



The Golden Mile – Utility Assessment

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1 Introduction

1.1 Scope

A high-level utility assessment of the four short listed options for the Golden Mile SSBC project has been undertaken at the concept design stage of the project. The assessment results will be fed into the Multi Criteria Assessment (MCA) processes to help identify the preferred design and will be used as a guide during the development of the preferred option. This report summaries the following key areas undertaken and the results of the assessment.

- Investigation into the existing utilities along the Golden Mile
- Consultation with the utility providers to identify future planned upgrades, operational and maintenance requirements
- A high-level utility assessment for each option

1.2 Design Options

The four short listed options are summarised in table 1 below:

Table 1 - Options summary

Option	Overview
Option 1-Reduced Traffic	 Retains private motor vehicle access on Lambton Quay, Courtenay Place and Willis Street with some restrictions Bus efficiency improvements through consolidated bus stops Some localised pedestrian improvements Closure of Mercer Street, Cuba Street, Allen Street, Blair Street
Option 2 -Bus Emphasis	 Private vehicle access removed on Lambton Quay, Courtenay Place and Willis Street Bus efficiency improvements provided (3/4 bus lanes on GM and consolidation of bus stops) Some localized pedestrian improvements (more than Option 1) Closure of Ballance Street, Stout Street, Waring Taylor Street, Johnston Street, Brandon Street, Panama Street, Mercer Street, Lower Cuba Street, Allen Street Car parking/loading/taxi bays relocated to side streets
Option 3 – Bus + Cyclist + Pedestrian Emphasis	 Private vehicle access removed on Lambton Quay, Courtenay Place and Willis Street Bus efficiency improvements provided through two dedicated bus lanes along the Golden Mile, consolidation of bus stops Some localized pedestrian improvements (more than Option 2) Closure of Ballance Street, Stout Street, Waring Taylor Street, Johnston Street, Brandon Street, Panama Street, Mercer Street, Cuba Street, Tory Street (both approaches), Allen Street, Blair Street Car parking/loading/taxi bays relocated to side streets Provision of on-road cycle lanes on Lambton Quay and Courtenay Place.
Option 4 – Reduced Traffic + Bus Emphasis	 Private vehicle access removed on Lambton Quay, Courtenay Place and Willis Street except loading vehicles, Taxis Bus efficiency improvements provided (3/4 bus lanes on GM and consolidation of bus stops) Provision of Loading/taxi bays on GM Some localized pedestrian improvements (similar to Option 2) Closure of Ballance Street, Stout Street, Waring Taylor Street, Johnston Street, Brandon Street, Panama Street, Mercer Street, Cuba Street, Allen Street, Blair Street Option to provide for Wellington City Council (WCC) Strategic Cycle Network on Courtenay Place.

The assessment has been based on the Concept Design drawings for the four options which were completed on 10 September 2020.

1.3 Methodology

The existing utilities have been investigated in accordance with the following methodology.

- Identify all affected utility providers within the project area and request plans from the BeforeUdig service.
- Collect both hard and electronic copies of the services plans and prepare the existing services drawings for each option
- Identify key utility contact personnel and initiate discussions .
- Consult with utility providers regarding planned utility upgrades and operational and maintenance requirements Identify existing services which would be affected by the design options •
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2 Utility Data Collection

2.1 BeforeUdig

Services plans for the area of interest were requested via BeforeUdig. The BeforeUdig service listed the following service providers within the project area.

- Powerco Ltd (Gas)
- Nova Gas
- Wellington Electricity
- Chorus Ltd
- Vital Ltd (CityLink Ltd)
- Vector Communications Ltd
- Vodafone NZ Ltd
- Wellington Water Limited

The services identified in this report and the services drawing are based on the services plans obtained through BeforeUdig. The services drawings are found in Appendix A. Unmarked or private services in the project area have not been identified.

2.2 Key contacts

Key contacts of the utility providers within the project area were identified through the Wellington City Council website and consultation was carried out with the providers via e-mail. They were provided with a summary of the project and were requested to provide information about future upgrade works and operational and maintenance requirements to their assets.

Organisation	Contact details
Powerco Ltd (Gas)	0800 769 372 ProjectOffice.Gas@powerco.nz
Nova Gas (Wellington)	Bruce McNaught 04 232 3795 027 837 6920 plans@novaenergy.co.nz
Wellington Electricity (power cables & poles)	Paul Stent 04 915 6124 pstent@welectiricity.co.nz
Chorus Ltd	Waata Hipango 021 501 639 Waata.hipango@chorus.co.nz
Vital Ltd (CityLink Ltd)	Graeme Norton 09 978 8279 Vectorcomms.co.nz/contact-us
Vodafone NZ Ltd	Christian White 0508 662 662 accessnetworkengineers@vodafone.com
Wellington Water Ltd	Tony Jaegers 04 912 4568 021 306 094 Tony.jaegers@wellingtonwater.co.nz

Table 2 – Utilities contacts

3 Existing Utility Services

The services drawings were prepared based on the data provided by the utility companies. These are collated on drawings 310203714-01-001-G111 to 310203714-04-001-G713 and have been provided in Appendix A.

3.1 Water supply

3.1.1 Lambton Quay

Three watermains run underneath the Lambton Quay carriageway. Two of these watermains are located on the western side of the road. One of the watermains is located along the building frontage. The two watermains underneath the carriageway are located further away from the kerb and footpath for most of the corridor, however the pipes run very close to the footpath at the two locations listed below. The depth of the watermains are not recorded on the plans provided and will need to be verified during the design phase.

- Northern kerb of Lambton Quay between Mansons Lane and 120 Lambton Quay;
- Southern kerb of Johnston Street at its intersection with Lambton Quay.

3.1.2 Wills Street

Two watermains are present on Wills Street. Both watermains run along the kerb with pipe connections between watermains and properties. The watermains are mainly located underneath the kerbside lanes on both sides of the road. The depths of the pipes have not been provided by the service provider and will need to be verified during the design phase.

3.1.3 Manners Street

Two watermains run underneath the Manners Street carriageway. One runs along the northern kerb of Manners Street and goes beneath the footpath at the two locations listed below, while the other is located underneath the traffic lanes. There are existing water supply pipes beneath the footpaths on both sides of the road to connect the watermains to properties. The depth of the watermains are not recorded on the plans and will need to be verified during the design phase.

- Northern kerb of Manners Street at Victoria Street / Manners Street intersection
- Northern kerb of Manners Street outside 55 Manners Street

3.1.4 Courtenay Place

Two watermains present on Courtenay Place. One runs along the northern kerb on Courtenay Place and goes under the footpath from 34 Courtenay Place to the eastern end of the road. The other pipe runs along the southern kerb on Courtenay Place and runs beneath the walkway from 77 Courtenay Place to the western end of the road. The depths of the watermains are not recorded on the plans provided and will need to be verified during the design phase.

3.2 Wastewater

3.2.1 Lambton Quay

Wastewater pipes are underneath the northern kerb of Lambton Quay as shown on the plan, and they connect to the manholes installed at the kerbside.

3.2.2 Wills Street

Wastewater pipes are shown underneath the northern kerb of Wills Street and in the middle of the carriageway and provide connections between manholes.

3.2.3 Manners Street

Wastewater pipes run underneath the southern kerb of Manners Street.

3.2.4 Courtenay Place

Wastewater pipes runs underneath the northern footpath of Courtenay Place and they are shown to be some distance from the kerb.

3.3 Stormwater

3.3.1 Lambton Quay

There is a stormwater pipe present on Lambton Quay which runs beneath the southern footpath. The pipe is shown running close to the kerb at some locations. Wastewater pipes are also located under both the carriageway and walkway to connect the stormwater mains with the existing manholes on Lambton Quay. Depths of the existing stormwater pipes are unknown.

3.3.2 Wills Street

There are two stormwater mains shown on Wills Street, one under each side of the footpaths between Willeston Street and Mercer Street. For the section of Wills Street between Mercer Street and Victoria Street, the stormwater pipes run underneath the carriageway close to the kerbs. No information about the pipe depths are provided.

3.3.3 Manners Street

There is one stormwater main pipe present on Manners Street which runs along and, in a position, very close to the southern kerb. Stormwater pipes are also present to provide connection between the stormwater main and existing manholes. Depths of the pipes need to be verified during the design phase.

3.3.4 Courtenay palce

As per the stormwater plans provided, two stormwater pipes are located on Courtenay Place. One runs under the carriageway in a close position to the kerb on the northern side of the road, whilst the other runs under the footpath between the western end of the road and 77 Courtenay Place, continuing beneath the carriageway in a close position to the southern kerb. No information about the pipe depths are provided.

3.4 Gas

There are two providers of Gas: Powerco Ltd and Nova Gas. Locations of the existing gas service pipes were collected from both providers and are shown in the service drawings. No information relating to the depth of the services has been provided.

3.4.1 Lambton Quay

There are three existing gas mains owned by Powerco Ltd on Lambton Quay. Two of them run underneath the property boundaries on both sides of the road, whilst the other one runs along the northern kerb of Lambton Quay, very close to the kerb.

3.4.2 Wills Street

There are existing gas pipes owned by Powerco Ltd under the footpaths on both sides of Wills Street, which run along the property boundaries. Gas main pipes owned by Nova Energy run along the northern kerbside lane at some locations on Wills Street. The service plans show that all the gas pipes are located at some distance from the kerb.

3.4.3 Manners Street

As per the underground service plans, there are three gas main pipes that run underneath the footpaths on both sides of Manners Street. Two of them are owned by Powerco Ltd, and the other one is owned by Nova Energy. The service plans show that all the gas main pipes are located further away from the kerb, except for a few locations where the pipes intersect with the southern kerb and go beneath the carriageway.

3.4.4 Courtenay palce

The service plans show two gas main pipes installed underneath the footpaths on both sides of Courtenay place. The service plans indicate that the pipes are located further away from the kerb, except at the section between Tory Street and outside 35 Courtenay Place.

3.5 Power

Service plans provided by Vector include the following types of cables and substations along the Golden Mile. No cable depth information has been provided by the service providers.

- 33,000 Volt cables (33kV)
- 11,000 Volt cables (11kV)
- Streetlight cables

3.5.1 Lambton Quay

The service plans provided do not indicate any 33 kV power cables on Lambton Quay. Most of the power service cables shown in the plan run underneath the footpath along the property boundaries on both sides of the road, except at the locations of parallel on-street parking areas on Lambton Quay. The power cables at the parking areas runs close to the northern/southern kerbs. Existing lamp posts are shown close to the kerbs on both sides of Lambton Quay.

3.5.2 Wills Street

Power cables are generally shown underneath existing footpaths on Wills Street, except at the section between Willeston Street and 15 Wills Street where the 11kV power cable runs closely along the northern kerb of the road. Existing lamp posts are located on the southern footpath close to the kerb.

3.5.3 Manners Street

No 33kV power cables are shown on Manners Street as per the service plans. From the information provided, existing power cables on the northern side of the road run underneath the footpath along the property boundaries, whilst the cables on the southern side run along the carriageway of the kerbside lane. None of them are shown to be close to the kerbs. There are streetlight posts installed near the kerbs on both sides of the road.

3.5.4 Courtenay Place

Service plans provided do not show any 33kV power cables on Courtenay Place. There are however other power cables installed underneath both the footpaths and carriageways. The cables are shown to be running close to the kerbs.

3.6 Telecommunications

There are four telecommunication providers in the Golden Mile project area. They are Chorus, Vodafone, Vector Communications, and Vital (previously called Citylink). Service plans were obtained from all four providers. No information about the depth of the cables were received, so will need to be verified during the design phase.

3.6.1 Lambton Quay

As per the underground telecommunication service plans, telecommunication cables run underneath both the footpath and carriageway on Lambton Quay. Most of the cables run further away from the kerb, except for the section of Lambton Quay between Brandon Street to 201 Lambton Quay, where the fibre cables of Vodafone run close to the eastern kerb.

3.6.2 Wills Street

The service plans indicate that there are telecommunication cables underneath both the footpaths and carriageway on Wills Street. Based on the service plans, Vodafone cables were shown to run closely along the southern kerb, whilst the telecommunication cables owned by Chorus and Vital run closely along the northern kerb. Other telecommunication cables either run underground in the middle of the carriageway or underneath the footpaths along the property boundaries.

3.6.3 Manners Street

Telecommunication cables were indicated under both the carriageway and footpaths. The utility plans show that most of the cables are away from the kerb, except for the fibre cables owned by Vodafone, which run closely along the northern kerb of Manners Street.

3.6.4 Courtenay Place

Utility plans shows telecommunication cables underneath both the footpaths and carriageway on Courtenay Place. The fibre cables owned by Vodafone and Vector are shown close to the northern kerb, whilst the cables owned by Chorus are shown close to the southern kerb.

4 Assessment of options

4.1 Impact of options on utilities

The assessment looked at the impact of the design options on existing utilities on each corridor. Table 3 below summarises the potential services affected on each corridor for each option.

Table 3 - Affected services

L	Option 1	
	Lambton Quay	 Potential relocations of catchpits at the following locations due to the proposed kerb extension: 2 catchpits outside 85 Lambton Quay 25 catchpits along the northern kerb on Lambton Quay between 96 Lambton Road and Lambton Quay / Panama St intersection 12 catchpits along the southern kerb on Lambton Quay between the Lambton Quay / Balance Street intersection and the Lambton Quay / Panama Street intersection The service plans show an existing water supply pipe, a main gas pipe owned by Powerco, stormwater pipes, power cables, and fibre cables owned by Vector on Balance Street at its intersection with Lambton Quay. Watermains, gas pipes, stormwater pipes and power cables are generally located at depths unlikely to be affected by kerb realignment, unless they clash with locations of new manholes and their connecting pipes. However, the fibre cables are likely to be affected by the footpath extension as they are usually laid at shallower depths. Foul sewer pipes, main gas pipes owned by Powerco Ltd, and wastewater pipes run closely along the northern kerb of Lambton Quay. These pipes are generally located at a deeper location and the likelihood of the pipes being affected by the footpath extension. The service plans show an existing water supply pipe, power cables owned by Vital close to the parallel on-street parking area on the northern side of Lambton Quay. Fibre cables or usually laid at shallower depths, so are more likely to be affected by the footpath extension. The service plans show an existing water supply pipe, power cables, fibre cables owned by Vodafone and Chorus, and a gas services pipe on Stout Street at its intersection with Lambton Quay. However, it is unlikely to be affected by the proposed construction of the new footpath. The water pipe and power cables are unlikely to be affected unless they conflicts with the locations of new manholes and their connecting pipes. There is an existing water supply pipe located clos
	Wills Street	 Potential relocations of catchpits at the following locations due to the proposed kerb extension: Two catchpits by the northern kerb of Wills St between 16 to 20 Wills Street There is an existing water supply pipe, gas service pipe owned by Powerco, power cables, fibres cables owned by Vector, Chorus, Vodafone and Vital, and foul sewer pipes on Mercer Street at its intersection with Wills Street. The Watermains, gas pipes, stormwater pipes, sewer pipes, foul sewer pipes and power cables are generally located at deeper locations. They would not be affected by kerb alignment unless they clash with the locations of new manholes and new stormwater pipes. The fibre cables are likely to be affected by footpath extension as they are usually laid at shallower depths.
	Manners Street	 The service plans shows stormwater pipes, gas service pipes, fibres cables owned by Vital, Chorus and Vector, water supply pipes and foul sewer pipes located between 58 Cuba Street and Cuba Street / Manners Street intersection. The stormwater pipes Water mains, gas pipes, foul sewer pipes and power cables are generally located at depths unlikely to be affected by kerb realignment. They would not be affected by kerb alignment unless they conflict with locations of new manholes and their connection pipes. The fibre cables are likely to be affected by the footpath extension. There is an existing gas services pipe owned by Powerco and foul sewer pipes located underneath the loading zone outside 104 Manners Street. The gas and sewer pipes are

	unlikely to be affected by the kerb extensions unless they clash with locations of new manholes and their connecting pipes.			
	Potential relocations of catchpits at the following locations due to the proposed kerb			
Courtenay Place	 extension: 10 catchpits along the southern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection 7 catchpits along the northern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection Utility plans indicates existing fibre cables owned by Chorus beneath the southern kerb of Courtenay Place and they would be impacted by the kerb build outs. There are stormwater pipes and water supply pipes beneath the northern kerb of Courtenay Place, and they are unlikely to be impacted by the footpath extension unless they clash with locations of new manholes and stormwater pipes. The service plans show existing fibre cables owned by Vodafone, water supply pipes, foul sewer pipes and power cables located underneath the angled on-street parking spaces outside 14 Courtenay Place. Vodafone fibre lines are very likely to be affected by footpath extensions. The watermains, sewer pipes and power lines would not be affected unless they clash with the locations of new manholes and connecting stormwater pipes. There is an existing stormwater pipe, water supply pipe, gas services pipes, foul sewer pipes and fibres owned by Vector beneath Blair Street at its intersection with Courtenay Place. Watermains, gas pipes, stormwater pipes, sewer pipes, foul sewer pipes and power cables at above locations would not be affected by kerb realignments unless they conflict with the locations of new manholes and the connecting pipes. However, the fibre cables would likely to be affected by the proposed improvements. 			
Option 2				
Lambton Quay	 extension: 2 catchpits outside 85 Lambton Quay 25 catchpits along the northern kerb on Lambton Quay between 96 Lambton Road and Lambton Quay / Panama St intersection 12 catchpits along the southern kerb on Lambton Quay between the Lambton Quay / Balance Street intersection and the Lambton Quay / Panama Street intersection The utility plans indicate an existing water supply pipe, main gas pipe owned by Powerco, a stormwater pipe, existing power cable and fibre cable owned by Vector on Balance Street at its intersection with Lambton Quay. •The watermain, gas pipes, sormwater pipes and power cables are unlikely to be affected by the footpath extensions unless they clash with the locations of new manholes and stormwater connection pipes. The Vector fibre cables are likely to be affected by the footpath extension as they are usually laid at shallower depths There is a foul sewer pipe, a main gas pipe owned by Powerco Ltd and wastewater pipes beneath the northern kerb of Lambton Quay. These services are unlikely to be affected by the footpath extensions of new manholes and stormwater connection pipes. Stormwater pipe and fibre cables owned by Vital laid underneath the parallel on-street parking area on the northern side of Lambton Quay. The fibre cables are very likely to be affected by the footpath extensions. The, stormwater pipe is unlikely to be affected by the footpath extensions unless it clashes with locations of new manholes and stormwater pipes. There is an existing water supply pipe, power cables, fibre cables owned by Vodafone and chorus and gas services pipe on Stout Street at its intersection with Lambton Quay. The watermain, gas pipes, power cables are unlikely to be affected by the footpath extension. There is an existing water supply pipe, gas services pipe, existing power cables, fibre owned by Vodafone, chorus and Vital underneath Johnston Street at its intersection with Lambton Quay. The watermain, gas pipes, power cab			

	connection pipes. The Vodafone fibre cables are very likely to be affected by footpath extensions.
	 There are existing water supply pipes, power cables, gas services pipes, foul sewer pipes and 11kv power cables under Panama Street at its intersection with Lambton Quay. These services are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes.
	Potential relocations of catchpits at the following locations due to the proposed kerb
Wills Street	 extension: Two catchpits by the northern kerb of Wills St between 16 to 20 Wills Street Two catchpits by the northern kerb of Boulcott Street at its intersection with Manners Street and Wills Street The utility plans shows an existing water supply pipe, gas service pipe owned by Powerco, existing power cables, fibre cables owned by Vector, Chorus, Vodafone, Vital and foul sewer pipes on Mercer Street at its intersection with Wills Street Watermains, gas pipes, power cables are unlikely to be affected by the proposed footpath widening unless they clash with locations of new manholes and stormwater connection pipes. However, the fibre cables are very likely to be affected by footpath extensions.
Manners Street	 The service plans indicate existing stormwater pipes, gas service pipes, fibres owned by Vital, Chorus, Vector, water supply pipes and foul sewer pipes located between 58 Cuba Street and Cuba Street / Manners Street intersection. Stormwater pipes and, gas pipes are unlikely to be affected by the proposed footpath widening unless they clash with locations of new manholes and stormwater connection pipes. The fibre cables are very likely to be affected by the footpath extensions. There are existing gas services pipe owned by Powerco and foul sewer pipes located underneath loading zone outside 104 Manners Street. The Powerco gas pipes and foul sewer pipes are unlikely to be affected by the proposed footpath widening unless they clash with locations of new manholes and the connecting stormwater pipes. The fibre cables are very likely to be affected by the proposed footpath extensions.
	Potential relocations of catchnits at the following locations due to the proposed kerb
Courtenay Place	 extension: 10 catchpits along the southern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection 7 catchpits along the northern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection Existing fibre cables owned by Chorus underneath the southern kerb of Courtenay Place are very likely to be impacted by the kerb build outs. Stormwater pipes and water supply pipes beneath the northern kerb of Courtenay Place are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. There are existing fibre cables owned by Vodafone, water supply pipes, foul sewer pipes and power cables located underneath the angled on-street parking spaces outside 14 Courtenay Place. The watermains, foul sewer pipes and, power cables are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The fibre cables are very likely to be affected by the footpath extensions. The service plans indicates an existing stormwater pipe, water supply pipe, gas services pipes, foul sewer pipes and fibres owned by Vector beneath Blair Street at its intersection with Courtenay Place The stormwater pipes, watermains, foul sewer pipes and, gas pipes are unlikely to be affected by the proposed footpath widening unless they clash with locations of new manholes and stormwater connection pipes. Existing power cables lies underneath the eastern kerb of Tory Street and gas services pipes runs beneath the western kerb of Tory Street. These underground services are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes.
Option 3	locations of new mannoles and stormwater connection pipes.
	Potential relocations of catchpits at the following locations due to the proposed kerb
Lambton Quay	 extension: 2 catchpits outside 85 Lambton Quay 25 catchpits along the northern kerb on Lambton Quay between 96 Lambton Road and Lambton Quay / Panama St intersection 12 catchpits along the southern kerb on Lambton Quay between the Lambton Quay / Balance Street intersection and the Lambton Quay / Panama Street intersection

	 2 catchpits along the southern kerb on Lambton Quay between the Lambton Quay / Panama Street intersection and the Lambton Quay / Featherston Street intersection There is an existing water supply pipe, main gas pipe owned by Powerco, a stormwater pipe, power cables and Vector fibre cables on Balance Street at its intersection with Lambton Quay. Watermain, stormwater pipes, power cables and gas pipes are unlikely to be affected by the proposed footpath widening unless they clash with locations of new manholes and stormwater connection pipes. The Vector fibre cables are very likely to be affected by the footpath extensions. Foul sewer pipe, the main gas pipe supplied by Powerco Ltd and the wastewater pipes run beneath the northern kerb of Lambton Quay. These sevicesare unlikely to be affected by the kerb build outs unless they clash with the locations of new manholes and stormwater
	 There are existing fibre cables owned by Chorus underneath the northern edge of the solid median outside 85 Lambton Quay and they are very likely to be affected by the proposed work
	 The service plans shows a stormwater pipe and fibre cables owned by Vital beneath the parallel on-street parking area on the northern side of Lambton Quay. The stormwater pipes are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The fibre cables are very likely to be affected by the footpath extensions. An existing water supply pipe, existing power cables, fibre cables owned by Vodafone and chorus and gas services pipe on Stout Street at its intersection with Lambton Quay are shown in the utility plans. The watermains and power cables are unlikely to be affected by
	the proposed footpath widening unless they clash with locations of new manholes and stormwater connection pipes. However, the fibre cables are very likely to be affected by the footpath extensions.
	 There is an existing water supply pipe, gas services pipe, power cables, fibre cables owned by Vodafone, chorus and Vital underneath Johnston Street at its intersection with Lambton Quay. The watermains, gas mains and power cables are unlikely to be affected by the proposed footpath extensions unless they clash with the locations of new manholes and stormwater connection pipes. The fibre cables would be affected by the kerb build outs. Existing power cables, stormwater pipe and fibre cables owned by Vodafone and power cables are shown underneath Brandon Street at its intersection with Lambton Quay. The stormwater pipes, and power cables are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The Vector fibre cables are very likely to be affected by the intersection upgrade work.
	 Existing water supply pipes, foul sewer pipes, power cables, gas services pipes and 11kV power cables are shown beneath either side of the kerb on Panama Street. The watermains, foul sewer pipes, power cables and gas pipes are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes.
	 There is are existing fibre cables owned by Vodafone beneath the southern kerb of Lambton Quay, water supply pipes, foul sewer pipes and fibres owned by Vector underneath the southern kerbside lane on Lambton Quay between Lambton Quay / Panama Street intersection and Lambton Quay / Featherston Street intersection. The fibre cables at these locations are very likely to be affected by the footpath extensions. The watermains and foul sewer pipes unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes
	 Potential relocations of catchpits at the following locations due to the proposed kerb extension: 5 catchpits by the northern kerb of Wills Street between the Wills Street / Willeston Street intersection and Wills Street / Boulcott Street intersection. 2 catchpits by the northern kerb of Boulcott Street at its intersection with Manners Street and Wills Street
Wills Street	 Utility plans shows an existing water supply pipe, gas service pipe owned by Powerco, existing power cables, fibres owned by Vector, Chorus, Vodafone, Vital and foul sewer pipes on Mercer Street at its intersection with Wills Street. The watermains, gas pipes, sewer pipes and power cables are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. All the fibre cables are very likely to be affected by the proposed improvements. Existing fibre cables owned by Vital and Chorus and foul sewer pipes are shown beneath the northern kerb of Wills Street between the Wills Street / Willeston Street intersection and

the kerb build outs. The foul sewer pipes are unlikely to be affected by footpath widening unless they clash with the locations of new manholes and stormwater connection pipes.		
the kerb build outs. The foul sewer pipes are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes.		
 Fibre lines shown underneath the southern kerb of Wills Street between the Wills Street / Willeston Street intersection and Wills Street / Boulcott Street, intersection and they are very likely to be impacted by the new footnath extension 		
 There are existing stormwater pipes, gas service pipes, fores owned by Vital, Chorus, Vector, water supply pipes and foul sewer pipes located between 58 Cuba Street and Cuba Street / Manners Street intersection The stormwater pipes, gas pipes and foul sewer pipes are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The fibre cables are very likely to be affected by the proposed work. The service plans show existing gas services pipe owned by Powerco and the foul sewer pipes located underneath the loading zone outside 104 Manners Street. The gas pipes and foul sewer pipes are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. 		
clash with the locations of new manholes and stormwater connection pipes		
 Potential relocations of catchpits at the following locations due to the proposed kerb extension: 10 catchpits along the southern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection 2 catchpits by the southern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection Existing fibre cables owned by Chorus lies beneath the southern kerb of Courtenay Place and will potentially be impacted by the kerb build out. There are stormwater pipes, water supply pipes and a wastewater pipe underneath the northern kerb of Courtenay Place and storm water pipes, power cables and fibre cables owned by Vector underneath the northern lane. The watermains, Stormwater pipes, sewer pipes and power cables are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes; The Vector fibre cables owned by Vodafone, water supply pipes, foul sewer pipes and power cables are very likely to be affected by the footpath extensions. There are fibre cables are very likely to be affected by the groposed footpath widening unless they clash with locations of new manholes and stormwater connection pipes; The Vector fibre cables are very likely to be affected by the kerb build outs. The watermains, foul, sewer pipes and power cables are unlikely to be affected by the kerb build outs. The utility plans indicate an existing stormwater pipe, water supply pipe, gas services pipes, foul sewer pipes and fibres owned by Vector beneath Blair Street at its intersection with Courtenay Place. The stormwater pipes, awater supply pipe, gas services pipes, pouser cables and stormwater pipes, water supply pipe, gas services pipes, power cables and stormwater pipes, water supply pipe, gas services pipes, power cables and stormwater pipes, water supply pipe		
 Potential relocations of catchpits at the following locations due to the proposed kerb extension: 2 catchpits outside 85 Lambton Quay 25 catchpits along the northern kerb on Lambton Quay between 96 Lambton Road and Lambton Quay / Panama St intersection 12 catchpits along the southern kerb on Lambton Quay between the Lambton Quay / Balance Street intersection and the Lambton Quay / Panama Street intersection The service plans shows an existing water supply pipe, a main gas pipe owned by Powerco, a stormwater pipe, power cables and fibre cables provided by Vector on Balance Street at its intersection with Lambton Quay. The watermain, gas pipe, stormwater pipes 		

	 they clash with the locations of new manholes and stormwater connection pipes. The fibre cables are very likely to be affected by the intersection upgrade work. A foul sewer pipe, a gas main owned by Powerco Ltd and wastewater pipes runs underneath the northern kerb of Lambton Quay are unlikely to be affected by the proposed work unless they clash with locations of new manholes and stormwater connection pipes. A stormwater pipe and fibre cables owned by Vital runs underneath the parallel on-street parking area on the northern side of Lambton Quay. The stormwater pipes is unlikely to be affected by the footpath extension unless it clashes with locations of new manholes and stormwater connection pipes The fibre cables are very likely to be affected by the kerb build outs There is an existing water supply pipe, existing power cables, fibre cables owned by Vodafone and chorus and gas services pipe on Stout Street at its intersection with Lambton. The watermain, gas pipes and power cables are very likely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The Vodafone fibre cables owned by Vodafone, chorus and Vital are shown underneath Johnston Street at its intersection with Lambton Quay. The watermain, gas pipes and power cables are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The fibre cables owned by Vodafone, chorus and Vital are shown underneath Johnston Street at its intersection with Lambton Quay. The watermain, gas pipes and power cables are very likely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and stormwater connection pipes. The fibre cables owned by Vodafone and power cables are shown underneath Johnston Street at its intersection with Lambton Quay. The watermain, gas pipes and fibre cables are very likely to be affected by the proposed fo
Wills Street	 Potential relocations of catchpits at the following locations due to the proposed kerb extension: Two catchpits by the northern kerb of Boulcott Street at its intersection with Manners Street and Wills Street There is an existing water supply pipe, gas service pipe owned by Powerco, power cables, fibre cables owned by Vector, Chorus, Vodafone, Vital and foul sewer pipes on Mercer Street at its intersection with Wills Street The watermain, gas pipes and power cables are unlikely to be affected by the proposed improvements unless they clash with locations of new manholes and stormwater connection pipes. The fibre cables are very likely to be affected during construction of wider footpaths
Manners Street	 The utility plans indicate existing stormwater pipes, gas service pipes, fibres owned by Vital, Chorus, Vector, water supply pipes and foul sewer pipes located between 58 Cuba Street and Cuba Street / Manners Street intersection. The stormwater pipes, water supply pipes, foul sewer pipes, gas pipes and power cables are unlikely to be affected by the proposed footpath widening unless they clash with the locations of new manholes and their connecting pipes. However, the fibre cables are very likely to be affected by the widening of footpaths. Existing storm water pipe located beneath the kerb of the loading zone outside 104 Manners Street is unlikely to be affected by the kerb extensions unless it clashes with locations of new manholes and their connecting pipes.
Courtenay Place	 Potential relocations of catchpits at the following locations due to the proposed kerb extension: 7 catchpits along the northern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection 5 catchpits along the northern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection 5 catchpits along the northern kerb of Courtenay Place between Taranaki Street / Courtenay Place intersection and the Cambridge Terrace / Courtenay Place intersection Existing fibre cables owned by Chorus beneath the southern kerb of Courtenay Place will potentially be impacted by the kerb build outs. There are stormwater pipes, water supply pipes and a wastewater pipe underneath the northern kerb of Courtenay Place and storm water pipes, power cables and fibre owned by Vector underneath the northern kerbside lane. The stormwater pipes, water supply pipes.

Depths of the above mentioned underground services will need to be verified during the design phase. In general water mains, sewer mains, power lines, stormwater pipes and the gas pipes are located at a depth unlikely to be affected by the footpath extensions and kerb realignments. The likelihood of those services being affected by the proposed design options is low unless they will be impacted by the locations of new manholes and their connecting pipes. Telecom cables are generally installed at a shallower depth, and as a result, are more likely to be impacted by the proposed improvements.

4.2 Utility assessment

A common scoring system has been used to compare the four options. The scoring system considers both positive and negative benefits by positive and negative scoring for High, Medium Low benefits as summarised in Table 4 below:

Table 4 - Scoring system

Scoring	Description		
3	High Positive Benefits		
2	Medium Positive Benefits		
1	Low Positive Benefits		
0	No Change in Benefits		
-1	Low Negative Benefits		
-2	Medium Negative Benefits		
-3	High Negative Benefits		

The assessment considers the impact of proposed options on utilities against the following criteria:

- Amount and extent of affected services
- Likely costs for service relocation, diversion, and protection
- Impact on constructability
- Ease of consenting, approvals from service providers

Each option has been assessed against the identified criteria above on a corridor by corridor basis using the scoring system described in Table 4 and the scoring summary is given in table 5.

Table 5 – Utility assessment scoring results

Corridor	Option 1	Option 2	Option 3	Option 4
Lambton Quay	-2	-2	-3	-2
Wills Street	-1	-2	-2	-1
Manners Street	-1	-1	-1	-1
Courtenay Place	-2	-2	-3	-3
Total	-6	-7	-8	-7

4.3 Assumptions and exclusions

- Service plans and the assessments are based on the utility plans provided by the service providers and WCC GIS data. The information may not be accurate and up to date.
- The depths of underground services are unknown. It has therefore been assumed that all underground services in the extent of footpath extensions would be affected by the work
- Proposed options require the relocation of streetlight poles and signal poles. Impact to these above ground services
 has not been assessed as part of the utility assessment.
- Each option requires the relocation of catchpits at footpath widening areas. No Stormwater assessment has been
 undertaken to identify potential impact to stormwater system.

4.4 Conclusion

All four options propose wider footpaths on Lambton Quay, Willis Street and Courtney Place. A number of side roads are proposed to be closed off and the intersection areas are proposed to be raised. These improvements will result in negative impacts on various utilities.

Option 3 proposes the widest footpaths and therefore has the highest negative benefits on the utilities. Option 2 and 3 appear to have similar negative impacts on the utilities and option 1 proposes slightly less negative impacts on existing utilities than option 2 and 3.

Other than the utilities listed in Table 3, there are manhole and various utility chamber lids and covers affected by all four options. These utility covers and lids are required to be identified for restoring to the adjacent footpath levels at the preliminary and detailed design stages of the project.

5 Future programmed utility works

During consultation with the utility providers, the following programmed utility upgrade works were identified within the project area. These works need to be coordinated between the LGWM and the utility companies.

5.1 Vital (Citylink)

Vital has an underground and overhead network along Golden Mile. There is an ongoing project to underground the existing overhead network that is attached to the old trolley bus stays. This project is due for completion in mid-2021 and Vital does not have any other major projects planned beyond mid-2021.

5.2 Wellington Water

There is a planned wastewater project in Lambton Quay from 193 Lambton Quay to Brandon Street and across to 226 Lambton Quay. Construction is planned for March to May 2022. Also, a wastewater project in Taranaki Street crossing the Manners Street / Courtenay intersection was planned for construction between February to September 2022. Potential trenching work might be carried out to repair/replace the old earthenware stormwater and wastewater pipes along the southern footpath-slip lane on Courtenay place from Kent Terrace to Allen Street.

6 Operational and maintenance requirements

In response to operational and maintenance requirements, the following comments have been received from the utility providers

6.1 Powerco

Powerco has gas infrastructure located along the Golden Mile and wider CBD and they will need to access existing services and to construct new services along the Golden Mile. The design will need to ensure that it does not affect the ongoing operation, maintenance and upgrading of the gas network, or restrict access to its network.

6.2 Vital (Citylink)

Citylink requires ongoing access to their network through the existing pits and manholes. These must remain uncovered and accessible for maintenance purposes.

6.3 Wellington Water

The main ongoing operational and maintenance requirements for Wellington Water are to maintain suitable access to operate, repair and renew the drinking water, stormwater and waste water assets such as pipes, manholes, lamphole, hole cleaning eyes, fire hydrants, and valves.

7 Recommendations and Next steps

It is recommended that the following be carried out once the preferred design option is confirmed:

- Discussions with utility providers to continue as design is progressed. Once more design information is available, hold workshops to better understand the impacts and requirements of the utility providers.
- Coordination with utility providers to ensure planned utility upgrades are undertaken co-ordinated with the Golden Mile and wider LGWM programme.
- Undertake a stormwater assessment to ensure potential fatal flaws are addressed early and are mitigated.
- At high risk locations, such as those where multiple services are likely to be affected, arrange for investigations to be carried out to accurately locate the apparatus.
- Obtain cost estimates from service providers for relocation, diversion and protection works.

Appendix A: Golden Mile - Existing Services Drawings



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Golden Mile Construction Staging V1.0

19 May 2021







Absolutely Positively Wellington City Council Me Heke Ki Põneke



The following slides outline the proposed construction phasing and access expectations.

Alternative approaches to construction phasing are possible and will result in different access and detour arrangements.



Overview

- Stage 1 undertake improvements at intersections affected by traffic rerouting
- Stage 2 Manners Street improvements
- Stage 3 Willis Street improvements
- Stage 4 Lambton Quay Improvements
- Stage 5 Courtenay Place Improvements

Key to diagrams



Bus route (Golden Mile) Bus route (branch off Golden Mile)







Road closure







Temporary bus stop



Traffic restriction





- Undertake improvements at intersections affected by traffic rerouting:
 - TBC
 - TBC
 - TBC



Stage 2 – Manners Street

The following stages are proposed:

- A. Close Cuba Street and reconfigure as two-way cul-de-sac
- B. Divert southbound buses via Mercer Street, Wakefield Street to Taranaki Street and make changes to Manners Street
- C. Remove diversion (not shown)



Stage 2A – Reconfigure Cuba Street





Stage 2B – Works on Manners Street



Stage 3 – Willis Street

The following stages are proposed:

- A. Close Willis Street to general traffic and make changes to Boulcott Street intersection
- B. Close Mercer Street and reconfigure as two-way cul-de-sac
- C. Divert southbound buses via Victoria Street and make changes to Willis Street and Willeston Street (removes access to Lambton Quay northbound for general traffic)
- D. Remove diversion (not shown)



Stage 3A – Close Willis to traffic



Stage 3B – Reconfigure Mercer Street



Stage 3C – Works on Willis Street



Stage 4 – Lambton Quay

The following stages are proposed:

- A. Divert southbound buses via Panama Street and make changes to Lambton Quay between Panama and Hunter
- B. Divert northbound buses via Customhouse Quay and make changes to Lambton Quay between Hunter and Willis
- C. Close side streets that enter onto Lambton Quay (except for property access) and reconfigure as twoway cul-de-sacs (can be staged)
- D. Close Lambton Quay to general traffic, make temporary changes to Whitmore Street intersection and reconfigure side roads that exit from Lambton Quay (except for property access) and reconfigure as two-way cul-de-sacs (can be staged)
- E. Make changes to southern carriageway (northbound direction) on Lambton Quay between Whitmore and Panama
- F. Divert southbound buses to new route and make changes to northern carriageway (southbound direction) on Lambton Quay between Whitmore and Panama



Stage 4A - Changes Panama to Hunter




Stage 4B – Changes Willis to Hunter



Stage 4C – Reconfigure entry side streets





Stage 4D – Reconfigure exit side streets

Close Lambton Quay to general traffic, make temporary changes to Whitmore Street intersection and reconfigure side roads that exit from Lambton Quay (Stout, Johnston and Panama) (except for property access) and reconfigure as two-way cul-de-sacs (can be staged)



Stage 4E – Reconfigure southern carriageway

Make changes to southern carriageway (northbound direction) on Lambton Quay between Whitmore and Panama

Temporary northbound bus stops required while new / reconfigured stops are constructed



Stage 4F – Reconfigure northern carriageway

Divert southbound buses to new route and make changes to northern carriageway (southbound direction) on Lambton Quay between Whitmore and Panama Temporary southbound bus stops required while new / reconfigured stops are constructed



Stage 5 – Courtenay Place

The following stages are proposed:

- A. Close side streets (except for property access) and reconfigure as two-way cul-de-sacs or through access only (can be staged)
- B. Close Courtenay Place to general traffic, make temporary changes to Taranaki and Cambridge intersections
- C. Remove median and surface (except where trees being retained)
- D. Shift lanes to south side and make changes to northern side of Courtenay Place
- E. Shift lanes to north side and make changes to southern side of Courtenay Place



Stage 5A – Reconfigure side streets



Stage 5B – Close Courtenay Place to traffic



Stage 5C – Remove median



Stage 5D – Make changes to northern side

Shift lanes to south side and make changes to northern side of Courtenay Place

Temporary northbound bus stops required while reconfigured stop is constructed

Diversion route or stop-go may be required for one direction for sections where median retained

Stage 5E – Make changes to southern side

Shift lanes to north side and make changes to southern side of Courtenay Place

Temporary southbound bus stops required while reconfigured stop is constructed

Diversion route or stop-go may be required for one direction for sections where median retained or final kerb line being constructed





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Revision Schedule

Boy			Signature or Typed Name (documentation on file)						
No.	Date	Description	Prepared by	Checked by	Reviewed by	Approved by			
А	12/7/2021	Draft for Review	M Smith						
В	4/8/2021	Final for Client Review	M Smith	M Muirson	xxx	S Blackmore			

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PROJECT MANAGER	PROJECT TECHNICAL LEAD
Selwyn Blackmore	Mike Smith
PREPARED BY	ρ
Mike Smith	12/7/2021
CHECKED BY	
Melanie Muirson	2/08/2021
19	
REVIEWED BY	
Rowan Schwynn	03/08/21
APPROVED FOR ISSUE BY	
Selwyn Blackmore	DD / MM /
Christchurch	
Hazeldean Business Park, 6 Hazeldean Road, Addington	, Christchurch 8141

PO Box 13-052, Armagh, Christchurch 8141

TEL +64 3 366 7449,

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Executive Summary

The Golden Mile project seeks to change mode use, and access needs within the existing operational road corridor. A key element of this project is the creation of a public transport priority link along the Golden Mile which encompasses Lambton Quay, Willis Street, Manners Street and Courtenay Place.

The project proposes to incorporate high class urban design and streetscape treatments to produce a welcoming and safe environment for all users, and to improve the engagement between businesses and retail, and the streetscape.

A Safety Audit and Network Functionality (SANF) assessment has been undertaken on behalf of the "Let's Get Wellington Moving" group. The SANF framework has been applied to undertake a holistic review of the proposed scheme design encompassing an assessment of the route for appropriateness of safety, landscape, & form and function, and allows all elements of the project to be reviewed within a single report for all road users. This also ensures that the decision makers have all relevant information within one report for their consideration.

The SANF process reviews the route sections, and the facility choice for each section and includes the more formal requirements of an RSA in the reporting and designer response sections. The goal is to ensure that the most appropriate safety treatment is selected to ensure a fit-for-purpose facility for all users.

In assessing the proposed scheme, it was found that details of the connectivity to the greater network were little understood due to minimal information of other projects that are conceptual in design only. Examples include the Greater Wellington cycle network, yet to be developed through this area. This lack of understanding could have significant safety implications for the legibility and usability of this scheme, and the connection to a yet to be determined cycle network. It is recognised that this element will be addressed in future design iterations, and through on-going discussions with Wellington City Council.

The interface with the adjacent side streets is indicative of a suitable design, and at this stage does not detail the finer detail required for full consideration of all the safety elements to be improved in the design. This is typical for this stage of a scheme design.

The final design of the project should include full consideration of elements such as slip resistance that could be affected by the choice of materials for construction. Special care should be taken for cycle facilities to ensure that the slip resistance is applicable to this user type, with smaller contact areas than that of a pedestrian, who slip resistance it typically measured for. This will typically require a higher slip resistance than AS/NZS 4586:2004.

The interface of the side roads will need full consideration of permitted and restricted through and turn movements, with the design considering the largest permissible vehicle as a check vehicle. Legibility of the side road treatments should incorporate full consideration of elements that will ensure safe movement and use by vulnerable users such as persons of low vision and blind, mobility impaired, and cognitive and mobility skills of the elderly.

At major intersections, cycle movements for connection to adjacent facilities will need careful consideration of the desired directions of travel, and safe incorporation of cycle facilities such as advance cycle boxes and on / off ramps to ensure safe, legible and effective movement.

Many of the items identified should lead discussion and inclusions into the next phases of design. It is recommended that on-going engagement with the SANF system is incorporated throughout the design, ensuring early identification of issues that may arise through the upcoming design phases. As the design progresses, the SANF system will incorporate more of the conventional Road Safety considerations, and the formal response process that this entails.

It is considered that the scheme design as presented has merit and should be progressed further into detailed design. Specific elements such as permeability and connectivity will require detailed communication throughout the design phases, and all risks identified and recorded where full integration cannot be met at this stage. It is recommended that Connectivity be a specific element of the risk register.



Abbreviations

ACB	Advanced Cycle Box
HCV	Heavy Commercial Vehicle
HPMV	High Productivity Motor Vehicle
SANF	Safety Audit & Network Functionality Framework
RSA	Road Safety Audit
SAT	Safety Audit Team
TGSI	Tactile Ground Surface Indicators

1.0 INTRODUCTION

1.1 SAFETY AUDIT AND NETWORK FUNCTIONALITY (SANF) FRAMEWORK

This Safety Audit and Network Functionality (SANF) process has been developed to undertake a holistic review of a scheme design that encompasses an assessment of the route for appropriateness of safety, landscape, & form and function, and allows all elements of the project to be reviewed within a single report for all road users. This also ensures that the decision makers have all relevant information within one report for their consideration.

The SANF process reviews the route sections, and the facility choice for each section and includes the more formal requirements of an RSA. The goal is to ensure that the most appropriate safety treatment is selected to ensure a fit-for-purpose facility for all users that considers elements such as:

- Facility connectivity
- Coherence and safety
- Business and residential impacts
- Commercial and public amenity parking
- Network impacts
- Multi-mode use
- Adjacent land use
- Access
- Maintenance and Operation
- Public Safety
- Quality of information for public consultation
- Future land use and growth
- Urban and Landscape design
- Local community issues and values e.g. local school routes and verge planting

The Golden Mile project seeks to change mode use, and access needs within the existing operational road corridor. Option selection has to strike a balance between all the transport modes of use, the existing surrounding land use and network function. The SANF process recognises that compromises from the ideal standard may be required, however these compromises should be based upon sound engineering judgment, maximising safety and efficiency, while minimising disruption to the network.

The SANF process therefore enables the teams to focus on the delivery of the project, with a process that requires the clear outline of reasoning (both for and against) for the issues considered throughout the route selection and design. This will ensure that the final product is fit-for-purpose and is defendable when progressing forward to public consultation and community acceptance.

As projects progress through their development cycle the balance of emphasis between network functionality, standards trial and review and safety will change. At the earlier stages of the project lifecycle network functionality is dominant with mainly fatal flaw safety issues considered. (Fatal Flaws are fundamental safety issues that are detrimental to public safety). During the course of the design process compromises to the "best practice design" to allow something that facilitates other corridor users' needs may be required. This "Trial and Review" phase will allow the development and evaluation of new and innovative treatments to be considered, and through a robust peer review being accepted, with this in turn being fed back into Best Practice Design Guides.

While the Road Safety Auditing element will be more dominant at the detailed design stage, the early inclusion of this in the process should ensure that safety considerations are addressed early, and that there will be no "Fatal Flaws" at the detailed design phase.

The SANF process requires the assessment of fatal flaws to user safety to be identified early. This eliminates the need to undertake rework at a later stage, and to also identify those elements that would have a significant impact on the delivery and acceptance of the facility within the environment that the route traverses through.

Issues should be identified early, and the impacts fully assessed. It is not acceptable to use the consultation process to identify any issues that should have been addressed through the scheme phases. It is therefore essential that the SANF process identifies any potential issues, and that the design teams have clearly documented their exceptions and decisions (evidence based).



This will therefore provide the decision makers certainty on the process, and the delivery of a fit-for-purpose facility.

To implement these safe, separated cycleways in an existing urban environment there will always be a need for a range of compromises. A SANF review needs to ensure the compromises are assessed through the 'trial and review' process, and that this review is well documented, based on sound evidence and safe.

1.2 SAFE SYSTEM APPROACH

A safe system approach for cyclist requires the careful consideration of vulnerable road users with a low tolerance of speed/ impact forces, a varying level of skills and capacities, and limited levels of mobility on the road particularly through movement and crossing movements.

The Safe System approach requires all road users, including mobility and visually impaired, to have an equal level of assessment and consideration.

The application of the Safe System Approach requires that everyone involved in the delivery of a safe network (Planners, Engineers, Designers and Reviewers) are fully aware of the issues that affect all road users, and the interrelationship between these users and the issues.

Decisions on route selection and facility design must be made to achieve a safe transport system for all users.

The SANF process utilises the Safe System approach. Safe facility design needs to consider the four principles of the Safe System as set out in the Government's Road to Zero Strategy 2020 - 2030.

The Safe System approach aims for a more forgiving road system that takes human fallibility and vulnerability into account. Under a Safe System we design the whole transport system to protect people from death and serious injury.

The Safe System approach considers the key elements of Vehicle, Roads and Roadsides, Speed and Road Users. It recognises that to reduce the road toll all elements have to be considered with equal weight.

2.0 THE PROJECT

About the Golden Mile Project¹

A summary of the Golden Mile is sourced from the Let's Get Wellington Moving website as follows.

"The Golden Mile is an incredible asset for the city and the region. It's our high street, where we meet, and the main route for buses bringing people into and through the central city. It's the city's busiest pedestrian area and our prime employment, shopping and entertainment destination.

Its transformation will create a vibrant and welcoming place to live, work and play as well as make it safer to walk, bike and scoot. Fewer vehicles will mean wider footpaths, better public transport and make it a safer and more pleasant place to walk, shop and dine. Bus services will be improved by having dedicated bus lanes. Bus stops will also be improved, consolidated and relocated to improve bus travel time and reliability.

Changing the shape of the Golden Mile which will also support the Poneke Promise – a social contract between Wellingtonians, Wellington City Council, Greater Wellington Regional Council, the Police and the City's hospitality and retail industries to create a CBD and city that is vibrant, inclusive and compassionate.



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Our vision is:

a New Zealand where no one is killed or seriously injured in road crashes. This means that no death or serious injury while travelling on our roads is acceptable.



"LET'S GET WELLINGTON MOVING" GOLDEN MILE SANF REPORT

Together these changes will support and encourage more walking, cycling and public transport use which will help reduce our carbon emissions. Each of the Let's Get Wellington Moving partners is committed to making changes to reduce the impact that our transport system has on climate change."

The Golden Mile is the heart of Wellington². It runs from the Beehive end of Lambton Quay, through Willis and Manners Streets, and then up to the Mt Victoria end of Courtenay Place.

It's the city's busiest pedestrian area, with nearly 30,000 people walking along part of it on a typical weekday, and a key shopping and hospitality area.

It's also the main route for buses, with an estimated 37,000 people travelling by bus on part of the Golden Mile on a typical weekday. Approximately 6,000 people travel some of the Golden Mile in cars and 500 people bike on a typical weekday.

The Let's Get Wellington Moving programme is looking at how the Golden Mile can be improved to make travelling by bus to the central city a faster and more reliable choice. We also want to create a better environment for people walking and on bikes.

Let's Get Wellington Moving sought feedback from the community on the future of the Golden Mile in November and December 2019. People were encouraged to suggest improvements through an online map-based platform called Social Pinpoint. Feedback could also be made via web form on the LGWM website, or by email.

3.0 SANF PROCESS & TEAM

3.1 PROCESS

An initial development of the Single Stage Business Case and treatment selections were undertaken by a diverse group of specialists in many technical areas. A workshop was undertaken on 26 May 2021, whereby the technical group were able to challenge the design to that date and undertake an assessment of the elements that would need further consideration. It was at this point that the SANF Framework was introduced to the assessment and challenge process.

The format deployed differs from that for a typical SANF, with roles normally being undertaken by specialist technical leads such as Urban Design and Transport Network having been already incorporated into the challenge group.

3.2 TEAM MEMBERS

For this SANF review, the initial consultation with the greater project team was undertaken by Mike Smith, Lead SANF practitioner, and Technical Lead for the SANF process through its development.

The report has been peer reviewed by Melanie Muirson, another trained SANF practitioner to ensure that the required level of challenge and review has been applied.

3.3 DOCUMENTS SUPPLIED

Extensive documentation was supplied for consideration of this scheme. In addition to the documents listed below, the Audit lead was a participant in an earlier workshop for the scheme development as a challenge lead for the refinements to come. The key documents provided includes:

- # Golden Mile Design Philosophy Statement; June 2021: Golden Mile Single Stage Business Case
- # Golden Mile Improvements Drawing set 18.06.21: General Layout Arrangements (22 Sheets)
- # Let's Get Wellington Moving: Golden Mile ; Materiality Strategy; June 2021 / Rev 2

3.4 SANF RATING SYSTEM

Critical to the assessment of the scheme or project, and to benefit the design teams, the SANF review utilises a process that allows for the quick and easy identification of issues based upon a coding system. These are outlined below.

Golden Mile Engagement Report March 2020
3.4.1 Project Risk

Each issue is given a rating in relation to the suitability of the current design or detail within the report for progression to public consultation. The rating is as follows:

Table 2 - SANF Project Risk

GREEN

ORANGE

RED



The issue is a comment only by the audit team, and while additional information or detail may be warranted on the issue in the future the current scope in the scheme report may be adequate for consultation.

The issue is of relative significance, it may have already been considered but not detailed within the report and the team believe that additional information or discussion should be input into the report to clarify and correctly analyse design options.



The issue is a serious concern and needs to be resolved prior to consultation. RED issues are considered to have a significant impact on the successful execution of a safe and efficient facility that is fit for purpose.

This project risk assessment is the view of the combined members of the SANF team with respect to completeness of information and the level of documentation required to present a well-balanced case for the implementation going forward.

3.4.2 Element Identification

The Project Risk Rating is further enhanced utilising a quick reference icon-based system to allow the reader to identify the elements of Road Safety, Functionality and Streetscape that an issue relates to.

When reporting these categories, the SANF team should consider how the issues raised impact on each of the individual elements, and the combination as a whole. Many issues will be interrelated and could result in consideration of one or many of the elements.

This identification system is utilised as follows:

Table 3-1 - SANF Element Identification

8	Road Safety	Elements that either directly, or indirectly affect the safe function of the road network
H	Functionality	Elements that impact on the operation of an efficient road network, considering the desired network function or hierarchy, and the effect that the scheme / design will have on both the local and greater networks.
	Streetscape	Elements that have an impact on the visual appearance of the street, both as-is and the proposed design. These elements should consider the visual appearance of the street, and the positive and negative impacts of the proposed design. A successful design will maintain or enhance the streetscape.



4.0 SANF FINDINGS

The findings presented below recognise that the Golden Mile project is in the development stage and is currently undertaking a Business Case development for further stages. This report is presented to lead the next stages of design, and details elements that should be considered in greater detail to achieve a considered and tested outcome.

4.1 GREATER NETWORK CONNECTIVITY

Essential to the design is the capacity for the proposed facilities to connect to the greater network infrastructure and desire lines. It is acknowledged that some key connection points and facilities are to be further developed outside of this project, however for clarity and direction the following comments are made on the greater connectivity elements.

4.1.1 Cycle Connectivity



Lambton Quay

Generally, the cycle connectivity along Lambton Quay has identified key connection nodes at the Bowen Street / Lambton Quay intersection, and the Lambton Quay / Panama Street intersection. A separated bi-directional cycleway is proposed, with varying levels of treatments for connection at side road junctions and community shared spaces.

It is understood that cyclists are required to depart the Lambton Quay alignment at Panama Street and utilise local roads to continue on their journey towards other key points on the network. A greenway system is currently established on Featherston Street for the southbound movement. There is no similar treatment or facilities for the northbound movement for connection into the proposed system.

The lack of facilities for the northbound movement will result in cyclists actively utilising the new shared / pedestrian spaces on Lambton Quay.

Through discussions with the Let's Get Wellington Moving group, it was identified that there is poor transparency of cycle projects that would service the Lambton Quay section of the Golden Mile project.

This lack of transparency, with poor services on the surrounding roads will be a risk to the project in the short term, until further developments of cycle projects are undertaken and implemented. During this timeframe cyclists will utilise the proposed pedestrian areas for connectivity, increasing the risk of conflicts and injury to the more vulnerable users such as the elderly, visually impaired and mobility impaired.

It has been presented that the cycle connections for the Lambton Quay portion have been derived based upon current understanding of suitable links to that existing network. Future changes to that network may result in a need to reconfigure the design at a later time.

Willis Street

South of Panama Street cyclists have poor provisions for the southbound movement. It is accepted that wider footpaths and shoulder spaces would result in cyclists utilising this space for the through movement.

Lambton Quay and Willis Street are indicated to be bus priority routes. Current legislation for bus lanes typically enables cyclists to utilise the bus lane for movement. However, the design submitted for review details that there is a prohibition on cycle use along Willis Street.

Considering any cycle use of Willis Street (Restricted or otherwise), the proposed design would require a following cyclist to sit behind a bus and be subject to stopping when the bus pulls into an in-line bus bay. A cyclist passing a stationary bus would do so at great risk due to the lack of forward visibility.

Willis Street is a key commercial area for the Golden Mile, and as such will attract a portion of riders that would access the shopping and commercial premises in that area.

There are permeability points along the Willis Street section, being Chews Lane, Mercer Street, and Bond Street. These permeability points connect to Victoria Street, a one-way south link. The northbound cycle movement is again poorly defined and is considered to result in adverse / conflicting use of the widened paths in the pedestrian areas.



Manners Street

The key elements of the Manners Street design are the stated prohibition for cycle use, and the continued use of the corridor as a public transport corridor, this PT corridor being a key deliverable to the LGWM project.

Looking at the greater network and considering the cycle use ban on Willis Street and Manners Street, there is very poor connectivity for cyclists for the north bound movement. It is noted in Drawing 310203714-05-001-G420 (see below) that advance cycle boxes (ACB) are located at the Willis Street (southern approach) through movement, and the Boulcott Street (south-east bound) movement. Of note to each of these ACB's is the situation where the design prohibits the movement indicated (Refer to Notes on drawing).

The formation of an ACB in these locations would only encourage cyclists into an area of conflict and an unsafe environment where there is no provision for cyclists.



Figure 4-1: Proposed Cycle connections in bus lanes

It is acknowledged that the greater cycle network is outside of the current LGWM project, however decisions made in this project will have a significant effect on users in the short term and may result in inappropriate or unsafe actions by cyclists attempting to traverse along the Golden Mile.

The design should include clear and concise considerations for safe cycle movement through the project length, including connectivity to the greater network.

Courtenay Place

Courtenay Place will be transformed with the new design, with the inclusion of a new bi-directional cycleway. To the west, the cycleway terminates at the Taranaki Street intersection, with no clear guidance for the connection to the greater network to the west. Cyclists are proposed to be prohibited along Manners Street due to the narrow lanes and high bus use. An alternate route is not readily identifiable for bi-directional travel along Manners Street.

Permeability between the proposed cycle facility and the north side of the road is concentrated to a small number of improved crossing points. These are generally formed to a good standard, and it is assumed that they correspond to key linkage desire lines for adjacent facilities / points of travel.



4.1.2 Walking / Pedestrian Connectivity



The proposed design greatly improves pedestrian movement along the route. Key to use of the spaces is a clear understanding of permeability points from the adjacent road network, often via possible links through buildings and laneways, especially from The Terrace etc.

These linkage points / nodes should engage with crossing points over Lambton Quay / Willis Street / Manners Street / Courtenay Place to ensure that people cross at controlled locations as much as reasonably practicable.

4.1.3 Bus Movement



A key element of the Let's Get Wellington Moving objective for the Golden Mile is the prioritisation of public transport movement along the proposed route. It is considered that the proposed design greatly enhances this prioritisation.

The proposed facilities and PT stop locations are indicated, and it is acknowledged that these will be refined in subsequent design iterations. The designers should take special care on how the bus stop locations interact with not only the permitted through traffic, but also the passenger entry / exit movements, and their impacts on the cycle and pedestrian through movements for the Golden Mile.

The final design should include specific consideration of the tracking requirements of large vehicles like the double decker buses, and the impact that road cross fall will have on the lean into the kerb for any turn movements. This may require a high level of detail around the location of traffic signal poles and other utilities above ground.

Experience on other central city redevelopments has identified the need to have site specific consideration of the impact that adjacent canopies over the footpath would have on the function of the design. A review of the design intent detailed in the material supplied would indicate that, generally as the road is being narrowed, and footpaths widened, there may be little impact created by the canopies. This should be specifically checked further design iterations to ensure that conflicts do not occur that could result in a design compromise once construction commences.

4.1.4 Street Furniture



- Street Seating: The design should allow consideration of users sitting in the seats with legs extended. This space requirement may limit the available usable width of the facility when considering the through movement. Seating away from the through movement (installed at 90 degree to path of travel and away from through movement) or recessed to enable full functional width of the through movement should be incorporated into the design.
- Street Furniture: The design will require the inclusion of street furniture along its length. This can include, but not be limited to, signs, light poles, street art, landscaping. As with the street seating, adequate provisions should be made for maintaining the effective through route widths to minimise conflicts between users.

4.1.5 Materiality – Surface Slip



Cyclists undertaking a tight turn such as this will be doing so on clay pavers. While we typically consider pavement surface slip (AS/NZS 4586:2004³), the test refers to a standard footprint contact area. Subsequent research undertaken for the Goodwill Bridge (Brisbane, AU) revealed that while suitable for pedestrian movement, AS/NZS 4586:2004 was considered inappropriate for wet use by bicycles, where the tyre contact area was significantly smaller. This research found that even at slow speeds, cyclists turning were falling from their bicycles.



³ AS/NZS 4586:2004 : Slip Resistance Classification of New Pedestrian Surface Materials

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The design should review the slip resistance for cycle safety on any surface where cyclists are required to undertake a turn movement, even where that turn can be undertaken at low to moderate speeds.

4.2 SIDE ROAD TREATMENTS

4.2.1 General



In reviewing the side road treatments, it is considered that the initial scheme treatments will have a beneficial effect on minimising vehicle movement into the improved pedestrian / shared space. There is typically a low level of detail at this stage of design, so a comprehensive assessment of effects cannot currently be presented.

To assist the designs going forward the following comments are made to ensure that an enhanced design is developed.

The movement plans detailed in the Design Philosophy Statement indicate that in general, service and commercial vehicles will be required to undertake a turn movement on side roads and exit via the way they entered. This will require appropriate facilities for all vehicles to turn, along with suitable loading areas near the ends of the street, especially for couriers and taxis. Some side road treatments do not demonstrate how the turn movements could safely occur.

Critical to these activities occurring on the side roads is the effect that the turning movement, especially reverse manoeuvres, will have on the safe movement of pedestrians and cyclists connecting to the greater road network.

The form and layout of the side road treatments will require careful consideration of the guidance and readability needs of all users, especially persons of low vision and blind, along with mobility impaired users. As an example, the inclusion of motorcycle parking at the end of Balance Street, if not well defined and limited, could result in a clutter of vehicles in a shared space.

It is acknowledged that this level of detail will be further addressed in the detailed design.

4.2.2 Panama Street



Panama Street is detailed as a critical link for cyclists onto the greater road network. The current design has the separated cycleway merging onto the shared space, with the shared space pavement surface identified as clay pavers, similar to the surrounding pavement. In this location a signalised midblock crossing is identified over the cycleway.

This style of design is counter-intuitive to all users. The cohesive surface treatment does not identify the dominance of any users in this location. The installation of a mid-block signalised crossing will have no cohesion to the intent of the design and will look and feel out of place with of no relevance to the movements / actions required for user. In effect, the proposed signals will be in the middle of a shared space and lack relevance.

Users will take little awareness of the mid-block signals and just traverse around in the space, regardless of the controls installed.





Figure 4-2: Panama Street Scheme Design

4.2.3 Hunter Street / Lambton Quay



The east side of Lambton Quay forms a vital pedestrian link to the retail areas. The plans indicate that the southbound lane movement for buses will be from Lambton Quay left turning onto Hunter Street. This general area is characterised by wide shared spaces with a high level of Urban Form.

The access movement to this retail area will be improved with the proposed intersection controls and form at the Customhouse Quay / Lambton Quay / Willis Street intersection.

Currently there is a signalised pedestrian crossing over this leg. While it is not indicated on the scheme plans (Refer to Figure 4-3 below), it is assumed that suitable and appropriate crossing facilities will be installed for pedestrians to safely cross this turn movement.



Figure 4-3: Hunter Street Scheme Design



4.2.4 Manners Street / Cuba Street





The scheme design changes Cuba Street from access north side, one way north, to a closed access arrangement. At this stage there would be little detail on the type and nature of controls to be installed for the closure, which is typical for scheme level. Given the current use by vehicles as an access through to Wakefield Street and the Town Hall, and the limitation of Manners Street to public transport movement only, there may be only minimal residual attempts to use this route. It is recognised that there may be some need for service vehicles to access this area due to the circulation routes formed by the access restrictions for vehicles on the through roads, and the nature of the one-way system.



Figure 4-4: Cuba Street Scheme Design

The final design should include suitable provisions to physically minimise any through traffic, supporting the intended shared use space in the design

Cuba Mall south is service vehicle access only, with a prohibition on cycle access and use. Observations on site indicated that there were delivery vehicles and couriers that utilised this area as a drop off for commercial business.

When considering the connectivity of the greater network, there is a lack of cohesive connection for cyclists wishing to enter into the Cuba Street retail area. The mid-block pedestrian crossing over Manners Street in the vicinity of Cuba Mall will form a natural and safe attraction for cyclists southbound, however the current access prohibition would detract from this movement It is recommended that a review of access restrictions for cyclists be undertaken through this project to determine if cycle access could be enabled given the changes to the greater network.

The proposed restrictions on cycle use on Manners Street limit safe and viable connections for cyclists, other than multi-laned busy roads such as Victoria Street and Taranaki Street. This places the cyclist at high risk when this part of the cycle network is not currently developed.

4.2.5 Manners Street / Taranaki Street / Courtenay Place



This junction is complex, and needs to cater for multiple functions, and trip movements. Of note for this area and junction is the apparent lack of provisions for safe cycle movement from the vicinity of Cuba Mall through to the separated cycle facility on Courtenay Place.





Figure 4-5: Proposed Taranaki Street / Manner Street / Courtenay Place Scheme Design

Manners Street is described as being for bus movement only, with cyclists restricted due to the narrow bus lanes. Dixon Street is one way west, does not support eastbound cycle movements, and is bounded by Te Aro Park. Te Aro Park has a known issue with anti-social behaviour and is not conducive to a safe environment, especially at night. The nature and layout of the park with multi-levels and complex pathways severely limits cycle movement.

The lack of alternate cycle provisions in this area will result in cyclists utilising the pedestrian pathways to gain access to the separated cycle facilities further east on Courtenay Place. Cycle connectivity for the greater area requires specific consideration as part of this project, with identification of treatments both for the time of construction, and the period until the greater interconnected and safe cycle network is developed and implemented. Failure to consider these elements now will place cyclists in an unsafe environment.

The eastbound traffic lane (Manners Street towards Courtenay Place) indicates that a large lateral shift will be required for the through movement (Manners to Courtenay). It is understood that this movement will be for bus only, with the adjacent right turn lane also being for bus only. The intersection is wide and appears to be able to accommodate the lateral movement given the access restrictions on vehicles.

The form of the left turn from Taranaki Street (south) into Dixon Street requires a driver to turn in a location where the kerb line is tight, severely limiting the capacity of a typical vehicle to undertake a safe turn from the left lane. This will jeopardise the safety of pedestrians waiting on the footpath. The Dixon Street entry in the design is characterised by a raised table formed at the junction of Dixon Street and the service lane parallel to Taranaki Street.

In this location, pedestrian movements are protected by signals over Manners Street and Taranaki Street, however the pedestrian movement over the service lane and Dixon Street is unprotected. A suitable protection treatment is required for the service lane pedestrian crossing movement and the Dixon Street pedestrian crossing movement for consistency of treatments.

It is noted that the Taranaki Street approaches (north and south) have advanced cycle boxes formed at the head of the three traffic lanes. The approaches to the limit lines at the intersection fail to identify a safe facility for cyclists to progress forward on the shoulder to gain access to the ACB's.

A cyclist wanting to progress straight ahead should not be sitting in the central through lane, as they will be passed on the left by a parallel through movement from the left lane and be squeezed at the arrival lanes on the opposite side of the intersection.

A cyclist wishing to turn right into Courtenay Street will require movement though three traffic lanes to gain access to the ACB. This is considered an unsafe movement, especially given the traffic volume and permitted / restricted movements. Cyclists wishing to turn right would be best served through an off ramp from Taranaki Street onto the adjacent footpath / shared space, then gaining access to the cycle crossing / hook turn box / ACB to be created as part of this project.

The cycle through movement is defined by a ACB in the centre lane. This is best located in the left lane because this is the safest location for the through movement.





Figure 4-6: Proposed Taranaki Street / Dixon Street intersection Scheme Design

Considering the Taranaki Street (southbound) approach, again connectivity to the greater movements is again detailed through the provisions of advance cycle boxes (ACB). Key to this is the consideration of the movements, and the actions that a user would have to undertake. As with the northbound movement, a cyclist wishing to turn right into Dixon Street would be required to traverse over two very active traffic lanes, with the kerbside lane also servicing the bus movement into Courtenay Place.

Confident cyclists will merge across the arrival lanes to access the ACB, however less confident cyclists will hesitate, or sit on kerbside awaiting a safe gap to access the turn pocket (with a lower level of service for the cyclist).

Access to the right turn ACB is considered to have serious safety issues in its current form and does not constitute best practice for cyclist's movement at multi-laned intersections. Typically, a right turn cyclist should be directed to a "Hook Turn" box for the completion of the right turn in a safe manner.

The right turn southbound (into Dixon Street) is an extended crossing distance, and it is assumed that the signal phasing is sufficient to address the crossing time required.



Figure 4-7: Proposed Taranaki Street / Dixon Street intersection Scheme Design

The southbound movement on Taranaki Street does not detail how a cyclist could access the proposed footpath on the north side. It is important to note that the current Government Yellow Paper Land Transport Rule: Paths and Road Margins 2020; Section 3 (if passed) will allow cycle use on footpaths, unless explicitly excluded.



Good practice would include a suitable off-ramp facility to allow cyclists to safely access onto the adjacent footpath. The design of an appropriate facility must also consider the safe interaction between cyclists and all other users, with special consideration of the movement needs and restrictions for the visually and mobility impaired.

4.2.6 Courtenay Place / Tory Street



The proposed design eliminates all turn movements and is highly controlled with traffic signals for the general traffic through movement. This greatly reduces the number of conflicts for other users.



Figure 4-8: Proposed Courtney Place / Tory Street intersection Scheme Design

The design requires the cyclist to deviate southward to access the cycle crossing over Tory Street (south). The design includes separated cycle and pedestrian crossing movement zones, as indicated in Figure 4-8 above. The dog-leg access movement for cyclists will result in cyclists cutting through the opposing direction of travel on the separated facility, causing head-to-head conflicts between cyclists, and a general conflict with the more vulnerable users such as the elderly, mobility impaired and the visually impaired.

The crossing of Courtenay Place at the Tory Street intersection is controlled by signals and provides an enhanced level of service for the cross-street movement. The current design would have pedestrians waiting at the end of the separated cycle facility, a location that conflicts with the safe passage and use by the more vulnerable user.

User behaviour experienced at similar crossing designs around New Zealand demonstrates that pedestrians will cross at the facility closest to their desire line, potentially being the cycle crossing component.

The transition length from separated facility to shared space is very short and could lead to late and sudden position movements for cyclists for them to utilise the proposed crossing facility.

4.3 CYCLE FACILITIES

The following section details elements around cycle facilities, and the interface with other facilities along the scheme length.

4.3.1 Lambton Quay / Bowen Street / Whitmore Street – Cycle Access



Cyclists travelling from the north would require access from Lambton Quay (North) for the south bound movement. Similarly, a cyclist undertaking the movement northbound, while having an option to access an advanced cycle box, will be required to negotiate to the right-hand lane to access the through movement.

The current design provides only minimal facilities and connectivity treatment details. It is considered that for this stage of the SSBC, these design details may still be progressing, and be subject to ongoing iterations. This element is raised to ensure that it is specifically addressed in future iterations.



It is recognised that this element will be addressed in future design iterations, and through on-going discussions with Wellington City Council.

4.3.2 Cycle / Pedestrian interface



The design indicates areas where the separated cycleway terminates, and a shared space is formed before recommencing the separated cycle facility, as indicated in the example below. Similarly, engagement / permeability for cyclists will be gained from the adjacent side roads, providing linkage to the separated cycle facilities.



Figure 4-9: Stout Street Interface Design. Note termination of cycleway set well back from pedestrian crossing.

The shared space formed at the pedestrian crossing cycle interfaces will require specific design consideration to enable safe interaction to occur. A recent review of the Auckland Transport facility on Quay Street identified a number of user conflicts for a similar facility type as that proposed for Lambton Quay. A picture of the Quay Street layout is shown below in Figure 4-10.



Figure 4-10: Quay Street cycle and pedestrian interface, Auckland

Issues identified with this configuration included:

1. People walking to the edge of the traffic lane and blocked the shared path.



- 2. Pedestrians did not appear to identify the conflict zone ahead of the TGSI. There is no warning that cyclists / users will traverse along this zone.
- 3. Cyclists passing the first set of lights on amber then traverse through the second set on red demonstrates that the cyclists feel that once past the first set of signals then they can continue through the facility. This was observed to conflict with signalised pedestrian movement where pedestrians took evasive action from the cyclists (travelling through the red signal).
- 4. There were many people crossing between the signals in this location they had no visibility of the pedestrian aspects and just wandered over the facility.
- People walking along the cycle facility, conflicting with cyclists in their passage along the designated facility.

A retro respective look at the design resulted in the identification of the need to reinforce through design elements the need for clear articulation of user spaces, and the locations where crossing conflicts are present.

The Golden Mile design should consider the safety enhancements required to minimise the conflicts, as much as reasonably practicable in the design.

4.3.3 Courtenay Place / Kent Terrace Intersection – Cycle Access



Cyclists travelling from Courtenay Place towards Kent Terrace can do so from the safety of a separated cycleway. At the eastern end of Courtenay Place, the separated cycleway terminates in a shared space in the general area of the left turn slip lane (Cambridge Terrace / Kent Terrace into Courtenay Place). Southbound and eastbound cyclists are required to cross on a zebra crossing, then access a multi-use signalised crossing over Courtenay Place. This gives mixed messages to the cycle user, where under law they are not permitted to cycle across a pedestrian crossing, and have to dismount, and then immediately beyond the zebra crossing, they are given their own crossing facility.



Figure 4-11: Courtenay Place / Kent Terrace Intersection Proposed Scheme Layout

The cycle user is presented with mixed messaging for this area, where they would cross over the left slip lane (noting the legal aspects mentioned above) as priority, then have to yield for the signals. As indicated below in the example of a constructed facility, clear messaging and controls will be required.

Consideration should be given to the establishment of a mixed-use crossing facility over the left turn slip lane where both cyclists and pedestrians have similar rights of way. This can be achieved through the formation of a facility such as that detailed below in Figure 4-12. The left turn driver will be required to yield at the merge point onto Courtenay Place, however the current design fails to detail this requirement.





Figure 4-12: Example of left turn multi-user priority crossing (Deans Avenue, Christchurch)

Connectivity for cyclists in this location requires a counterintuitive movement, with cyclists required to traverse to the north side of Courtenay Place, then cross over Kent Terrace. This crossing movement does not appear to have a specific design to allow both pedestrians and cyclists to cross safely to the east. Currently the scheme indicates a typical pedestrian crossing movement permitted at a signalised intersection.

It is important to note that current legislation prohibits a cyclist using a signalised pedestrian crossing while mounted, unless there is a specific signal aspect that also controls the crossing movement for cyclists.

Upon departure from the crossing movement, there is no indication of the safe location for a cyclist to recommence their journey either eastbound or southbound.

Cyclists travelling northbound along Cambridge Terrace and wishing to travel westbound on the proposed new facility appear to currently be required to traverse through the left turn slip lane, and travel through the shared space to engage with the separated cycleway. Provisions for a safe and dedicated on-road to off-road facility would enhance the cycle movement into the new facility and remove cyclists from the conflicts generated at the left slip lane.

5.0 SUMMARY

The proposed Golden Mile project aims to improve the safe and effective connection for all users along the Lambton Quay / Willis Street / Manners Street / Courtenay Place route. A key element of this project is the creation of a public transport priority link along the Golden Mile.

The project proposes to incorporate high class urban design and streetscape treatments to produce a welcoming and safe environment for all users, and to improve the engagement between businesses and retail, and the streetscape.

A Safety Audit and Network Functionality (SANF) assessment has been undertaken on behalf of the "Let's Get Wellington Moving" group. The SANF framework has been applied to undertake a holistic review of the proposed scheme design encompassing an assessment of the route for appropriateness of safety, landscape, & form and function, and allows all elements of the project to be reviewed within a single report for all road users. This also ensures that the decision makers have all relevant information within one report for their consideration.

The SANF process reviews the route sections, and the facility choice for each section and includes the more formal requirements of an RSA in the reporting and designer response sections. The goal is to ensure that the most appropriate safety treatment is selected to ensure a fit-for-purpose facility for all users.

In assessing the proposed scheme, it was found that details of the connectivity to the greater network were little understood due to minimal information of other projects that are conceptual in design only. Examples include the Greater Wellington cycle network, yet to be developed through this area. This lack of understanding could have significant safety implications for the legibility and usability of this scheme, and the connection to a yet to be



determined cycle network. It is recognised that this element will be addressed in future design iterations, and through on-going discussions with Wellington City Council.

The interface with the adjacent side streets is indicative of a suitable design, and at this stage does not detail the finer detail required for full consideration of all the safety elements to be improved in the design. This is typical for this stage of a scheme design.

The final design of the project should include full consideration of elements such as slip resistance that could be affected by the choice of materials for construction. Special care should be taken for cycle facilities to ensure that the slip resistance is applicable to this user type, with smaller contact areas than that of a pedestrian, who slip resistance it typically measured for. This will typically require a higher slip resistance than AS/NZS 4586:2004.

The interface of the side roads will need full consideration of permitted and restricted through and turn movements, with the design considering the largest permissible vehicle as a check vehicle. Legibility of the side road treatments should incorporate full consideration of elements that will ensure safe movement and use by vulnerable users such as persons of low vision and blind, mobility impaired, and cognitive and mobility skills of the elderly.

At major intersections, cycle movements for connection to adjacent facilities will need careful consideration of the desired directions of travel, and safe incorporation of cycle facilities such as advance cycle boxes and on / off ramps to ensure safe, legible and effective movement.

Many of the items identified should lead discussion and inclusions into the next phases of design. It is recommended that on-going engagement with the SANF system is incorporated throughout the design, ensuring early identification of issues that may arise through the upcoming design phases. As the design progresses, the SANF system will incorporate more of the conventional Road Safety considerations, and the formal response process that this entails.

It is considered that the scheme design as presented has merit and should be progressed further into detailed design. Specific elements such as permeability and connectivity will require detailed communication throughout the design phases, and all risks identified and recorded where full integration cannot be met at this stage. It is recommended that Connectivity be a specific element of the risk register.





LETS GET WELLINGTON MOVING GOLDEN MILE



DRAFT

MATERIALITY STRATEGY

05 AUGUST 2021 / REV3 PREPARED BY BOFFA MISKELL AS PART OF FUTUREGROUP

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PURPOSE

than others.

Given the length of the Mile, a significant influence to the level of investment sits with the materials used, in particular the paving type. While it is recognised that the existing clay paver presents safety concerns and scores poorly in terms of public perception*, it is not possible to renew the full extent of the street within the Business Case funding.

The purpose of this report is to inform the Detailed Design phase by testing a nuanced approach that varies the degree of investment along the length of the Mile. This approach would see a lighter touch in some areas, retaining the existing aesthetic, while other areas would see a comprehensive upgrade and change in materiality, establishing the modernised palette that can be phased in over time as part of routine maintenance.

This approach is not reflected in the final costing of the Business Case.

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The Golden Mile is 2.6 km in length and extends from the Wellington Railway Station along Lambton Quay, Willis Street and Manners Street to the end of Courtenay Place. It has a range of physical and functional characteristics along its length and when considering the work required to realise the benefits of Option 3 - Transform', some areas will require a higher degree of change



MATERIALITY

EXISTING MATERIALS

The Golden Mile is predominantly paved with clay pavers in a range of orangebrown tones. Areas of grey stone and exposed aggregate concrete have been introduced around seating and in laneways, such as Grey Street, Press Hall, and Lombard Lane. A flexible base used to enable access to services, however this does tend towards pavers becoming loose and uneven over time.

COURTENAY PLACE

WILLIS STREET



Courtney Place paving is in a poorer condition than Willis and Lambton Quay, with dated features in exposed aggregate as well as complex header patterns.



have a narrow form - 150mm wide and are often in poor condition.



Paving on Willis Street is generally in good condition. Kerbs have a large format profile that lifts the sense of quality.

LAMBTON QUAY



Lambton Quay has areas of stone paving where seating is provided.



There are areas of all streets that are a patchwork of different materials (eg. Cable Car Lane entrance)



Wider sections of Lambton Quay are in good condition (eg Farmers, David Jones) and suppport bus stops. Kerbs have a large format profile that lifts the sense of quality.

TIME FOR CHANGE?

There is recognition that clay pavers present a number of issues including poor slip resistance when wet, unpopular aesthetic with general public, installation constraints (only two contractors available) and short life span (7-years). However, section as a place, has a set of common elements including paving that unite the there is also a recognition that across the Golden Mile complete replacement is a significant cost and maybe unnecessary to gain the best value from the investment in reallocating the street space. A choice needs to be made about the future street and paving design along the Golden Mile.

A strategic design approach will be key to ensure that the corridor can be experienced as a series of sections that whilst unique to the nature of each whole. Consideration to a future which may look to transition away from clay pavers over time as they need to be replaced is also part of the strategy.

DRAFT

CORRIDOR APPROACH

A 'signature project' approach is proposed which strategically applies the investments to several key places along the Golden Mile and touches more lightly the sections in between. This approach responds to the Golden Mile Vision (see diagram) which recognises the reflection of place.

The key places are reflective of areas where there is typically more width available in street space that can support:

- people as PT customers either waiting and or moving to and from stops
- people in active walking or cycling modes
- people 'dwelling' or spending time supported by complimentary business activities
- strategic street and connectivity initiatives to and from other parts of the city centre

The key places are of sufficient scale as spaces that enables the expression of identity and a response to their context - both in use day and night as well as natural, cultural heritage and built character.

As 'signature' places they can show a standard of design for LGWM projects that demonstrate the benefits of reallocating space to people and public transport.

There are 3 key places where it is proposed to invest in higher levels of investment - these are around Midland Park and adjacent bus stop, Mercer Street and the north east end of Courtenay Place. Other places, such as Te Aro Park are contenders too, but will need to link with other WCC initiatives.

GM VISION "REFLECTING PLACE"



SIGNATURE PROJECT #1 MIDLAND PARK + LAMBTON PROMENADE

Midland Park is a well used space during day time hours and has the opportunity to make a space that straddles the Quay, provides for PT stop amenity and then links back to parliament

SIGNATURE PROJECT #2

MERCER STREET Mercer Street is the beginning the transition to a 'green link' as proposed under the Civic Square framework.

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SIGNATURE PROJECT #3 COURTENAY PLACE

Courtenay Place has a night time economy, accommodates a key PT stop as well as providing amenity for many Te Aro residents day to day.



ARO PARK

It it important to retain quality mature trees, whilst adding new trees where space is enabled in conjunction with signature projects.

MATERIAL TYPOLOGIES

FEATURE PALETTE

The highest cost option with bespoke elements, small areas of stone. Used in the highest profile areas. INDICATIVE COST*

\$1500-2000m² 25 yrs (concrete) 50 yrs (stone)

EXAMPLE

Federal Street Stage 2 (Auckland) 70% concrete (high cost), 30% stone, bespoke furniture and greening

STONE PAVING

Approximately 30% area paved in granite or bluestone. Stone is a natural material that enhances in character as it ages. It is used in the highest quality spaces.

\$400-500m²



CONCRETE PAVING

Approximately 70% coverage in concrete pavers. Gold standard allows for a some variation in paving pattern unit sizes.

\$200-300m²

STREET FURNITURE, PLANTING AND DETAILS

More intricate planting, raingardens, bespoke street furniture and feature lighting





Federal Street took a transitional approach to introduce changes to road space allocation prior to physical works. This transitional cost would be additional.



* Cost represents construction cost and includes paving surface along with street furniture, planting, kerbs, lighting, and does not include professional fees or service realignment

MATERIAL TYPOLOGIES

MODERNISED PALETTE

A good quality paving surface that is simple and consistent, using a palette of materials that tie together a similar colour range (eg shades of grey or warmer tones). Lower cost surfacing such as asphalt can be used if well designed and thoughtfully integrated. Attention to detail is important, particularly investment into details such as edging, planting and street furniture that will lift the sense of quality, while saving cost through a simple ground surface treatment.









INDICATIVE COST*

INDICATIVE LIFESPAN

25 yrs (concrete) 30yrs (asphalt)

\$800-1200m²

CONCRETE PAVING

CONCRETE PAVING

Off-the-shelf pavers such as 400 x 200 x 80mm or 50 x 50 x 80mm sett units. (approx \$150-\$200m² supply and install). Indicative cost includes

Concrete units have a longer life span and require less maintenance than the clay paver. Potential to lay on flexible base course with 5% cement to bedding sand. Cement holds pavers in place for a smooth surface, while still allowing for sections to be lifted to gain access to services.

When trafficable, laid on concrete base.

ASPHALT

A fine grain mix to elevate above general road surfacing. Asphalt can be used to create a simple, recessive ground surface provided it is laid well and is wellmaintained.

Surface provides a smooth surface for small wheels and good grip for cycles/ scooters.

Easy to access services and affordable to relay. If lifted, it is important to relay in complete sections, which may be more than required to avoid patchy outcome.

STREET FURNITURE, PLANTING AND DETAILS

Simple materials framed well, eg steel edging, header paving, wide concrete kerb, infill manhole covers aligned with paving.

Raingardens with standard cost planting, off-the-shelf street furniture and lighting, minimal feature elements.



EXAMPLE

Whitianga Town Centre



* Cost represents construction cost and includes paving surface along with street furniture, planting, kerbs, lighting, and does not include professional fees or service realignment

MATERIAL TYPOLOGIES

EXISTING PALETTE

Provides for footpath extension including kerb realignment in a basic unit paver, clay or concrete. Asphalt can be used in areas to distribute cost effectively.

Generally this approach relates to the infill of car parks with kerb realignment or simple widening of the footpath.

INDICATIVE COST*

INDICATIVE LIFESPAN

7 yrs (clay paver)

30 yrs (asphalt)

\$300-500m²

CLAY PAVER

Clay pavers on a flexible base as per existing. Current issues include poor slip resistance, short life span, poor public opinion of aesthetic and pavers coming loose causing a hazard.



ASPHALT

A fine grain mix to elevate above general road surfacing. Asphalt can be used to create a simple, recessive ground surface provided it is laid well and is wellmaintained.

Surface provides a smooth surface for small wheels and good grip for cycles/ scooters.

Easy to access services and affordable to relay. If lifted, it is important to relay in complete sections, which may be more than required to avoid patchy outcome.

FURNITURE AND DETAILS

Minimal allowance for street furniture, planting or non-standard details.

EXAMPLE

Current Golden Mile aesthetic



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* Cost represents construction cost as supplied by WCC and includes paving surface with kerb realignment with minimal investment into features such as street furniture, planting and lighting. Cost does not include professional fees or service realignment.

GREEN INFRASTRUCTURE

ALL OPTIONS

The provision of green infrastructure has a wide range of well documented benefits. It is recommended that good quality planting and trees are provided in all options, with value to be saved through simplifying hard surfacing in the first instance. Planting and trees are particulalry valuable when working with a palette of low cost hard surfacing, transforming potentially bleak spaces into places that invite people to spend time.

Street trees and planting have a high impact in the urban context. Green infrastructure such as tree pits and raingardens can protect water quality and help to manage flooding. Planting can be used to make useful, 3-dimensional spaces that feel comfortable and people-focused.



Health Precinct, Christchurch Planted rain gardens filter and clean stormwater to some extent from central city streets, delineate spaces and provide amenity.



Central Rail Link, Albert and Queen Streets, Auckland Mature native street trees have been successfully transplanted into the central city



Lombard Lane, Wellington Low growing native planting in raingardens within parking zone.



Central City, Auckland Street trees can be planted into paved areas, however the tree pit becomes expensive, generally requiring a cell structure to maintain a healthy root ball. Planting into garden bed or rain gardens is more cost effective.

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LAMBTON QUAY

Closing side streets enables the creation of a continuous pedestrian space on the east of Lambton Quay that allows for unobstructed pedestrian movement along the street. The level of intervention provides a good opportunity for an upgrade to aesthetic.

The streetscape surrounding Midland Park is a signature project, setting the public space within a high quality street environment that promotes pedestrian accessibility.

Where minor works are proposed, eg. in-fill of parking bays, continuation of the existing materiality is proposed.



0m	100	200

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An exercise to test a nuanced approach to investment with more extensive renewal in some areas, and a lighter touch in others.





WILLIS STREET

Paving is generally in good condition and works are limited therefore footpath extensions are proposed to tie in with the existing aesthetic.

Mercer Street is a feature project, which in the future is hoped to extend from Press Hall to Te Ngakau Civic Sq. This project establishes the standard for future and provides amenity for public transport customers.





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An exercise to test a nuanced approach to investment with more extensive renewal in some areas, and a lighter touch in others.





MANNERS STREET

Minimal changes are proposed to Manners St due to constrained width. Changes focus on improving the experience for people walking along the street.

When Te Aro Park comes up for renewal, the concept should integrate Manners St and Dixon St as a cohesive project. Te Aro Park is an area that needs to be improved, but it is not in the scope of the Golden Mile investment objectives.



0m	100	200

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DRAFT

An exercise to test a nuanced approach to investment with more extensive renewal in some areas, and a lighter touch in others.



TYPICAL MODERNISED FEATURE



COURTENAY PLACE

Focus investment on the southern half of Courtenay Place as a signature project.



100 200 0m

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DRAFT

An exercise to test a nuanced approach to investment with more extensive renewal in some areas, and a lighter touch in others.



MODERNISED FEATURE



STREETSCAPE PLANS

The streetscape plans build upon the cost distribution strategy to enable more accurate costing. Indicative numbers of street trees, planting, raingardens and seating are also provided. The plans also show formal pedestrian crossings as well as intersections that can be upgraded to improve peoples experience moving along and across the Golden Mile.

This process is taking place in advance of the streetscape design and should be treated as diagrammatic and to be developed through the subsequent design phase.

OVERVIEW PLANS

LAMBTON QUAY

At the widest section Lambton Quay will undergo substantial change, with the reallocation of 2 vehicle lanes east of the median, which presents an opportunity to upgrade the aesthetic. Midland Park is a high profile, well used public space that is a landmark for the city. The surrounding streets are upgraded to better integrate the park with the surrounding environment.

SUPREME

Lambton Promenade

Due to the work involved in reallocating vehicle lanes to active modes in this location, it would be a good opportunity to upgrade from clay paving to a modern aesthetic.

This would create a continuous, modern streetscape from the Midland Park to the Supreme Court and on to the upgraded bus interchange (by others).

Asphalt could be used in the zone intended for scooters or cycles, allowing for a smooth ride and helping to provide definition to pedestrian only areas.

Retention of as many trees as possible should be a priority, integrated into the design of paved areas and bus stops.

MIDLAND PARK

Midland Park

A signature project with cohesive character that extends from one side of the corridor to the other, integrating Midland Park, Woodward St and Farmers Lane. Opportunity to reference to Kumutoto Stream (which flows under the space) and strengthen sense of identity. Space to be created to support activities such as busking, temporary events, pop-up trading, playful features and expanded public seating to relieve pressure on Midland Park and broaden appeal to include youth.

West Lambton

Clay paving is retained along the west side of the street as it is generally in good condition and works in this location is generally infill of parking bays.

Bus stop upgrade

Dedicated seating space clear of pedestrian movements with overhead shelter where possible. Existing surface around the Supreme Court is predominantly asphalt with stone at the main entrance, which is to be retained and tied into.

INDICATIVE QUANTITIES

To inform business case costing	, subject to change.	
PROPOSED TREES	15	
RAINGARDENS	160m²	
GARDEN BED	700m²	
SEATING ELEMENTS	20 + Midland feature elements	
(Bus stops accounted for elsewhere)		

CLAY PAVING PROPOSED TREE MODERNISED PAVING EXISTING TREE OUTDOOR TRADING ASPHALT

Grey Street Crossing

Remove barriers to crossing and elevate pedestrian presence at intersection. Improve poor quality paving outside Countdown and Cable Car Lane, connecting aesthetic to recent Grey St renovation.

DAVID/JONES

★ ACTIVITY ZONE

5

WOODWARD

Provides a zone where features such as street furniture, raingardens, lighting, cafe tables can be gathered to provide a clear movement path. Also designed to providing a buffer between people moving on scooters/cycles and the footpath

FUNCTIONAL CROSS-SECTION Α



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New bus stops

Dedicated seating space clear of pedestrian flow with overhead shelter and seating where possible.



WILLIS ST

There is minimal change possible on Willis due to the narrow cross-section the existing aesthetic would be maintained. The exception is Mercer St that is the first step in creating a shared space connecting to Te Ngākau Civic Square.

LAMBTON QUAY

BNZ BANK

Intersection upgrade

As a result of carriageway narrowing and removal of general traffic, intersection can be upgraded to improve use for pedestrians. Remove level changes at the kerb to enable free, accessible movement in all directions at the signal phase.



PROPOSED TREE CLAY PAVING MODERNISED PAVING EXISTING TREE OUTDOOR TRADING ASPHALT

Additional space for bus stop

۲ م,

Extend footpath to tie in with existing aesthetic and provide space for public transport customers to wait.

Mercer St closure

connection to the waterfront.

PRESS,

HALLLANE

Establish a high level of finish to set the aesthetic for the future 'green link', connecting Press Hall to Te Ngākau Civic Sq. Provide seating and amenity for public transport customers and general public seeking refuge from the busy street environment. Enable active mode

MERCER ST

1



DRAFT



4



OVERVIEW PLANS

MANNERS ST

There is minimal change possible on Manners St due to the narrow cross-section the existing aesthetic would be maintained.



OPERA HOUSE LANE

TE ARO PARK

WAKEFIELD ST

0

vehicles

people

CUBA ST

DIXON ST

BOND ST LANEWAY

A,

Closure from Manners St allows infill of clay paving to create continuous footpath. This block of Cuba is already designated as a Shared Space, with a level surface and flush kerbs, There is opportunity to focus vehicle access to the northern half of the street, with pedestrian focus in the southern half - relocating the existing container cafe and large seating elements closer to Manners St. Additional food carts could take up residence and further activate the space.

Footpath paving at the Wakefield St entrance is extended with some planting removed to allow 2-way vehicle movement at the intersection and improve pedestrian connectivity from Bond Street laneway.



NANNIERS ST

Due to the narrow cross section of Manners St in this location, no footpath widening is possible, other than a loading bay. The upgrade of Te Aro Park is beyond the scope of this project and would be best treated as a cohesive project which includes Dixon St and local laneways.

INDICATIVE QUANTITIES

To inform business case costing, subject to change PROPOSED TREES 0 RAINGARDENS 0m²

11



LUKESLNA

INDICATIVE QUANTITIES

Intersection upgrade

shorten crossing distances.

Footpath widened where possible to

To inform business case costing, subject to change.		
PROPOSED TREES	0	
RAINGARDENS	0m²	
GARDEN BED	0m²	
SEATING ELEMENTS	S 6	



DRAFT



Dixon St

A

Changing the intersection from 5-way to 4-way provides opportunity to improve pedestrian waiting area. The existing surfaces are asphalt in this area which could be continued.



FOOTPATH

OVERVIEW PLANS

COURTENAY PLACE

Courtenay Place will see substantial change along the length to reallocate current vehicle lanes to pedestrians, active modes and extended trading area. The southern end is in poor condition and would benefit from a comprehensive upgrade.





North Courtenay

The mobility path is constructed along the edge of the existing public space with footpath widening, street planting and furniture added to the east.

The northern area includes a plaza space which is in reasonable condition with clay paving. This area is not impacted by the project, so the existing aesthetic is proposed to be retained. The space would be a good candidate for a future upgrade to offer more from a public space perspective.

Tory St intersection upgrade

With the general traffic no longer turning onto Courtenay Place, the intersection can be compressed and pedestrian improved.

Α

South Courtenav

The southern end of Courtenay Place would benefit greatly from modernisation and de-cluttering to become a more open and inviting place that supports both a day and night time economy. Using a good quality, simple paving material would unify the space along with the upgraded bus stop to improve the experience for public transport customers. The active travel zone could be asphalt to help differentiate from the footpath and provide a smooth surface with good grip for people on wheeled devices.

INDICATIVE QUANTITIES

To inform business case costing, subject to change,		
PROPOSED TREES	30	
RAINGARDENS	220m ²	
GARDEN BED	100m ²	
SEATING ELEMENTS	20 + Courtney feature projec	

CLAY PAVING PROPOSED TREE MODERNISED PAVING EXISTING TREE OUTDOOR TRADING ASPHALT

ACTIVITY ZONE *

Provides a zone where features such as street furniture, raingardens, lighting, cafe tables can be gathered to provide a clear movement path. Also designed to provide a buffer between people using outdoor dining spaces and bus traffic.



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Allen and Blair Streets are hospitality destinations that benefit from a flush surface from building edge to building edge and catenary lighting. This gives flexibility to choose the extent of pedestrianisation with minimal investment, creating opportunity for

FOCUS PLANS

LAMBTON QUAY NORTH

Focus plans to show pedestrian crossings and key design interventions



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FOCUS PLANS

LAMBTON QUAY SOUTH

Focus plans to show pedestrian crossings and key design interventions



 CLAY PAVING
 PROPOSED TREE
 SIGNALISED CROSSING

 MODERNISED PAVING
 EXISTING TREE
 IIII ZEBRA CROSSING

 ASPHALT
 OUTDOOR TRADING
 SUS CUSTOMER SPACE

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require consideration.

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FOCUS PLANS

WILLIS STREET

Focus plans to show pedestrian crossings and key design interventions



←→ SIGNALISED CROSSING CLAY PAVING PROPOSED TREE MODERNISED PAVING EXISTING TREE ZEBRA CROSSING [OUTDOOR TRADING [BUS CUSTOMER SPACE ASPHALT

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public transport customers. Potential for

I coffee cart or similar.




FOCUS PLANS

MANNERS STREET



Minor change to intersection, existing aesthetic maintained

Loading bay infilled, existing aesthetic maintained

CLAY PAVING PROPOSED TREE \longleftrightarrow SIGNALISED CROSSING MODERNISED PAVING ZEBRA CROSSING EXISTING TREE UTDOOR TRADING BUS CUSTOMER SPACE ASPHALT

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FOCUS PLANS

COURTENAY PLACE NORTH



Existing area is asphalt, pavement extension to tie in with this materiality.

 CLAY PAVING
 PROPOSED TREE
 SIGNALISED CROSSING

 MODERNISED PAVING
 EXISTING TREE
 IIII ZEBRA CROSSING

 ASPHALT
 OUTDOOR TRADING
 BUS CUSTOMER SPACE

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Micromobility zone could be asphalt separated by a buffer zone of paving and raingardens. Existing aesthetic maintained





FOCUS PLANS

COURTENAY PLACE SOUTH



CLAY PAVING PROPOSED TREE MODERNISED PAVING EXISTING TREE ASPHALT

 \rightarrow SIGNALISED CROSSING ZEBRA CROSSING CONTRADING BUS CUSTOMER SPACE

4

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add note re what the plans communicate -Plans show both new and existing paving to communicate the overall strategy for distribution of materials. Design to be developed through subsequent stages.











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PREPARED BY:	Kylie Boivin Senior Professional / CPTED Parctitioner Boffa Miskell Ltd	KBun -	
REVIEWED BY:	Jane Rennie Associate Partner / Urban Designer Boffa Miskell Ltd	Alternia	
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EXECUTIVE SUMMARY

The Golden Mile project is one of the key projects for Let's Get Wellington Moving (LGWM) in transforming how people move through and spend time in the centre of Wellington. This project will be the most significant and high-profile public realm project for Wellington in many years. Extensive public consultation found that people want visionary change for the Golden Mile, opting for the most ambitious of the three short-listed options. People want the Golden Mile to be easily accessible and a place for people.

The centre of Wellington is/will continue to experience ongoing change, with a greater focus on central city living. The Te Aro area is the fastest growing residential area in New Zealand and this project provides an opportunity to support this change in land-use and urban intensification. Creating a safe place for central city residents is critically important and CPTED plays a role in delivering this outcome.

Crime Prevention through Environmental Design (CPTED) aims to create safe places for people by reducing opportunities for criminal and antisocial behaviour through a range of methods. Key National CPTED Principles align with the vision for the Golden Mile and will assist the design team in delivering these. One of the key objectives for the Golden Mile is to create a 'Safe Place'. The success of this objective will be a key factor in determining if people choose to spend time along the Golden Mile or not, and CPTED can help achieve this objective.

This Strategy is the first piece of CPTED work for LGWM and sets-out how CPTED can add value to this project and be meaningfully integrated into the process to maximise the benefits of a range of design outcomes. The process identifies future CPTED work needed to fully understand the site and to inform the project goals as the process evolves. A highly collaborative approach with key stakeholders and groups (such as the Pōneke Promise) is recommended to understand the complexity of the issues and challenges the Golden Mile faces. This project provides an opportunity to create real change for a significant part of central Wellington and provides an opportunity to use CPTED to create a safe and vibrant city.

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1. INTRODUCTION AND PURPOSE OF THIS CPTED STRATEGY

The Let's Get Wellington Moving (LGWM) project will transform the way people move around Wellington's central city. The intent of LGWM is to shift the focus from private vehicles to a public transport model about and for people. Investment in street improvements will promote active transport modes for pedestrian and cyclists and public transport priority with a safety and place focus.

As part of the LGWM project, three design options with differing levels of intervention have been consulted on for the transformation of the Golden Mile. Following extensive consultation, option three was identified as the preferred option. This option opted for the most extensive change to the Golden Mile corridor with people seeking a visionary transformation of the way the Golden Mile is used.

LGWM have engaged Boffa Miskell to prepare a high-level Crime Prevention through Environmental Design (CPTED) Strategy for the Golden Mile project to promote and achieve best practice CPTED principles.

This Strategy is based on a desktop analysis and high-level review of the project and known information. It draws on information from other work streams, such as the Social Effects Assessment and outlines how CPTED can assist in achieving the project vision and key objectives.

This CPTED Strategy for the Golden Mile is the first piece of work relating to CPTED as part of the wider LGWM project and sets out how CPTED will be integrated into the project going forward. As such, the Strategy establishes a CPTED framework for reviewing the project at key design stages, in promoting best practice CPTED outcomes.

This document includes the following;

- 1. Introduction of CPTED principles and how these can add value to the design process and resulting public realm environment.
- 2. Identification of relevant CPTED-related goals and aspirations for the Golden Mile and the Lets Get Wellington Moving project.
- 3. Identification of current high-level CPTED issues, risks and opportunities for the preferred option and strategies to address these.
- 4. Establish a way forward for how CPTED is embedded into the project to maximise crime reduction and elimination for all users of the Golden Mile.



LETS GET WELLINGTON MOVING IMAGE

2. WHAT IS CPTED?

"Crime Prevention through Environmental Design is a crime prevention philosophy based on proper design and effective use of the built environment. The use of CPTED is intended to reduce crime and fear of crime by reducing criminal opportunity and fostering positive social interaction among legitimate users of space."

NATIONAL GUIDELINES FOR CRIME PREVENTION THROUGH ENVIRONMENTAL DESIGN IN NEW ZEALAND PART 1: SEVEN QUALITIES OF SAFER PLACES

CPTED aims to create safe places and communities through the application of a range of principles, strategies and methods. There are three key interrelated factors which can create a 'safe place' these are; the design of the environment (CPTED), mechanical security (cameras, access control etc) and management (security teams, hours of operation etc). CPTED's primary focus is the design of the environment, however it is acknowledged that this is one factor and that security and management need to be considered in parallel to make a place truly safe. Research shows that crime and the fear of crime can be significantly reduced by implementing appropriate environmental design strategies in the community.

The New Zealand National Guidelines for CPTED were established in 2005 as part of the Urban Design Protocol. The National Guidelines for CPTED establishes the key CPTED principles which include:

- 1. Surveillance People are present and can see what is going on.
- 2. Access management Methods are used to attract people and vehicles in some places and restrict them from others.

- 3. Territorial reinforcement Clear boundaries encourage community 'ownership' of the space.
- 4. Quality environments Good quality, well maintained places attract people and support surveillance.

The National Guidelines also define seven qualities that characterise well designed, safer places. These qualities broaden the view of CPTED to include additional factors which result in both good CPTED outcomes and a 'high-guality urban design'. These seven CPTED gualities include:

- 1. Access: Safe movement and connections. Places with well-defined routes, spaces and entrances that provide for convenient and safe movement without compromising security.
- 2. Surveillance and sight lines: See and be seen. Places where all publicly accessible spaces are overlooked, and clear sight lines and good lighting provide maximum visibility.
- 3. Layout: Clear and logical orientation. Places laid out to discourage crime, enhance perception of safety and help orientation and wayfinding.

- community.



4. Activity mix: Eyes on the street. Places where the level of human activity is appropriate to the location and creates a reduced risk of crime and a sense of safety at all times by promoting a compatible mix of uses and increased use of public spaces.

5. Sense of ownership: Showing a space is cared for. Places that promote a sense of ownership, respect, territorial responsibility and

6. Quality environments: Well designed, managed and maintained environments. Places that provide a quality environment and are designed with management and maintenance in mind to discourage crime and promote community safety in the present and the future.

7. Physical protection: Using active security measures. Places that include necessary, well designed security features and elements.

THIS IS THE PART OF THE PROJECT WHICH CPTED AIMS TO ADDRESS **TECHNIQUES AND STRATEGIES.**

3. WHY IS CPTED IMPORTANT TO THE GOLDEN MILE?

PUBLIC REALM AND CPTED

The Golden Mile is a integral part of the Wellington street network, moving thousands of people to, from and through the central city daily. The Golden Mile is one of the key projects for 'Let's Get Wellington Moving' and will guide how Wellington will develop in the future. The Golden Mile will be one of the most significant public realm projects that Wellington has seen since the development of the waterfront. It has the potential for visionary change to Wellington to improve the way people live, work and play in the heart of the city.

Safe, accessible and attractive streets are at the core of what CPTED aims to achieve. The LGWM project objectives reflect these core CPTED values. CPTED will be a key design driver which can influence the success of this project. If a place is not safe then people will not choose to spend time there for positive sociable activities.

THE GOLDEN MILE PROJECT VISION AND PRINCIPLES

A unique vision for the Golden Mile has been developed and is informed by the Wellington City Councils 'Our City Tomorrow' goals and the LGWM Vision, Objectives and Key Performance Indicators (see opposite). This policy context provides a mandate for promoting and achieving

VISION:

Connecting large numbers of people to and through the central city with reliable and efficient public transport while providing safe, accessible and attractive streets and spaces.

GOLDEN MILE DESIGN PRINCIPLES:

These principles provide direction for the development of the Single Stage Business Case.

- TRANSITIONING
- VIBRANT AND PROSPEROUS
- INCLUSIVE AND CONNECTED •
- GREENER •
- RESILIENT •



Strategic Influences Golden Mile Vision and

that informed the Design Principles

HELPING TO ACHIEVE THE VISION

Safety for walking and cycling

The following table outlines the relevant LGWM Objectives and Key Performance Indicators along with the Golden Mile Design Principles and how CPTED can assist in achieving these. These Objectives, KPIs and Design Principles will also inform the CPTED Goals for the Golden Mile, which are discussed in more detail later in this Report.

occurring.

LET'S GET WELLINGTON MOV OBJECTIVES & KEY PERFORM.	ING PROGRAMME ANCE INDICATORS	THE GOLDEN MILE PROJECT VISION AND	
PROGRAMME OBJECTIVES	HOW CPTED CAN ACHIEVE THESE?	DESIGN PRINCIPLES	HOW CPTED C
	In creating a place which is safe, has high-levels of amenity to attract people, feels comfortable and fosters a sense of well-being, you are promoting a liveable community.	VIBRANT AND PROSPEROUS	This Design Princ Development pote and attractive car land-uses and su attractive, safe pla
ACCESS	CPTED promotes high-levels of legibility and ease of access, allowing all people to safely move through a place and find their way around instinctively.	INCLUSIVE AND CONNECTED	CPTED principles for all. This is not the supporting fac spend time in a p people to instincti place will mean th
0	People will only choose to spend time in a place if they feel		the user groups s
SAFETY	safe. CPTED promotes places which are safe for people to dwell and move through without fear or risk of antisocial or criminal behaviour occurring.		
KEY PERFORMANCE INDICATORS	HOW CPTED CAN ACHIEVE THESE?		
Amenity	Amenity is essential to attract people and activate a place, providing a safe environment through surveillance. Places which are well-cared for promote positive social responses and foster a sense of ownership and pride from locals.		
Urban development potential	Creating environments which are safe and attractive can encourage development of complimentary land-uses and high-quality outcomes which can further activate and provide surveillance of a place.		
	In providing safe environments for active travel modes, usage increases the levels of activation and surveillance, making		

places safer. This KPI promotes not just the safety of people from traffic incidences, but also allows people to move through the area without fear or risk of antisocial or criminal behaviour

ESIGN PRINCIPLES

CAN ACHIEVE THESE?

ciple aligns with the KPI around Urban cential. Creating environments which are safe n encourage development of complimentary upport economic growth. In creating an lace people will want to spend time there.

s promote places which are highly accessible t limited to universal access, but also providing cilities required to allow people to comfortably place, for example public toilets. Allowing tively and easily move through and around a his is not daunting for people and will diversify spending time in a place.

4. OVERVIEW OF THE PREFERRED OPTION

SUMMARY

The development of a design response for the Golden Mile has been iterative, having involved a Long List of options and a Short List evaluation process. A 'Preferred Option' has been selected and a summary of the key elements of the concept are set out below.

SHORT LIST OPTIONS:



SUMMARY OF OPTION 3: THE PREFERRED OPTION

This option sees the narrowing of the carriage way to 2-lanes with the remaining space reallocated to pedestrians, active mobility, people accessing the bus service and public space. The most significant change occurs at either end of the corridor where the street is wider - North Lambton and Courtenay Place.



PRIVATE MOTOR VEHICLES + PARKING Realigned to parallel streets. Accessible parking provided on side streets

SIDE ROADS

Closed to general traffic, open for active modes, service and emergency access.

SERVICING AND TAXI Relocated to side streets, some access out of peak hours.

BUS OPERATIONS Step change in bus operations with buses generally the only vehicles permitted.

PEDESTRIAN / URBAN AMENITY / ACTIVE MODES Significant improvements through in-fill of loading and parking bays, side street closures and reallocation of vehicle lanes to pedestrian space

BUS STOPS

Some bus stops removed/relocated to gain efficiency.



LETS GET WELLINGTON MOVING IMAGE

DIAGRAMMATIC CROSS SECTIONS



LAMBTON QUAY NORTHBOUND SOUTHBOUND

WILLIS STREET



Т

	Ň	i
'		

NORTHBOUND

COURTENAY PLACE



BOFFA MISKELL | LETS GET WELLINGTON MOVING THE GOLDEN MILE : CPTED STRATEGY | 4. OVERVIEW OF THE PREFERRED OPTION

6



5. WHAT DO WE ALREADY KNOW?

CRIME PROFILE

The Golden Mile stretches through a significant cross-section of Wellington's Central City. The neighbourhoods along Golden Mile have very different land-uses and characteristics, which results in a range of different challenges and risks in relation to crime and antisocial behaviour.

From a high-level review of the Police crime data, two key hot-spots have been identified as presenting elevated levels of crime. These two 'hotspots' coincide with two of the signature projects for the Golden Mile, Courtenay Place and Midland Park, presenting an opportunity to improve the risks relating to crime for these areas. The following graphic sets out the types of incidences that are occurring along the Golden Mile.

CRIME MAP



FIGURE 2: NEW ZEALAND POLICE VICTIMISATION TIME AND PLACE DATE FOR PERIOD 1 MAY 2020 TO 30 APRIL 2021 WITH EXTENT OF GOLDEN MILE NOTED IN PURPLE

A more detailed review of the receiving environment will be needed to fully understand the issues, risks and inform the design of these places and this is proposed to be undertaken at the next stage of the project.

The Wellington City Council has been aware of the challenges Courtenay Place has been facing for many years and as a result have commissioned a CPTED report specifically for the area. This report should be reviewed before commencing the next phase of design.

EXISTING CPTED DOCUMENTS

The Te Aro Park Assessing Harm document was prepared by Wellington City Council in September 2020. The recommendations for this document focus on Te Aro Park only, which is outside of the scope of the Golden Mile project. The crime profile data which informed this document draws on data for the wider Courtenay Place area between Taranaki Street and Victoria Street, the following conclusions can be drawn from this data:

- compared with previous years.
- Place area.
- at night.

The findings from this document confirm assumptions drawn from the brief review of Police crime data (earlier), that the Courtenay Place area presents significant CPTED risks.



COURTENAY PLACE AND TE ARO PARK

Very high levels of crime data are outlined, even for an urban environment. Many of these are potentially linked to alcohol and drug use.

LAMBTON QUAY

High levels of assault related incidences including; sexual assault, common assault, armed robbery and abduction/ kidnapping.

There were also significant levels of theft related incidences.





· Consistently increasing rates of antisocial behaviour in the area

· Concentrations of graffiti in Te Aro Park and the surrounding Courtenay

Significant levels of 'breach of the liquor ban'.

Perceptions that the Courtenay Place and Te Aro Park area is unsafe

SOCIAL CONTEXT IMPLICATIONS ON CPTED

A Social Effects Assessment has been prepared by WSP to review the preferred option for Golden Mile. This includes consideration of:

'the effect on equitable access to social and economic opportunities...... and 'the effect on social connectedness'

The Assessment concluded that there were different needs for different user groups in achieving equitable social effects for the groups. However, there were consistent commonalities across all user groups. From a CPTED perspective it is desirable to diversify the types of people who choose to spend time and move through the Golden Mile. Greater diversity of visitors encourages positive use of the public realm at different times of the day/night.

Many of the findings focused on transportation related solutions, particularly for the traveller and 'non-private motor vehicle users' (Taxi, Uber etc). However, for the people who choose to live or spend time in the city, environmental factors and facilities become critically important to their social experience of the place.

CPTED PRINCIPLES IN RELATION TO USERS

The adjacent table summarises the different requirement of each user group and considers at a high-level which of the National CPTED Principles are relevant to achieving the needs outlined.

- Access
- Sense of ownership
- Surveillance and sight lines
- **Layout**
- Activity mix
- Quality environments

Refer to page 2 for full description of the CPTED principles. Note 'Physical Protection' is not part of this list, because the focus of the design is on the environment.

	YOUTH	FAMILY GROUPS	MOBILITY IMPAIRED (DISABLED, IMPAIRED, CHALLENGED)	INNER CITY RESIDENTS, PARTICULARLY THOSE IN AFFORDABLE HOUSING:	NON-PRIVATE MOTOR VEHICLE (PMV) USERS:	TRAVELLERS TO HOSPITAL, UNIVERSITY, AIRPORT DESTINATIONS BEYOND THE CBD:
ALL GROUPS			Increased I More space fo Improved pedestr Separation betweer	PT reliability or public realm ian level of service n modes and speeds		
TRANSPORTATION RELATED NEEDS	Getting to their destinations in and through the Golden Mile, e.g., schools, university, casual/part time work	 Affordable, safe options for moving around as a mixed ability group (in keeping with the "8yrs – 80yrs" principle) 	 Ease of moving along the Golden Mile pavement - having enough space to navigate comfortably and smoothly Ease of using private and public transport Ease of getting around the CBD in vehicles (private & public) smooth passage, reduced stopping and starting 	 Affordable and effective AT & PT connections to services and destinations beyond the CBD 	 Safe, comfortable, efficient routes Facilities to support active, shared, and public transport modes in the right places Viable mode choice (affordable, reliable, accessible, safe) 	 Reliable travel time Easy changes Affordable AT & PT mode choices
ENVIRONMENTAL NEEDS AND FACILITIES	 Sense of belonging to Wellington and the CBD as a place to meet and gather in groups that is affordable, comfortable, and legitimate Able to engage with places in different ways - resting, actively, explore and enquire 	 Facilities to rest, recreate, play Access to services (toilets etc) Attend events affordability and reliably 	 Comfort for lingering and mingling - providing multiple opportunities 	 Quality public places to balance smaller private space to enhance the liveability of the CBD Reduced noise and congestion 		

CURRENT OBSERVATIONS

This following outlines a summary of the high-level CPTED observations, based on a site visit and knowledge from the design team.



NORTH LAMBTON - PARLIAMENT TO MIDLAND PARK

This section of the corridor connects between Parliament and the popular Midland Park, the area is associated with the Government sector, corporate offices and retail. There are scattered cafés and pubs with a lunch-time focus. During business hours traffic is congested and slow. The footpaths are congested and walking speeds are high. Footpaths are also busy on the weekend, but not so congested. There are intermittent pedestrian connections to the Terrace, providing access to a concentration of high rise offices and apartments.

HIGH-LEVEL CPTED OBSERVATIONS:

- There are few places to stop out of the flow of movement and rest. The space could be challenging for a range of people. Choice of movement is restricted - channelled along the footpaths. Street furniture and vehicle congestion impedes pedestrian desire lines across the street. Vehicle noise is loud and reduces comfort.
- Customers waiting for the bus are often mixing with people walking due to a lack of dedicated, comfortable space.
- There is a lack of activation/surveillance at night by businesses. however there is an emerging night-time economy on the adjacent Featherston Street. After hours there are few pedestrians, mostly passing through to the Rail Station or apartments and nearby residential suburbs.
- This area has potential to provide for more residential apartments in the future given the pressure on housing, The project should anticipate this and be designed in such a way that supports land use change and provides amenity for inner city residents.
- · There is fair, but a dated environment, generally with good sight lines and reasonable lighting. At night it feels relatively safe when vehicle and pedestrian congestion is reduced, enabling clear sight lines and space to avoid people if desired.

(2) SOUTH LAMBTON - MIDLAND PARK TO OLD BANK ARCADE

This section is similar to North Lambton, however the cross section tapers from four lanes to one and is 'bus only' in some areas. Land use is characterised by ground floor retail and high rise offices, hotels, apartments and a supermarket. There are late night venues accessed from laneways.

HIGH-LEVEL CPTED OBSERVATIONS:

- · Footpaths are crowded during the day due to high levels of pedestrian traffic and relatively narrow footpaths.
- Footpaths are narrower and more cluttered with street furniture and bollards increasing risks of people bumping into each other and reducing accessibility.
- Quality is degraded in places, but generally fair, albeit dated.
- At night it feels relatively safe when vehicle and pedestrian congestion is reduced, enabling clear sight lines and choice of movement. Lighting is reasonable. The supermarket provides oversight and activity while foot traffic is generated from hotels and occasional bars.
- · There is low traffic at night, but there is generally someone around.

(3) WILLIS AND MANNERS STREETS

Willis Street is a narrow street with high pedestrian volumes. It is retail dominant with few businesses open after hours. There is pressure on bus stops with high volumes of customers, particularly at the evening peak.

HIGH-LEVEL CPTED OBSERVATIONS:

- The northern half is reasonably clear of clutter, while the effective footpath width in the southern half is constrained by street furniture designed to deter informal crossing - there are minimal opportunities for respite. Pavement quality is good and well maintained.
- · Customers waiting for the bus are often mixing with people walking due to lack of dedicated, comfortable space.
- · There are good sight lines and reasonable lighting. The supermarket provides eyes on the street until 10pm. After this time, there is no business activation and with occasional pedestrians passing through.
- It is unlikely that this street will support a night time economy given the strong retail presence.
- TE ARO PARK
- This area is not considered to be within scope of the Golden Mile project, due to the investment objectives. Access for vehicles from Courtenay Place to Dixon is closed, while still allowing for cycles and micro mobility. The public toilets and poor performance as a public space are contributors as well as the isolation of the space by vehicle movement and parking.

(4) COURTENAY PLACE

This area is the primary night-life destination in Wellington with bars dominating the eastern side of the street and takeaway/food focused to the west. During the day many businesses are closed. There are high numbers of pedestrians commuting in the morning and evening, with some lunch time activity. The street transforms on the weekend when bars are full and footpaths are heavily congested. The area has well-documented issues with crime, violence, sexual violence and antisocial behaviour, which is perceived to have increased in recent years, particularly during the day.

HIGH-LEVEL CPTED OBSERVATIONS:

- movement.
- street.
- personal space.

- restricting surveillance.
- threatening to some people.

- legitimate uses.
- supported by the crime statistics.

• Environmental quality is poor with empty shop fronts, low quality streetscape, dated aesthetic and noticeable graffiti/damage. Street furniture, low walls and vegetation restricts sight lines and choice of

Bars extend trading area onto the footpath, which is generally well defined, although there are issues with passing alcohol in from the

· Footpaths are heavily congested at night causing friction between people and inability to avoid contact with people when feeling unsafe. While some enjoy the atmosphere, others may feel uncomfortable due to sensory aggravation and inability to move through while retaining

· There is a trial to use the service lane as a taxi stand, which is reported to be working well in the current street configuration.

• The street is under-utilised in the day, particularly at the southern end.

· Side streets are well activated and level, however full of parked cars

 Te Aro has a rapidly increasing residential population, mostly in apartments. Many transitional and temporary housing has been developed recently. Noticeable presence of homeless that can feel

· Heavy, noisy traffic during the day reduces levels of pedestrian comfort.

· Lack of activation during the day due to dominance of bars only open at night, creating an uncomfortable pedestrian environment by day.

Significant levels of commuter traffic at peak times during the day and into the evening. People are moving through, but not lingering for

 After 10pm on weekends Courtenay Place experiences over-crowding, high-levels of intoxication and significant levels of physical and sexual violence. There is a perception that this area is not safe at night, this is

· Conflicts between Uber, buses and taxis can occur at night.

HIGH-LEVEL CPTED CONSIDERATIONS AND RECOMMENDATIONS



ALL STREETS

- · Wide, clear footpath environments to provide space for people to choose how they move without conflict or pressure. Simplify and dedicate space for street furniture, vegetation and waiting spaces for transport facilities to provide sufficient effective footpath width and sight-lines up and down the street.
- · People feel safer in places that are well occupied and have a good level of sober oversight. Amenity is also a basic requirement of a successful public space, there needs to be a balance of movement and pause spaces with elements such as seats, planting, feature lighting, playful elements,
- It is important that people feel that they are legitimately welcome, particularly youth, and even if they are not spending money. This encourages a sense of ownership and belonging and is a positive influence on behaviour, with a universal design approach to encourage use by the whole community.
- · Well considered design is needed to integrate different modal movement zones. Environmental cues have a stronger influence on behaviour than control measures, so design to encourage considerate interaction between users is important.
- · At points of interaction between modes, design for the most vulnerable user.
- Express a unique sense of place that reflects local culture to increase sense of ownership, pride and belonging, and encourage respectful behaviour.
- Allow for practical servicing for business and residential activity.
- · Encourage businesses to create positive edges and activate the street.

(1) NORTH LAMBTON - PARLIAMENT TO MIDLAND PARK

- · Changes to the cross section are positive, particularly the reduction in traffic, dedicated space for bus customers, provision for active modes, welcoming dwelling space and wide clear footpaths. The ability for people to follow desire lines is supported.
- · Removal of traffic could reduce passive surveillance at night, some vehicle access, particularly servicing is positive. Frequent side streets support taxi use.
- Care will required when integrating cycles into the pedestrian realm. Encourage slow speeds and consideration towards pedestrian as the most vulnerable user.
- · The space will be a more desirable place to spend time this should support businesses to diversity and cater to the large working population at lunch and after work, as well as inner city residents.

(2) SOUTH LAMBTON - MIDLAND PARK TO OLD BANK ARCADE

- · Decluttering and opening up the space for pedestrian movement is beneficial - supporting accessibility, clear sight lines, choice of movement and comfort.
- · Reduced vehicle traffic makes a more relaxing atmosphere. Provide opportunities for respite at the end of streets which have been closed if space is not available in the cross-section.
- Dedicated space for bus customers to wait is an improvement.
- Some vehicle access at night is encouraged, at least for service vehicles as side streets provide regular opportunities for taxi/uber access.

(3) WILLIS AND MANNERS STREETS

- Due to the narrow cross-section, changes are minimal. Footpaths should be as clear and as wide as possible to relieve pedestrian congestion. The provision of dedicated space for bus customers to wait is positive, aligning with the natural location to wait, improving accessibility for both people using the bus or on foot.
- Closing access to Cuba and Mercer Streets will have a significant impact, allowing respite clear of movement, businesses to activate space, and active travel connections to the waterfront. Lighting, quality and amenity will be important in this area.
- After business hours, some vehicle access would be beneficial to provide natural surveillance. Taxi access should be considered (not necessarily on these streets) to support Cuba Street and popular latenight laneways.

• TE ARO PARK

There are significant, well recognised CPTED concerns with this space, and a strong alignment between the aspirations of the Golden Mile project and the work of the Poneke Promise, which seeks to improve the social and physical environment in the precinct.

(4) COURTENAY PLACE

- residential population.
- this is encouraged.
- lines up and down the street.
- all users.

- the general public.
- environments.
- long-term goal to provide travel options.

 Any future project should seek to integrate from building edge to building edge and include surrounding laneways. Removal of parking from Dixon Street between Cuba and Courtenay Place could be beneficial to promote better integration of Dixon Street businesses with the space, opportunities to spill out, and create a sense of custodianship.

· This area has historically been a destination for additional forms of entertainment (theatre, movies, dining etc.), which are less focused on alcohol. It would be beneficial to encourage more diverse activity in the future, as well as community services to support the rapidly growing

• This area requires community services for the increasing residential population. Collaboration with the Poneke Promise team in regards to

Encourage collaborative management of licensed premises, such as the Alcohol Accord Association in Christchurch.

• The footpath widening reduces crowding and provides space for people to move around each other. Align street furniture, trees, lighting and transport facilities to retain sufficient pedestrian effective width and sight-

 Providing a space where people can move faster than pedestrians on scooters and cycles is positive for the pedestrian experience. Care needs to be taken through design to promote considerate behaviour from

Define liquor licensing areas with restaurant partitions, creating a clear, continuous edge to the movement corridor to support accessibility.

Encourage active engagement at the built edge to provide sober passive surveillance, supporting diversification of businesses.

 Well-considered provision of street trees and furniture will provide amenity and promote a sense of belonging for inner city residents and

Establish clear access management for servicing and unsafe

• Allow safe tax/uber access, at least to pick-up drop off. Take care not to cause people to walk too far to access these services, separating people from their group. Ensure there is good business oversight in these locations and co locate taxi areas with late night support services. A focus on improving public transportation for late night trips should be a

6. THE PROCESS AND NEXT STEPS

ESTABLISHING CPTED GOALS

For the Golden Mile to be truly successful and promote a safe, healthy environment for all users, the following project-wide CPTED goals are recommended. These goals align with the project vision and objectives and the National Guidelines for CPTED as best practise. These goals will form the basis of CPTED reviews for the course of the project and will need to be refined as more detailed investigations of the receiving environment are completed.



THE GOLDEN MILE DESIGN PRINCIPLES



Promote safe and efficient access for all people and modes of transportation (with a particular focus on active modes).

- Promote instinctive way-finding within the public realm which is clear and logical.
- Safe movement and connections for both public and active transportation modes.
- Comfortable and safe environments for resting and waiting, which are well overlooked and supported by facilities.

VIBRANT AND PROSPEROUS (and Reflecting of Place)

CPTED GOAL

Create a place which reflects Wellington and it's people. This will attract a diverse range of people to spend time in the Golden Mile for positive social experiences, not just to travel through. A diverse range of people reduces risk for antisocial behaviour.

- Engage with the local community to create a place which reflects uniquely Wellington. Encourage an engaging place to gain a sense of ownership.
- · Create and encourage places for people to dwell, linger and feel part of the city.
- · Reflect needs of all members of the community, including mobility impaired, youth and family.

OVERALL GOAL



To achieve the overall goal of safety we need to create a safe environment which promotes well-being, a sense of belonging and reduces opportunity and risks for antisocial and criminal behaviour.

SURVEILLANCE

Achieving high-levels of surveillance throughout the Golden Mile by encouraging activation and facilitating clear views.

- Clear sight lines between building frontages.
- Minimise clutter within the public realm (poles etc).
- Promote complimentary and diverse land-uses to create activation/surveillance at different times of the day and night.
- Welcoming warm, white light to all areas to promote a feeling of well-being at night and to ensure no dark-spots.

AREA SPECIFIC

GOALS

· Eliminate entrapment areas.

AMENITY

High levels of amenity are essential to this project and not just a 'nice to have'. Amenity creates environments where people want to be and promotes activation/surveillance. It creates a quality environment to deter people damaging or disrespecting the place.

- Create a place that reflects the community will help to foster a sense of ownership to maintain its quality.
- Well designed, managed and maintained environments.
- High-quality, durable and robust materials.
- Creation of places with interest and intrigue.

INCLUSIVE AND CONNECTED

Create places for positive social experiences and interactions. Ensure the needs of all users are met and the design fosters ease of living and working along the Golden Mile.

- · Provide the required facilities for the different users.
- · Allow ease of loading, servicing and deliveries get the practicalities right for residents and businesses.
- Promote places for people to meet and greet, getting to know the neighbours can reinforce CPTED principles.

Following detailed investigations into the receiving environment, specific CPTED goals and aspirations will be developed based on the results of the receiving environment analysis.

For example; late-night drinking related issues have been identified for Courtenav Place - specific goals to assist with addressing these issues will be identified in the concept stage.

• Use access-control to prevent access to areas where it is not safe/appropriate for public access.

DIVERSITY OF ACTIVITY

It is acknowledged that the scope of the Golden Mile is not to change land-uses. However, creation of a high-quality environment will encourage complementary and diverse land use activities during the day and night.

Create a high-quality environment to attract complimentary diverse land uses. This will assist with activating a place providing surveillance and a positive environment.

The public realm reflects the diversity of users within the central city and encourages a sense of belonging and ownership.

WELL-MANAGED

To create a safe environment, other techniques which support CPTED principles are required. Effective management of a place and formal security techniques are required in some locations.

• Use active security measures to prevent access to areas where it is not safe/appropriate for public access, e.g.: servicing areas.

· Collaborative approaches to management of the Golden Mile with key stake holders.

HOW CPTED WILL BE INTEGRATED INTO THE PROCESS?

To maximise the benefits CPTED can have for the project, properly integrating CPTED into the design process is key. Working from the broadest scale through to the detailed scale, just like the design process will allow various aspects to be considered at the appropriate stage. Below summarises the next-steps in each phase of the project in relation to CPTED.

	BUSINESS CASE	CONCEPT	PRELIMINARY DESIGN	DEVELOPED DESIGN	DETAILED DES
CPTED GOALS	To establish any CPTED mandates of policies the client needs/wants to include on the process.	To review the Receiving Environment in detail and establish broad-scape CPTED issues and risks for the project. Establish broad-scale CPTED concepts.	To refine the design to achieve good CPTED principles and begin to focus on the detail.	To refine the design to achieve good CPTED principles and begin to focus on the detail. Checking Value Engineering process considers CPTED implications.	Refine design to achieve principles established in e stages of the project.
KEY CONSIDERATIONS	 Understand the needs of the site from a high-level. Identify any known complimentary information, data or CPTED reports relevant to the project. High-level strategies around access for different modes of transport and user groups. This should be tested and confirmed at concept design stage. 	 Understand land use activity mix. Understand key neighbourhood connections and activity generators. Hierarchy to entrances/ key established building and landscape conceptually supports this. Establish engagement process and how a sense of ownership 	 High level surveillance strategy. Understanding of hours of use and movement and night activity to encourage legitimate night time use. Public, semi-public, private serving areas. Public spaces designed to high- quality with appropriate level of legitimate activity. 	 Ensure safe movement around site, elimination of entrapment spots/concealed spots. Eliminate opportunities for offenders to go unnoticed, e.g. make conspicuous. Maximise surveillance from within buildings. Lighting strategy established to inform design. Way-finding strategy established. 	 Maintenance/manage plans established to good environmental e Security measures di Active management security) considered. Material selection rev for robustness, qualit consideration given t hardening, e.g. entra
CPTED DESIGN	REVIEWS	Review at each design stage toReview 100% design drop to con	review the 50% design drop drawings to nfirm CPTED matters are addressed.	o identify any CPTED issues, opportun	ities and risks.
ENGAGEMENT	Project team	 Local Police Wellington City Council Stakeholders groups (businesses, residents etc.) 		Project team	
CPTED KEY TASKS/PROJECTS	 Confirm CPTED mandates of policies for the project moving forward. Establish how CPTED will fit into the engagement process 	 Review the Courtenay Place CPTED Report (WCC). Carry out detailed CPTED Assessment for the other parts of the Golden Mile. Including stakeholder engagement to understand the challenges. Identify key goals for the Golden Mile Project. 			

IGN	POST OCCUPANCY
CPTED early	Visit site, gain feedback from tenants to understand if CPTED goals have been met. Make refinements if needed.
ement achieve quality. iscussed. (CCTV viewed ty and to target inces.	 Post occupancy site visit to assess site against the CPTED mandates/policies/goals for the project. Report on and make adjustments to environment should this be required. Review maintenance standards.
	Local Police
	Wellington City Council
	 Stakeholders groups (businesses, residents etc.)
	 Post occupancy site visit to assess site against the CPTED mandates/policies/ goals for the project. Report on and make adjustments to environment should this be required. Review maintenance standards.

Boffa Miskell is a leading New Zealand professional services consultancy with offices in Auckland, Hamilton, Tauranga, Wellington, Christchurch, Dunedin and Queenstown. We work with a wide range of local and international private and public sector clients in the areas of planning, urban design, landscape architecture, landscape planning, ecology, biosecurity, cultural heritage, graphics and mapping. Over the past four decades we have built a reputation for professionalism, innovation and excellence. During this time we have been associated with a significant number of projects that have shaped New Zealand's environment.

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 09 358 2526
 07 960 0006
 07 571 5511
 04 385 9315
 03 366 8891
 03 441 1670
 03 470 0460

About Boffa Miskell

www.boffamiskell.co.nz





Golden Mile Shortlist Options: Social effects assessment

Completed by Dr Vivienne Ivory Technical Principal - Social Science, Resilience, and Public Health. WSP June 2021

1 Purpose and scope

The purpose of the Golden Mile Option 3 social effects assessment is to consider

- the effect on equitable access to social and economic opportunities such as employment, retail, health and cultural opportunities. For the purposes of this assessment, 'equitable access' needs to consider different sectors of society including mobility impaired, income groups, age groups, etc. 'Access' needs to consider changes in the number and location of mobility parks, bicycle parks, motorcycle parks, public on-street car parks, public offstreet car parks, bus stop locations.
- 2. the effect on social connectedness.

The assessment below builds on the MCA undertaken in December 2021 and considers in more detail how a further developed Option 3 will address social and distributional effects based on updated information and decisions. The updated assessment also identifies specific issues and recommendations for consideration in the more detailed design phases (*indicated in italics*).

2 Methodology

The assessment was desktop-based, drawing on expert knowledge and emerging materials detailing Option 3. Additional information was taken from meetings and reports, including

- 1. Coordination workshops and meetings with movement hierarchies, safety, CPTED, sustainability to review option development
- 2. Courtney Place safety improvements meeting with WCC
- 3. Subsequent meeting with Moana Mackay, Chief Advisor to the Chief Planning Officer and Chief Infrastructure Officer
- 4. Existing reports and submissions were identified and reviewed, including:
 - Safety and Wellbeing of Young Women in Wellington (2021)
 - Te Aro Park: Assessing Harm (September 2020)

The assessment also identified specific issues and recommendations for consideration in the more detailed design phases to address the social and distributional effects identified.

3 Key assumptions and criteria

During the MCA process, several key factors were identified by an expert panel and submissions as potentially affecting the level of social impact from changes to the Golden Mile. Considerations included the extent to which the different options were expected to provide



- A variety of public spaces that meet the diverse needs for people to gather (e.g., that meet the needs of youth)
- Space for appropriate amenities to be provided and for people to be able to move freely and safely
- Reliable travel times for through travellers
- For Active transport (AT) mode users to move safely, have connection to networks, and have access to active transport facilities such as bike parks in the right places
- Public transport (PT) users have reliable travel times and easy access to bus stops within the Golden Mile.

Based on the above, the following target groups and their needs were considered for equity implications:

Group	Needs
Youth:	Getting to their destinations in and through the Golden Mile, e.g., schools, university, casual/part time work
	Sense of belonging to Wellington and the CBD as a place to meet and gather in groups that is affordable, comfortable, and legitimate
	Able to engage with places in different ways - resting, actively, explore and enquire
	Safe and secure places and means of moving about to take part in the night- time economy, particularly for young women
Family groups:	Affordable, safe options for moving around as a mixed ability group (in keeping with the "8yrs – 80yrs" principle)
	Facilities to rest, recreate, play
	Access to services (toilets etc)
	Attend events affordably and reliably
Mobility impaired	Ease of using private and public transport
challenged)	Ease of moving along the Golden Mile pavement - having enough space to navigate comfortably and smoothly
	Ease of getting around the CBD in vehicles (private & public) - smooth passage, reduced stopping and starting
	Comfort for lingering and mingling - providing multiple opportunities
Inner city residents, particularly those in affordable housina:	Quality public places to balance smaller private space to enhance the liveability of the CBD
-,,,-:	Reduced noise and congestion
	Affordable and effective AT & PT connections to services and destinations beyond the CBD
	Safe, comfortable, efficient routes

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Non-private motor vehicle (PMV) users:	Facilities to support active, shared, and public transport modes in the right places Viable mode choice (affordable, reliable, accessible, safe)
Travellers to hospital, university, airport	Reliable travel time
destinations beyond	Easy changes
the CBD:	Affordable AT & PT mode choices

4 Evaluation outcomes

4.1 Commonalities

The MCA assessment identified the following needs as common to all groups:

- Increased PT reliability
- More space for public realm
- Improved pedestrian LOS
- Separation between modes and speeds

4.1.1 Specific common implications of Option 3

Option 3 provides greater capacity to enhance social connectedness for Wellingtonians generally, and for users and residents of the Golden Mile. More space means greater opportunity to provide space for place-making and stationary and temporary activities in selected locations such as Mercer St. Such spaces can be used by visitors to the Golden Mile, workers and residents wanting time relaxing outside alongside others, and all those wanting to spend time in a public setting safely and comfortably. Shared public spaces such as these contribute to social connectedness by helping Wellingtonians engage with the Golden Mile as a place they belong to, and for them to engage socially in casual but significant ways with other Wellingtonians (and their inner city neighbours).

Wellington City Council's Te Māhana Strategy to ending homelessness can be supported through Option 3 by making streets and civic spaces safer, clean and accessible to for vulnerable residents, providing better places for them to engage with positively with their community and those that support them.

The Poneke Promise is a social contract between the Wellington City Council, Greater Wellington Regional Council, the hospitality and retail sectors, and the police to keep Wellingtonians safe in the central city during the day and night. Option 3 can help enable the social contract through

- using increased amount of pedestrian space to provide an improved and safer urban realm through streetscape, lighting, street furniture and so on
- reducing congestion and clumping of pedestrians by giving more space for people to move and mingle in safety and comfort. This includes additional space on Courtenay Place and on side streets
- provide safer opportunities for pedestrians to move across Courtenay Place
- reduced the severance across Courtenay Place that comes from traffic volumes and noise
- Targeted sites and improved facilities for taxi and rideshare pick-ups and drop-offs nearby to hospitality and entertainment venues, as well as the proposed youth and community hubs. *The convenience of customers being able to easily access taxis and rideshares all along Courtenay Place in the busy night period will need to*



be balanced with the potential severance and safety risks from high volumes of taxis and rideshares travelling along Courtenay Place.

Using available space for multiple functions over the day and week will allow more equitable use of space rather than sectioning it off for movement and/or retail activities.

4.1.2 Target group specific implications for Option 3

The updated plans were reviewed for their implications for each target group

	Updated revisions and implications for key groups
Youth	Option 3 aligns with the youth sustainability values identified in submissions through increased walkability/cycle-ability through the following measures
	• Reduced reliance by youth on private motor vehicles to come into and move through the Golden Mile will reduce the financial cost of mobility for youth who are often on low incomes. Low cost modes such as walking and cycling will be more efficient, affordable and safer than PMV options.
	Increased priority for walking and slow-moving modes throughout the Golden Mile
	• Cycle lanes along lower Lambton Quay and Courtenay Place will allow connectivity through the city centre and entertainment areas by cycle, providing youth with viable alternatives to driving and normalising active modes.
	• Retaining north-bound cycle access on Willis street will at least maintain existing key routes from the southern hill suburbs, albeit with considerable safety trade-offs. The only viable northbound route on Willis Street is for the very confident and able cyclist - discouraging more safety conscious riders (often women) which excludes rather than includes diverse riders
	and more opportunities to
	• reflect local cultures in the urban realm through increased number of spaces that can be used for place-making
	allow for water sensitive design in rainwater runoff treatments and planting in new developments
	• use of sustainable materials in redeveloped areas such as pavements.
	Improvements to Courtenay Place urban realm and night-time transport options will
	 increase the range of safe and affordable transport options for youth to engage in the night-time economy and participate in the night-time workforce
	 help Courtenay Place to develop as a more inclusive place where youth and young women feel they belong at any time of the day and night (and other groups who currently are marginalised by unsafe behaviours and practices)
	 Option 3 provides the opportunity to design places and movement paths that young women can occupy comfortably, for example ensuring alignment to entrances, visible escape routes, and well connected to bus stops and other modes.

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Mobility impaired users and family groups:	Substantial increases in non-vehicle space is a key characteristic of Option 3. Use of the additional space has been determined by a movement hierarchy, with the slowest movers being given the highest priority on footpaths. The planned changes will benefit all users by
	 allowing more space for users moving at different speeds to be comfortably separated. For example, people with mobility impairments and/or family groups will be able to safely move along Lambton Quay at their preferred pace while faster walkers and those on faster wheels (scooters) and cycles can move along beside without challenging or endangering them.
	• Clear demarcation of slower and faster zones of the shared movement space will help provide clarity about how the space can be safely shared
	• The operation of the movement hierarchy at intersections such as Panama street and Lambton Quay means that pedestrian movements are prioritised over faster moving cycling and scooter movements. This will help facilitate more continuous and safer journeys for the highest priority slow movers.
	• Street crossing distances will be reduced as the carriageway becomes narrower, reducing severance and making it easier and less effortful for mobility impaired users to move backwards and forwards across the Golden Mile.
	 Blocking side street crossings and raising the pavement will allow for more continuous journeys along the eastern side of Lambton Quay for all pedestrians.
	• Side streets and wider pavements will allow for more space for people to stop, wait and rest without disrupting other's movements. This will help foster a more inclusive environment that allows people and groups to engage in the Golden Mile at their own pace and style.
	• The combination of more footpath width and a more continuous path will meet the differing needs of users over the day and week. During peak commute times it will be easier for greater volumes of commute walkers to walk at different speeds. At other times there will be more space for recreational users and shoppers who want to move at a more leisurely pace, often with others.
	• The restriction of short-stay parking in side streets provides the opportunity to provide more and/or improved locations for mobility parking that is close to desired locations on and around the Golden Mile. This will support the objective to support access for all, including those who cannot use active and public transport.
Inner city residents	Changes to movement priorities and parking in the side streets has two implications for inner city residents. Firstly, stopping vehicle thoroughfare between side streets and Lambton Quay will provide the opportunity to increase the space available for place- making. WCC have identified the need for more public places to improve the liveability of the CBD for increasing numbers of inner-city residents. Identifying particular street intersections (such as Grey Street/Lambton Quay) as 'place streets' will allow their development into civic spaces with 'Third Place' qualities of belonging, develop amenity for play (for all ages), and spaces for pop-up style events. Secondly, moving parking in side streets to an emphasis on quick pick-up / drop off plus permitted / special parking in side streets is likely to reduce the competition with retail
	parking. With management, it could mean that the services needed to support inner city living (such as food delivery and home care) are able to park nearby.
Non-private motor vehicle (PMV) users:	For people who travel to the Golden Mile using non PMV modes, Option 3 provides improved journeys by walking and public transport, and to a large extent, cycling.

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• More efficient and effective public and active transport journeys will increase the range of viable options open to people wanting to come to the Golden Mile
• Improved pedestrian LOS will make journeys by foot or slow mobility more efficient and comfortable.
• Cycling connections between the rest of the cycling network and Lambton Quay and Courtenay Place will improve northbound access & journeys by cycle to and within the CBD. As noted elsewhere, northbound access via Willis street will still be restricted to confident riders until alternative routes north can be provided.
• The increased space will provide more opportunities to provide high quality and secure cycle and scooter parking and infrastructure. <i>Having secure facilities in well-lit places close to the entertainment and hospitality on Courtenay Place would encourage the use of active modes to participate in the night-time economy.</i>
The increased reliability, comfort, and safety of public transport and walking routes through the Golden Mile will enhance journeys for those needing to travel through to other destinations and reduce reliance on PMV's.
Journeys by cycle between the southern suburbs and northern destinations will still rely on slower, more congested routes along the waterfront or through sections of the Golden Mile on shared movement spaces.

5 Appendix 1: Submission comments

Detailed extraction of key points by submitters that are relevant for each target group are available in the accompanying spreadsheet 'Submission points_Social-effects-GM'.





Memorandum

То	Roger Burra
Сору	Rowan Dixon,
From	Kate Chivers
Office	Auckland
Date	6 August 2021
File/Ref	5-C3880.03
Subject	Golden Mile: Carbon Zero Appraisal – Carbon Emission Assessment

1 Introduction

This memo has been prepared by FutureGoup to inform the Golden Mile Single Stage Business Case being developed on behalf of Lets Get Wellington Moving (Waka Kotahi, Wellington City Council, and Greater Wellington Regional Council.)

To establish a climate resilient transport network, whole-of-life (WOL) carbon emissions associated with projects and programmes must be understood from an early stage. Understanding the whole-of-life carbon impact and climate risks of the concept design enables the design process to reduce emissions and climate resilience through detailed design and delivery phases of the project.

This memo includes an assessment of the capital construction, maintenance embodied carbon and user emissions. This is intended to be used as a base case to benchmark and improve upon throughout concept design, detailed design, and delivery. As such, it is recommended that this Carbon Emission Assessment is reviewed as the project design evolves. The climate change risk and adaptation assessment (CCRAA) is provided in a separate memo.

2 Assumptions and Limitations

This report ('Report') has been prepared by WSP exclusively for Let's Get Wellington Moving ('Client') in relation to the Golden Mile Project ('Purpose') and in accordance with NZTA Contract 1851. The findings in this Memorandum are based on and are subject to the assumptions specified in the Report. WSP accepts no liability whatsoever for any reliance on or use of this Report, in whole or in part, for any use or purpose other than the Purpose or any use or reliance on the Report by any third party.

3 Methodology

A WOL approach helps design teams consider how their decisions, in any life cycle phase, might influence the ability of future life cycle phases to deliver sustainable outcomes. This enables a more circular and future proofed system. A 30-year design life has been adopted.

To support the understanding of where the largest GHG reductions can be made the whole-of-life assessment included the carbon impact of construction, maintenance, trees and vehicle use. This provides a holistic view of Golden Mile's potential impact on emissions for the central city.



The construction and maintenance emissions estimate were separated into the four streets: Lambton Quay, Willis Street, Manners Street, and Courtenay Place. This separation enables comparison of whole-of-life emissions for the differing combinations of proposed pavement, design palettes and other infrastructure. The comparison can then be used to inform design decisions considering upfront cost and long-term carbon emissions for the concept design of each street. All calculations are provided in tonnes of carbon dioxide equivalent (tCO₂e).

The data required for this estimate was based on the 'Materiality Strategy' document provided by Boffa Miskell, the projects traffic assessment, and bill of quantities. This assessment will require updating as the design outlined in these documents is updated or changed.

3.1 Boundaries, Sources, and Data

The boundaries of the carbon assessment include the materials, earthworks, construction effort, pavement maintenance over and user emissions 30 years. Within each of these elements the emission sources and their data inputs were mapped against fuel and electricity use (scopes 1 and 2) as well as Materials and User Emissions (Scope 3).

The high-level carbon assessment has been completed for the recommended design. A more in-depth whole-oflife carbon depth assessment are recommended as design progresses and more information is available to inform low-carbon design decisions. Particularly in relation to any detailed impacts of material choices.

Scope 1 & 2: Fuel and Electricity	Scope 3: Materials and User Emissions		
Earthworks (m ³)	Pavement (m ³)		
	- Stone		
	- Concrete		
	- Clay		
	- Asphalt		
Vehicle movements/ haulage	Drainage:		
(km)	- Concrete (m3)		
	- Steel (t)		
Construction effort (L)	Street Furniture (m ³)		
	Traffic Services		
	User emissions (VKT)		

The assessment was based on quantities of materials provided by the project's cost estimators and engineers. User emissions calculations were based on projected mode share out to 2054 based on the project's traffic models and the Climate Change Commissions Final Advice. The scenarios presented for user emissions follow the Climate Change Commissions Advice, the *Demonstration Path* which underpins its recommended emissions budgets. Projections are based on the *Demonstration and Tailwinds* scenarios to understand future mode sensitivity and EV uptake out to 2054:

- *Demonstration* scenario shows the Do Minimum option, whereby some carbon reduction is occurring as mode shifts and increase in EV's occurs in alignment with the Climate Change Commission's advice.
- Tailwind's scenario shows the expected Golden Mile project's increase in carbon reduction. Tailwinds is the most optimistic mode shift scenario, which examines a future where there are fewer barriers to technology and behaviour change and integrates a larger mode change for households towards public transport, cycling and walking, with a quicker uptake in EV's. This scenario aligns with the behaviour changes expected from the project, alongside a faster uptake in EV's for Wellington City.

Exclusions

The following was excluded from this assessment due to not being material or suitable data not being available at concept design phase:

- Traffic Services other than lighting
- Street Furniture other than seating
- Other architectural features
- Service relocation
- Clearing vegetation

3.2 User Emissions

User emissions data was based on the reduction in vehicle kilometres expected to result from the traffic restrictions associated with the Golden Mile project. Restricting access to the Golden Mile for private motorists will mean that some journeys become longer and take more time. In response to these changes some motorists, over time, are expected to:

- park their vehicles in a different location thereby reducing the distance they drive;
- change how they travel (i.e. choose walking, cycling or travel by bus); and
- drive less often.

An analysis to estimate the traffic reduction associated with the traffic restrictions found that annually the project is expected to result in a reduction of 21,003,910 km's per annum from Light User Vehicles based on a 2026 model year, when compared to a Do Minimum scenario.

As a sensitivity test a basic analysis was undertaken to estimate the mode shift which might be expected to result from the improvements to level of services for bus services travelling along the Golden Mile. The change in travel behaviour change resulting from traffic restrictions and travel behaviour change resulting from improved bus services are not mutually exclusive which means the forecast tCO₂e reductions cannot be summed. Ignoring the traffic restrictions, the changes to the Golden Mile are expected reduce LUV vehicle-kilometres by 215,961 km's per annum based on bus routes 1 and 2 alone¹.

4 Results

The total 30-year WOL emissions for the Golden Mile are summarised in Table 1 below. Accounting for both LUV mode shift models this results in a faster reduction in carbon emissions under the Tailwinds scenario, **overall decrease in carbon emissions of about 116,147 tonnes over the 30 years** when compared to the Do Minimum Demonstration path scenario (**Error! Reference source not found.**).

The carbon assessment shows that emissions from construction (both materials and fuel burn) total 841 tCO₂e, and the whole of life (WOL) maintenance impact totals 264 tCO₂e (**Error! Reference source not found.**).



Figure 2 indicates that the largest portion of construction emissions is due to drainage materials 556 tCO₂e, with just under half from Lambton Quay 270 tCO₂e.

Figure 3 shows that of the total WOL maintenance emissions 264 tCO₂e approximately half is from Lambton Quay 134 tCO₂e and just under half from Courtenay Place 103 from the replacement of concrete pavers over a 30-year

¹ Note no other routes were analysed due to limited data availability at the time of assessment.

lifecycle. Construction and maintenance emissions are partially offset by both the tree sequestration -116 (tCO₂e) (Figure 4) and mode shift resulting from the traffic restrictions (

Whole of Life Emissions						
Period	Construction (tCO ₂ e)	Maintenance (tCO₂e)	Trees (tCO₂e)	User Emissions: Tailwinds Scenario (tCO ₂ e)		
2022 - 2024	841		-0	219,206		
2025 - 2029			-3	178,227		
2030 - 2034		88	-9	121,839		
2035 - 2039			-16	70,473		
2040 - 2044		88	-24	34,799		
2045 - 2049			-30	14,458		
2050 - 2054		88	-34	3,724		
TOTAL	841	264	-116	642,726		



Figure 1. WOL breakdown showing construction and maintenance emissions, with the negative emissions and offsetting from proposed new trees. User emissions from the Do Minimum (Demonstration scenario) and Golden Mile (Tailwinds scenario) show the approximate 117,136 tCO₂e reduction in user emissions from the Golden Mile project across 30 years.

The results show that influencing how people travel can have a much larger impact on reducing emissions in the long term than traditional carbon-reduction construction methods. This is particularly relevant when looking to potential impact of the wider Let's Get Wellington Moving project.



Figure 2. Emissions resulting from Construction Materials per street (tCO₂e)

The emissions impact of each street can be used as the preliminary base case emission scenario. This means that these are the high-level emissions that the project would emit under their business-as-usual construction scenario. Accuracy will need to be improved and updated as design progresses and more data comes available. This is so the project can be confident about its base case as it tracks reductions during construction.



Figure 3. 30-year WOL maintenance materials emissions per street every 10 years (tCO₂e)



Figure 4. WOL Carbon Sequestration from new indigenous trees per 5 years (tCO₂e).

5 Next Steps

5.1 Low Carbon Optioneering

To reduce emissions in next phases, the Golden Mile project team should align with the PAS 2050:2011 carbon emissions reduction hierarchy. A workshop for low-carbon design should be completed at the beginning of the next project phase to identify opportunities, quantify the expected emission reductions, and the financial cost differential of each initiative. This will help the project team calculate and pursue the most optimal initiatives and opportunities.

PAS 2050:2011 carbon emissions reduction hierarchy:

- 1 **Build nothing:** evaluate the basic need for an asset and explore alternatives to achieve the set outcomes.
- 2 **Build less:** evaluate the potential for re-using / refurbishing existing assets to reduce the extent of new construction required.
- 3 **Build clever:** consider low carbon solutions, including technologies, materials and products, during construction, operation and usage e.g. SCM/ fly ash in all concrete mixes (ready mix and precast).
- 4 **Build efficiently:** minimise resource consumption during construction and operation

5.2 Strategic Opportunities

Given the rapid and comprehensive climate change and carbon emission policy, regulation, and legislation currently underway it is recommended that strategic and discrete actions are taken with a view to integrate them into the expected requirements from central government. To set Golden Mile up for success, the project should consider:

- 1 Continuing carbon management through next phases of this project, including:
 - (a) Detailed design workshop of low-carbon design initiatives opportunities to reduce emissions
 - (b) Track and embed low-carbon initiatives during design and alongside designers,
 - (c) Early engagement with construction partners to ensure low-carbon construction phase is secured through procurement, requirements and performance management e.g. through including low carbon outcomes in the design contract, construction contract and engaging in supplier forums,
 - (d) Measure the emissions reduced at the end of design, and

- (e) Continue to track emissions through to the end of construction to ensure the projects performance is consistent with the region's ambitions and targets.
- 5 Set carbon reduction targets for the project.
 - (a) The international Science Based Targets Initiative (SBTI) is considered best practice guidance on setting carbon emission reduction targets to ensure a safe global climate and the Paris Agreement.
 - (b) SBTI broadly recommends all activities and projects deliver a 50% reduction in scope 1 and 2 emissions, and 30% reduction in scope 3 emissions.
- 6 Consider how the sustainability and carbon approach of Golden Mile might benefit existing and future projects as well as Te Atakura – First to Zero. This could include mapping how GHG emissions from infrastructure capex and opex influence:
 - (a) Community wide GHG reduction targets,
 - (b) Emissions reporting, tracking and management,
 - (c) Opportunities for a strategic approach to infrastructure GHG reductions,
 - (d) Specific actions to achieve reduction targets (such as revisions of long-term plans, capital programmes, design standards, and procurement processes),
 - (e) Incorporate climate change mitigation and adaptation throughout the city centre, potentially as part of the wider Let's Get Wellington Moving project, to reduce impact on the networks and key user spaces.
Key Assumptions and Inputs

Key Assumptions

- Utilising Climate Change Commissions Final Advice Demonstration Path, and considerations of potential changes against Headwinds and Tailwinds Scenarios.
- Assuming no Supplementary cementing materials (SCMs) has been included within concrete elements
- Materials are sourced locally, within 10km from the project site.
- Construction effort for fuel consumption (other than haulage, earthworks, milling and asphalt laying) during construction is 10% for material installation.
- Assume VKT reduction is constant over time

Data inputs

- 'Materiality Strategy' document provided by Boffa Miskell,
- Golden Miles traffic assessment
- Golden Miles bill of quantities.

Sources

- <u>Climate Change Commissions Final Advice</u>
- Measuring Emissions: Summary of Emission Factors 2020 | Ministry for the Environment
- Carbon sequestration potential of non-ETS land on farms (mpi.govt.nz)
- <u>https://www.alliedconcrete.co.nz/assets/technical-resources/files/Sustainability/Allied-Concrete-</u> Environment-Product-Declaration-2019.pdf?vid=4
- <u>http://www.auslci.com.au/index.php/datasets/Materials</u>



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QUALITY STATEMENT

PROJECT MANAGER

Graeme Stanton

PROJECT TECHNICAL LEAD

FutureGroup

JB Jackmore appeellar

14/10/2021

14/10/2021

14/10/2021

PREPARED BY

Selwyn Blackmore

CHECKED BY

April Peckham

REVIEWED BY

Selwyn Blackmore

APPROVED FOR ISSUE BY

G9B/aclmore G.Stantos

14/10/20121

Graeme Stanton

WELLINGTON

Stantec Building, Level 15, 10 Brandon Street, Wellington Central, Wellington 6011 PO Box 13-052, Armagh, Christchurch 8141 TEL +64 4 381 6700

REVISION SCHEDULE

Rev				N	lame	
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Executive Summary

The purpose of this strategy is to set out the key considerations under the Resource Management Act 1991 (RMA) for obtaining the necessary authorisations for the Golden Mile's Preferred Option. It also identifies what other statutory authorisations might be required.

It is noted that a number of new traffic resolutions will be needed, in order to give effect to the traffic controls necessary to implement the Preferred Option. Accordingly, a traffic regulation strategy has been prepared, and is a separate document to this strategy.

Key consenting issues

The Golden Mile Preferred Option has been developed to a technical standard suitable fora Single Stage Business Case. Based on the available technical information, the key consenting issues identified are as follows:

- Construction / implementation of the works is to be located within the legal road
- No private property is required for the works
- Key construction activities involve construction of:
 - New kerb / channels (including earthworks)
 - New pavement areas (including earthworks)
 - Streetscaping (including new trees, potential rain gardens)
 - Above and below ground service relocations
 - o Installation of new bus shelters
 - o Possible modification (e.g. pruning) of existing trees, and
 - Re-routing of bus services during construction.
- Potential effects on the environment include:
 - Noise / vibration and dust from construction activities
 - General disruption for local community and businesses
 - Potential disturbance of contaminated land
 - o Potential accidental archaeological discoveries
 - Impacts on existing underground services, and
 - Temporary changes to bus routes.
- There are a number of heritage buildings, sites and objects located along the Golden Mile, including:
 - The Wellington Harbour pre-1855 Wairarapa earthquake shoreline is located on, near or along the Golden Mile streets (e.g. it runs along the Lambton Quay Alignment)
 - The former Te Aro Pa and associated settlement are located in Te Aro Park (and surrounds). Te Aro Park is located on the corner of Manners / Dixon Streets, and
 - Māori Site Points 66 (Kumutoto Kainga) and 68 (Waitangi Lagoon) are also of significance for mana whenua.
- The Project's Detailed Design Phase (to commence from December 2021) will provide refined detailed design information, including confirming final construction / implementation requirements, and
- Construction / implementation is expected to commence in late 2022 or early 2023.

Key recommendations

This consenting strategy recommends the following:

- As the physical works needed to implement the Preferred Option are likely to be authorised under the Local Government Act 1974, it is unlikely that there will be a need to make use of the notice of requirement / designation planning instrument under the RMA
- Based on the WCC District Plan's Central Area, Public Open Space and Heritage provisions, it appears that the Preferred Option works would be a permitted activity, subject to construction activities meeting the relevant standards
- Further consideration of compliance with the relevant standards (e.g. the Heritage Area earthworks standards, and earthworks within Contaminated Land) needs further detailed design, and therefore cannot be gauged until the Detailed Design Phase has commenced and / or site investigations have been completed (e.g. HAIL activities). It is noted that non-compliance is likely to require discretionary (restricted) consents. However, if physical works activities are ultimately considered a permitted activity, then consideration should be given to obtaining a certificate of compliance
- It is highly likely that a general Archaeological Authority (Form A) will be required by Heritage New Zealand Pouhere Taonga (Heritage NZ). This application will need tobe informed by a detailed cultural and heritage impact assessment in the first instance
- All works around trees located on WCC land must comply with WCC's standard tree protection conditions. It is noted that any proposal to remove a Heritage / Notable Tree¹, partially or completely, or to build, do earthworks or any other work in a Heritage / Notable Tree's root zone, will require a resource consent, and
- Maintaining a watching brief of the WCC District Plan Review process to beundertaken in 2022 / 2023.

Key priorities for the Detailed Design Phase

The following key steps are recommended as a priority for the Detailed Design Phase:

- Undertake an archaeological assessment to inform preparation of a general authority application to Heritage NZ during the early stages of the Detailed Design Phase, and allow sufficient time within the programme to secure this authorisation
- Consider whether HAIL detailed investigations are required during the early stages of the Detailed Design Phase
- Progress the Detailed Design Phase to a point where sufficient design has been undertaken to inform an assessment of the Preferred Option's compliance with the Central Area Zone, Open Space A Zone, Heritage Zone and Contaminated Land provisions as soon aspracticable, and
- Progress the Detailed Design Phase to a point that is sufficient for a New Zealand Arboricultural Association-approved contractor to assess whether works will be in compliance with WCC's standard tree protection condition.

¹ It is noted that there are no Heritage Trees listed in the WCC District Plan that are located on the Golden Mile

1. Purpose

The purpose of this strategy is to set out the key considerations for obtaining the necessary authorisations for the Golden Mile's Preferred Option under the Resource Management Act 1991 (RMA). It also identifies what other statutory authorisations might be required.

It is noted that a number of new traffic resolutions will be needed, in order to give effect to any new traffic controls necessary to implement the Preferred Option. Accordingly, a traffic resolutions strategy has been prepared, which is a separate document to this strategy.

1.1 General Purpose of Consenting Strategies

Consent strategies are developed as part of single stage business case processes to outline the pathway for successfully obtaining the necessary approvals under the RMA and other relevant statutes for a particular project. Consenting strategies, at the business case stage, generally identify the following matters:

- The key issues associated with applying for resource consents under the RMA and any other statutory approvals required under other legislation
- The designations and resource consents required under the RMA for the proposed activities, the potential effects associated with the proposed activities and the information required to support any required notices of requirement and / or resource consent applications
- The "other" statutory approvals required under other legislation and the processes involved and information required to obtain the necessary approvals [i.e. under the Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011]
- The proposed approach to obtaining the necessary RMA approvals
- Identify any areas where further work is required before notice of requirements and / or resource consents applications can be lodged
- The areas where the Project Sponsor may need to make key decisions in order to progress the project, and
- The risks and opportunities for Project Partners, including partnering with mana whenua in consenting.

Furthermore, consenting strategies are designed to be fit for purpose (i.e. right sized for the project).

2. Golden Mile Preferred Option

The Golden Mile Single Stage Business Case (SSBC) has identified Option 3 as the Preferred Option. In summary, this option is described as follows:

- Private motor vehicle (PMV) access removed from the entirety of the Golden Mile
- One bus lane in each direction along the entire Golden Mile (with no physical separation between the lanes)
- Bus stops will be indented at either end of the Golden Mile, with mid-block stops inline
- Ends of Blair, Allen, Cuba, Mercer, Ballance, Stout, Waring Taylor, Johnson, Brandon and Panama Streets closed (north / south through traffic at the Tory Street / Courtenay Place intersection allowed)
- Dedicated or shared space for cyclists and fast active modes (e.g. e-scooters) on Courtenay Place and Lambton Quay (north of Panama Street)

- Some loading zones and taxi stands relocated to side streets (loading zones for large service vehicles to be provided on the Golden Mile based on temporal arrangements)
- On-street car parking on the Golden Mile removed (existing parking arrangements on side roads connecting to the Golden Mile to be modified)
- Bus stops consolidated to improve bus reliability [a maximum five-minute walk to a bus stop (for someone walking at an average speed)], and
- Emergency vehicle access to be allowed 24 / 7.

Figure 1 sets out the geographical scope of the Preferred Option.

Figure 1: Preferred option's geographical scope



2.1 Key Consenting Issues

The key consenting issues / considerations identified for the Preferred Option's works (to date) are as follows:

- Construction / implementation of the works is to be located within legal road
- No private property is required for the works
- Key construction activities involve construction of:
 - New kerb / channels (including earthworks)
 - New pavement areas (including earthworks)

- Streetscaping (including new trees, potential rain gardens)
- o Above and below ground service relocations
- Installation of new bus shelters
- o Possible modification (e.g. pruning) of existing trees, and
- Re-routing of bus services during construction.
- Potential effects on the environment include:
 - Noise / vibration and dust from construction activities
 - General disruption for local community and businesses
 - o Potential disturbance of contaminated land
 - Potential accidental archaeological discoveries
 - o Impacts on existing underground services, and
 - Temporary changes to bus routes.
- There are a number of heritage buildings, sites and objects located along the Golden Mile, including:
 - The Wellington Harbour pre-1855 Wairarapa earthquake shoreline is located on, near or along the Golden Mile streets (e.g. it runs along the Lambton Quay Alignment)
 - The former Te Aro Pa and associated settlement are located in Te Aro Park (and surrounds). Te Aro Park is located on the corner of Manners / Dixon Streets, and
 - Māori Site Points 66 (Kumutoto Kainga) and 68 (Waitangi Lagoon) are also of significance for mana whenua.
- The Project's Detailed Design Phase (to commence from December 2021) will confirm final construction / implementation requirements, and
- Construction / implementation is expected to commence in late 2020 or early 2023.

To further understand the potential effects of the Preferred Option an Environmental and Social Responsibility Screen (ESRS) assessment (using Waka Kotahi's ESRS template). This assessment is set out in **Appendix A**.

The Golden Mile plays a vital role in the success of Wellington's transport system, regional economy and sense of place. Transecting central Wellington, it provides the core spine to the city's bus network and enables thousands of people to access employment, do business, shop, dine and to access other central city destinations each day. It has the highest pedestrian volumes in New Zealand. Given the high number of people travelling on buses and walking along the Golden Mile, any changes made to its transport network will affect the daily movement and access of many people.

2.1.1 General Arrangements

The SSBC's general layout arrangements are attached as **Appendix B**. These arrangements show the locations of where the physical works are proposed.

It is noted that the major kerb / channel, pedestrian pavement and streetscape works are proposed for Lambton Quay and Courtenay Place. The works proposed for Manners and Willis Streets is limited to minor kerb realignments and replacing loading bays with pedestrian pavement.

3. Relevant RMA Planning Instruments and Assessment

The relevant RMA planning and other statutory instruments considered relevant at this point in time include:

- National Planning Instruments
- Wellington City Council (WCC) District Plan, and
- Greater Wellington Regional Council's Proposed Natural Resource Plans.

As discussed further in this strategy, it is likely that archaeological authorisations will be required under the *Heritage New Zealand Pouhere Taonga Act* 2014. Accordingly, the national planning processes associated with this Act are described below in Section 3.4.

3.1 National Planning Instruments

The following national planning instruments are potentially relevant to the Preferred Option's works:

- The National Policy Statement on Urban Development Capacity (2020)
- The Resource Management (National Environmental Standards for Air Quality) Regulations 2004 (amended in 2011), and
- The Resource Management (National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health) Regulations 2011.

3.1.1 National Policy Statement on Urban Development Capacity

Among other matters, the National Policy Statement on Urban Development ensures that district plans make room for growth both 'up' and 'out', that rules are not unnecessarily constraining growth, and there is alignment and coordinated planning across urban areas.

Although not directly relevant to the Preferred Option's works, it is recommended that the design of the Preferred Option be developed with the outcomes of this national policy statement in mind.

3.1.2 National Environmental Standards for Air Quality

Among other matters, the National Environmental Standards for Air Quality requires regional and district councils to put in place planning provisions for the management of Air Quality. Compliance with this standard is expected to be achieved through compliance with either the GWRC's Proposed Natural Resources Plan and / or WCC District Plan.

3.1.3 National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health

The National Environmental Standard for Assessing and Managing Contaminants in Soil to Protect Human Health applies to certain activities undertaken on a "piece of land" on which a Hazardous Activities and Industries List (HAIL) activity may have occurred. It is noted that a 'piece of land' is not the legal boundary of the site but rather the area impacted by the HAIL activity, and may include non-land development activities. The standard does not affect existing land uses, and only applies when certain activities are proposed to take place on land where there is reason to suspect that the land has been contaminated.

Compliance with this standard is expected to be achieved through compliance with either the GWRC's Proposed Natural Resources Plan and / or WCC District Plan.

3.2 WCC District Plan

The WCC District Plan became fully operative in 2000.² However, WCC have announced they are undertaking a full review of the District Plan as part of its Planning for Growth Project. The review process is to start in late 2021. Consultation is expected in 2022, with formal plan change processes commencing from 2023. Given that the review process has yet to commence, the remainder of this section is premised on consideration of the existing operative provisions of the WCC District Plan. It will be however important that a watching brief on the district plan review is maintained during the course of 2022 prior to construction commencing.

As set out in Figure 2 below, the streets that make up the Golden Mile (i.e. Lambton Quay, Willis Street, Manners Street and Courtenay Place) are identified in Planning Map 34 (Hierarchy of Roads – Central Area) of the WCC District Plan as the "Golden Mile".



Figure 2: Central Area Road Hierarchy

Section 3.10 of the WCC District Plan defines each component of the Road Hierarchy as follows:

- Motorway: high standard limited access roads designed to carry long distancethrough traffic at speed (primary road).
- Arterial Road: high standard limited access roads designed to carry long distancethrough traffic (primary road).
- Principal Road: roads that provide access to motorways and to arterial roads having adominant through-traffic function and carrying the major public transport routes (primary road).
- Collector Road: roads that distribute traffic between and within local areas and formthe link between principal and secondary roads (secondary road).
- Sub-collector Road: roads that distribute traffic within the local area and form the linkbetween collector and local roads (secondary road).

The Golden Mile does not have a separate road hierarchy definition. However, Section 3.10 of the WCC District Plan does define the Golden Mile as the:

² See: Plans, policies and bylaws - District Plan - Wellington City Council

"properties that either front or gain access from the main retail and commercial strip extending from the Cenotaph (near Parliament Buildings) to the eastern end of Courtenay Place (see Map 34 Volume III)"³

It is noted that each street of the Golden Mile is classified as an Arterial Road under Waka Kotahi's One Network Road Classification system.

3.2.1 WCC District Plan Maps 17 and 18

Section 3.7 of the WCC District Plan defines the status of formed and unformed roads, service lanes and motorways. Key summary points from this section include:

- On the District Plan Maps all formed legal roads are uncoloured
- With regard to the application of district plan objectives, policies and rules, the District Plan provisions of the area in which any formed or unformed legal road or service lane or motorway is located shall apply, and
- Where a formed, unformed or stopped road, service lane or motorway, is bounded by different areas, the demarcation between areas is the centre of the legal road.

On Planning Maps 16 and 17 of the District Plan, the Golden Mile streets are formed and therefore *uncoloured*, and located adjacent to the Central Area Zone, however at key locations the streets also "pass" three Open Space Zones [Te Aro Park (which also includes Māori Site Point 67 – Te Aro Kainga), Midland Park, and Parliament Cenotaph] as set out in Figure 3 below.

³ Section 3.10, page 50

Figure 3: Planning Maps 16 and 17 of the WCC District Plan



LEGEND FOR PLANNING MAPS



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As set out above in Figure 3, the Golden Mile passes through (or near) the following Heritage Areas (as per the black dotted areas identified in the legend for Figure 3):

- Parliamentary Precinct Heritage Area
- Stout Street Precinct Heritage Area
- BNZ / Head Office Heritage Area
- Cuba Street Heritage Area, and
- Courtenay Place Heritage Area.

Furthermore, there are over 60 heritage buildings located adjacent to the Golden Mile streets (see **Appendix C**). It is noted Heritage Building 61 (Men's Toilets (Former), Constructed 1910 - 1910) and Heritage Object 35 (Courtenay Place Clock) are located within the Courtenay Place carriageway (near the Courtenay Place / Taranaki Street intersection).

The Golden Mile is also located within, or near, the Hazard Ground Shaking Area overlay. That is, both Lambton Quay and Willis Street are located within 100m of the overlay. Both Manners Street and Courtenay Place are however located within the overlay.

3.2.2 Notice of Requirement for a New Designation

A designation is a provision made in a District Plan under Part VIII of the RMA to give effect to a notice of requirement made by a requiring authority (such as WCC). Designations allow land to be secured for public works without the need for a land use consent. Designations are also typically sought when private property is required to give effect to a project.

In order for a notice requirement to be confirmed into a district plan it is necessary for the requiring authority (who would likely be WCC in the case of the Golden Mile Project) to demonstrate that the works and designation are reasonably necessary for achieving the objectives of the requiring authority under Section 171(c) of the RMA.

The Preferred Option is located within legal road and there is no private property required.⁴ It is also noted that WCC has statutory authorisation under Section 316 of the Local Government Act 1974 to undertake upgrades / alterations / repairs (among other matters) to roads within its jurisdiction. Accordingly, it is considered that a designation is not needed to authorise the Preferred Option's works.

3.2.2.1 Designation Summary and Recommendations

On the basis the Preferred Option's works are to be undertaken on legal road only and are therefore authorised under the Local Government Act, it is recommended that a designation to enable the Preferred Option's works is not pursued.

For avoidance of doubt, and if this approach is ultimately confirmed by LGWM, then resource consents and or other statutory authorisations may still be required to be obtained in order to authorise construction of the Preferred Option. On this basis it is necessary to identify the likely resource consent (and other statutory approval) requirements.

3.2.3 Central Area Zone Objectives, Policies and Rules

As noted above in Section 3.2.1 of this report, the District Plan zone that the Golden Mile streets are predominately located within is the Central Area Zone. Chapter 12⁵ and 13⁶ of the WCC District Plan sets out the objectives, policies and rules for this zone. Both chapters are also supported by the provisions / methods cited in the Central Area Appendices and in Volume 2: Design Guide (e.g. Central Area Urban Design Guide).

⁴ It is noted that a property survey will be undertaken as part of the pre-implementation phase to confirm exact property boundaries

⁵ See: <u>v1chap12.pdf (wellington.govt.nz)</u>

⁶ See: <u>v1chap13.pdf (wellington.govt.nz)</u>

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The introduction to Chapter 12.1 states that the Central Area provisions in the District Plan are based on the following principles (the provisions specifically mentioning the Golden Mile have been expanded upon):

- 12.1.1 Enhance 'sense of place'
- 12.1.2 Sustain the physical and economic heart of the Central Area
- 12.1.3 Enhance the role of the 'Golden Mile' and 'Cuba'

The 'Golden Mile' refers to the main retail and commercial strip extending from the Cenotaph near Parliament Buildings, to the eastern end and entertainment hub of Courtenay Place. This 'Golden Mile' concept reflects the natural form of the Central Area, and helps structure people's perceptions of the city and the way they move within it. Cuba Street is a premier pedestrian-based retail promenade that forms an important axis with the 'Golden Mile'. The 'Golden Mile' and 'Cuba' will be enhanced and supported by reinforcing their key retail function, promoting nearby office location, enhancing thepedestrian environment and improving the roll-out of quality public transport infrastructure.

- 12.1.4 Enhance the Central Area as a location for high quality inner city living (including: increasing the amount and quality of residential dwellings will be encouraged, building on the overall vibrancy of the Central Area and supporting the primary commercial function of downtown Wellington and the 'Golden Mile')
- 12.1.5 Enhance the built form of the Central Area
- 12.1.6 Enhance the quality of the public environment, and
- 12.1.7 Enhance city / harbour integration.

3.2.3.1 Objectives and Policies

The Central Area Zone's objectives and supporting policies are set out in Chapter 12.2 of the District Plan.

An assessment of the Preferred Option against the Central Area Zone's objectives and policies is set out in **Appendix D**. Generally, this assessment has identified that the Preferred Option is consistent or generally consistent with the objectives and policies directly relevant to the implementation of the Preferred Option. There were some objectives and policies identified that will need additional consideration during the Preferred Options Detailed Design Phase (and if resource consents are ultimately required) as follows:

- Objective 12.2.3 Urban Form and Sense of Place; and its supporting policies
- Objective 12.2.13 Natural and Technological Hazards; and its supporting policies
- Objective 12.2.14 Hazardous substances and contaminated sites; and
- Objective 12.2.15 Access.

3.2.3.2 Rules

The Central Area Zone's rules are set out in Chapter 13 of the District Plan. As set out above in Section 3 of this report, the District Plan provisions of the relevant area in which the formed road is located within applies.

Chapter 13.1 states that any activity is a Permitted Activity provided that it complies with the standards specified in section 13.6.1 (Activities, buildings and structures) and 13.6.2 (Activities) and if not specifically identified in Rules 13.1.1 to 13.1.6.

In terms of Rules 13.1.1 to 13.1.6, altering / repairing / upgrading existing roads is not listed as an exempted activity (so, therefore may qualify as a Permitted Activity).

Table 1 (below) lists the standards identified in Chapter 13.6.2 (Activity Standards) that apply to all activities in the Central Area Zone, and an initial assessment against these standards for the Preferred Option's proposed works.

Table 1: Central Area Zone's Chapter 13.6.2 Standards and Initial Assessment

Standard	Standard Summary Description	Golden Mile Assessment Comment
13.6.2.1: Noise	 There is a general duty to avoid unreasonable noise under S16 of the RMA.The general noise emission standards are: At all times: 60dBA LAeq (15 min), and At all times: 85dBA LAFmax. For temporary activities, the above noise standards do not apply from: 9am to 9pm each day (Sunday to Thursday), and 9am to 10pm (Friday and Saturday). 	Non-compliance with this standard is likely to require discretionary (restricted) resource consents. Non-compliance with this standard is to be determined during the Detailed Design Phase.
13.6.2.2: Lighting	Any activity which requires outdoor areas to be lit shall ensure that direct or indirect illumination does not exceed 8 lux at the windows of residential buildings in any Residential Area.	Non-compliance with this standard for construction at night is likely to require discretionary (restricted) resource consents. Non-compliance with this standard is to be determined during the Detailed Design Phase.
13.6.2.3: Use, storage or handling of hazardous substances	 Any area where hazardous substances are used, stored or handled in any manner on-site shall have secondary containment (via bunding or otherwise) using materials. Secondary containment systems also needto comply with any relevant provisions under the Hazardous Substances and New Organisms Act 1996. All facilities must display signage to indicate the nature of the hazardous substances present, and Any process waste or waste containing hazardous substances shall be stored in a manner which complies with the above. 	This rule is likely to apply in the case of discovery of a "HAIL site leak" onto the road carriageway from a HAIL Site located on a private property (See Appendix E for a list of "Golden Mile" properties where HAIL activities are registered). Non-compliance with this standard is likely to require discretionary (restricted) resource consents. Non-compliance to be determined during the Detailed Design Phase. It is noted that subsurface investigations of potentially contaminated land (to determine the presence, extent and nature of any contamination) is a permitted activity under Rule 32.1.1.

Standard	Standard Summary Description	Golden Mile Assessment Comment
13.6.2.4: Screening of activities and	Sites with yards which abut a Residential Area must be screened from viewby a fence not less than 1.8m high.	Non-compliance with this standard for construction at night is likely to require discretionary (restricted) resource consents.
storage		Non-compliance with this standard is to be determined during the Detailed Design Phase.
13.6.2.5: Dust	Activities must not create a dust nuisance. A dust nuisance will occur if:	Non-compliance with this standard for construction at night is likely to require discretionary (restricted) resource consents.
	 There is visible evidence of suspended solids in the air beyond the site boundary; or 	Non-compliance with this standard is to be determined during the Detailed Design Phase.
	• There is visible evidence of suspended solids traceable from a dust source settling on the ground, building or structure on a neighbouring site, or water	
13.6.2.7: Discharge of contaminants	Discharge of contaminants to land, air or water is a Greater Wellington Regional Council responsibility and activities causing discharges may need to obtain a relevant consent from the Regional Council.	The potential need for discharges to land, air and water will be determined during the Detailed Design Phase.

3.2.3.3 Buildings and Structures (Bus Stop Shelters)

It is proposed that new bus stop shelters be installed along the Golden Mile, including in the identified Heritage Areas (i.e. Courtenay Place, BNZ / Head Office Heritage, Cuba Street Heritage Areas). The designs for each bus stop will be developed during the Detailed Design Phase.

The standards for buildings and structures are set out in Chapter 13.6.3 (Buildings and Structures). Among other matters, this chapter identifies the standards for the height and bulk rules for new buildings and structures for the Central Zone, as well as for the Heritage Areas. For avoidance of doubt, and based on the *Golden Mile Design Philosophy Statement* 's 'proposed busstop dimensions', all new bus stop shelters are expected to be well below the height and bulk standards of Chapter 13.6.3, and therefore no resource consents are likely to be required for the erection of bus shelters.

However, installation of new bus stop shelters is expected to comply with the WCC Code of Practice for Land Development (see below) and building consents may ultimately be required.

3.2.3.4 Central Area Appendices

The Central Area appendices sets out a range of matters in support of the rules identified in Chapter 13. Of partial relevance to the Preferred Option's works is Appendix 01, which defines the Courtenay Place general area (and includes the Courtenay Place road carriageway), and Appendix 07, which lists the public spaces protected for the purposes of sunlight access including: West Courtenay Place, Te Aro Park and Midland Park. Despite these provisions not applying directly to the Preferred Option's works, the direction of these provisions should be noted during the Detailed Design Phase.

3.2.3.5 Volume 2: Design Guidelines

Volume 2: Design Guidelines sets out the guidelines for developments of particular types, or in particular areas, as well as suggested guidelines relating to design against crime and wind.

The *Central Urban Design Guide* applies to new buildings, and additions and modifications to existing buildings in the Central Area. Despite it not applying directly to the Preferred Option's works (e.g. the new spaces to be created by the works), its "intention" should be incorporated into the design of the Preferred Option's Works during the Detailed Design Phase, which are as follows:

"To achieve high quality buildings, places and spaces in the Central Area of the city. This will be achieved by ensuring they:

- are coherently designed
- make a considered response to context
- address heritage values
- establish positive visual effects
- provide good quality living and working environments
- integrate environmental sustainability principles, and
- provide conditions of safety and accessibility."

It is noted that Volume 2 of the WCC District Plan also includes Guidelines for Design *against Crime*. It is specifically concerned with the design of urban public spaces. Among other activities, urban public space includes places of free public assembly and thoroughfare and publicly owned streets and parks. The Guidelines are recommended to be considered during the Detailed Design Phase for the Preferred Option's works.

3.2.3.6 Central Area Zone Provisions Summary and Recommendations

At the SSBC Stage, the Preferred Option's works are likely to be considered a Permitted Activity under Chapter 13 if the relevant standards can be met. However, this activity status will not be able to be confirmed until the Detailed Design Phase is completed.

It is recommended that whether the Preferred Option's works can be delivered in accordance with the relevant standards, be determined as early as practicable during the Detailed Design Phase.

3.2.4 Open Space A Zone Objectives, Policies and Rules

The objectives, policies and rules for the Open Space Zones are set out in Chapter 16^7 and 17^8 of the WCC District Plan.

Open Space A Zones generally provide for passive and active recreational opportunities. Provision of access, including equitable access, is a key focus of the provisions for this Zone.

As identified in Figure 3 above, the Golden Mile's streets "pass by" three Open Space A Zones: Te Aro Park, Midland Park, and Parliament Cenotaph. It is noted that Section 2 of the WCC District Plan identifies Te Aro Pa as an important issue for Tangata Whenua.

The objectives, policies and rules for the Open Space Zone A are predominately focused on activities occurring within the zone.

An initial assessment of the objectives and policies (see Appendix D) has identified that Objective 16.5.1 (*To maintain, protect and enhance the open spaces of Wellington City*) and Objective 16.5.3 (*To prevent or mitigate any adverse effects of the storage, use, disposal, or transportation of hazardous substances, including waste disposal.*) may be of relevance to the Preferred Option's works. The outcomes of the Preferred Option's works are expected to give effect to Objective 16.5.1, whilst no construction activities (including storage of hazardous substances) are expected to occur on Open Space A land.

In terms of the relevant rules, Rule 17.1.14 identifies the upgrade and maintenance of existing formed roads and [public] accessways [including associated earthworks], except the construction of new legal road, as a Permitted Activity. Rule 17.1.13 allows the storage, use or handling of hazardous substances as a Permitted Activity, provided that they comply with the relevant standards.

3.2.4.1 Open Space Zone Summary and Recommendations

Provided the Preferred Option's works do not occur on Open Space Area Zone land then they are likely to be considered a Permitted Activity under Chapter 17's provisions. However, if this SSBC assumption is incorrect, then this conclusion will need to be revisited.

3.2.5 Heritage Rules

The provisions of Chapter 21A (Heritage Rules: Buildings and Objects) apply to all listed Heritage Buildings and Objects throughout the city.

With the exception of Heritage Building 61 [Men's Toilets (Former)] and Heritage Object 35 (Courtenay Place Clock) located in West Courtenay Place, there are no heritage buildings or objects directly impacted by the Preferred Option works (that is, all works are within legal road and no private property is required).

With regards to Heritage Building 61 and Heritage Object 35, it is currently anticipated by the SSBC that both heritage items will not be directly impacted by the Preferred Option works. If, however this assumption changes during the Detailed Design Phase, then any

⁷ See: <u>v1chap16.pdf (wellington.govt.nz)</u>

⁸ See: v1chap17.pdf (wellington.govt.nz)

modification of these items will require a discretionary (restricted) resource consent to be obtained.

Official signs for management of the legal roads are excluded from the heritage rules.

3.2.5.1 Heritage Areas

The provisions of Chapter 21B (*Heritage Rules: Areas*) also apply to listed heritage areas throughout the city. As set out above, there are five listed heritage areas in the WCC District Plan that encompasses either all or some of the Golden Mile streets. Although Chapter 21B's focus is on buildings and structures within a Heritage Area, it does appear that the Heritage Area rules may still apply to road alterations / repairs with respect to Rule 21B.1.3. This rule states that earthworks are a permitted activity up to 10m³ or a surface area of 10m². Accordingly, if the Preferred Option's earthworks exceed this standard at any one time, then a discretionary (restricted) resource consent may need to be obtained (discretion is restricted to effects on historic heritage).

3.2.5.2 Heritage Trees

The provisions of Chapter 21C (*Heritage Rules: Trees*) apply to listed Heritage Trees throughout the city. There are no Heritage Trees located on the Golden Mile, and therefore no Heritage Trees will be impacted by the Preferred Option's works.

3.2.5.3 Heritage Rules Summary and Recommendations

It is not currently proposed to undertake any modifications to Heritage Building 61 or Heritage Object 35, however it is noted a discretionary (restricted) resource consent would be required if this SSBC assumption changes during the Detailed Design Phase.

It is noted earthworks in a Heritage Area exceeding 10m³ or a surface area of 10m² is likely to require a discretionary (restricted) resource consent. Compliance with this standard will need to be further considered early in the Detailed Design Phase, and if it is not considered efficient for the Preferred Option's works, then consideration will need to be given to seeking a global earthworks resource consent for the Heritage Areas.

3.2.6 Other WCC District Plan Provisions

3.2.6.1 WCC Code of Practice for Land Development

The WCC Code of Practice for Land Development⁹ is referenced in Section 3.9 of the WCC District Plan. This section advises that the Code provides the strategic standards, engineering specifications and general guidance for road, sanitary, stormwater and water supply design and construction.

The Code does not form part of the District Plan, it is however expected that developments are undertaken in accordance with the Code. It is noted that the Golden Mile Design Philosophy Statement advises that construction activities will be undertaken in accordance with the Code.

3.2.6.2 Signs

Section 3.10 of the WCC District Plan defines an *Official Sign* to be those signs for the management of the legal road, public parks and reserves. This section's definition of a *Sign* excludes those signs needed for the management of a legal road, public parks and reserves (including official signs).

3.2.6.3 Traffic Management and Control Structures

Section 3.10 of the WCC District Plan defines *Traffic Management and Control Structures* to mean: *any structure and associated devices including plinths located on, above or below legal road for the purpose of managing, controlling or directing traffic and includes*

⁹ See: <u>Code of Practice for Land Development - 2012 (wellington.govt.nz)</u>

but is not limited to traffic signals, traffic signs (including illuminated signs), monitoringand control devices, and road barriers.

3.2.6.4 Heritage / Notable Trees

There are no Heritage / Notable Trees listed in the WCC District Plan that are located on the Golden Mile. Nevertheless, it is noted that any proposal to remove a Heritage / Notable Tree, partially or completely, or to build, do earthworks or any other work in a Notable Tree's root zone, will require a resource consent.

It is noted that all works around trees located on WCC land must comply with WCC's standard tree protection conditions (see **Appendix F**).

3.3 WCC Drainage and Water Supply Permits

For avoidance of doubt, a public drainage permit (or permits) will be required to alter or add to the WCC public drainage networks¹⁰. Similarly, a water supply permit will be required for any new water connection¹¹.

3.4 Proposed Natural Resources Plan

The Proposed Natural Resources Plan (PNRP) sets out the objectives, policies and methods for the use of the region's resources.¹² Some parts of the PNRP are still under appeal, however once resolved, the Plan will become fully operative.

3.4.1 Regionally Significant Infrastructure

The PNRP defines regionally significant infrastructure to include a number of infrastructure activities / assets within the Wellington region. Included on the asset list are the region's water supply, wastewater and stormwater networks, Wellington Railway Station terminus as well as the strategic transport network. The Golden Mile is not included as part of the latter.

3.4.2 Objectives, Policies and Rules

An initial assessment of the relevant objectives, policies and rules of the PNRP is provided in **Appendix G**. This assessment identifies the objectives and policies of the following Chapters to be of some relevance to the Preferred Option's works:

- Beneficial use and development
- Māori relationships
- Air quality
- Land use, and
- Discharges to land and water.

The initial assessment indicates that the Preferred Option works are generally consistent with the above chapter's objectives and policies. However, final consistency will not be able to be confirmed until the Detailed Design Phase is completed.

The initial assessment also indicates that the Preferred Option works are likely to meet the Permitted Activity standards for Air quality, Land use and Discharges to land and water rules. However, final compliance will not be able to be confirmed until the Detailed Design Phase is completed. It is noted that there are no specific rules relating to Beneficial use and development or Māori relationships.

¹⁰ See: <u>Sewerage</u>, wastewater and trade waste - Wastewater & drainage - Wellington City Council

¹¹ See: Water - Apply for a water connection - Wellington City Council

¹² See the Decisions Version: <u>Proposed-Natural-Resources-Plan-Part-1.pdf (gw.govt.nz)</u>

3.4.3 PNRP Summary and Recommendations

In summary, the Preferred Option works are likely to be considered a Permitted Activity under the PNRP provided the relevant standards can be met for the Chapters set out above (and in Appendix E of this strategy). However, final compliance will not be able to be confirmed until the Detailed Design Phase is completed.

It is recommended that the Detailed Design Phase considers the ability of the Preferred Option's works to be delivered in compliance with the relevant standards as early as practicable.

3.5 Heritage New Zealand Pouhere Taonga Act 2014 / Archaeological Authorities

The *Heritage New Zealand Pouhere Taonga Act* 2014 (NZHPT) makes it unlawful for any person to modify or destroy, or cause to be modified or destroyed, the whole or any part of an archaeological site without the prior authority of Heritage New Zealand Pouhere Taonga (Heritage NZ). An archaeological site is defined by Section 6 of the NZHPT as follows:

"archaeological site means, subject to section 42(3), -

- (a) any place in New Zealand, including any building or structure (or part of a building or structure) that –
- (b)
- *(i)* was associated with human activity that occurred before 1900 or is the site of the wreck of any vessel where the wreck occurred before 1900; and
- (ii) provides or may provide, through investigation by archaeological methods, evidence relating to the history of New Zealand; and
- (b) includes a site for which a declaration is made under section 43(1)."

Accordingly, any archaeological sites (including unrecorded sites) that may be modified or damaged by the Preferred Option's works will require an archaeological authority from Heritage NZ.

An initial review of ArchSite identifies that there are a number of potential archaeological sites located within the geographical scope of the Golden Mile Project.

As discussed above, the Golden Mile's streets are located adjacent to numerous heritage buildings, sites, areas and objects and the ArchSite indicates the presence of a number of sites in Central Wellington. Furthermore, the Wellington Harbour pre-1855 Wairarapa earthquake shoreline is located on, near or along the Golden Mile streets (e.g. it runs along the Lambton Quay Alignment). The former Te Aro Pa and associated settlement are located in Te Aro Park (and surrounds) on the corner of the Manners Street / Dixon Street intersection, and the former Kumutoto Pa is located on The Terrace near Woodward Street.¹³ Accordingly, it is likely that an archaeology authority will be required from Heritage NZ, and this authority will be needed prior to any physical works occurring. In addition, it is likely that Heritage NZ will be interested in potential construction impacts (e.g. dust and vibration) on the nearby heritage buildings. It will also want assurance that appropriate engagement with mana whenua has been undertaken.

3.5.1 Archaeology Authority Summary and Recommendations

It is possible that unknown archaeological sites (i.e. under the road carriageway to be upgraded) might be encountered during the Preferred Option's construction activities (e.g. earthworks). As such, it is recommended that a general archaeological authority (Form A^{14}) be sought early in the Detailed Design Phase process (it is noted that the formal

 ¹³ It is noted that taonga was recently found during excavation of a new apartment development on Taranaki Street
 ¹⁴ See: <u>1Form AApp for Gen Arch Auth (1).pdf</u>

application process can take up to 3 months to process from the date of submission).

Any authority application will need to be informed by an archaeological assessment report and an assessment of Māori values of the archaeological site and the effect of the proposed activity on those values. The application must also provide evidence of consultation undertaken with tangata whenua and views expressed for archaeological sites that are of interest to Māori. The archaeological assessment must be prepared by a qualified archaeologist in the first instance. Mana whenua involvement in the assessment will be integral.

It is also recommended that early engagement during the Detailed Design Phase with Heritage NZ on construction effects on nearby heritage buildings be undertaken to ascertain if there are any additional Heritage NZ requirements.

4. Summary and Recommendations

This section of the strategy sets out a recommended approach to obtaining the necessary RMA and other statutory approvals, and to identify any areas where further work / final decisions are required before the relevant applications can be lodged.

4.1 Seek Resource Consents (If Required)

Obtaining a designation for altering / upgrading an existing road does have certain advantages over the resource consent process [e.g eliminates the need for land use consents (but not regional consents), and protects the land needed from future development once design is completed]. However, there appears to be no need for a designation in this instance – that is, all of the works are to be located within the legal road and therefore are authorised under the Local Government Act.

Resource consents however still may be needed under either / both the WCC District Plan or PNRP, and potentially under the NES Contaminated Land.

In terms of the WCC District Plan, and from review of the relevant Central Area Zone provisions (and assuming that there are no activities that directly affect the three Open Space A Zones), and the Heritage Zone rules, it is likely that the Preferred Option works will be a permitted activity provided the relevant standards can be met. It will be important to review this conclusion once the Detailed Design Phase is sufficiently advanced. In particular, compliance with the noise, dust, contaminated land (Chapter 31) and heritage area (Chapter 20) standards will need to be carefully considered. It is highly recommended that if compliance can be achieved that a Certificate of Compliance for a permitted activity be obtained to demonstrate compliance with the WCC District Plan. To obtain this certificate will require LGWM to work closely with the WCC Planning Team.

It is noted that if compliance cannot be achieved then individual or global resource consents can be sought. If the resource consents were to be 'bundled', all of the consents required would be considered at the most restrictive activity class, which would likely be discretionary (restricted), and maybe subject to the public notification and public hearing provisions within the WCC District Plan (and possibly Environment Court appeals), and subject to conditions. Under this scenario, the bundled resource consent application could take anywhere between 6 and 12 months to process and might jeopardise the ability for LGWM to commence works at the end of 2022.

Similarly, from a review of the relevant air quality, land use and discharge provisions of the PNRP, it is also likely that the Preferred Option's works will meet the permitted activity standards. However, final compliance will not be able to be confirmed until the Detailed Design Phase is completed.

Further consideration of the impacts on existing trees located on WCC will be required. It

is noted that all works around trees located on WCC land must comply with WCC's standard tree protection conditions.

4.2 Unrecorded Archaeological Sites

Although the works are to be undertaken within legal road, it is likely that the Preferred Option's works could potentially modify or damage unrecorded archaeological sites that may exist under the road (especially on Lambton Quay and Courtenay Place where the major underground works are proposed).

Accordingly, it is recommended that a general archaeological authority (Form A¹⁵) be sought early in the Detailed Design Phase process (noting that the formal application process can take up to 3 months to process from the date of submission). This application will need to be informed by an archaeological assessment report and an assessment of Māori values of the archaeological site and the effect of the proposed activity on those values. The application must also provide evidence of consultation undertaken with tangata whenua and views expressed for archaeological and will need to be undertaken by a qualified archaeologist in the first instance.

It is also recommended that early engagement during the Detailed Design Phase with Heritage NZ (as well as the WCC Heritage Team) on construction effects on nearby heritage buildings and objects are undertaken to ascertain if there are any additional regulatory requirements.

4.3 Recommendations

This consenting strategy recommends the following:

- If desired by LGWM, it is unlikely that it will be able to demonstrate that there is a need for a notice of requirement / designation to authorise the type of physical works envisaged for the Preferred Option. This is because the proposed works are to be undertaken within the legal road and are therefore authorised under the Local Government Act 1974
- Based on the WCC District Plan's Central Area, Public Open Space and Heritage provisions it appears that the Preferred Option's works would be a permitted activity, subject to construction activities meeting the relevant standards
- Further consideration of compliance with the relevant standards (e.g. the Heritage Area earthworks standards, and earthworks within Contaminated Land) needs further detailed design, and therefore cannot be gauged until the Detailed Design Phase has commenced and / or site investigations have been completed (e.g. HAIL activities). It is noted that non-compliance is likely to require discretionary (restricted) consents. However, if physical works activities are ultimately considered a Permitted Activity, then consideration should be given to obtaining a certificate of compliance.
- It is highly likely that a general archaeological authority (Form A) will be required by Heritage NZ. This application will need to be informed by a cultural values / impact assessment in the first instance
- Further consideration of the impacts on existing trees located on WCC will be required. It is noted that all works around trees located on WCC land must comply with WCC's standard tree protection condition, and
- Maintaining a watching brief of the WCC District Plan Review process should be undertaken in 2022 / 2023.

¹⁵ See: <u>1Form AApp for Gen Arch Auth (1).pdf</u>

4.3.1 Key priorities for the Detailed Design Phase

The following key steps are recommended as a priority for the Detailed Design Phase:

- Undertake an archaeological assessment to inform preparation of a general authority application to Heritage NZ during the early stages of the Detailed Design Phase, and allow sufficient time within the programme to secure this authorisation
- Consider whether HAIL detailed investigations are required during the early stages of the Detailed Design Phase
- Progress the Detailed Design Phase to a point where sufficient design has been undertaken to inform an assessment of the Preferred Option's compliance with the Central Area Zone, Open Space A Zone and Heritage Zone's provisions as soon as practicable, and
- Progress the Detailed Design Phase to a point that is sufficient for a New Zealand Arboricultural Association-approved contractor to assess whether works will be in compliance with WCC standard tree protection condition.



ENVIRONMENTAL AND SOCIAL RESPONSIBILITY SCREEN V2.FEBRUARY 2016



Use to assess options in the Indicative Business Case

Use this screen to identify opportunities and risks and assess options for state highway projects. Complete the screen for each option to distinguish them from one another or bundle options where appropriate. Screen results will signal where technical assessments are required and provide a written record to support the alternatives assessment required for statutory applications. For further assistance contact the <u>EUD Team</u>.

Additional instructions and content, including information sources, to help complete the screen can be found on the Highways Information Portal Screen pages here

Decide how many times screen should be filled out (Group Options)	Answer screen questions using project information and suggested information sources	Refer to screen questions explanation, particularly if you answered yes to any of the questions	Complete page 2 of screen	 Incorporate page 2 text in IBC assessment of options table (Background and MCA)
PROJECT LOCATION:	PROJECT PURPOSE:	DATE:	OPTION DESCRIPTION:	

CATEGORY		QUESTION	ANSWER		USEFUL INFORMATION SOURCES
		What is the zoning of adjacent land?	Rural	Commercial	District/Unitary Plan Zoning Maps
	G1	other reserve/covenants	Industrial	Residential	
GENERAL			High density residential	Parks/open space	
	G2	Does the option disturb previously undisturbed land?	Y	N	
	G3	What is the construction timeframe?	>18 months	<18 months	
	NE1	Are there any outstanding/significant natural features (e.g. geological or geothermal)/landscapes?	Y	N	NZTA MapHub Environmental and Social Risk Map- Natural Environment
	NE2	Will the option affect the coastal marine area, wetlands, lakes, rivers, streams or their margins?	Y	N	Regional Plan Maps and Schedules
NATURAL ENVIRONMENT	NE3	Will the option affect areas of the conservation estate, or areas of known significance for biodiversity or known habitats of uncommon or threatened species?	Y	N	District Plan Maps and Schedules
	NE4	Is the option in an area of potential hazard risk e.g. fault lines, significant erosion, flooding, sea level rise etc?	Y	Ν	Department of Conservation
		Will more than 0.5 hectares of vegetation be removed?	Y	Ν	
	NE5	What type?			
	СН1	Are there sites/areas of significance to Maori within 200m of the area of interest?	Y	Ν	lwi
	CH2	Are any recorded, scheduled or listed archaeological sites within 200m of the area of interest?	Y	N	Risk Map- Culture and Heritage Heritage New Zealand List
CULTURAL AND HISTORIC	СНЗ	Are any scheduled, listed or other important heritage buildings/ structures within 200m of the area of interest?	Y	N	NZ Archaeological Association District Plan Maps and Schedules
HERITAGE	СН4	Will the option affect the setting of any historic building/structure or archaeological site?	Y	N	Regional Plan Maps and Schedules IPENZ Heritage List
	СН5	Is a group of archaeological sites or an area of historic built environment (even partially) within 200m of the area of interest?	Y	N	NZTA GIS predictive models
	HH1	What is the One Network Road Classification?	National	Regional	NZTA MapHub Environmental and Social Risk Maps- Human Health and
			Arterial	Collector	Community which includes: - Designated airsheds (including one
	нн2	Is the area of interest designated as a non-compliant airshed?	Y	N	network classification)
HUMAN	ННЗ	residential properties, maraes or other sensitive receivers located within 200m of the area of interest?	Y	Ν	- Highly sensitive receivers Regional Council Contaminated sites Team
HEALTH		Does land use within 200m of the area of interest include industrial sites, chemical manufacturing or storage, petrol stations, vehicle maintenance, timber processing/treatment, substations, rail yards, landfills or involve other activities that may result in ground	Y	N	
	HH4	contamination? OR Are there HAIL or SLUR (contaminated) sites within 200m of the area of interest?	Y	Ν	
		Does the option affect access to community facilities i.e. libraries	Y	N	NZTA MapHub
SOCIAL	S1	open space etc (either temporarily or permanently)?	Which?		Project Team
	S2	Does the option affect community cohesion and accessibility including vehicular connectivity on the local road network?	Y	N	Council and Community Strategy Documents
	ULD 1	Are there opportunities to enhance infrastructure for, and/or improve access to, public transport and/or active modes of travel such as as walking and cycling?	Y	N	NZTA MapHub Environmental and Social Risk Map- Natural Environment (Scenic Routes)
	ULD2	Does the option enhance the development potential of adjacent land where appropriate?	Y	Ν	Regional Land Transport Plan Project Team
DESIGN	ULD3	Is the option located on a themed highway? Is the option part of or near a national cycle or walking route?	Y	N	Strategies and District Plan
	ULD4	Are there opportunities to enhance the urban character, landscape character and visual amenity?	Y	Ν	



Answers and Comments Refer to	screen questions explanation to help complete this part.
1. Summarize the potential environm Consider short and long term risks	ental and social risks/impacts associated with this option. and impacts.
NATURAL ENVIRONMENT:	
CULTURAL AND HISTORIC HERITAGE:	
HUMAN HEALTH:	
SOCIAL:	
The responses above will be used in the IBC	assessment of options summary table: MCA of the Option.
URBAN AND LANDSCAPE DESIGN:	

Incorporate the relevant comments from above into the economy, social and geography sections of the IBC assessment of options summary table.

2. What are the environmental, social integration, landscape design or urban design benefits or opportunities presented by this option? Particularly record opportunities that could be lost if not considered early in the design process.

3. Are there any impacts, risks or opportunities which require preliminary technical assessments to help understand risks or opportunities? Is further information required to support the development of the detailed business case or can it be left until the detailed business case/pre-implementation?

Completed by		
Reviewed by NZTA Project Manager		
Incorporated results into IBC assessment of options summary table?	Yes	Νο





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NEW ASPHALT FOOTPATH

NEW / RELOCATED SIGN

EXISTING RAISED MEDIAN ISLAND

NEW / EXTENDED RAISED MEDIAN ISLAND

CYCLIST LANES

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4



Heritage Properties Listed by WCC

Lambton Quay

- 1. Kelburn Chambers, 280 284 Lambton Quay, Constructed 1901 1901
- 2. Kirkcaldie and Stains Department Store, 165-177 Lambton Quay, Constructed 1909 1909
- 3. DIC Department Store (Former), 179 193 Lambton Quay, Constructed 1929 1929
- 4. Whitcoulls Building (Former), 312 316 Lambton Quay, Constructed 1907 1908
- 5. Public Trust Building, 131 135 Lambton Quay, Constructed 1909 1909
- 6. Hamilton Chambers (Former), 199-201 Lambton Quay, Constructed 1928
- 7. Old BNZ Building 1 and 2, Old Bank Arcade, 233-247 Lambton Quay Constructed 1899 1901
- 8. State Insurance Building (Former), 143-149 Lambton Quay, Constructed 1940 1942
- 9. Government Buildings, 15 Lambton Quay, Constructed 1876 1876
- 10. Prudential Assurance Building, 332-340 Lambton Quay, Constructed 1934 1934
- 11. CBA Building (Former), 328-330 Lambton Quay, Constructed 1936 1936
- 12. South British Insurance Building (Former), 326 Lambton Quay, Constructed 1936 1936
- 13. Australian Temperance and General Mutual Life Assurance Society (T&G) Building, 203 -
- 213 Lambton Quay (also 30 Grey Street), Constructed 1928 1928
- 14. Equitable Building and Investment Co. Building, 360 Lambton Quay, Constructed 1887 1887
- 15. Massey House, 126 132 Lambton Quay and 47 57 The Terrace, Constructed 1955 1957
- 16. Fraser Statue, Old Government Building, 15 Lambton Quay, Constructed 1989
- 17. MLC Building (Former), 231 Lambton Quay, Constructed 1939 1940
- 18. Stewart Dawson's Corner, 366 Lambton Quay, Constructed 1900 1900
- 19. Wellington Cenotaph, Cnr Bowen Street and Lambton Quay, Constructed 1929 1931
- 20. Plimmer Steps

Willis Street

- 21. Hibernian Building, 89 Willis Street, Constructed 1930 1930
- 22. Hotel St George, 124 Willis Street, Constructed 1929 1930
- 23. Dr Henry Pollen House, 122 Willis Street (corner of Boulcott Street), Constructed 1902 1902
- 24. Commercial Building, 35 Willis Street, Constructed 1906
- 25. Preston's Building, 92-96 Willis Street, Constructed 1902 1912
- 26. Commercial Building, 99 Willis Street, Constructed 1920
- 27. Macarthy Building, 50 52 Willis Street, Te Aro Wellington
- 28. Evening Post Building (Former), 82 Willis Street, Constructed 1927 1928
- 29. McDonald Building, 128 Willis Street, Constructed 1919 1920
- 30. House, 81 Abel Smith Street (formerly 319 Willis Street), Constructed 1897
- 31. Fletcher's Building (Former), 2-4 Willis Street, Constructed 1872 1872

Manners Street

- 32. The Opera House, 109-117 Manners Street, Constructed 1911 1914
- 33. Bank of New Zealand Te Aro Branch, 79-85 Manners Street, cnr Cuba Street, Constructed 1912 1913
- 34. James Smith Ltd Department Store (former), 49-65 Cuba Street & 93-97 Manners Street, Constructed 1907 1907
- 35. Commercial Building, 88 Manners Street, Constructed 1900 1908
- 36. Edwards' Building, 131 Manners Street, Te Aro Wellington

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37. Postal Box, Corner of Cuba Street and Manners Street (Manners Mall), Constructed 1879 - 1910

Courtenay Place

38. National Bank Building, 49-53 Courtenay Place, Constructed 1928 - 1928

- 39. Commercial Building, 120 126 Courtenay Place, Constructed 1904 1908
- 40. Wellington Gas Company Building (Former), 60-64 Courtenay Place, Constructed 1898 1898
- 41. Paramount Theatre, 25-29 Courtenay Place, Constructed 1917 1927
- 42. Westpac Building, 10-12 Courtenay Place, Constructed 1936 1936
- 43. Griffith's Building (Former), 31 39 Courtenay Place, Constructed 1917 1917
- 44. Commercial Building, 30-36 Courtenay Place, Constructed 1900 1900

45. Colonial Motor Company Building (former), 89 – 95 Courtenay Place, Constructed 1920 - 1986

- 46. Men's Toilets (Former), Courtenay Place, Constructed 1910 1910
- 47. Commercial Building, 11-13 Courtenay Place, Constructed 1911 1911
- 48. St James Theatre, 77 81 Courtenay Place, Constructed 1912 1912
- 49. Commercial Building, 24 26 Courtenay Place, Constructed 1895

50. A & T Burt Ltd Building (Former)/ St James Theatre Foyer, 87 Courtenay Place, Constructed 1900

- 51. Commercial Building, 14 16 Courtenay Place (corner Blair Street), Constructed 1905
- 52. Hooson's Building (Former), 55 Courtenay Place, Constructed 1922 1922
- 53. Harper's Corner (Former), 15-20 Cambridge Terrace (1 Courtenay Place), Constructed 1928
- 54. Victory Buildings, 66 72 Courtenay Place, Constructed 1919
- 55. Stewart's Building, 43 Courtenay Place, Constructed 1919 1919
- 56. Newport Chambers, 48 Courtenay Place, Constructed 1930
- 57. Commercial Building, 46 Courtenay Place, Constructed 1931
- 58. Athenic Building, 45-47 Courtenay Place, Constructed 1922 1922
- 59. Courtenay Chambers, 15 Courtenay Place, Constructed 1927 1927
- 60. Commercial Building, 28 Courtenay Place, Constructed 1906
- 61. Commercial Building, 41 Courtenay Place, Constructed 1909 1910
- 62. Commercial Building, 18 22 Courtenay Place, Constructed 1907 1907



Assessment of the Preferred Option against the Central Area and Public Open Space A Zone's Objectives and Policies

Central Area Zone Objectives and Policies

Objectives	Supporting Policies	Consiste
Objective 12.2.1 (Containment and Accessibly) To enhance the Central Area's natural containment, accessibility, and highly urbanised environment by promoting the efficient use and development of natural and physical resources.	 To achieve this objective, the Council will implement the following policy: 12.2.1.1: Define the extent of the Central Area in order to maintain and enhance its compact, contained physical character" 	The Preferre policy.
Objective 12.2.2 (Activities) To facilitate a vibrant, dynamic Central Area by enabling a wide range of activities to occur, provided that adverse effects are avoided, remedied or mitigated.	 To achieve this objective, the Council will implement the following policies: Policy 12.2.2.1: Encourage a wide range of activities within the Central Area by allowing most uses or activities provided that the standards specified in the Plan are satisfied. Policy 12.2.2.2: Ensure that activities are managed to avoid, remedy or mitigate adverse effects in the Central Area or on properties in nearby Residential Areas. Policy 12.2.2.3: Provide for temporary activities that contribute to the social, economic and cultural wellbeing of the community, and control the adverse effects of temporary activities in a manner that acknowledges their infrequent nature and limited duration. Policy 12.2.2.4: Control the adverse effects of noise in the Central Area. Policy 12.2.2.5: Ensure that appropriate on-site measures are taken to protect noise sensitive activities that locate within the Central Area from any intrusive noise effects. 	The Preferre supporting p Matters relat dust) will nee Design Phas cannot be required.
Objective 12.2.3 (Urban Form and Sense of Place) To recognise and enhance those characteristics, features and areas of the Central Area that contribute positively to the City's distinctive physical character and sense of place.	 To achieve this objective, the Council will implement the following policies: 12.2.3.2 Promote a strong sense of place and identity within different parts of the Central Area. 12.2.3.2 Promote a strong sense of place and identity within different parts of the Central Area. 	The Preferre supporting p However, co recommende Phase (e.g. be considere
Objective 12.2.4 (Sensitive Development Areas) To ensure that any future development of large land holdings within the Central Area is undertaken in a manner that is compatible with, and enhances the contained urban form of the Central Area.	The policies supporting this objective are recorded in Policies 12.2.4.1 to 12.2.4.5.	This objectiv relevant to t relate to the and Te Aro /
Objective 12.2.5 (Effects of New Building Works) Encourage the development of new buildings within the Central Area provided that any potential adverse effects can be avoided, remedied or mitigated.	The policies supporting this objective are recorded in Policies 12.2.5.1 to 12.2.5.10.	This objectiv relevant to th
Objective 12.2.6 (Buildings and Public Amenity) To ensure that new building works maintain and enhance the amenity and safety of the public environment in the Central Area, and the general amenity of any nearby Residential Areas	 The policies supporting this objective are recorded in Policies 12.2.6.1 to 12.2.6.19. The following policies reference the Golden Mile / pedestrian shelters in relation to construction of new buildings: 12.2.6.8: Ensure that pedestrian shelter is continuous on identified streets where there are high volumes of pedestrians, and on identified pedestrian access routes leading to the Golden Mile from the outskirts of the Central Area. 12.2.6.9: Ensure that in providing pedestrian shelter any adverse effects on the architectural integrity and historic heritage value of a building to which the shelter is affixed, and any adverse effects on public safety and the informal surveillance of public spaces are avoided, remedied or mitigated. 	This objectiv relevant to th However, Po of Pedestriar to be taken in

ency with the Golden Mile Preferred Option

ed Option is consistent with this objective and

ed Option is consistent with this objective and its policies.

ting to construction activities (e.g. noise and ed to be taken into account during the Detailed se. If the relevant Central Rule Standards complied with, resource consents may be

d Option is consistent with this objective and its olicies.

onsideration of sense of place and identity is ed to be considered during the Detailed Design the outcomes of the Central Design Guide will ed during the Detailed Design Phase).

ve and its supporting policies are not directly the Preferred Option's development (i.e. they Port Redevelopment Precinct, Pipitea Precinct / Inner City Bypass Corridor).

e and its supporting policies are not directly ne Preferred Option's development.

ve and its supporting policies are not directly ne Preferred Option's development.

blicies 12.2.6.8 to 12.2.6.11 (relating to provision n Shelters for New Buildings) are recommended nto account during the Detailed Design Phase.

Supporting Policies	Consiste
 12.2.6.10: Encourage the provision of pedestrian shelter along streets and public spaces throughout the Central Area (including within the Pipitea Precinct). 12.2.6.11: Enhance the informal pedestrian network within the Central Area, by encouraging the retention and enhancement of existing pedestrian thoroughfares, and promoting the creation of new thoroughfares where they would enhance walkability and permeability for 	
pedestrians.	
The policies supporting this objective are recorded in Policies 12.2.6.1 to 12.2.6.19. 12.2.7.1 to 12.2.7.3	This objective relevant to th
The policies supporting this objective are recorded in Policies 12.2.8.1 to 12.2.8.9	This objective relevant to th
The policies supporting this objective are recorded in Policies 12.2.9.1 to 12.2.9.5	This objective
	relevant to th
 To achieve this objective, the Council will implement the following policies: 12.2.10.1: Guide the design of signs (and their associated structures and affixtures) to enhance the quality of signage within the Central Area. 12.2.10.2: Manage the scale, intensity and placement of signs to: maintain and enhance the visual amenity of the host building or site, and ensure public safety. 12.2.10.3: Ensure signs in the Central Area do not adversely affect the architectural integrity of the building on which the sign is located. 12.2.10.4: Ensure that signs contribute positively to the visual amenity of the building neighbourhood and cityscape above the fourth storey level. 12.2.10.7: Ensure that signs in the Central Area do not adversely affect the architectural signs contribute positively to the context of the Parliamentary Precinct Heritage Area. 12.2.10.7: Ensure that signs in the Central Area do not adversely affect the amenity values of nearby Residential Areas. 	The Preferred objective and Permanent tr must comply However, Pol to be conside signage is implementation
The policies supporting this objective are recorded in Policies 12.2.12.1 to 12.2.12.4	
	relevant to th
To achieve this objective, the Council will implement the following policies:	The Preferred
• 12.2.13.1 Identify those hazards that pose a significant threat to Wellington, to ensure that areas of significant potential hazard are not occupied or developed for vulnerable uses or activities.	objective and The Golden line, howeve Ground Shał
	Supporting Policies

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ncy with the Golden Mile Preferred Option e and its supporting policies are not directly ne Preferred Option's development. e and its supporting policies are not directly ne Preferred Option's development. e and its supporting policies are not directly ne Preferred Option's development. d Option is expected to be consistent with this its supporting policies. raffic signs erected to support implementation with the Traffic Control Device Manual. licies 12.2.10.1 to 12.2.10.7 are recommended ered during the Detailed Design Phase if other to be involved in the Preferred Option's ion. ve and supporting policy are not directly ne Preferred Option development. e and its supporting policies are not directly ne Preferred Option development. d Option is expected to be consistent with this its supporting policies. Mile streets are not located on a major fault er they are located near or within Hazard king Areas. Accordingly, consistency of the

Objectives	Supporting Policies	Consister
	• 12.2.13.2 In relation to the Wellington fault, discourage the location of new structures and buildings within the 'fault runture bazard area'	Preferred Optic
	 12.2.13.4 Ensure that the adverse effects on the natural environment arising from a hazard event are avoided, remedied or mitigated 	Phase.
Objective 12.2.14 (Hazardous substances and contaminated sites) To prevent or mitigate any adverse effects of the storage, use, disposal, or transportation of hazardous substances, including waste disposal.	 To achieve this objective, the Council will implement the following policies: 12.2.14.1 Ensure that the use, storage, handling and disposing of hazardous substances does not result in any potential or actual adverse effects on the environment, by requiring that the proposed activity is assessed using the Hazardous Facilities Screening Procedure, and where appropriate, the resource consent process. 12.2.14.2 Reduce the potential adverse effects of transporting hazardous substances. 12.2.14.3 Control the use of land for end point disposal of waste to ensure the environmentally safe disposal of solid and hazardous waste. 12.2.14.4 To require hazardous facilities to be located away from Hazard Areas. 12.2.14.5 In assessing an application for a resource consent relating to hazardous 	The Preferred with this object Based on the However, the the Golden Mi have occurred were contained maybe requir resource cons Management construction a
	substances, the following matters will be considered	during detaile determined at
Objective 12.2.15 (Access)	To achieve this objective, the Council will implement the following policies:	The Preferred
To enable efficient, convenient and safe access for people and goods	• 12.2.15.1 Seek to improve access for all people, particularly people travelling by public transport, cycle or foot, and for people with mobility restrictions.	It is noted th
within the Central Area.	• 12.2.15.2 Manage the road network to avoid, remedy or mitigate the adverse effects of road traffic on the amenity of the Central Area and the surrounding Residential Areas	improve publi and enhance
	• 12.2.15.3 Manage the road system in accordance with a defined road hierarchy.	Mile or on adi
	• 12.2.15.4 To permit appropriate extensions to the existing road network, and make provision for these.	The Preferred
	• 12.2.15.5 Enable development within the Pipitea Precinct by allowing for the design and construction of new roads and access points, where appropriate.	further reduct
	• 12.2.15.6 Manage the supply of commuter car parking.	
	• 12.2.15.7 Consider waivers from parking requirements where:	
	 the nature of the activity on the site necessitates the provision of additional parking; or 	
	 the additional provision is for short-stay customer parking. 	
	 12.2.15.8 Manage on-site parking to ensure any adverse effects on the surrounding street network are avoided, remedied or mitigated. 12.2.15.9 Require the provision of servicing or loading facilities for each site in the Central Area 	
	• 12.2.15.10 Ensure that the design and location of servicing or loading facilities is appropriate having regard to the nature of the development and the existing or likely future use of the site.	
	• 12.2.15.11 Consider waivers from the servicing or loading requirements:	
	 where suitable alternative off-street provision can be made; or 	
	 where site access restrictions apply and there is no suitable alternative means of access; or 	
	 where it is necessary to protect any listed heritage item. 	
	 where the topography, size or shape of the site, the location of any natural or built features on the site, or other 	
	 requirements such as easements, rights of way, or restrictive covenants impose constraints which make 	
	o compliance impractical.	

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ion with this objective and its supporting policies her consideration during the Detailed Design

d Option is expected to be generally consistent ective and its supporting policies.

e GWRC's SLUR there are no HAIL activities. ere are a number of properties recorded along file where HAIL activities have occurred or may ed. Although it is assumed that these activities ned on-site, further consideration of "leakage" ired during the Detailed Design Phase, and asents maybe required.

t of hazardous substances in support of activities will need to be specifically considered ed design (and the need for resource consents at the time).

d Option is expected to be generally consistent ective and its supporting policies.

hat the Preferred Option specifically seeks to lic transport, active mode and mobility access access to public spaces. Provision for loading vice vehicles will be provided for on the Golden djacent side streets.

d Option removes on-street car parking from the (about 86 car-parks), and is likely to result in a ction of on-street car parking from side roads d designs are completed.

Objectives	Supporting Policies	Consister
	 12.2.15.12 Manage the creation of new vehicle accessways along identified roads in the Central Area, to ensure: efficient, convenient and safe movement of pedestrians, vehicles and public transport; and, continuity of key commercial frontages. 12.2.15.13 Require all vehicular access to sites to be safe. 12.2.15.14 Protect and enhance access to public spaces in the Central Area. 12.2.15.15 Recognise the role of the Pipitea Precinct as a strategic public transport corridor for the City, to recognise the continuing role of the railway system for both passenger and freight transport, and to promote the provision and use of public transport generally enhance accessibility within the Pipitea Precinct 	
Objective 12.2.16 (Tangata Whenua) To facilitate and enable the exercise of tino rangatiratanga and kaitiakitanga by Wellington's tangata whenua and other Maori.	 To achieve this objective, the Council will implement the following policies: 12.2.16.1 Identify, define and protect sites and precincts of significance to tangata whenua and other Maori using methods acceptable to tangata whenua and other Maori. 12.2.16.2 Enable a wide range of activities that relate to the needs and wishes of tangata whenua and other Maori, provided that physical and environmental standards specified in the Plan are met. 12.2.16.3 In considering resource consents, Council will take into account the principles of the Treaty of Waitangi/Te Tiriti o Waitangi. 	The Preferred with this object The Preferre access, to Te Lagoon). Ma contributing to

Open Space A Zone

Objectives	Supporting Policies	Consiste
Objective 16.5.1 To maintain, protect and enhance the open spaces of Wellington City.	 To achieve this objective, the Council will implement the following policies: 16.5.1.1: Identify a range of open spaces and maintain their character, purpose and function, while enhancing their accessibility and usability. 	The Preferre this objective
Objective 16.5.3 To prevent or mitigate any adverse effects of the storage, use, disposal, or transportation of hazardous substances, including waste disposal.	 To achieve this objective, the Council will implement the following policies: 16.5.3.1 Require that the storage, use, handling and disposal of hazardous substances are subject to analysis using the Hazardous Facilities Screening Procedure and, where appropriate, the resource consent procedure in order that any potential or actual adverse effects are managed in such a way as to safeguard the environment. 16.5.3.2 Reduce the potential adverse effects of transporting hazardous substances. 	The Preferre storage, us substances o

ncy with the Golden Mile Preferred Option

d Option is expected to be generally consistent ective and its supporting policies.

ed Option is not impacting on, or affecting e Aro Pa and / or Maori Site Point 68 (Waitangi lana whenua have identified that they will be to the Detailed Design Phase.

ency with the Golden Mile Preferred Option

ed Option works are generally consistent with e and supporting policy.

ed Option is highly unlikely to involve any se, handling and disposal of hazardous on the three identified Open Space Zones.



Private Properties Listed in the SLUR as Containing HAIL Activities

Site Name	File No	HAIL Description		
Serco National FM	SN/05/419/02			
15 Stout St	SN/05/413/02			
Midland Tower Company Ltd	SN/05/076/02	Chemical manufacture application and bulk		
Brandon Chambers	SN/05/293/02	storage		
National Bank Building	SN/05/254/02	Storage tanks or drums for fuel, chemicals or liquid waste		
ANZ Building	SN/05/278/02			
BNZ Centre	SN/05/246/02			
Majestic Tower	SN/05/415/02			
James Smiths Corner	SN/05/267/02	Vehicle refuelling, service and repair Service stations including retail or commercial refuelling facilities		
Ex Courtenay Place Gasworks	SN/05/176/02	Chemical manufacture, application and bulk storage Gasworks including the manufacture of gas from		
Cusironia		coal or oil feedstocks		
		Vehicle refuelling, service and repair		
St James Theatre	SN/05/232/02	Service stations including retail or commercial refuelling facilities		



Appendix F WCC Standard Tree Protection Conditions

Wellington City Council standard tree protection conditions

These conditions are designed to minimise the impact of any construction activity on tree health while allowing projects to be completed.

Standard tree conditions

Prior to any works commencing on the site a Council-approved consulting apporist (Protect_Arkinist) must be engaged by the applicant. The Project Arborist shall prepare an arboricultural impact assessment in accordance with AS 4970 - 2009 Protection of Trees on Development Sites. AS part of this assessment the Project Arborist will identify trees and vegetation that is to be removed and retained as part of the project and develop a tree protection plan. This assessment is to be provided to Councils Arboricultural Officer for review and acceptance.

On completion of work the Project Arborist shall at their discretion, sign off the work of the applicant's contractor and provide a brief account of the project to the Council arborist and compliance officer that documents.

- i Photographs showing stages of any work within the RPA
- ii Effects of work on the trees
- iii. Remedial works required

Tree Protection Zone (TPZ)

(...) The TPZ shall be fenced as indicated in the arboricultural impact assessment.

(...) A permanent fence shall be erected at edge of the TPZ. The protective fence shall be installed before construction and remain there until the work is finished. The fence should be clearly visible and strong enough to protect the tree trunk, branches and tree roots from any accidental damage and machinery impact.

(...) Any work within the TPZ is at the discretion of project arborist and shall be done in accordance with the tree protection plan developed as part of the arboricultural impact assessment.

(...) All vehicles, structures, building materials and debris associated with construction must not be stored within the Tree Protection Zone of any tree, unless prior approval from the <u>Erniect_Arborist</u> or Council's Compliance Monitoring Officer (in liaison with the Council's Arboricultural Officer) has been obtained

Excavations within the TPZ

(...) All excavations which are to take place in the TPZ shall be done so in conjunction with the Project arborist in accordance with the agreed arboricultural impact assessment and to the satisfaction of the <u>Project</u> <u>arborist</u>.

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Assessment of the Preferred Options works against the Relevant Objectives and Policies of the Proposed Natural Resources Plan (Decision Version 31.07.2019)

Objectives	Supporting Policies	Rules	Consistency with the Golden Mile Preferred Option
Section 3.2: Beneficial use and development	Policy P12: Benefits of regionally significant infrastructure and renewable electricity generation facilities	No specific rules	The Preferred Option will support the functioning of the Wellington Station.
Objective O12: The social, economic, cultural and environmental benefits of regionally significant infrastructure, and renewable energy generation activities, the utilisation of mineral resources are recognised.	 The benefits of regionally significant infrastructure and renewable energy generation activities are recognised by having regard to: (a) the strategic integration of infrastructure and land use, and (b) the location of existing infrastructure and structures, and (c) the need for renewable energy generation activities to locate where the renewable energy resources exist, and (d) the functional need and operational requirements associated with developing, operating, maintaining and upgrading regionally significant infrastructure and renewable energy generation Policy P14: Incompatible activities adjacent to regionally significant infrastructure, renewable electricity generation activities and significant mineral resources. Regionally significant infrastructure, renewable energy generation activities and significant mineral resources. 		Impacts on the regionally significant water supply, wastewater and stormwater networks will be further considered during the Detailed Design Phase.
	development occurring under, over or adjacent to it, by locating and designing new use and development to avoid, remedy or mitigate any reverse sensitivity effects.		
 Section 3.3: Māori relationships Objective O14: The relationships of Māori and their culture and traditions with their ancestral lands, water, sites, waahi tapu, and other taonga are recognised and provided for, including: (d) protecting sites with significant mana whenua values from use and development that will adversely affect their values and restoring those sites to a state where their characteristics and qualities sustain the identified values. Objective O15: Kaitiakitanga is recognised and mana whenua actively participate in planning and decision-making in relation to the use, development and protection of natural and physical resources. 	 Policy P20: Exercise of kaitiakitanga Kaitiakitanga shall be recognised and provided for by involving mana whenua in the assessment and decision-making processes associated with use and development of natural and physical resources including: (a) managing activities in sites with significant mana whenua values listed in Schedule C (mana whenua) in accordance with tikanga and kaupapa Māori as exercised by mana whenua, and (b) the identification and inclusion of mana whenua attributes and values in the kaitiaki information and monitoring strategy in accordance with Method M2, and (c) identification of mana whenua values and attributes and their application through tikanga and kaupapa Māori in the maintenance and enhancement of mana whenua relationships with Ngā Taonga Nui a Kiwa 	No specific rules	The Te Aro Pa site is a Site of Significance to Taranaki Whānui. Waitangi Lagoon is also of significance. Mana whenua are partners in the LGWM programme (which includes the Golden Mile Project).
 3.8 Air quality Objective 39: Ambient air quality is maintained or improved to the acceptable category or better in Schedule L1 (ambient air). Objective O40: Human health, property, and the environment are protected from the adverse effects of point source discharges of air pollutants. Objective O41: The adverse effects of odour, smoke and dust on amenity values and people's well-being are minimised. 	 Policy P52: Managing ambient air quality Ambient air quality shall be managed to protect human health and safety by: (a) maintaining the acceptable category or better identified in Schedule L1 (ambient air) for the specific contaminants, and (b) improving unacceptable or poor ambient air quality to at least the acceptable category or better identified in Schedule L1 (ambient air), and (c) managing the discharge of other contaminants so that the adverse effects on human health, including cumulative adverse effects, are minimised. 	 Rule R32: Petroleum storage or transfer facilities – permitted activity provided the prescribed standards are met. Rule R34: Gas, water and wastewater processes – permitted activity provided the prescribed standards are met. Rule R41: All other discharges - The discharge of contaminants into air that are not permitted, controlled, discretionary, non-complying or prohibited is a discretionary activity 	The local airshed is in compliance with the National Environmental Standards for Air Quality. Potential discharges to air as part of construction activities will be further considered during the Detailed Design Phase.
3.10 Land use	Policy P67: Minimising effects of discharges to water or land	• Rule R54: Detailed site investigation (of contaminated land) is a permitted activity	Potential impacts on soil and water from construction activities will be further considered during the Detailed Design

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Objectives	Supporting Policies	Rules	Consistency with the Golden Mile Preferred Option
			Phase.
 Objective 044: The adverse effects on soil and water from land use activities are minimised. 3.11 Discharges to land and water Objective 046: The runoff or leaching of contaminants to water from discharges to land is minimised. Objective 047: The amount of sediment-laden runoff entering water is minimised. Objective 051: The environment is protected from the adverse effects of discharges of hazardous substances and the creation of contaminated land is avoided. Objective 043: The environment is protected from more than minor adverse effects of discharges from contaminated land. 	 Discharges of contaminants to water or land will be minimised by adopting the following hierarchy: (a) avoiding the production of the contaminant, (b) reducing the amount of contaminants, including by reusing, recovering or recycling contaminants. (c) minimising the volume or amount of the discharge, (d) discharging to land is promoted over discharging direct to water, including using land-based treatment, constructed wetlands or other systems to treat contaminants prior to discharge Policy P95: Discharges to land The discharge of contaminants to land shall be managed to: (a) minimise adverse effects on the life-supporting capacity of soil, and (b) avoid create creating contaminated land, (c) not exceed the capacity of the soil to theat, use or remove the contaminant, (d) not exceed the available capacity of the soil to absorb and infiltrate the discharge (e) avoid significant adverse effects on public health and amenity, and (f) not result in a discharge to water that causes more than a minor adverse effects. Policy P62: Promoting discharges to land The discharge of contaminants to land is promoted over direct discharges to water, particularly where three are adverse effects on stream very. (a) aquatic ecosystem health and mahinga kai, or (b) contact recreation and Māori customary use. Policy P73: Managing land use impacts on stormwater Land use, subdivision and evelopment, including stormwater discharges, shall be managed so that runoff volumes and peak flows: (a) avoid or minimise scour and erosion of stream beds, banks and coastal margins, and (b) do not increase risk to human health or safety, or increase the risk of inundation, erosion or damage to property or infrastructure, inundation, erosion or damage to property or infrastructure, inundation, erosion or damage to property or infrastructure, coastal wate	 provided the relevant standards are met Rule R55: Discharges from contaminated land ispermitted provide the relevant standards are met (otherwise a discretionary resource consent is required) Rule R42: Minor discharges is a is permitted provide the relevant standards are met Rule R99: Earthworks is a permitted activity provided it complies with the relevant standards (non-compliancewill required a discretionary resource consent) 	Potential discharges to land and water from construction activities will be further considered during the Detailed Design Phase. It is noted that Section 2.2 of the PNRP definition of <i>Earthworks</i> excludes repair or maintenance of existing roads.

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Contact

Stantec Building Level 15, 10 Brandon Street Wellington Central, Wellington 6011 +64 4 381 6700

Futuregroup →

Stantec WS) aurecon Jasmax MRCagney Boffa Miskell



local