four traffic lanes retained on the Quays — No changes to traffic access to the Quays from side streets

2.1.2 T02 – KERBSIDE BUS

The T02 – Kerbside Bus option provides for buses travelling in both directions along the Harbour Quays. Bike facilities are provided via the Featherston route. Figure 2-3 shows the indicative alignment and cross-section of this option.

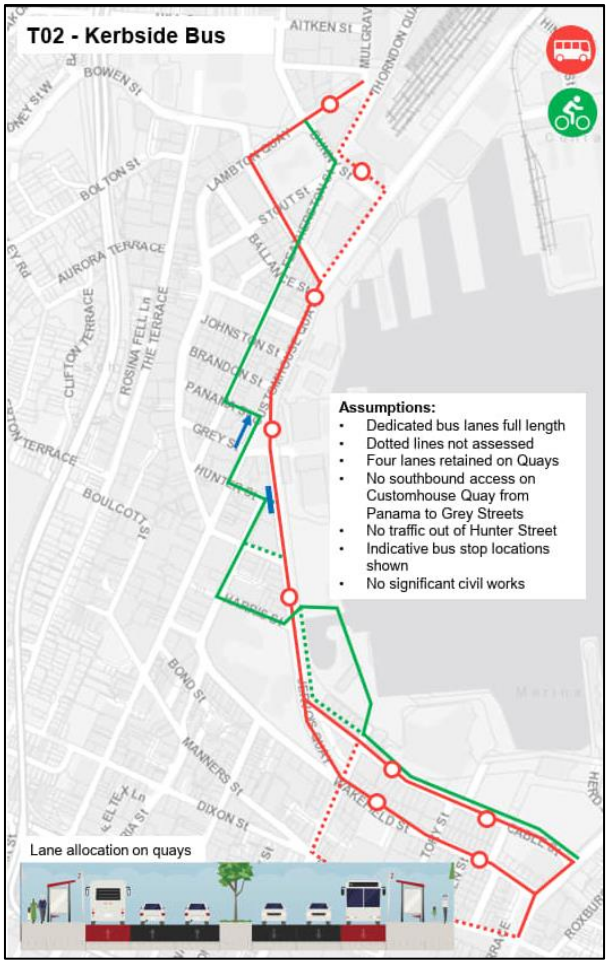

Figure 2-3: T02 –Kerbside Bus option

Table 2-2 provides a description of what this option means for buses, people on bikes, and general traffic.

Table 2-2: T02 – Kerbside Bus option description

	T02 – KERBSIDE BUS
Buses	— Northbound buses on Wakefield Street, Jervois Quay, Customhouse Quay — Southbound buses on Customhouse Quay, Jervois Quay, Cable Street — Indicative bus stops are as shown (red circles)
Bikes	— Bikes on Featherston Street, Victoria Street, Harris Street, Jervois Quay, Cable Street — Potential variants around southbound bike route (for example, use of Willeston Street or Hunter Street) — Provision of lanes through City to Sea bridge pinch-point to be resolved
Traffic	— Four traffic lanes retained on the Quays — No changes to traffic access to the Quays from side streets — No southbound traffic access on Customhouse Quay from Panama to Grey Street — No traffic access out of Hunter Street

2.1.3 SUMMARY OF INTERIM OPTIONS

Table 2-3 provides a summary of which assumptions apply to each of the interim options.

Table 2-3: Application of assumptions to the interim options

ASSUMPTION	T01 – SPLIT BUS ROUTE	T02 –KERBSIDE BUS
Dedicated bus lanes will be provided for the full length	✓	✓
At least four traffic lanes will be retained on the Harbour Quays	✓	✓
No southbound traffic access on Customhouse Quay from Panama St to Grey St		✓
No traffic access out of Hunter St only		✓

2.2 PERMANENT OPTIONS DEVELOPMENT

Eight different options within four option categories were considered for a permanent solution for the Harbour Quays. These options are listed in Table 2-4.

Table 2-4: Permanent options for consideration

OPTION CATEGORY	OPTION
P01 – Split bus route	P01A – Split Bus Route
	P01B – Split Bus Route Variant
P02 – Buses both ways on Quays, bikes on Featherston route	P02A – Buses Kerbside on Quays
	P02B – Buses Cityside on Quays
	P02C – Buses Centre-Running on Quays
P03 – Buses on Featherston	P03 – Buses on Featherston
P04 – Buses and bikes on the Quays	P04A – Buses and Bikes Cityside on Quays
	P04B – Buses Cityside and Bikes Waterfront Side on Quays

Each of these options are described in the following sections.

2.2.1 P01A – SPLIT BUS ROUTE

The permanent P01A – Split Bus Route option is closely aligned with T01 and provides for northbound buses on the Harbour Quays, with southbound buses travelling via the Featherston route. Bike facilities are provided for along the Harbour Quays. Wakefield Street is converted to a two-way busway with traffic access removed. Cable Street is made two-way for general traffic. Road reconstruction and streetscaping are included. Figure 2-4 shows the indicative alignment and cross-section of this option.

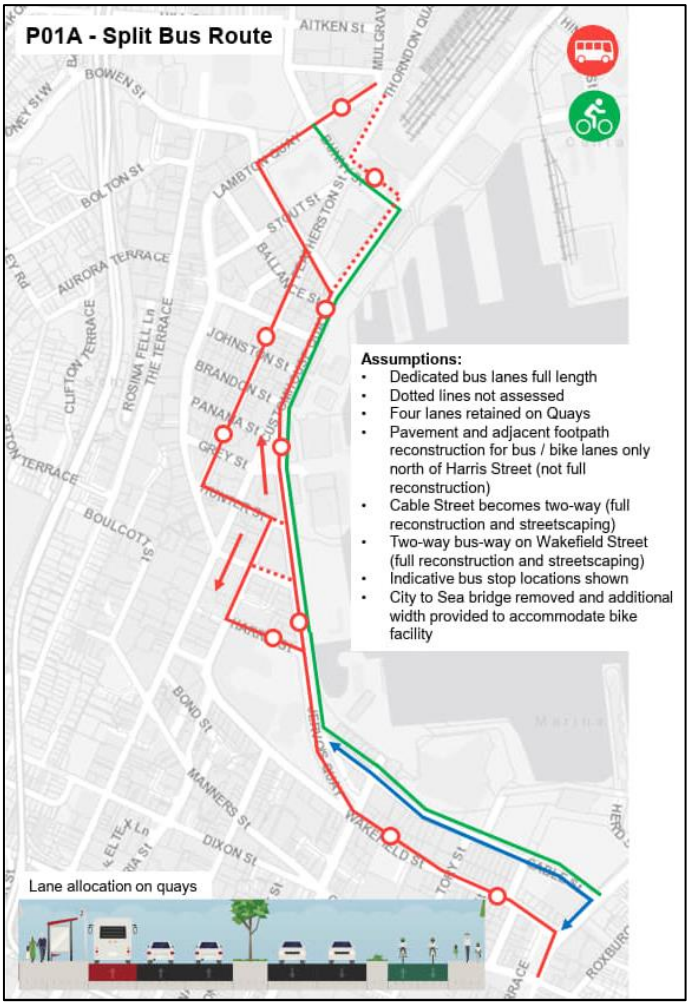

Figure 2-4: P01A – Split Bus Route permanent option indicative layout

Table 2-5 provides a description of what this option means for buses, people on bikes, general traffic and place.

Table 2-5: P01A – Split Bus Route permanent option description

	P01A – SPLIT BUS ROUTE
Buses	— Two-way busway on Wakefield Street — Indicative bus stops are as shown (red circles)
Bikes	— Bikes on Waterloo Quay, Customhouse Quay, Jervois Quay, Cable Street

	— Provision of lanes through City to Sea bridge pinch-point to be resolved (during possible replacement of bridge with at grade crossing)
Traffic / parking	— Four traffic lanes retained on the Quays — Cable Street becomes two-way for general traffic
Place and pedestrians	— Central median with trees retained in its current position — Full reconstruction and streetscaping of Cable Street and Wakefield Street — City to Sea pedestrian bridge removed as part of a separate project, allowing additional width to accommodate a bike facility

2.2.2 P01B – SPLIT BUS ROUTE VARIANT

This option is a variant of the P01 – Split Bus Route option. The variant is that southbound buses travel along Wakefield Street instead of Harris Street. This option does not require the removal of the City to Sea bridge to accommodate a bike facility. Figure 2-5 shows the indicative alignment and cross-section of this option.

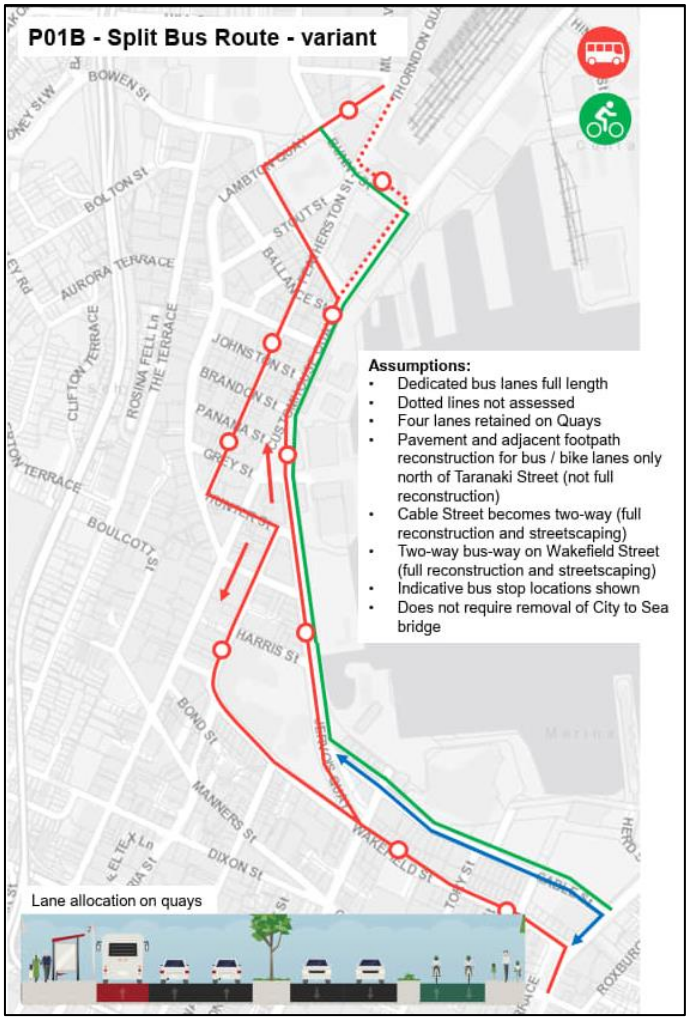

Figure 2-5: P01B – Split Bus Route Variant option indicative layout

Table 2-6 provides a description of what this option means for buses, people on bikes, general traffic, and place.

Table 2-6: P01B –Split Bus Route Variant option description

	P01B – SPLIT BUS ROUTE VARIANT
Buses	— Two-way busway on Wakefield Street — Indicative bus stops are as shown (red circles)
Bikes	— Bikes on Waterloo Quay, Customhouse Quay, Jervois Quay, Cable Street
Traffic	— Four traffic lanes retained on the Quays — Cable Street becomes two-way for general traffic

Place and pedestrians	— Central median with trees retained in its current position — Full reconstruction and streetscaping of Cable Street and Wakefield Street — Removal of City to Sea pedestrian bridge not required

2.2.3 P02A – BUSES KERBSIDE ON QUAYS

The P02A – Buses Kerbside on Quays option provides for buses travelling in both directions along the Harbour Quays and is closely aligned with T02. Bus lanes are located on either side of the street with existing median retained. Bike facilities are provided along the Featherston Street route. Figure 2-6 shows the indicative alignment and cross-section of this option.

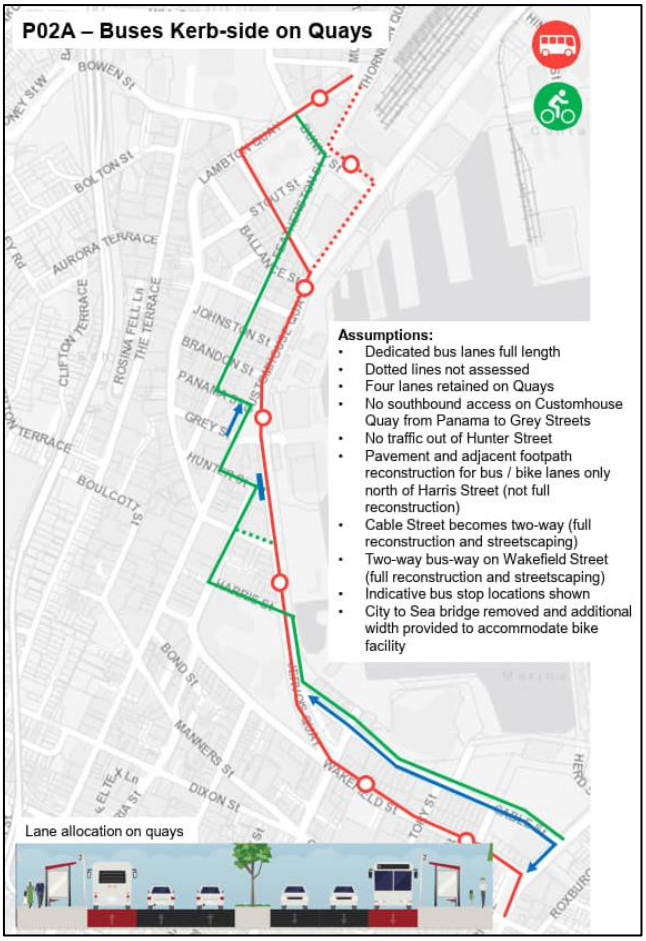

Figure 2-6: P02A – Buses Kerbside on Quays option indicative layout

Table 2-7 provides a description of what this option means for buses, people on bikes, general traffic, and place.

Table 2-7: P02A – Buses Kerbside on Quays option description

	P02A – BUSES KERBSIDE ON QUAYS
Buses	— Two-way buses on Wakefield Street, Jervois Quay, Customhouse Quay
Bikes	— Bikes on Featherston Street, Victoria Street, Harris Street, Jervois Quay, Cable Street — Provision of lanes through City to Sea bridge pinch-point to be resolved — Potential variants around southbound bike route (e.g. use of Willeston Street, Hunter Street or Wakefield Streets)
Traffic	— Four traffic lanes retained on the Quays

	— No southbound traffic access on Customhouse Quay from Panama Street to Grey Street — No traffic access out of Hunter Street — Cable Street becomes two-way for general traffic
Place and pedestrians	— Central median with trees retained in its existing location — Existing footpaths retained — Full reconstruction and streetscaping on Cable Street and Wakefield Street — City to Sea pedestrian bridge removed as part of a separate project, allowing additional width to accommodate a bike facility

2.2.4 P02B – BUSES CITYSIDE ON QUAYS

The P02B – Buses Cityside on Quays option provides a two-way busway along the city side of the Harbour Quays route. Bike facilities are provided along the Featherston route. It requires the closure of several side street accesses. Figure 2-7 shows the indicative alignment and cross-section of this option.

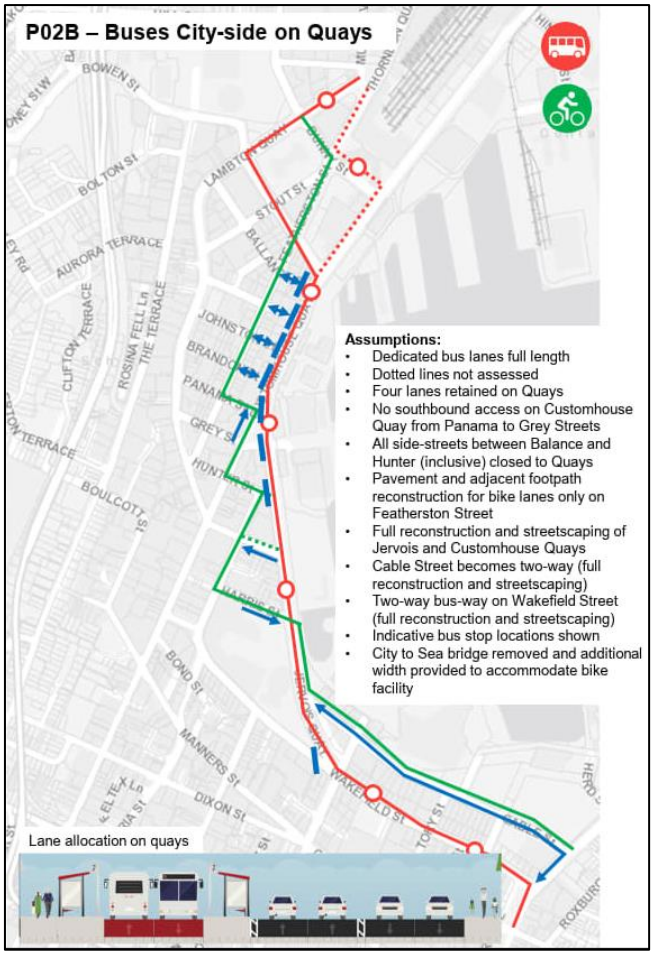

Figure 2-7: P02B – Buses Cityside on Quay option indicative layout

Table 2-8 provides a description of what this option means for buses, people on bikes, general traffic, and place.

Table 2-8: P02B –Buses Cityside on Quays option description

	P02B – BUSES CITYSIDE ON QUAYS
Buses	— Two-way buses on Wakefield Street, Jervois Quay, Customhouse Quay
Bikes	— Bikes on Featherston Street, Victoria Street, Harris Street, Jervois Quay, Cable Street — Provision of lanes through City to Sea bridge pinch-point to be resolved — Potential variants around southbound bike route (e.g. use of Willeston Street, Hunter Street or Wakefield Streets)
Traffic	— Four traffic lanes retained on the Quays

	— No southbound traffic access on Customhouse Quay from Panama Street to Grey Street — All access to and from side streets to and from the Quays between Balance Street and Hunter Street (inclusive) closed — No median separating opposing traffic lanes — Cable Street becomes two-way for general traffic
Place and pedestrians	— Central median with trees moved to be adjacent to busway — Existing footpaths retained — Pavement and adjacent footpath reconstruction for bike lanes only on Featherston Street — Full reconstruction and streetscaping of Jervois Quay, Customhouse Quay, Cable Street, and Wakefield Street — City to Sea pedestrian bridge removed as part of a separate project, allowing additional width to accommodate a bike facility

2.2.5 P02C – BUSES CENTRE-RUNNING ON QUAYS

The P02C – Buses Centre-Running on Quays option provides a two-way busway down the middle of the Harbour Quays, replacing the existing raised median. Bike facilities are provided along the Featherston route. Figure 2-8 shows the indicative alignment and cross-section of this option.

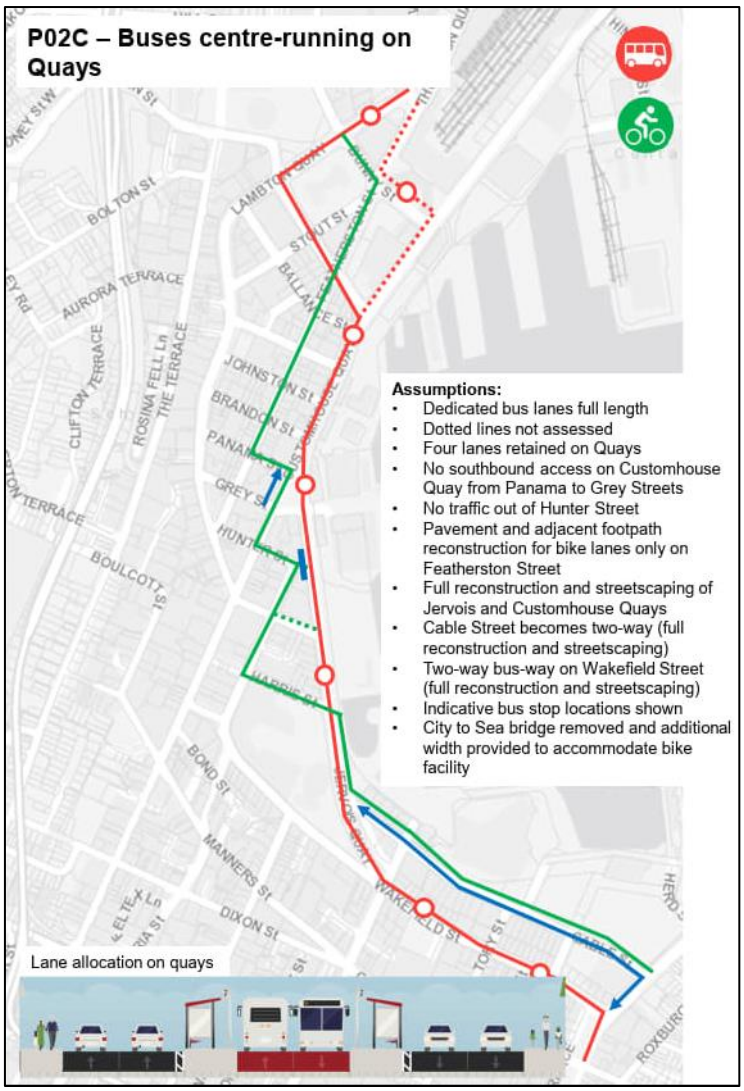

Figure 2-8: P02C – Buses Centre-Running on Quays option indicative layout

Table 2-9 provides a description of what this option means for buses, people on bikes, general traffic, and place.

Table 2-9: P02C – Buses Centre-Running on Quays option description

	P02C – BUSES CENTRE-RUNNING ON QUAYS
Buses	— Two-way buses centre-running on Wakefield Street, Jervois Quay, Customhouse Quay
Bikes	— Bikes on Featherston Street, Victoria Street, Harris Street, Jervois Quay, Cable Street — Provision of lanes through City to Sea bridge pinch-point to be resolved

	— Potential variants around southbound bike route (e.g. use of Willeston Street, Hunter Street or Wakefield Streets)
Traffic	— Four traffic lanes retained on the Quays — Busway separates opposing traffic lanes — No southbound traffic access on Customhouse Quay from Panama Street to Grey Street — No traffic access out of Hunter Street — Cable Street becomes two-way
Place and pedestrians	— Existing central median to be removed and replaced with medians between busway and traffic lanes. Medians will provide room for bus shelters at bus stops and streetscaping between bus stops. — Existing footpaths retained — Pavement and adjacent footpath reconstruction for bike lanes only on Featherston Street — Full reconstruction and streetscaping of Jervois Quay, Customhouse Quay, Cable Street, and Wakefield Street — City to Sea pedestrian bridge removed as part of a separate project, allowing additional width to accommodate a bike facility

2.2.6 P03 – BUSES ON FEATHERSTON

The P03 – Buses on Featherston option provides for buses in both directions along the Featherston Street route. Cycle facilities are provided along the Quays. Figure 2-9 shows the indicative alignment and cross-section of this option.

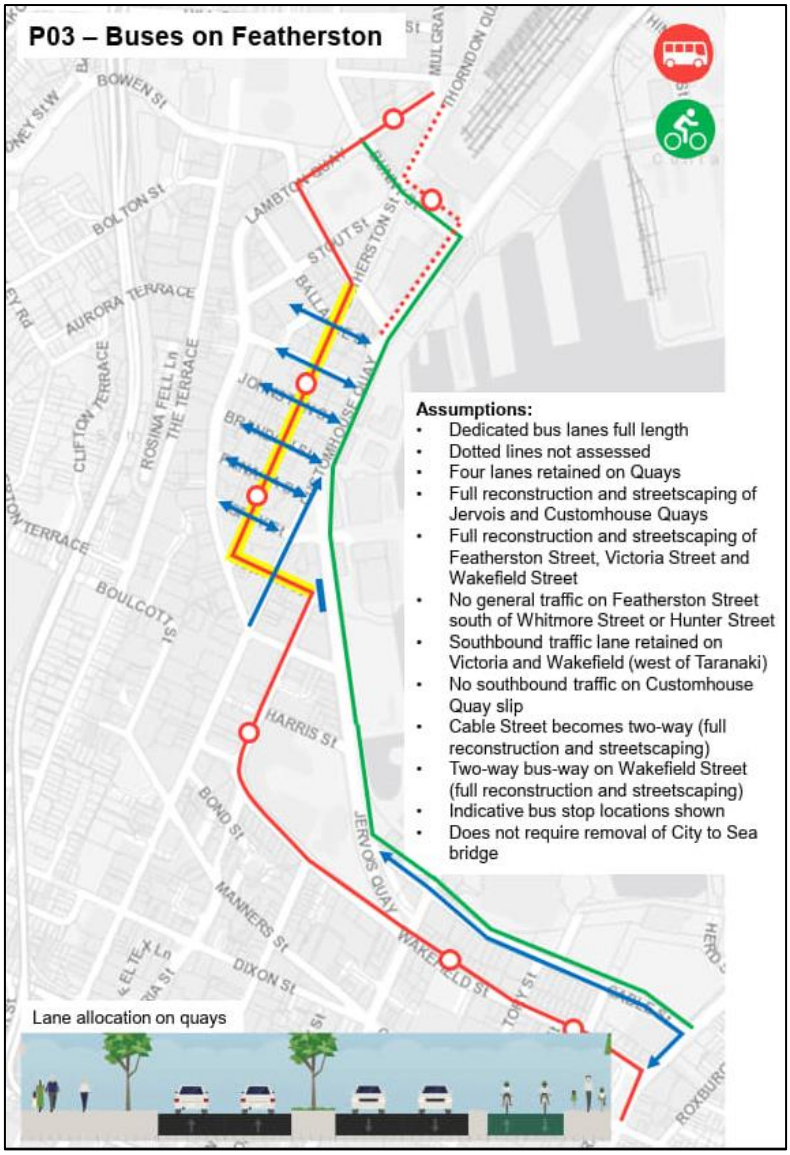

Figure 2-9: P03 – Buses on Featherston Street option indicative layout

Table 2-10 provides a description of what this option means for buses, people on bikes, general traffic and place.

Table 2-10: P03 – Buses on Featherston option description

	P03 – BUSES ON FEATHERSTON
Buses	— Two-way buses on Wakefield Street, Victoria Street, Featherston Street
Bikes	— Bikes waterfront side of the Quays
Traffic	— Four traffic lanes retained on the Quays

	— No general traffic on Featherston Street between Whitmore Street and Hunter Street — No general traffic on Hunter Street — Southbound traffic lane retained on Victoria Street and Wakefield Street — No southbound traffic access on Customhouse Quay slip — Variants with and without converting Cable Street to two-way for general traffic — Cable Street becomes two-way
Place and pedestrians	— Central median with trees retained in its existing location — Footpath reconstruction and streetscaping of Jervois Quay, Customhouse Quay, and Cable Street — Full reconstruction and streetscaping of Featherston Street, Victoria Street, and Wakefield Street — Removal of the City to Sea bridge is not required

2.2.7 P04A – BUSES AND BIKES CITYSIDE ON QUAYS

The P04A – Buses and Bikes Cityside on Quays option provides both a two-way busway and a two-way bike facility on the Harbour Quays. Both are located on the cityside of the Quays corridor. Three traffic lanes are allowed for. Figure 2-10 shows the indicative alignment and cross-section of this option.

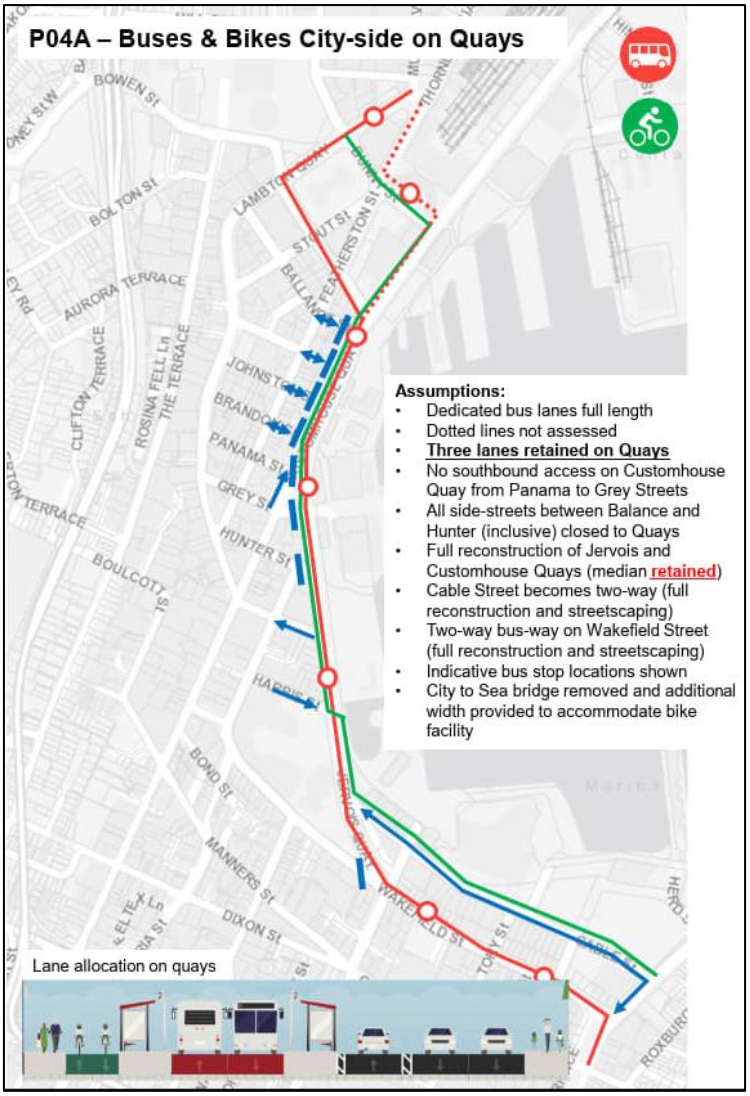

Figure 2-10: P04A – Buses and Bikes Cityside on Quays option indicative layout

Table 2-11 provides a description of what this option means for buses, people on bikes, general traffic and place.

Table 2-11: P04A – Buses and Bikes Cityside on Quays option description

	P04A – BUSES AND BIKES CITYSIDE ON QUAYS
Buses	— Two-way buses cityside on Quays — Two-way busway on Wakefield Street
Bikes	— Bikes cityside of the Quays, between footpath and busway
Traffic	— Three traffic lanes retained on the Quays

	— No southbound access on Customhouse Quay from Panama Street to Grey Street — All side streets between Balance Street and Hunter Street (inclusive) closed to Quays — Cable Street becomes two-way
Place and pedestrians	— Central median with retained in its existing location, but with some tree removal to allow for bus stops — Full reconstruction and streetscaping of Cable Street and Wakefield Street — City to Sea pedestrian bridge removed as part of a separate project, allowing additional width to accommodate a bike facility

2.2.8 P04B – BUSES CITYSIDE AND BIKES WATERFRONT SIDE ON QUAYS

The P04B – Buses Cityside and Bikes Waterfront Side on Quays option provides both a two-way busway and a two-way bike facility on the Harbour Quays. The busway is on the cityside while the bike facility is on the waterfront side of the Quays corridor. The central median is relocated, and four traffic lanes are allowed for. Figure 2-11 shows the indicative alignment and cross-section of this option.

Option P04B has many possible variants – e.g. could include fewer lanes and more trees / footpath etc. This option is a proxy for those many variants.

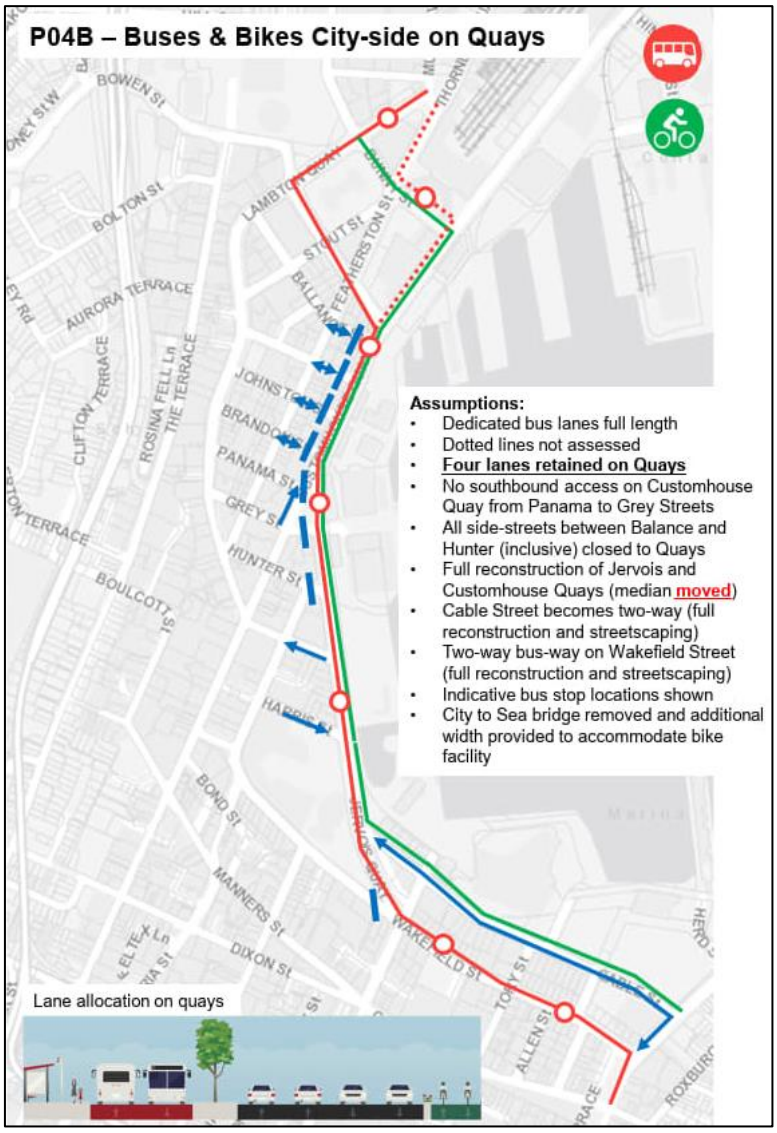

Figure 2-11: P04B – Buses Cityside and Bikes Waterfront Side on the Quays option indicative layout

Table 2-12 provides a description of what this option means for buses, people on bikes, general traffic and place.

Table 2-12: P04B – Buses Cityside and Bikes Waterfront Side on Quays option description

	P04B – BUSES CITYSIDE AND BIKES WATERFRONT SIDE ON QUAYS
Buses	— Two-way buses cityside on Quays

	— Two-way busway on Wakefield Street
Bikes	— Bikes waterfront side of the Quays, adjacent to footpath
Traffic	— Four traffic lanes retained on the Quays — No median between opposing traffic lanes — No southbound access on Customhouse Quay from Panama Street to Grey Street — All side streets between Balance Street and Hunter Street (inclusive) closed to Quays — Cable Street becomes two-way
Place and pedestrians	— Full reconstruction and streetscaping of Jervois Quay and Customhouse Quay — Full reconstruction and streetscaping of Cable Street and Wakefield Street — Existing central median moved city side to provide space for bus stops between busway and general traffic lanes — City to Sea pedestrian bridge removed as part of a separate project, allowing additional width to accommodate a bike facility

2.2.9 SUMMARY OF PERMANENT OPTIONS

Table 2-13 provides a summary of which assumptions apply to each of the permanent options.

Table 2-13: Application of assumptions to the permanent options

ASSUMPTION	P01A	P01B	P02A	P02B	P02C	P03	P04A	P04B
Dedicated bus lanes will be provided for the full length	✓	✓	✓	✓	✓	✓	✓	✓
At least four traffic lanes will be retained on the Harbour Quays	✓	✓	✓	✓	✓	✓		✓[7]
Relocation or removal of Harbour Quays median required with full reconstruction				✓	✓	✓	✓[8]	✓
Full reconstruction of Featherston route required						✓		
Partial reconstruction of Featherston route required to allow contra-flow bike facility			✓	✓	✓			
No general traffic on Featherston St south of Whitmore St and Hunter St						✓		
No southbound traffic access on Customhouse from Panama to Grey		✓						
All access to side streets between Balance St and Hunter St closed				✓			✓	✓
No traffic access out of Hunter St only			✓		✓	✓		
Two-way traffic on Cable St	✓	✓	✓	✓	✓	✓	✓	✓
Two-way busway on Wakefield St	✓	✓	✓	✓	✓	✓	✓	✓
Removal of the City to Sea bridge required	✓		✓	✓	✓		✓	✓

[7] Potential variants with fewer lanes and more provision for amenity / pedestrians could also be considered

[8] The median is retained in this option, though partially reconstruction may be required at bus stops.

3 OPTIONS ASSESSMENT

An options assessment workshop was held on Friday 19 July 2024. The purpose of this workshop was to assess the options against an agreed set of criteria. A number of additional criteria were added by participants during the workshop.

3.1 ASSESSMENT CRITERIA

There were seven broad categories of assessment criteria. They were:

- Bus
- Bike
- Pedestrians
- Place
- Strategic alignment
- Effects
- Implementability

The full list of agreed assessment criteria, and their respective weightings for the interim and permanent options, for assessing the Harbour Quays options are shown in Table 3-1.

Table 3-1: Assessment criteria for interim and permanent Harbour Quays options

CATEGORY	CRITERIA	SUB-CRITERIA	WEIGHTING INTERIM	WEIGHTING (PERMANENT)
Bus	Bus performance	Improved travel time on the new route compared to the Golden Mile	15%	15%
		Improved reliability on the new route compared to the Golden Mile	15%	15%
		Passing ability at bus stops	5%	5%
	Passenger experience	Route legibility	5%	5%
		Safe access between the new route and City destinations	10%	10%
		Safe access between the new route and Waterfront destinations	5%	5%
		Convenient access to City destinations – walking distance from new stops and level of shelter on those routes	10%	10%
		Convenient access to Waterfront destinations –	5%	5%

		walking distance from new stops and level of shelter on those routes		
		General waiting environment at stop locations along the new route	10%	5%
		Seating and shelter at stop locations on the new route	10%	5%
	Other	New route is future proofed for higher-capacity public transit	0%	5%
		Alternative route – ability of the route to provide for disruption from planned and unplanned events on the Golden Mile	10%	5%
		New route increases overall bus network capacity	0%	5%
Bike	Bike connectivity	Provision of a safe and convenient alternative to the Waterfront route (Railway Station to Oriental Bay)	33%	33%
		Provision of a safe and convenient connection between northern and western routes (Thorndon Quay, Thorndon Connections, and Karori) to the wider bike network	33%	33%
		Provision of a safe and convenient connection between southern and eastern routes (Taranaki Street, Cambridge Terrace, and Oriental Parade) to the wider bike network	33%	33%
Pedestrians	Pedestrian level of service	Pedestrian level of service to new bus stop locations	10%	10%
		Pedestrian level of service along and across Featherston Street	20%	20%
		Pedestrian level of service along and across the Quays (including Wakefield and Cable)	20%	20%
	Pedestrian safety	Pedestrian safety (reduced modal conflicts) on the Waterfront	50%	50%

Place	Improved place outcomes	Improved place outcomes along the Featherston Street route	50%	25%
		Improved place outcomes along the Quays route (including Wakefield and Cable)	50%	75%
Strategic alignment	Transport strategies	Te Aro Tatou	13%	10%
		Mode shift / transport choice	50%	40%
		Bike Network Plan	13%	30%
	Place strategies	Green network plan	13%	10%
		Gehl report (2021)	13%	10%
Effects	Traffic network disruption	Traffic network disruption (impact on capacity and queuing which affects adjacent multi-modal routes)	17%	17%
		On-street parking impact	17%	17%
		Traffic safety	17%	17%
	Property access	On-street servicing and mobility	17%	17%
		Business disruption during construction	17%	17%
		Access to off-street parking and servicing	17%	17%
Implementability	Extent of physical works		10%	25%
	Alignment with project budget / ability to implement within project budget		30%	0%
	Long-term retail impact – benefits due to increased activity		0%	10%
	Social license – ability to get approval for Traffic Resolutions		25%	25%
	Alignment with / reliance on other projects (e.g. removal of City to Sea Bridge, lane closure on Wakefield Street at Te Ngākau)		20%	20%
	Construction disruption		10%	15%
	Consentability		5%	5%

3.2 INTERIM OPTIONS ASSESSMENT

Table 3-2 shows the agreed scoring for the two interim options. Option T01 scores better for bus and implementability criteria, while Option T02 scores better for bikes, pedestrians, and effects criteria. There is no score differentiation for place and strategic alignment criteria. Both options score negatively for pedestrian, effects, and implementability criteria.

A more detailed scoring matrix with scoring rationale is provided in Appendix A.

Table 3-2: Scoring matrix for interim options

SCORING CRITERIA CATEGORIES	OPTION T01	OPTION T02
Bus	0.2	-0.1
Bike	0.7	1.0
Pedestrian	-0.2	-0.1
Place	0.5	0.5
Strategic alignment	0.6	0.6
Effects	-1.2	-1.0
Implementability	-1.3	-1.9

3.3 PERMANENT OPTIONS ASSESSMENT

Table 3-3 shows the agreed scoring for the eight permanent options. The highest scoring options were P03, P04A, and P04B. These options score similarly for bus criteria, although P03 has poorer bus travel time but better catchment compared to the P04 variants. All three scored well for bikes and strategic alignment criteria. Regardless of which option is chosen the northbound bus route is the same for the interim stage of the project.

A more detailed scoring matrix with scoring rationale is provided in Appendix B.

Table 3-3: Scoring matrix for permanent options

SCORING CRITERIA CATEGORIES	P01A	P01B	P02A	P02B	P02C	P03	P04A	P04B
Bus	0.2	0.3	-0.1	0.7	0.3	0.6	0.6	0.7
Bike	2.0	2.0	1.7	1.7	1.7	2.0	2.0	2.3
Pedestrian	1.7	1.7	0.8	1.0	0.8	2.1	1.2	1.7
Place	1.3	1.3	1.0	1.8	0.3	2.0	2.3	1.5
Strategic alignment	1.3	1.3	1.3	1.5	1.3	2.0	2.2	1.8
Effects	-1.2	-1.3	-1.2	-1.5	-1.2	-2.0	-1.7	-1.5
Implementability	-1.1	-1.1	-1.7	-1.9	-2.0	-2.0	-1.4	-1.6

4 PREFERRED OPTION CONFIRMATION

A preferred option confirmation workshop was held on Monday, 29 July 2024. The purpose of this workshop was to finalise the scoring and confirmed the preferred interim and permanent options.

4.1 PREFERRED INTERIM OPTION

The preferred interim option is T01 – Split bus route. This option avoids the need for bus passengers to cross the Quays to access Golden Mile or nearby destinations. It allows both the Featherston and Quays routes to be tested for traffic and bus travel time impacts. It also avoids the added costs of providing a contra-flow bike facility along the Featherston route.

This option can proceed to the design stage. It is anticipated that this interim option will be implemented in two stages. The first stage will be to implement the bus improvements, given the urgency of having an alternative during Golden Mile construction. Improvements for people on bikes will be implemented during the second stage.

Key areas of focus for the initial stage of design should include:

- Analysis of preferred southbound route between Hunter Street and Jervois Quay (route variants identified in Figure 2-2)
- Confirm connectivity and provision of dedicated bus facilities on and north / west of Whitmore Street
- Confirm connectivity and provision of dedicated bus facilities south / east of Taranaki Street
- Consider low-cost future proofing for future bike improvements
- Consider opportunities for modal filters to remove turning traffic conflicts with buses.

4.2 PREFERRED PERMANENT OPTION

No preferred option for a permanent solution to the Harbour Quays has been arrived at. While options P03, P04A, and P04B scored highest, it was agreed amongst stakeholders that more information is needed to more robustly test the options. It was agreed that all the options tabled through this options assessment process will remain to be considered through a robust Business Case process. No options were fatally flawed based on the available information. However, available funding may mean that some options are not feasible.

While identifying the need for bike provision as part of this process, the addition of bike infrastructure may be done at a later stage and possibly under a different business case.

5 LIMITATIONS

This report ('Report') has been prepared by WSP New Zealand Limited ('WSP') exclusively for Wellington City Council ('Client') in relation to the Harbour Quays Option Assessment ('Purpose') and in accordance with the AoG Consultancy Services Order with the Client dated 1 July 2024. ('Agreement'). The findings in this Report are based on and are subject to the assumptions specified in the Report. WSP accepts no liability whatsoever for any use or reliance on this Report, in whole or in part, for any purpose other than the Purpose or for any use or reliance on this Report by any third party.

In preparing this Report, WSP has relied upon data, surveys, analyses, designs, plans and other information ('Client Data') provided by or on behalf of the Client. Except as otherwise stated in this Report, WSP has not verified the accuracy or completeness of the Client Data. To the extent that the statements, opinions, facts, information, conclusions and/or recommendations in this Report are based in whole or part on the Client Data, those conclusions are contingent upon the accuracy and completeness of the Client Data. WSP will not be liable for any incorrect conclusions or findings in the Report should any Client Data be incorrect or have been concealed, withheld, misrepresented or otherwise not fully disclosed to WSP.

APPENDIX A

INTERIM OPTIONS FULL SCORING MATRICES

Option T01				
Category	**Criteria**	**Sub-Criteria**	**Score**	**Discussion**
Bus	Bus performance	Improved travel time	1	Minor improvement one direction (compared to GM)
		Improved reliability	1	Dedicated bus lanes but interactions with left turning vehicles
		Passing ability at bus stops	1	Buses can use adjacent lane but likely to be congested
	Passenger experience	Route legibility	-3	split route and directions not logical
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	0	Similar to existing
		Convenient access (Waterfront)	1	Improvement compared to the Golden Mile
		General waiting environment	-1	Worse than Golden Mile, some shelter for both directions
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	-1	Traffic sharing lanes not aligned with long term vision
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	2	Southbound on Featherston similar capacity to Golden Mile at 60 buses per hour per direction. Northbound Quays higher capacity at 75 buses per hour per direction due to stops being located downstream of intersections
Bike	Bike performance	Alternative Waterfront route	0	Does not provide alternative south of Lagoon
		North / western routes	1	Connects NW routes with Waterfront destinations only
		South / eastern routes	1	Connects E routes with Taranaki Street
Pedestrians	Pedestrian level of service	LoS at bus stops	0	Similar to existing
		LoS Featherston	0	Similar to existing
		LoS Quays	-1	Reduced footpath widths on Cable Street at bus stops
	Pedestrian safety	Reduced conflicts	0	Reduction in bikes on Waterfront, but increase in bikes around Lagoon
Place	Improved Place outcomes	Featherston Street	0	Featherston Street shows to have less space allocated for the private motor vehicle which will improve the cycle experience parking outside bus stops maintained
		Quays	1	Generally the place function is improved across Jervois Quay with the bi-directional cycleway, wider footpaths outside of the bus stops and the introduction of a 1.4 meter wide planting strip between the cycleways and the carriageway. There will be 1 less lane of motorized traffic to cross
Strategic alignment	Transport strategies	Te Aro Tatou	0	No alignment
		Mode shift / travel choice	1	Reduced traffic capacity and improved other modes
		Bike Network Plan	0	Primary route on Quays except for Lagoon diversion
	Place strategies	Green network plan	0	Similar to existing - but creates opportunities
		GEHL Report (2021)	1	Provides for bike on Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Featherston and Wakefield
		Traffic safety	0	Similar to existing
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-2	Bus stops outside businesses on Featherston and Quays
		Off-street parking and servicing	0	Similar to existing
Implementability		Extent of physical works	-1	Targetted works on Featherston and Quays
		Alignment with project budget	-2	Cost of work unknown, potentially outside project budget
		Long term retail impact	0	Not applicable for interim outcomes
		Social licence	-1	Some percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays in favour of bikes
		Alignment with / reliance on other projects	-1	Reliance on two lanes on Featherston Street
		Construction disruption	-1	Moderate disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option T02 Category	Criteria	Sub-Criteria	Score	Discussion
Bus	Bus performance	Improved travel time	2	Improvement both directions (compared to GM)
		Improved reliability	1	Dedicated bus lanes but interactions with left turning vehicles
		Passing ability at bus stops	1	Buses can use adjacent lane but likely to be congested
	Passenger experience	Route legibility	-1	Partial split route
		Safe access (City)	-3	Pedestrians from city side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	-3	Some uncovered routes to new stop locations
		Convenient access (Waterfront)	2	Improvement compared to the Golden Mile
		General waiting environment	-1	Worse than Golden Mile, some shelter for both directions
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	-1	Traffic sharing lanes not aligned with long term vision
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	3	Quays assessed as having higher capacity than golden mile following transit capacity manual guidance due to stop being located at mid block or downstream of intersections
Bike	Bike performance	Alternative Waterfront route	0	Does not provide effective alternative
		North / western routes	2	Connects NW routes with new Victoria Street route and Golden Mile
		South / eastern routes	1	Connects E routes with Taranaki Street
Pedestrians	Pedestrian level of service	LoS at bus stops	1	Minor improvement due to less pedestrian demand on Quays
		LoS Featherston	0	Similar to existing, longer crossing distance across Featherston but improved access across side roads
		LoS Quays	-1	Reduced footpath widths on Cable Street at bus stops
	Pedestrian safety	Reduced conflicts	0	Similar to existing, minor reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	0	Featherston Street gets an improved sense of aminity with a landscape strip between the cycle lane and the traffic lane. However 2 lanes of traffic and a bi-directional cycle lane make it still somewhat tricky to cross for pedestrians.
		Quays	1	Place value is slight improved, and there is opportunities for improved place function through amenity planting etc. in between bus stops. However there are still 3 lanes of motorised traffic to cross, to get to the waterfront
Strategic alignment	Transport strategies	Te Aro Tatou	0	No alignment
		Mode shift / travel choice	1	Reduced traffic capacity and improved other modes
		Bike Network Plan	0	Primary route on Featherston except for Lagoon diversion
	Place strategies	Green network plan	0	Similar to existing
		GEHL Report (2021)	1	Provides for buses on the Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Featherston and Wakefield
		Traffic safety	0	Similar to existing
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-1	Bus stops outside businesses on Quays
		Off-street parking and servicing	0	Similar to existing
Implementability		Extent of physical works	-1	Targetted works on Featherston and Quays
		Alignment with project budget	-3	Two-way on Featherston for Bikes (alone) outside expected project budget (based on previous City Street estimates)
		Long term retail impact	0	Not applicable for interim outcomes
		Social licence	-2	High percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays
		Alignment with / reliance on other projects	-1	Reliance on two lanes on Featherston Street
		Construction disruption	-1	Moderate disruption
		Consentability	-1	Potential heritage risk at Post Office Square

APPENDIX B

PERMANENT OPTIONS FULL SCORING MATRICES

Option P01A Category	Criteria	Sub-Criteria	Score	Discussion
Bus	Bus performance	Improved travel time	1	Minor improvement one direction (compared to GM)
		Improved reliability	1	Dedicated bus lanes but interactions with left turning vehicles
		Passing ability at bus stops	1	Buses can use adjacent lane but likely to be congested
	Passenger experience	Route legibility	-2	Partial split route and directions not logical
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	0	Similar to existing
		Convenient access (Waterfront)	1	Improvement compared to the Golden Mile
		General waiting environment	-1	Worse than Golden Mile, some shelter for both directions
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	-1	Traffic sharing lanes not aligned with long term vision
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	2	Southbound on Featherston similar capacity to Golden Mile at 60 buses per hour per direction. Northbound Quays higher capacity at 75 buses per hour per direction due to stops being located downstream of intersections
Bike	Bike performance	Alternative Waterfront route	3	Provides direct alternative
		North / western routes	1	Connects NW routes with new Taranaki Street route
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	0	Similar to existing
		LoS Featherston	0	Similar to existing
		LoS Quays	1	Minor improvements in amenity along Quays
	Pedestrian safety	Reduced conflicts	3	Significant reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	2	Featherston Street shows to have less space allocated for the private motor vehicle which will improve the cycle experience. The footpaths outside of the bus stops can be widened providing opportunities for place improvements, planting etc. However this space should not be used for additional parking, that would lower the score significantly. It will be a lot easier to cross the street.
		Quays	1	Generally the place function is improved across Jervois Quay with the bi-directional cycleway, wider footpaths outside of the bus stops and the introduction of a 1.4 meter wide planting strip between the cycleways and the carriageway. There will be 1 less lane of motorized traffic to cross
Strategic alignment	Transport strategies	Te Aro Tatou	0	No alignment
		Mode shift / travel choice	2	Reduced traffic capacity and improved other modes
		Bike Network Plan	1	Primary route on Quays nothing on Featherston
	Place strategies	Green network plan	1	Opportunity for increased greening on Featherston Street
		GEHL Report (2021)	1	Minor amenity improvements + bikes on Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Featherston and Wakefield
		Traffic safety	0	Similar to existing
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-2	Bus stops outside businesses on Featherston and Quays
		Off-street parking and servicing	0	Similar to existing
Implementability		Extent of physical works	-1	Targetted works on Featherston and Quays, Full reconstruction on Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	2	Activation of Featherston Street and south side of Quays and Wakefield Street
		Social licence	-1	Some percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays in favour of bikes
		Alignment with / reliance on other projects	-2	Reliance on two lanes on Featherston Street and removal of City to Sea Bridge
		Construction disruption	-2	Moderate disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option P01B				
Category	**Criteria**	**Sub-Criteria**	**Score**	**Discussion**
Bus	Bus performance	Improved travel time	1	Minor improvement one direction (compared to GM)
		Improved reliability	1	Dedicated bus lanes but interactions with left turning vehicles
		Passing ability at bus stops	1	Buses can use adjacent lane but likely to be congested
	Passenger experience	Route legibility	-2	Partial split route and directions not logical
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	0	Similar to existing
		Convenient access (Waterfront)	1	Improvement compared to the Golden Mile
		General waiting environment	-1	Worse than Golden Mile, some shelter for both directions
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	-1	Traffic sharing lanes not aligned with long term vision
		Alternative route	3	Provides three separate bus corridors
		Network capacity	2	Southbound on Featherston similar capacity to Golden Mile at 60 buses per hour per direction. Northbound Quays higher capacity at 75 buses per hour per direction due to stops being located downstream of intersections
Bike	Bike performance	Alternative Waterfront route	3	Provides direct alternative
		North / western routes	1	Connects NW routes with new Taranaki Street route
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	0	Similar to existing
		LoS Featherston	0	Similar to existing
		LoS Quays	1	Minor improvements in amenity along Quays
	Pedestrian safety	Reduced conflicts	3	Significant reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	2	Featherston Street shows to have less space allocated for the private motor vehicle which will improve the cycle experience. The footpaths outside of the bus stops can be widened providing opportunities for place improvements, planting etc. However this space should not be used for additional parking, that would lower the score significantly. It will be a lot easier to cross the street.
		Quays	1	Generally the place function is improved across Jervois Quay with the bi-directional cycleway, wider footpaths outside of the bus stops and the introduction of a 1.4 meter wide planting strip between the cycleways and the carriageway. There will be 1 less lane of motorized traffic to cross
Strategic alignment	Transport strategies	Te Aro Tatou	0	No alignment
		Mode shift / travel choice	2	Reduced traffic capacity and improved other modes
		Bike Network Plan	1	Primary route on Quays nothing on Featherston
	Place strategies	Green network plan	1	Opportunity for increased greening on Featherston Street
		GEHL Report (2021)	1	Minor amenity improvements + bikes on Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-3	Parking removed on both sides of Quays, Wakefield (north) and Cable Street and one side of Featherston, Victoria and Wakefield
		Traffic safety	0	Similar to existing
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-2	Bus stops outside businesses on Featherston and Quays
		Off-street parking and servicing	0	Similar to existing
Implementability		Extent of physical works	-1	Targetted works on Featherston and Quays, Full reconstruction on Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	2	Activation of Featherston Street and south side of Quays and Wakefield Street
		Social licence	-1	Some percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays in favour of bikes
		Alignment with / reliance on other projects	-2	Reliance on two lanes on Featherston Street, Wakefield Street (north) open and removal of City to Sea Bridge
		Construction disruption	-2	Moderate disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option P02A Category	Criteria	Sub-Criteria	Score	Discussion
Bus	Bus performance	Improved travel time	2	Improvement both directions (compared to GM)
		Improved reliability	1	Dedicated bus lanes but interactions with left turning vehicles
		Passing ability at bus stops	1	Buses can use adjacent lane but likely to be congested
	Passenger experience	Route legibility	0	Consistent two-way route on same corridor
		Safe access (City)	-3	Pedestrians from city side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	-3	Some uncovered routes to new stop locations
		Convenient access (Waterfront)	2	Improvement compared to the Golden Mile
		General waiting environment	-1	Worse than Golden Mile, some shelter for both directions
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	-1	Traffic sharing lanes not aligned with long term vision
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	3	Quays assessed as having higher capacity than golden mile following transit capacity manual guidance due to stop being located at mid block or downstream of intersections
Bike	Bike performance	Alternative Waterfront route	1	Provides indirect alternative
		North / western routes	2	Connects NW routes with new Taranaki Street route, Victoria Street route and Golden Mile
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	1	Minor improvement due to less pedestrian demand on Quays
		LoS Featherston	0	Similar to existing, longer crossing distance across Featherston but improved access across side roads
		LoS Quays	1	Minor improvements in amenity along Quays
	Pedestrian safety	Reduced conflicts	1	Minor reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	1	Featherston Street gets an improved sense of aminity with a landscape strip between the cycle lane and the traffic lane. However 2 lanes of traffic and a bi-directional cycle lane make it still somewhat tricky to cross for pedestrians.
		Quays	1	Place value is slight improved, and there is opportunities for improved place function through amenity planting etc. in between bus stops. However there are still 3 lanes of motorised traffic to cross, to get to the waterfront
Strategic alignment	Transport strategies	Te Aro Tatou	0	No alignment
		Mode shift / travel choice	2	Reduced traffic capacity and improved other modes
		Bike Network Plan	1	Primary route on Featherston nothing on Quays
	Place strategies	Green network plan	1	Opportunity for increased greening on Quays
		GEHL Report (2021)	1	Minor amenity improvements + buses on Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Featherston and Wakefield
		Traffic safety	-1	Changes in direction can increase crash risk in short term
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-1	Bus stops outside businesses on Quays
		Off-street parking and servicing	0	Similar to existing
Implementability		Extent of physical works	-2	Targetted works on Featherston and Quays, Full reconstruction on Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	1	Activation of south side of Quays and Wakefield Street
		Social licence	-2	High percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays
		Alignment with / reliance on other projects	-2	Reliance on two lanes on Featherston Street and removal of City to Sea Bridge
		Construction disruption	-2	Moderate disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option P02B				
Category	**Criteria**	**Sub-Criteria**	**Score**	**Discussion**
Bus	Bus performance	Improved travel time	2	Improvement both directions (compared to GM)
		Improved reliability	3	Improved reliability through dedicated corridor
		Passing ability at bus stops	1	Buses can use adjacent bus lane in event of breakdown
	Passenger experience	Route legibility	0	Consistent two-way route on same corridor
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	-1	Some uncovered routes to new stop locations
		Convenient access (Waterfront)	1	Improvement compared to the Golden Mile
		General waiting environment	-2	Worse than Golden Mile, some shelter for northbound direction, exposed position with median bus boarder
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	0	No significant restrictions
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	3	Quays assessed as having higher capacity than golden mile following transit capacity manual guidance due to stop being located at mid block or downstream of intersections
Bike	Bike performance	Alternative Waterfront route	1	Provides indirect alternative
		North / western routes	2	Connects NW routes with new Taranaki Street route, Victoria Street route and Golden Mile
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	1	Minor improvement due to less pedestrian demand on Quays
		LoS Featherston	0	Similar to existing, longer crossing distance across Featherston but improved access across side roads
		LoS Quays	2	Assume full corridor reconstruction improves amenity and crossing provision
	Pedestrian safety	Reduced conflicts	1	Minor reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	1	Featherston Street gets an improved sense of aminity with a landscape strip between the cycle lane and the traffic lane. However 2 lanes of traffic and a bi-directional cycle lane make it still somewhat tricky to cross for pedestrians.
		Quays	2	This option creates a lot of opportunity for improve amenity and place fucntion along the bus corridor bewteen bus stops. Crossing 4 lanes of traffic will be a lot easier. Crossing 2 lanes of busses might not be to hard either. There is however also a loss of planting in the median. However that median planting has no public access.
Strategic alignment	Transport strategies	Te Aro Tatou	2	Restricted vehicle access aligned with principles
		Mode shift / travel choice	2	Reduced traffic capacity and improved other modes
		Bike Network Plan	1	Primary route on Featherston nothing on Quays
	Place strategies	Green network plan	1	Opportunity for increased greening on Quays
		GEHL Report (2021)	1	Minor amenity improvements + buses on Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Featherston and Wakefield
		Traffic safety	-1	Changes in direction can increase crash risk in short term
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-1	Bus stops outside businesses on Quays
		Off-street parking and servicing	-2	Reduced access from Quays (longer routes)
Implementability		Extent of physical works	-3	Targetted works on Featherston, full reconstruction on Quays, Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	1	Activation of south side of Quays and Wakefield Street
		Social licence	-2	High percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays
		Alignment with / reliance on other projects	-2	Reliance on two lanes on Featherston Street and removal of City to Sea Bridge
		Construction disruption	-2	High disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option P02C				
Category	**Criteria**	**Sub-Criteria**	**Score**	**Discussion**
Bus	Bus performance	Improved travel time	2	Improvement both directions (compared to GM)
		Improved reliability	3	Improved reliability through dedicated corridor
		Passing ability at bus stops	1	Buses can use adjacent bus lane in event of breakdown
	Passenger experience	Route legibility	0	Consistent two-way route on same corridor
		Safe access (City)	-2	Pedestrians from city side have to cross one direction of traffic, concerns about safety for people jaywalking to not miss bus
		Safe access (Waterfront)	-2	Pedestrians from Waterfront side have to cross one direction of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	-3	Some uncovered routes to new stop locations
		Convenient access (Waterfront)	2	Improvement compared to the Golden Mile
		General waiting environment	-3	Worse than Golden Mile, exposed position with median bus boarder in both directions
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	0	No significant restrictions
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	3	Quays assessed as having higher capacity than golden mile following transit capacity manual guidance due to stop being located at mid block or downstream of intersections
Bike	Bike performance	Alternative Waterfront route	1	Provides indirect alternative
		North / western routes	2	Connects NW routes with new Taranaki Street route, Victoria Street route and Golden Mile
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	1	Minor improvement due to less pedestrian demand on Quays
		LoS Featherston	0	Similar to existing, longer crossing distance across Featherston but improved access across side roads
		LoS Quays	1	Assume full corridor reconstruction improves amenity and crossing provision but pedestrian still next to traffic
	Pedestrian safety	Reduced conflicts	1	Minor reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	1	Featherston Street gets an improved sense of aminity with a landscape strip between the cycle lane and the traffic lane. However 2 lanes of traffic and a bi-directional cycle lane make it still somewhat tricky to cross for pedestrians.
		Quays	0	footpath widths on the street edge are reduced and the amenity planting in the centre is removed. There is some opportunity for amenity planting in the centre, but it doesn't really contribute to the footpaths on the street edge.
Strategic alignment	Transport strategies	Te Aro Tatou	0	No alignment
		Mode shift / travel choice	2	Reduced traffic capacity and improved other modes
		Bike Network Plan	1	Primary route on Featherston nothing on Quays
	Place strategies	Green network plan	1	Opportunity for increased greening on Quays
		GEHL Report (2021)	1	Minor amenity improvements + buses on Quays
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Featherston and Wakefield
		Traffic safety	-1	Changes in direction can increase crash risk in short term
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	0	No bus stops outside businesses
		Off-street parking and servicing	-1	Reduced access from Quays (right turns) assumed
Implementability		Extent of physical works	-3	Targetted works on Featherston, full reconstruction on Quays, Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	0	Limited activation opportunity
		Social licence	-2	High percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays
		Alignment with / reliance on other projects	-2	Reliance on two lanes on Featherston Street and removal of City to Sea Bridge
		Construction disruption	-2	High disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option P03				
Category	**Criteria**	**Sub-Criteria**	**Score**	**Discussion**
Bus	Bus performance	Improved travel time	1	Minor improvement both directions (compared to GM)
		Improved reliability	2	Improved reliability through dedicated corridor. However frequent intersections along route
		Passing ability at bus stops	1	Buses can use adjacent bus lane in event of breakdown
	Passenger experience	Route legibility	0	Consistent two-way route on same corridor
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-2	Pedestrians from Waterfront side have to cross both directions of traffic
		Convenient access (City)	0	Similar to existing
		Convenient access (Waterfront)	0	Similar to existing
		General waiting environment	0	Similar to Golden Mile
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	-1	Tight radii may retrict higher-capacity vehicles
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	2	Similar capacity to manners st due to bus stops located close to intersections
Bike	Bike performance	Alternative Waterfront route	3	Provides direct alternative
		North / western routes	1	Connects NW routes with new Taranaki Street route
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	0	Similar to existing
		LoS Featherston	1	Assume full corridor reconstruction improves amenity and crossing provision
		LoS Quays	2	Potential for wider footpaths however could be politically difficult to implement
	Pedestrian safety	Reduced conflicts	3	Significant reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	2	Significant impovement to the place function of Featherston, Victoria and to a slightly lesser degree for Wakefield. However side streets would still be difficult to cross
		Quays	2	Significant improvement of the Quays, wider footpaths and a lot of opportunity for place improvements. Central median planting is retained.
Strategic alignment	Transport strategies	Te Aro Tatou	1	Restricted vehicle access aligned with principles
		Mode shift / travel choice	3	Significantly reduced traffic capacity and improved other modes
		Bike Network Plan	1	Primary route on Quays nothing on Featherston
	Place strategies	Green network plan	2	Opportunity for increased greening on Quays & Featherston
		GEHL Report (2021)	2	Moderate amenity improvements + bikes on Quays
Effects	Traffic	Transport network disruption	-3	Significant reduction in capacity on Quays + reduced capacity on Featherston Streeet , LGWM modelling of Quays suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-3	Parking removed on both sides of Quays, Featherston, Victoria and Wakefield (north) and one side of Wakefield and Cable
		Traffic safety	-1	Changes in direction can increase crash risk in short term
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-3	Bus stops outside businesses on Featherston both sides
		Off-street parking and servicing	-1	Changed access to side streets
Implementability		Extent of physical works	-3	Full reconstruction on Featherston, Quays, Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	2	Activation of Featherston Street and south side of Quays and Wakefield Street
		Social licence	-3	Significant percieved parking loss on and business disruption on Featherston Street at a time when businesses are struggling, loss of traffic capacity on Quays
		Alignment with / reliance on other projects	-2	Reliance on two lanes on Featherston Street, Wakefield Street (north) open
		Construction disruption	-2	High disruption
		Consentability	0	No risks identified

Option P04A Category	Criteria	Sub-Criteria	Score	Discussion
Bus	Bus performance	Improved travel time	2	Improvement both directions (compared to GM)
		Improved reliability	3	Improved reliability through dedicated corridor
		Passing ability at bus stops	1	Buses can use adjacent bus lane in event of breakdown
	Passenger experience	Route legibility	0	Consistent two-way route on same corridor
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	-1	Some uncovered routes to new stop locations
		Convenient access (Waterfront)	1	Improvement compared to the Golden Mile
		General waiting environment	-2	Worse than Golden Mile, some shelter for northbound direction, exposed position with median bus boarder
		Seating and shelter	-1	May not be able to be provided at all locations without more substantial cross-section reconstruction
	Other	Future proofing	-1	As per above, limited space for longer platforms in future
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	3	Quays assessed as having higher capacity than golden mile following transit capacity manual guidance due to stop being located at mid block or downstream of intersections
Bike	Bike performance	Alternative Waterfront route	2	Provides direct alternative, but less connectivity to Waterfront destinations
		North / western routes	2	Connects NW routes with new Taranaki Street route and northern CBD
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	-2	Reduced due to conflicts with bikes on adjacent path
		LoS Featherston	0	Similar to existing
		LoS Quays	2	Minor improvements in amenity + further separation from traffic partially offset by having to cross three separate carriageways
	Pedestrian safety	Reduced conflicts	2	Moderate reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	0	no change
		Quays	3	Significant reduction in traffic lanes with pedestrianson city side of the Quays being separated from vehicles by cycleway and busway. Good opportunities for enhanced landscaping on central islands.
Strategic alignment	Transport strategies	Te Aro Tatou	2	Restricted vehicle access aligned with principles
		Mode shift / travel choice	3	Significantly reduced traffic capacity and improved other modes
		Bike Network Plan	2	Primary route on Featherston side of Quays
	Place strategies	Green network plan	0	Similar to existing
		GEHL Report (2021)	2	Buses and bikes on Quays (less traffic) with enhanced greening
Effects	Traffic	Transport network disruption	-3	Very significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Wakefield
		Traffic safety	-2	Two-way in current southbound carriageway results in increased head-on risk
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-1	Bus stops outside businesses on Quays
		Off-street parking and servicing	-1	Changed access to side streets
Implementability		Extent of physical works	-1	Targetted works on Quays, Full reconstruction on Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	1	Activation of south side of Quays and Wakefield Street
		Social licence	-3	High percieved loss of traffic capacity on Quays
		Alignment with / reliance on other projects	0	No reliance
		Construction disruption	-3	High disruption
		Consentability	-1	Potential heritage risk at Post Office Square

Option P04B Category	Criteria	Sub-Criteria	Score	Discussion
Bus	Bus performance	Improved travel time	2	Improvement both directions (compared to GM)
		Improved reliability	3	Improved reliability through dedicated corridor
		Passing ability at bus stops	1	Buses can use adjacent bus lane in event of breakdown
	Passenger experience	Route legibility	0	Consistent two-way route on same corridor
		Safe access (City)	0	Similar to existing
		Safe access (Waterfront)	-3	Pedestrians from Waterfront side have to cross both directions of traffic, concerns about safety for people jaywalking to not miss bus
		Convenient access (City)	-1	Some uncovered routes to new stop locations
		Convenient access (Waterfront)	1	Improvement compared to the Golden Mile
		General waiting environment	-2	Worse than Golden Mile, some shelter for northbound direction, exposed position with median bus boarder
		Seating and shelter	0	Expected to be able to be provided at all indicative locations (will require civil works)
	Other	Future proofing	0	No significant restrictions
		Alternative route	2	Provides bus priority route separate to Golden Mile
		Network capacity	3	Quays assessed as having higher capacity than golden mile following transit capacity manual guidance due to stop being located at mid block or downstream of intersections
Bike	Bike performance	Alternative Waterfront route	3	Provides direct alternative
		North / western routes	2	Connects NW routes with new Taranaki Street route and northern CBD
		South / eastern routes	2	Connects E routes with Taranaki Street and both S+E routes with northern CBD
Pedestrians	Pedestrian level of service	LoS at bus stops	0	Minor improvement due to less pedestrian demand on Quays, but footpath narrowing at bus stops
		LoS Featherston	0	Similar to existing
		LoS Quays	1	Reduction in traffic lanes, improved footpath but bus stops using footpath with shop awnings
	Pedestrian safety	Reduced conflicts	3	Significant reduction in bikes on Waterfront
Place	Improved Place outcomes	Featherston Street	0	no change
		Quays	2	Significant reduction in traffic lanes with pedestrianson city side of the Quays being separated from vehicles by cycleway and busway. Opportunity to plant on central median when not used for bus stop/ turning lane
Strategic alignment	Transport strategies	Te Aro Tatou	2	Restricted vehicle access aligned with principles
		Mode shift / travel choice	2	Significantly reduced traffic capacity and improved other modes
		Bike Network Plan	2	Primary route on Waterfribt side of Quays
	Place strategies	Green network plan	0	Net loss of greening on Quays
		GEHL Report (2021)	2	Buses and bikes on Quays (less traffic) with reduced greening
Effects	Traffic	Transport network disruption	-2	Significant reduction in capacity , LGWM modelling suggested 20-30% reduction in demand required, PT capacity not available to take all of the removed traffic.
		On-street parking impact	-2	Parking removed on both sides of Quays and Cable Street and one side of Wakefield
		Traffic safety	-2	Two-way in current southbound carriageway results in increased head-on risk
	Property access	On-street servicing and mobility	-1	Assume located to side streets
		Business disruption	-1	Bus stops outside businesses on Quays
		Off-street parking and servicing	-1	Changed access to side streets
Implementability		Extent of physical works	-2	Full reconstruction on Quays, Cable and Wakefield
		Alignment with project budget	0	Unknown depedent on outcomes of business case
		Long term retail impact	1	Activation of south side of Quays and Wakefield Street
		Social licence	-2	Moderate percieved loss of traffic capacity on Quays, high percieved loss of greening
		Alignment with / reliance on other projects	-1	Reliance on removal of City to Sea Bridge
		Construction disruption	-3	High disruption
		Consentability	-1	Potential heritage risk at Post Office Square

APPENDIX C

VEHICLE TRACKING

We have tested the vehicle tracking of an 18m articulated vehicle traveling at 15kmph southbound along the Featherston Street route. Figure 0-1 shows the intersections where vehicle tracking has been checked. This is an indicative check which can be further verified during the design phase.

Figure 0-1: Intersections where vehicle tracking of an 18m articulated vehicle has been undertaken (blue line represents the preferred interim option bus route)

Lambton Quay / Whitmore Street intersection

Figure 0-2 shows the vehicle tracking of a vehicle turning left from Lambton Quay to Whitmore Street. The vehicle tracking appears to be acceptable with no kerb changes required.

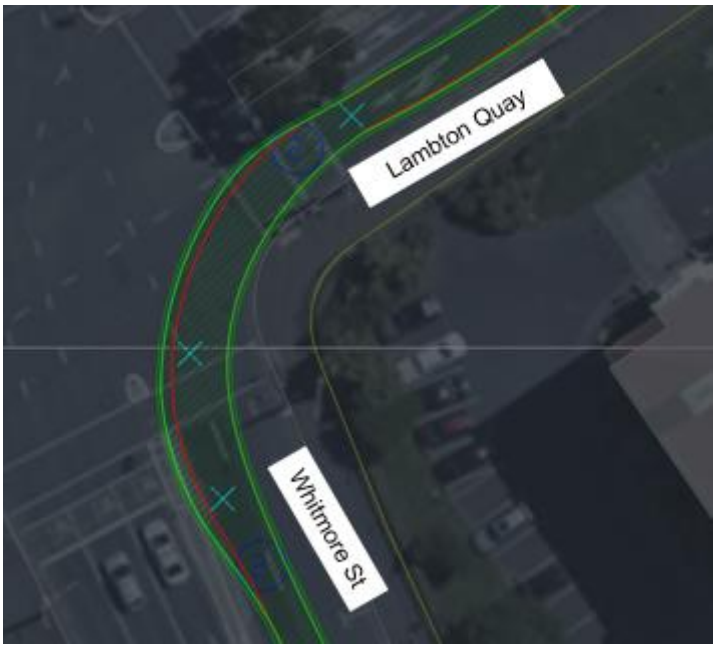

Figure 0-2: Vehicle tracking right-turn from Lambton Quay on to Whitmore Street

Whitmore Street / Featherston Street

Figure 0-3 shows the vehicle tracking of a vehicle turning right from Whitmore Street to Featherston Street. The vehicle tracking appears to be acceptable with no kerb changes required.

Figure 0-3: Vehicle tracking both ways between Whitmore Street and Featherston Street

Featherston Street / Hunter Street

Figure 0-4 shows the vehicle tracking of a vehicle turning left from Featherston Street to Hunter Street. A bus jump signal will likely be required to allow buses a head-start over the adjacent traffic lane.

Figure 0-4: Vehicle tracking for a vehicle turning right from Featherston Street to Hunter Street

Victoria Street / Hunter Street

Figure 0-5 shows the vehicle tracking of a vehicle turning right from Hunter Street to Victoria Street. The vehicle tracking appears to be acceptable with no kerb changes required.

Figure 0-5: Vehicle tracking in both directions between Victoria Street and Hunter Street

Victoria Street / Harris Street

Figure 0-6 shows the vehicle tracking of a vehicle turning left from Victoria Street to Harris Street. Kerb changes will likely be required.

Figure 0-6: Vehicle tracking for vehicles turning left from Victoria Street to Harris Street