ATTACHMENTS

Project Planning & Monitoring Committee meeting
Separate Attachments 1

Monday, 25 November 2024

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Durham St to Grey St Laneway

Concept Optioneering

December 2022

Tauranga City

Beca

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Revision History

Project Number: 4671520

Revision	Prepared By	Description	Date
A	Emma Stiven	For issue	15/12/2022

Document Acceptance

Action	Name	Signed	Date
Prepared by	Emma Stiven		15/12/2022
Reviewed by	Tom Abbott		15/12/2022
Approved by	Craig Richards		15/12/2022

on behalf of Beca Ltd.

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Figure 1 - Looking west towards Durham Street from the service lane

Figure 2 - Looking north along service lane to Trustpower building and entrance to laneway

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Part A

Concept Summary

Introduction

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As part of a wider plan to better link up Tauranga's City Centre, Tauranga City Council (TCC) are exploring a laneway connection between Durham Street and Grey Street. This connection will support pedestrian movement between proposed transport destinations and the Knowledge precinct to the waterfront via the Commercial and Retail precinct. TCC are considering the purchase of 79 Grey Street, a portion of 134 Durham Street, and utilising an existing service lane to enable the connection.

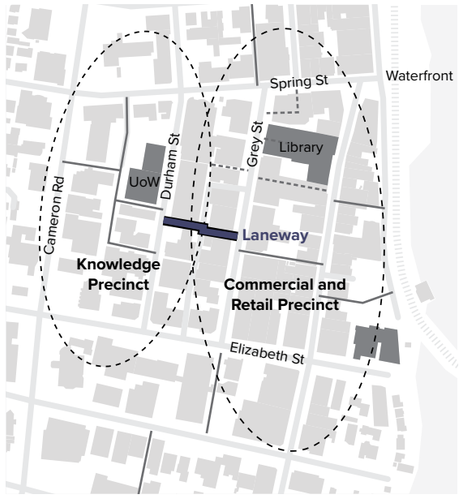

Figure 3 - Tauranga City Centre Precincts

The project

The proposed laneway development has three clear objectives;

1. to create an active east-west connection within the CBD to support connections to destinations such as the commercial and retail precinct, public transport and University of Waikato

2. to create an accessible route for pedestrian and active mode users of all ages and abilities

3. to support placemaking outcomes through attractive and inviting spaces that are adaptable and create positive landuse interfaces

For the purposes of the optioneering process, the design of the laneway has considered the proposed development at 134-142 Durham St (Pre-concept Study, Evatt Martin, January 2022).

The laneway has been divided into two sections, the first running between Durham Street to the service lane, and the second from the service lane through to Grey Street. The optioneering section focuses on section 1 of the laneway due to the elevational challenges through this area.

Purpose

The first part of this report establishes the context, analysis, design drivers and assumptions leading into the optioneering and concept design phases. The second part of the optioneering study within this report (page 17) explores three different layouts for section 1 of the laneway (between Durham Street and the service lane), providing a high level concept cost comparison for each. One of these options will be selected by TCC and taken forward into concept design in 2023 along with section 2.

These deliverables will then support a land requirement plan that will aid TCC in the potential purchase of any required land.

A kick-off workshop was held with the TCC design team to understand Council's drivers for the laneway prior to the delivery of the Concept Summary report. Following this, a long list of options were circulated and presented at workshop 2 with the TCC design team, developer and Evatt Martin Architects.

From workshop 2, three preferred options (short list) were selected to present in the optioneering report;

- Option 1 - Elevator and Stairs
- Option 3b - Ramp and Stairs (1 in 12)
- Option 4 - Stairs only

At the workshop, a variation for Option 3b at 1 in 14 was suggested to be explored. This option presented a number of issues due to the extra length of ramp required and the need to respond to a mid-lane retail area in the proposed building development. Due to this, the 1 in 12 ramp option has been included in the optioneering with benefits and constraints for each discussed in this report.

As the Tauranga City Centre Public Realm Design Guidelines (TCC PRDG) are still being developed (draft due end of 2022), directive on the look and feel for the laneway including aesthetic drivers will be incorporated in to the concept design. Delivery of the concept design programme of this project will therefore be linked to the delivery of the guidelines.

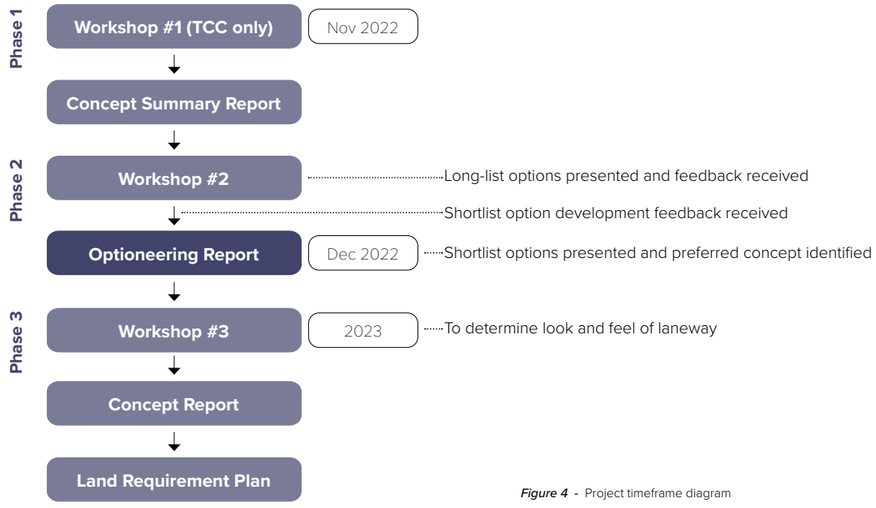

Figure 4 - Project timeframe diagram

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User types

Pedestrian user data was received from Tauranga City Council in December 2022 as part of wider external transport studies within the city centre. Data validation is still an on-going process and there are some data gaps for certain devices. From this analysis, four user types were detected within the city centre area;

1. Pedestrians
2. Cyclists
3. E-scooters
4. Motorcycle/mopeds (excluded from the data in this report)

A summary of user data is provided in figures 6 and 7 adjacent.

Figure 5 - Device locations

Total monthly users passing Willow/Spring Street, Grey Street, Durham Street lower, Elizabeth Street Opt B cameras

Month Summer vs winter	Pedestrians	Cyclists	E-scooters
June 2022 (winter)	81,395	1,081	149
November 2022 (summer)	96,344	2,275	75

Figure 6 - Total monthly users June and November 2022

The data shows a higher proportion of pedestrians utilise the area monthly compared with cyclists and e-scooters with the summer period featuring more pedestrians and cyclists than winter. A smaller number of cyclists utilise Grey Street and Durham Street compared to the east-west connections of Elizabeth Street and Willow Street.

Daily users passing Grey Street and Durham St lower cameras (7th, 9th and 11th November 2022)

Average numbers (November 7th, 9th and 11th 2022	Pedestrians		Cyclists		E-scooters	
	Grey St	Durham St	Grey St	Durham St	Grey St	Durham St
Monday 7am - 10am	179	130	2	4	0	0
Monday 11am - 2pm	575	130	1	5	0	1
Monday 4pm - 6pm	142	98	9	2	1	1
Wednesday 7am - 9am	217	201	1	10	0	1
Wednesday 11am - 1pm	670	122	0	5	0	1
Wednesday 4pm - 6pm	132	88	3	3	0	1
Saturday 7am - 9am	277	122	1	3	0	0
Saturday 11am - 1pm	872	138	4	4	0	0
Saturday 4pm - 6pm	207	80	0	2	0	0

Figure 7 - Daily user types 7th, 9th and 11th November 2022

A random week in November was selected, with the data showing that the busiest period of the day for Grey Street was between 11am and 1pm, with the morning and midday period the busiest for Durham Street. Pedestrians make up the majority of the user type in both areas, with cyclists more common along Durham Street.

User requirements

Typical user dimensions for future laneway users have been taken from AS4121:2001 and AT Engineering Design Code Cycling Infrastructure;

Pedestrians

- Single pedestrian 1.0m - 1.5m
- Two single pedestrians passing 2.0m

Wheelchair users

- Single stationary wheelchair 0.8m min.
- Wheelchair passing a walking pedestrian 1.2m min.
- Wheelchair passing a pram 1.5m min.
- Two wheelchairs passing each other 1.8m min.

Cyclists

- Single standard bike 1.0m - 1.5m min.
- Single non-standard (cargo, trailer etc) bike 1.3m min.
- Two standard bikes passing - 3.0m min.

E-scooters

- Single e-scooter user 1.0m - 1.5m min.

Width requirements

Typical widths that have been used for the laneway optioneering include;

- Through route zone for pedestrians (kept clear of all obstructions) - 3.0m - 4.0m
- Planting (trees in tree pits) - 2.0m - 3.0m
- Furniture zone (seating, spill out spaces) - 2.0m

Context

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Strategic context

The following strategic documents will be considered in the design development of the laneway;

- Tauranga Taurikura (Draft Environmental Strategy), 2022
- Fine-grained Spaces Amenity Report, 2017
- Tauranga City Centre Public Realm Design Guidelines (ongoing)
- Tauranga City Centre Action and Implementation Plan (CCAIP), 2022

Tauranga Taurikura

TCC's draft environmental strategy outlines five goals that will help to value, protect and enhance the natural environment of Tauranga. The two goals that are relevant to the design of the proposed laneway include;

1. Thriving nature and biodiversity at the heart of our communities - increase canopy cover and urban forest across the city and include biophillic principles in urban planning and design.

2. Tauranga is a low emissions and climate resilient city - consider climate impacts such as rising temperatures, wind, rainfall and seasonal patterns. Support increased use of public transport, walking and cycling, increase uptake of walking, cycling and micro-mobility devices by improving safety and connectivity.

Fine-Grained Spaces Amenity Report

The purpose of this internal TCC report was to undertake analysis of under-utilised urban spaces that could be redeveloped, regenerated and/or reconfigured to improve the urban amenity and vibrancy within Tauranga's CBD.

Tauranga City Centre Public Real Design Guidelines

The guidelines are currently being developed with a draft issue expected end of 2022. Following the release of this document, any directive on the look and feel for the laneways and aesthetic drivers will be incorporated into the concept design.

Tauranga City Centre Action and Implementation Plan

The CCAIP reaffirms the long-term vision for the city and identifies a number of actions for implementation over the next 10 years. An action for the wider City is to provide 'a network of vibrant laneways', encouraging a pedestrian focused city centre. The Durham Street to Grey Street laneway is part of this network and has also been outlined as its own priority action for the City Centre's Knowledge Precinct.

CCAIP key moves

Whilst being a priority action itself, the proposed laneway also interfaces with several other CCAIP actions and key moves;

1. Rapid bus spine - a clear, prioritised public transport route which will travel through the city centre along Durham St past the laneway and the University of Waikato. Private vehicle priority will be reduced in this area with a larger focus on public transport and pedestrian movements at the entrance of the laneway.

2. Key transport destinations - a permanent bus facility or 'super stops' (to be confirmed) will be located along Durham Street. These stops will collect the walking and cycling catchment of the Knowledge and Commercial and Retail Precincts, with the proposed laneway supporting these connections through to the stops.

3. Te Manawa Huanui (central pedestrian spine) - a pedestrian-focused north-south central walking route that connects key destinations and places with Te Manawataki o Te Papa, supported by laneways, wayfinding and storytelling. The proposed laneway will provide east-west connections to and from this main pedestrian route to key destinations to the west such as the University of Waikato, transport hubs and Cameron Road.

4. Future development - a number of major developments are committed for the city centre within the next eight years, highlighting the transformation the current city centre will undertake into a thriving and revitalised centre. The laneway will provide a key connection between these and should support higher pedestrian numbers.

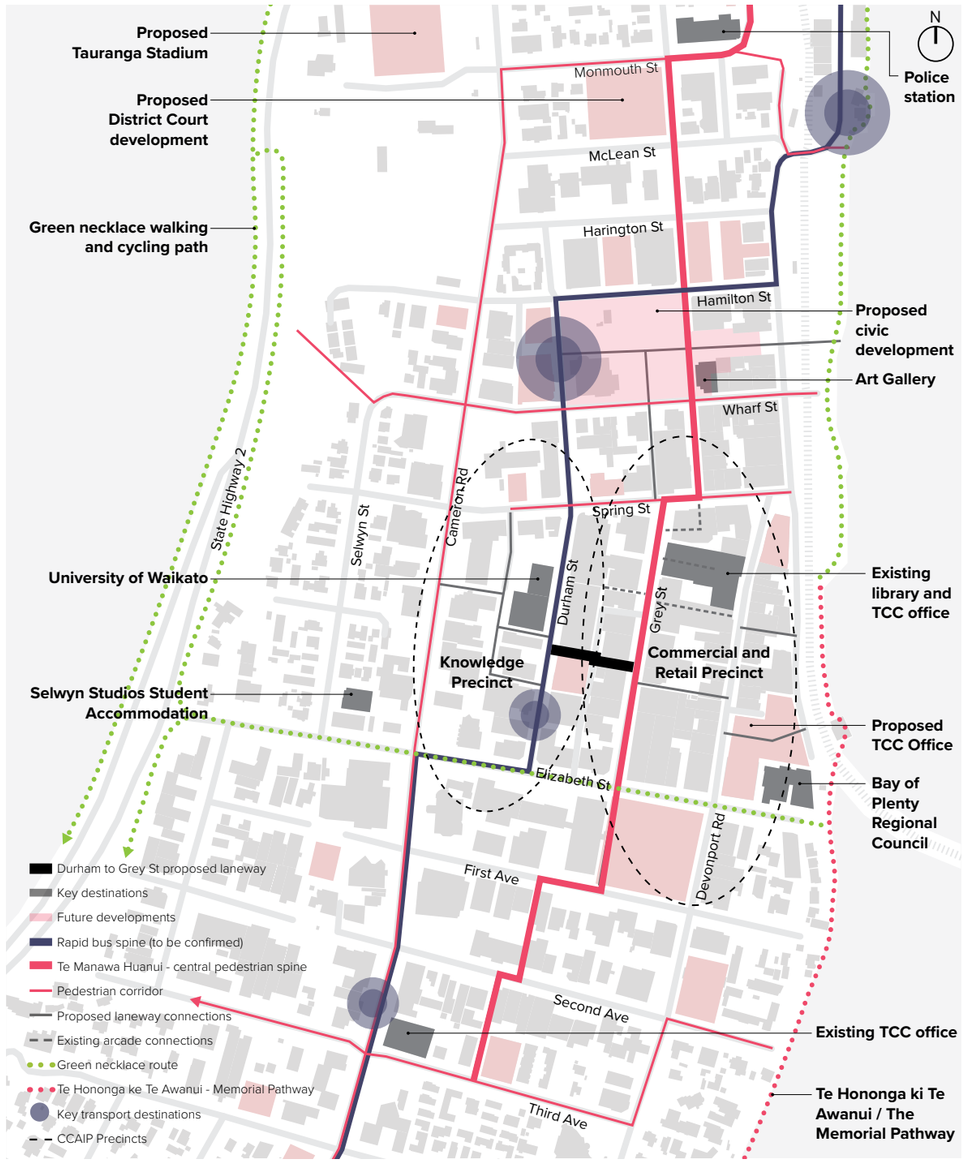

Figure 9 - City Centre Action and Investment Plan Key Moves

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Tauranga City Centre Context

The laneway is located in the heart of Tauranga's CBD, on the boundary of the Knowledge and Commercial and Retail precincts. To the west, Durham Street has been identified as a strategic public transport connection, having recently undergone a streetscape upgrade that coincided with the construction of the University of Waikato campus. The University of Waikato campus is set to accommodate up to 5000 students and further development is still intended for the campus. This could also include future student accommodation in the area.

To the east, Grey Street is one of the main commercial and retail streets in Tauranga's CBD. It is characterised by its brick paving, character banner and light poles and mature trees (palms and Australian Frangipani) along both sides of the road.

Movement

Three pedestrian and active mode user types are assumed to currently utilise the city centre; commuters, students and tourists, with residents likely to increase in the future. Each require different place and movement needs and will have unique travel patterns based on their destinations and travel choice. This will determine the type and level of amenity the laneway needs to support.

Commuters are likely to arrive and depart the city centre by cycling, public transport or by private vehicle, with all day parking provided to the north and south of the city centre. There are also multi-storey covered carpark buildings on Durham Street and Elizabeth Street. Commuter movements across the city are likely to remain fixed unless a more convenient route is presented. They will take the same route to their respective offices daily and support retailers, especially food and beverage outlets, during lunch hours and before and after work. In future it is expected that there will be changes in active mode transport, with greater uptake of electric bikes, skateboards and scooters. Design of spaces that accommodate these options should be considered.

Tourists numbers are expected to increase post-covid with visiting times varying during the week and the weekend. Previously, cruise ship tourists were bused into the city centre. An activity that engages tourists with the city centre includes an historic walking tour and also an art walking tour. In the future, key destinations will include the civic development, museum, waterfront development and historic precinct.

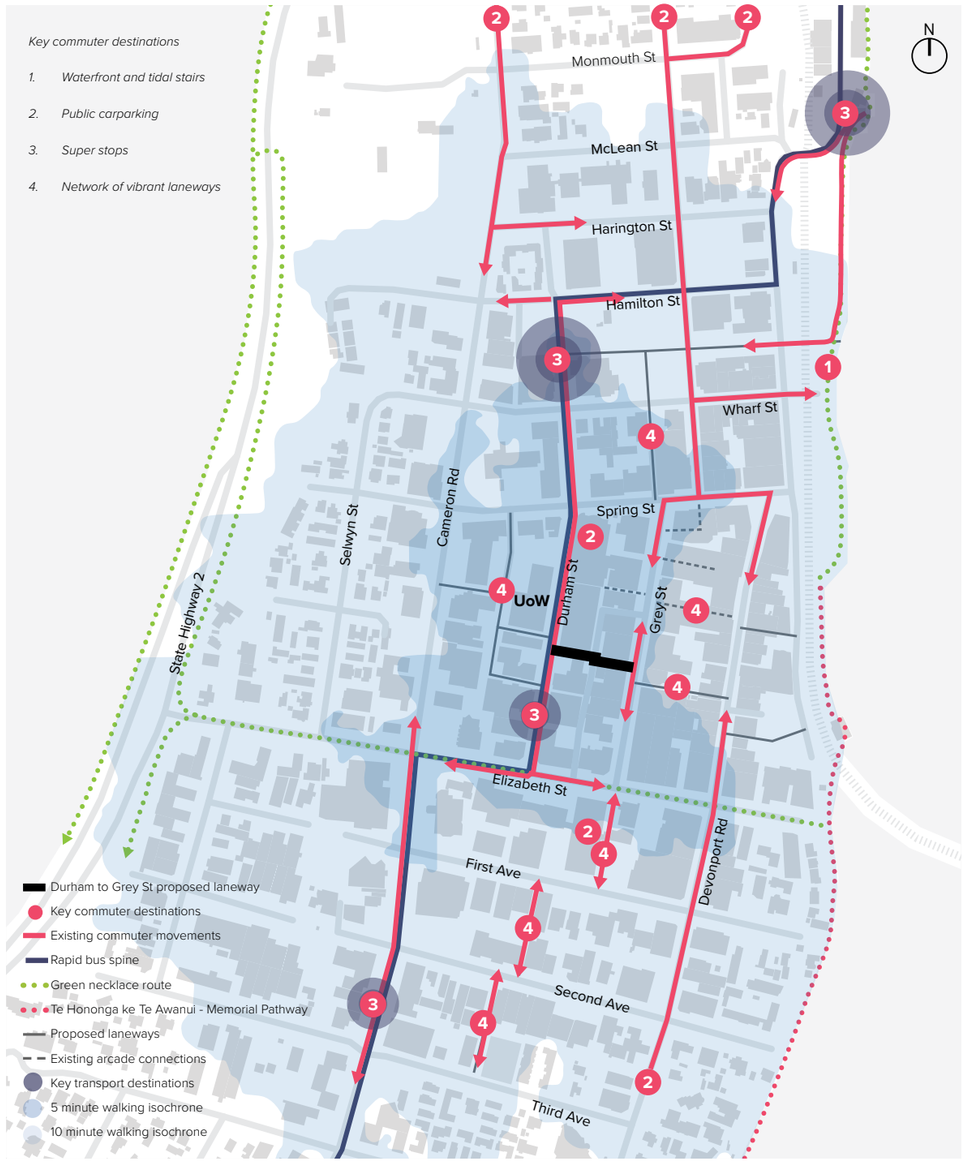
Student movements are predominantly based around the University of Waikato Campus, public transport hubs and Cameron Road. As students need to move around cheaply and quickly, active transport modes such as bicycles, skateboards and scooters will be popular in this area. A larger daily population in this area results in a need for students to be able to filter easily through the city centre to access food and beverage outlets and destinations such as the Tauranga City Library.

Place

Commuters will likely spend the majority of the day at their place of work, with lunch hours seeing more demand for people out eating their lunch or taking a break. Spaces such as the waterfront and parks are popular spots for this however small spaces should also be considered e.g. for short breaks and to take phone calls. An important aspect to consider is Tauranga's climate with coastal rain and wind common during the year. There are minimal covered spaces around the city to spend time in other than within buildings.

Tourists will likely want to be exploring the city, taking in experiences such as the waterfront and proposed civic precinct. A vibrant network of laneways will attract tourists engaging them with finer grain spaces. Art and cultural walking trails utilised across the city will draw tourists into the vibrant spaces of city centre where they can spend time.

Students will spend most of their day in and around the University of Waikato campus. Destinations for students include places that accommodate socialising between lectures, eating and places to study. Areas for recreation may also be popular with a number of pop up parks across the city featuring a basketball half court, football and table tennis tables. Areas for study should consider student needs such as SMART technology, free wifi and power sources embedded into street furniture. Shelter will also be an important consideration to create continuous cover between transport destinations, the University and retail streets.



Commuter movement and place patterns

Figure 10 - Tauranga City Centre commuter patterns

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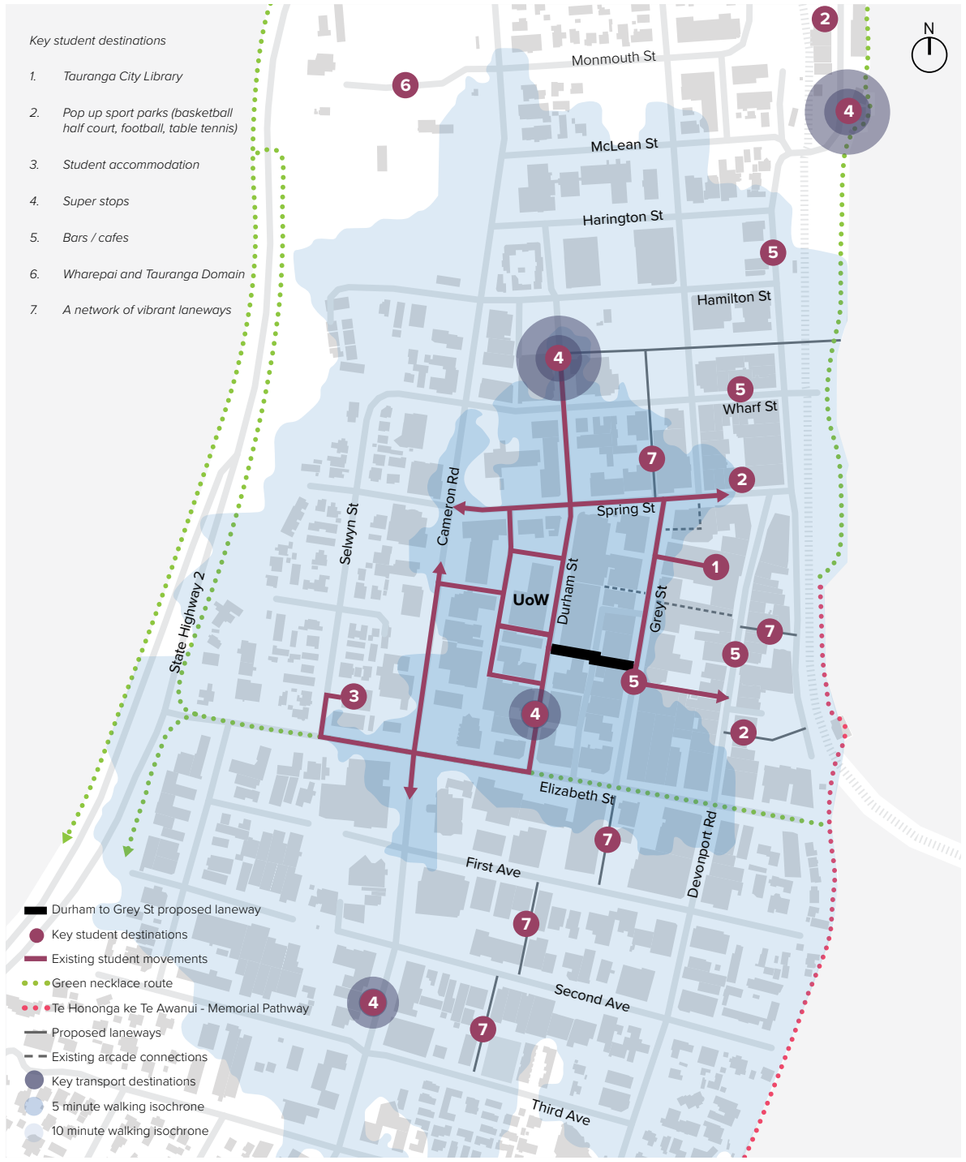
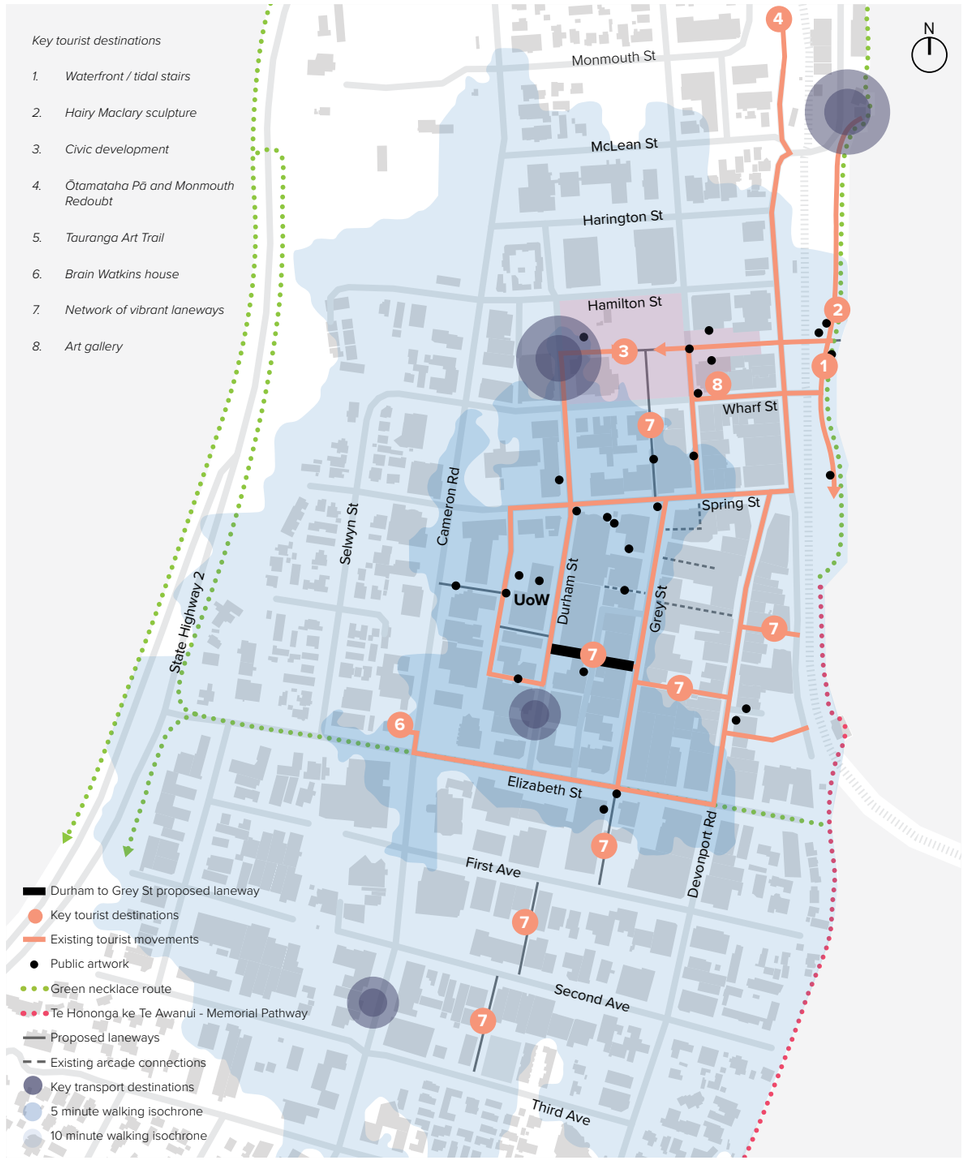


Student movement and place patterns

Figure 11 - Tauranga City Centre student patterns



Tourist movement and place patterns

Figure 12 - Tauranga City Centre tourist patterns

Figure 13 - Connections and street activation

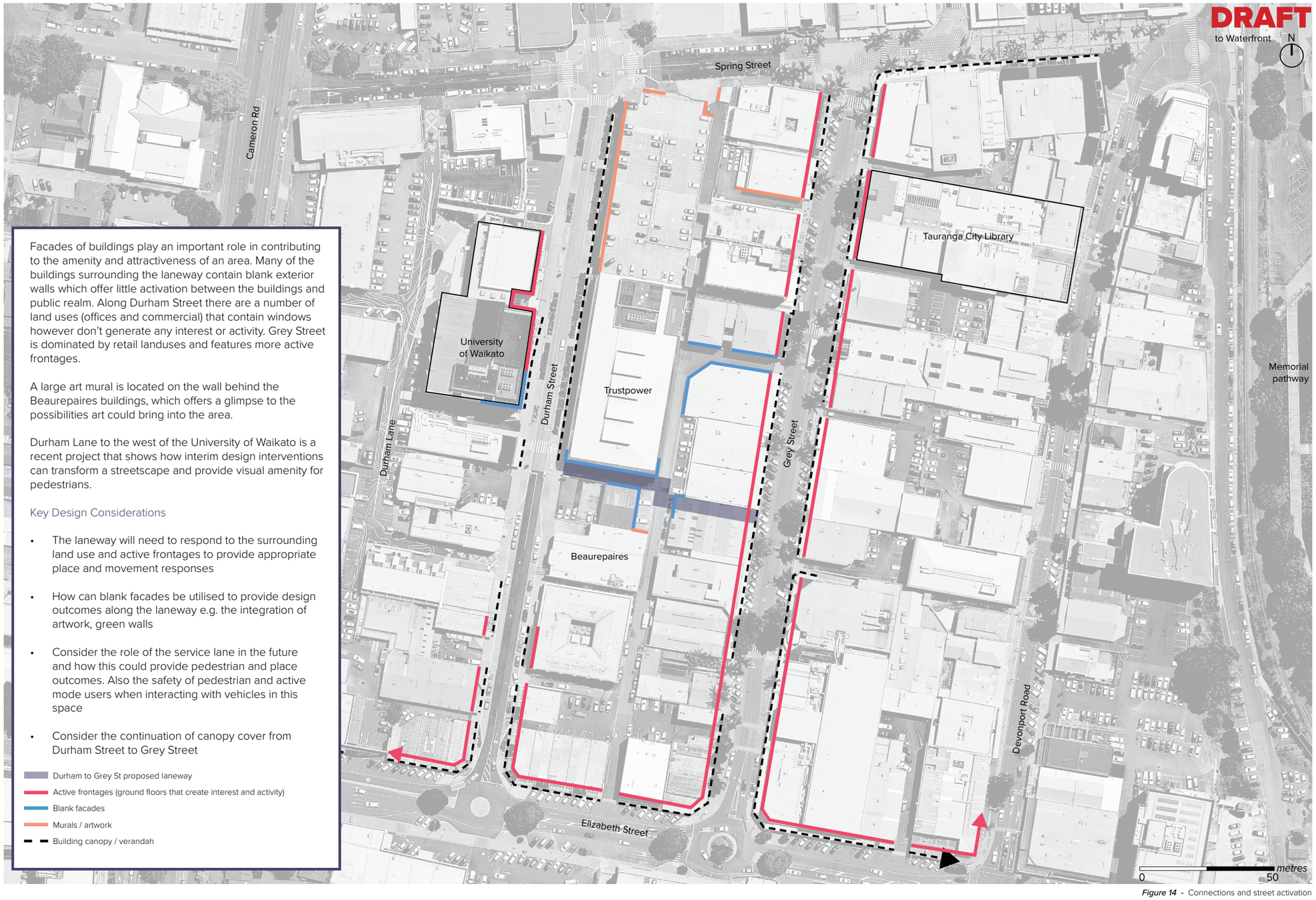


Figure 14 - Connections and street activation

The Site

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The proposed site of the Durham Street to Grey Street laneway connection consists of three separate sections;

- Section 1 - an existing accessway and building on private property, accessed off Durham Street
- Section 2 - an existing service lane (contains multiple vehicle access points)
- Section 3 - an existing building on private property, accessed off Grey Street

Both private properties are targeted for development in the near future, with opportunities for TCC to acquire a portion of land on each property to formalise the laneway.

Section 1 is located off Durham Street which has recently undergone streetscape upgrades. The upgrades provided improved surfaces, public amenity (seats, bike parking), planting (rain gardens), lighting, and road narrowing to improve pedestrian accessibility. Opposite the site is the new University of Waikato campus and adjacent is the Trustpower building, a recent development that accommodates up to 600 staff. The southern wall of Trustpower borders the site and consists of a blank facade with several exotic trees planted along the length within an accessway. The accessway connects Durham Street to the service lane, however this is currently planted with lomandra and fenced, with no public thoroughfare. Running along the other edge of the accessway is a Beaurepaires tyre shop with forecourt. This is often busy with private vehicles.

Section 2 contains a portion of service lane that runs parallel between Durham Street and Grey Street. The service lane is 5m wide but varies in width (5m+) along its length by the building setbacks. The service lane is primarily vehicle oriented with private parking for adjacent retail and commercial buildings. The service lane presents a back of house environment, with carparking, rubbish bins and other services. There is a large mural on one of the exterior building walls that adds character to the space.

Section 3 is currently located under an existing building that is earmarked for redevelopment. The laneway will open out to the service lane to the west and Grey Street to the east through this area.

Across the site there is an elevation change of 4.7m with 4.1m of this occurring across a 37m length between Durham Street and the service lane. This elevation change and grade will need to be considered in the design phase to accommodate accessibility requirements for pedestrians and also active mode users eg. cyclists.

Biodiversity and sustainability

There is minimal vegetation coverage on the site aside from a row of lomandra and young deciduous exotic trees in the existing accessway between Beaurepaires and Trustpower. Durham Street contains rain gardens with exotic and native tree planting (Fastigiata Ginkgo, Chinese Tupelo and Taraire) and Grey Street contains mature exotic trees (palms and Australian Frangipani) in tree pits.

Key Design Considerations

- Consider planting and how this could support canopy cover and urban forest goals
- Incorporate biophillic principles into design
- Support the use of multi-modal transport options
- Consider sustainability outcomes driven from the Public Realm Design Guidelines

Climate

Due to it's unique topography, the climate in Tauranga is sub-tropical and humid with summers generally hot and winters mild. Tauranga has less frequent rainfall than other areas of New Zealand, but due to it's coastal setting rainfall can occur unexpectedly. The prevailing wind is from the west and south-west, however the city is largely sheltered by the Coromandel, Kaimai and Mamaku Ranges.

In a coastal city such as Tauranga, climate change is an important factor to consider when future-proofing the cities infrastructure including the provision of shade for pedestrians. The current climate and projected effects of climate change on Tauranga are supportive of a walking and cycling environment. The site is relatively shaded during the day in section 1 due to the height of the Trustpower building and the orientation of the laneway along the southern wall.

Key Design Considerations

- How can the laneway provide a sheltered thoroughfare for pedestrian moving between the University and Grey Street
- Consider additional shade and shelter for pedestrians spending time in the space
- Consider a design response that reflects the local climate conditions

Proposed future development

A new development has been proposed at 134-142 Durham Street (previous Beaurepaires site) that will feature retail and office space. The proposed building is 10 levels (38m+ high off Durham Street) and due to the topography of the land the first floor, containing retail and the lobby, will be accessed off Durham Street. Retail and basement carparking will be accessed off the service lane. The development is still undergoing feasibility studies, however the laneway design should consider the positive and complementary interface the building will have with Durham Street and the laneway, including activation of spaces from future tenancies.

Figure 15 - Looking towards new development from Durham Street

Figure 16 - Looking towards new development from the Service Lane

Figure 17 - Proposed laneway site plan

Design Drivers

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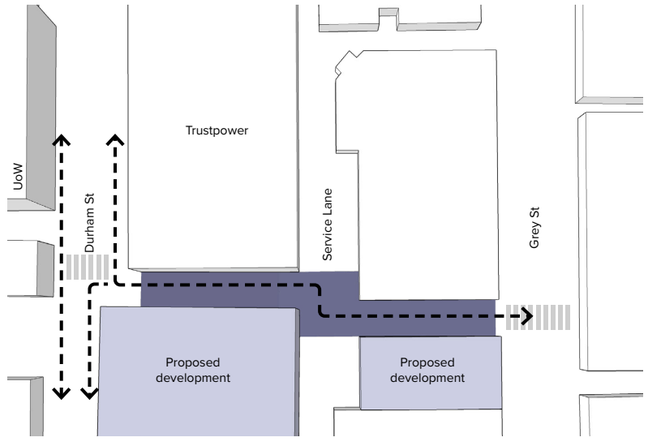
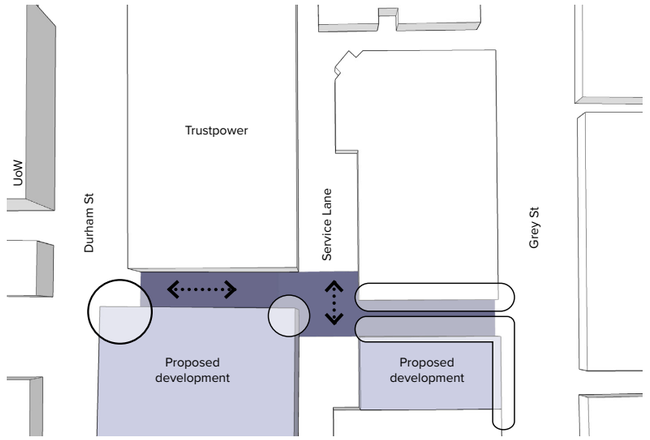
These design drivers have been driven from the analysis and will influence the design outcomes of the laneway through the optioneering and concept process.



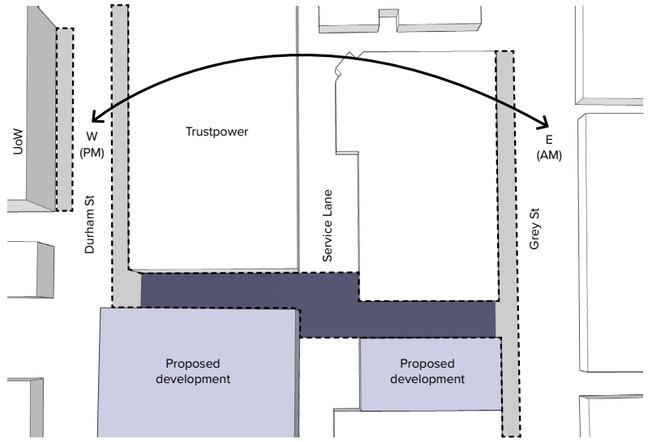
1 *Figure 18* - Accessibility

The laneway will need to provide universal access for pedestrians and active mode users of all ages and abilities (e.g. wheelchairs) with the design response needing to meet accessibility codes.



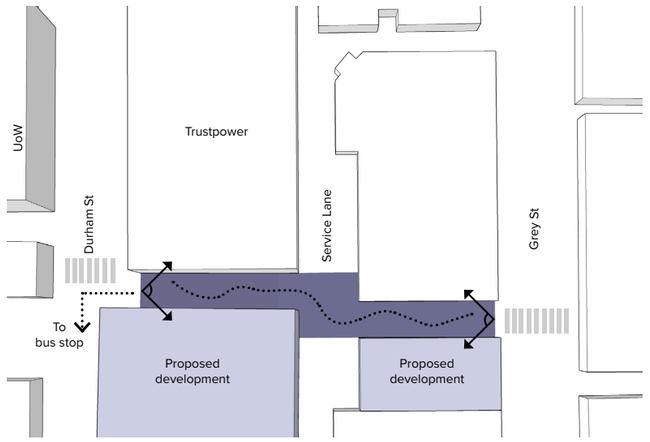
2 *Figure 19* - Place and movement

The laneway will need to consider the adjacent built environment and land use to provide suitable areas for place and movement.



3 *Figure 20* - Shelter

The laneway will need to contain an appropriate response to the local climate including the provision of shelter and whether additional shade is required.



4 *Figure 21* - Safe and inclusive

The laneway will need to be inviting, safe and inclusive. Consider CPTED and accessibility outcomes, and the layout of the laneway to attract all types of users into the space.

Design Response

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The following key moves will form the design response for the laneway through the optioneering and concept design process;

1. Access will be provided for pedestrians (including mobility and vision impaired users), cyclists and other active mode users along the entire length of the laneway

2. A combination of stairs, and either a ramp or elevator, will be provided to meet accessibility requirements and meet the needs of active mode users

3. Preferred ramp grades will be 1 in 14, with 1 in 12 the minimum requirement.

4. A width of 7-9m will be tested for the laneway during the optioneering process to make sure project objectives can be met along with optimum/minimum widths

5. Spaces for activation and place will be provided at either end of the laneway, interfacing with the proposed development, Durham Street and Grey Street

6. Shelter will be provided along the length of the laneway to provide pedestrians and active mode users with a covered connection between the Knowledge and Retail and Commercial precincts

7. Meaningful planting outcomes will be incorporated into the laneway to achieve a softer and greener space. Planting will provide amenity and visually breakup the space, continuing planting outcomes from Durham Street and Elizabeth Street

8. The Tauranga Moana Design Principles (or similar) will be agreed with mana whenua during the concept phase and applied to the laneway development to celebrate and elevate te ao māori values, history and cultural heritage of the city centre

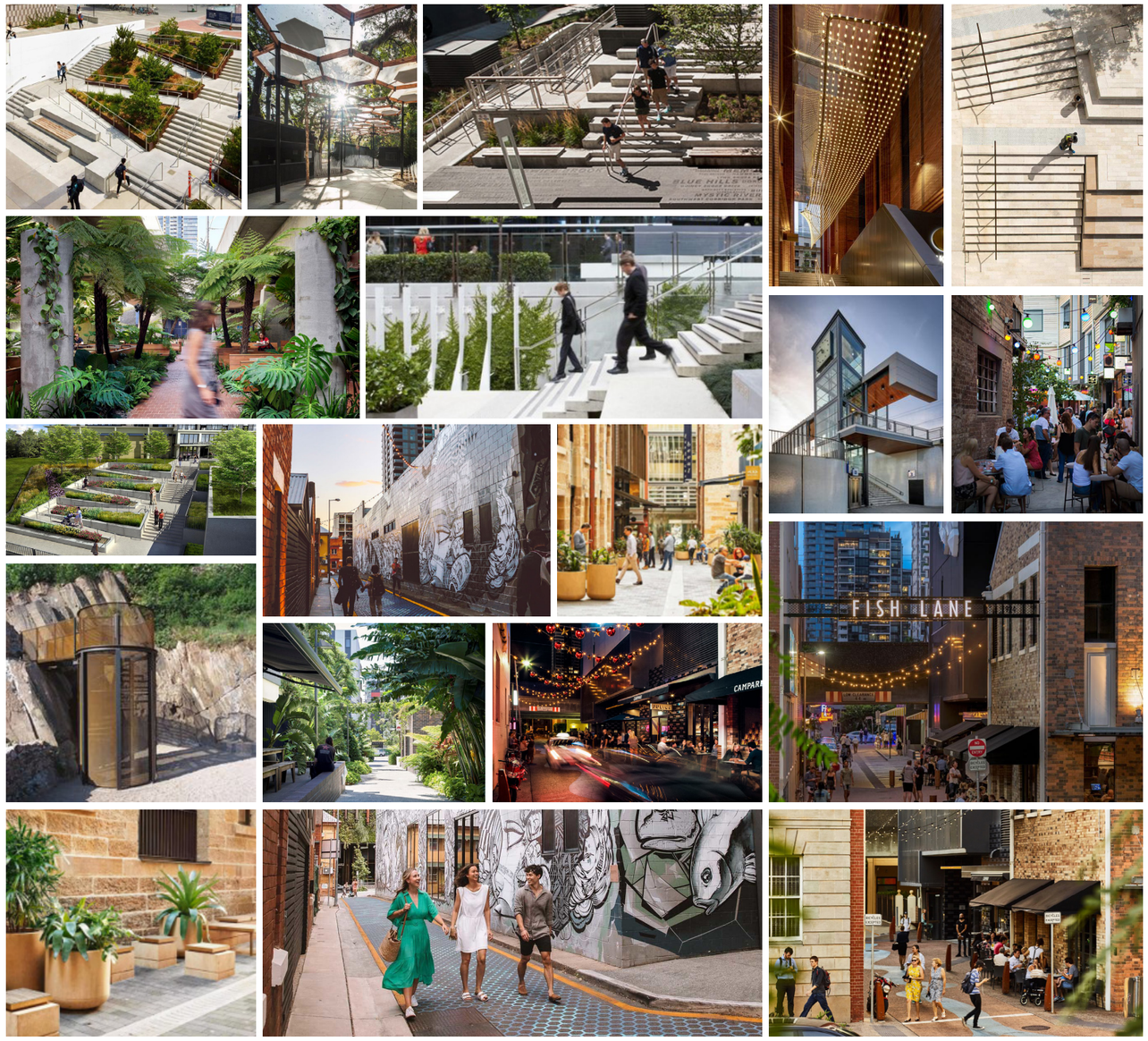

Figure 22 - Precedent imagery

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Part B

Optioneering

Option 1 - Elevator and Stairs

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Option 1 of the shortlisted options provides access between Durham Street and Grey Street via stairs and an elevator. Given the elevational change of 4.1m between Durham Street and the service lane, an elevator option was discussed in workshop 1 and 2 as a way to meet accessibility requirements within a relatively constrain laneway width. The elevator would provide flexibility for the layout of the laneway to respond to the proposed development at 134-142 Durham Street to the south of section 1.

Features

- 8.0m laneway width (the existing property or proposed building to accommodate an extra 1.0m width)
- The elevator option responds best with the proposed development layout. Due to the internal level change for the proposed lower level retail space, a shorter 1 in 14 ramp has been provided to access the elevator (number of steps reduced from original Evatt Martin design)
- There is an opportunity for the elevator tower to become a design feature of the laneway, featuring artwork or planting
- Option 1 can be adapted to respond to active building edges by shifting the elevator east or west. Further discussions around the elevator being located within the building footprint are required with the developer
- Access is enabled into the lower lever retail space off the laneway, with a larger area for a spill out space provided compared to Option 3B
- The elevator option provides greater flexibility and larger areas of space for placemaking opportunities compared to Option 3b
- A high proportion of planting areas are provided along the edge of Trustpower building, stairs and at the service lane and Durham Street entrances
- A high proportion of building and laneway interface (based on current building design) is provided in this option
- This option has been estimated to have the highest cost compared to Option 3b and Option 4 (refer Durham St to Grey St Laneway Optioneering Cost Estimate Report, Dec 2022)

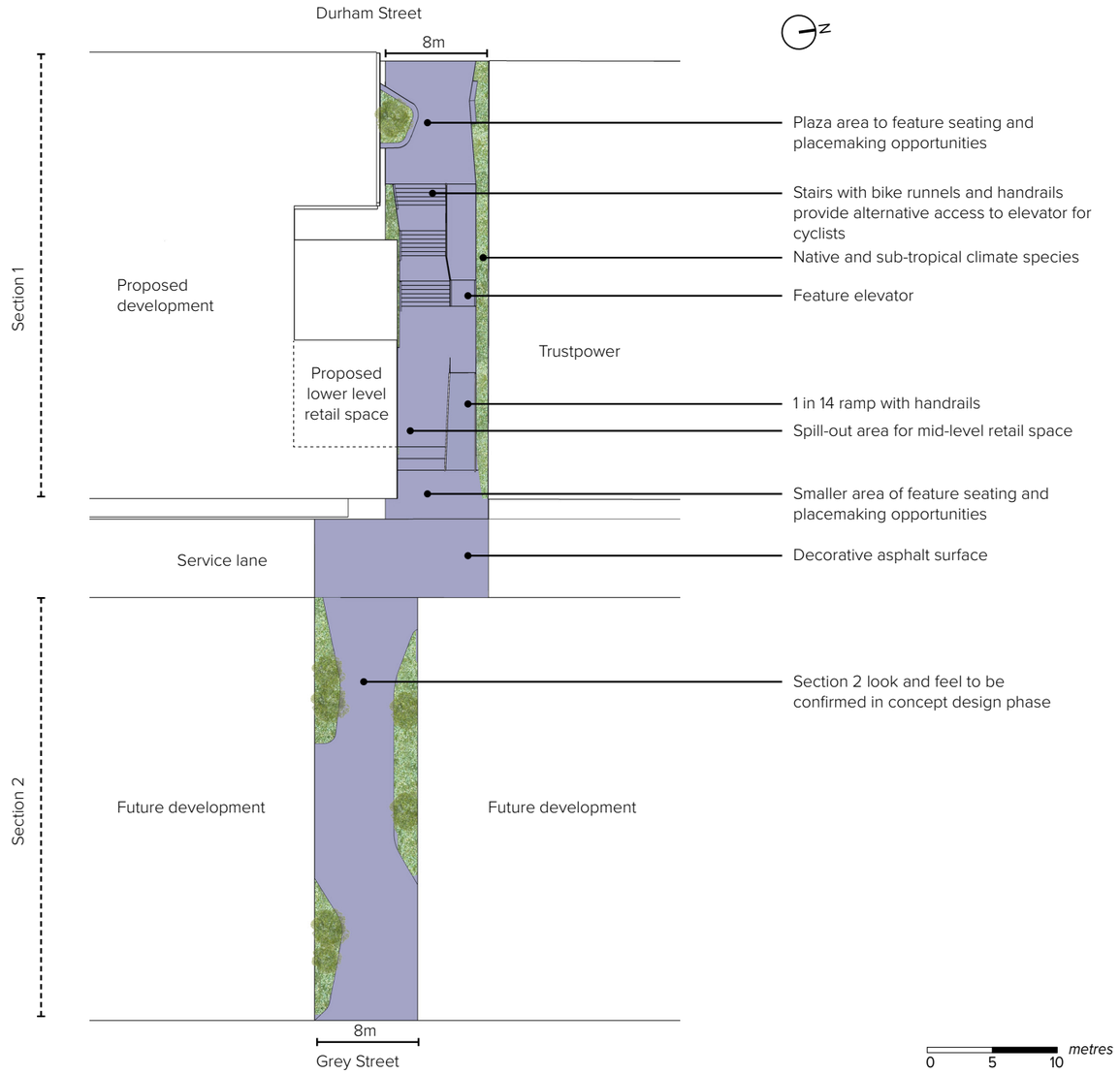

Figure 23 - Option 1 Concept Plan

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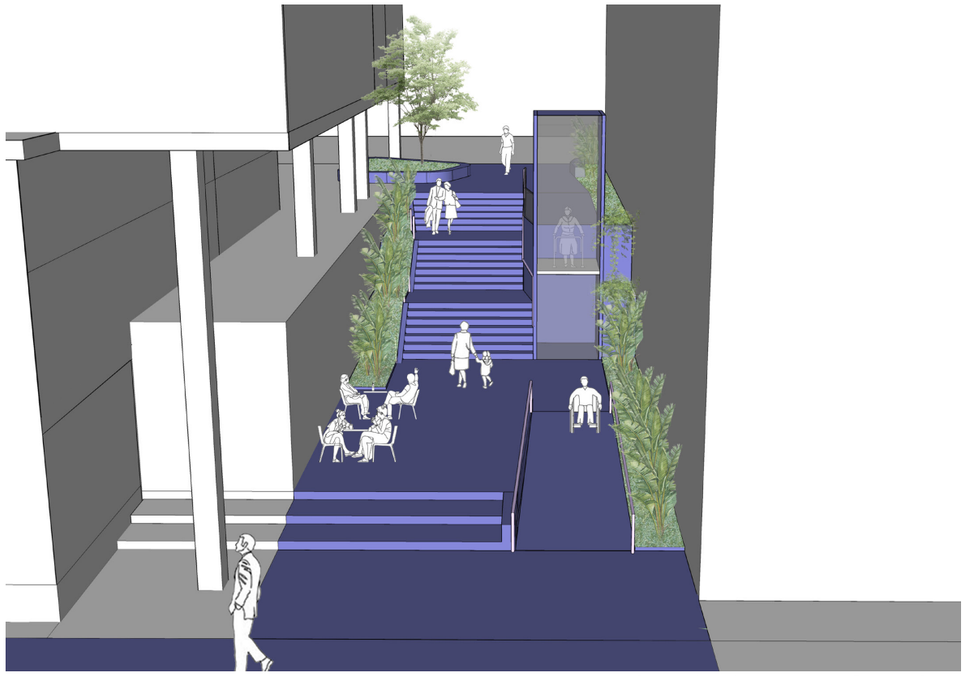
Option 1 render



Service lane looking west to Durham Street

Durham Street looking east to service lane

Option 1 section

Option 3b - 1 in 12 Ramp and Stairs

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Workshop 2 highlighted that the elevation change of the laneway and the existing east-west road connections may result in cyclists preferring to use the road network to access between Durham Street and Grey Street rather than the laneway. This resulted in the ramp option focusing on providing disabled access rather than catering for all active modes. A variation for Option 3b at 1 in 14 was discussed and explored. This option resulted in a preferred grade for accessibility requirements however the extra ramp length constrained the laneway space and provided little flexibility to provide placemaking/spill out spaces along the length of section 1. Due to this, the 1 in 12 option has been put forward.

Features

- 8.0m laneway width (building to accommodate extra 1.0m)
- This option provides the minimum ramp requirements for accessibility under NZS 4121:2001. 1 in 12 grade, 1.8m wide ramps with 1.5-2.0m landings, 9.0m max ramp lengths. Handrail and balustrade design to be developed in concept phase
- Compared to other options, Option 3b responds to the proposed development layout however is more constrained. In comparison to Option 3b 1 in 14, access is retained to the proposed lower level retail space, however the spill out area from the retail space will be constrained due the width required for the ramps. If the proposed mid-level retail area didn't occur, a 1 in 14 ramp could be implemented however a 1 in 12 ramp would provide greater flexibility to the layout of section 1 than 1 in 14
- Due to the position of the stairs, these may conflict with the proposed lower level shower space at the rear of the building (see Pre-Concept Study, Evatt and Martin)
- A medium proportion of planting areas are provided along the edge of Trustpower building and ramp
- A medium proportion of building and laneway interface (based on current proposed building design)
- This option has been estimated to have the medium cost compared to Option 1 and Option 4 (refer Durham St to Grey St Laneway Optioneering Cost Estimate Report, Dec 2022)

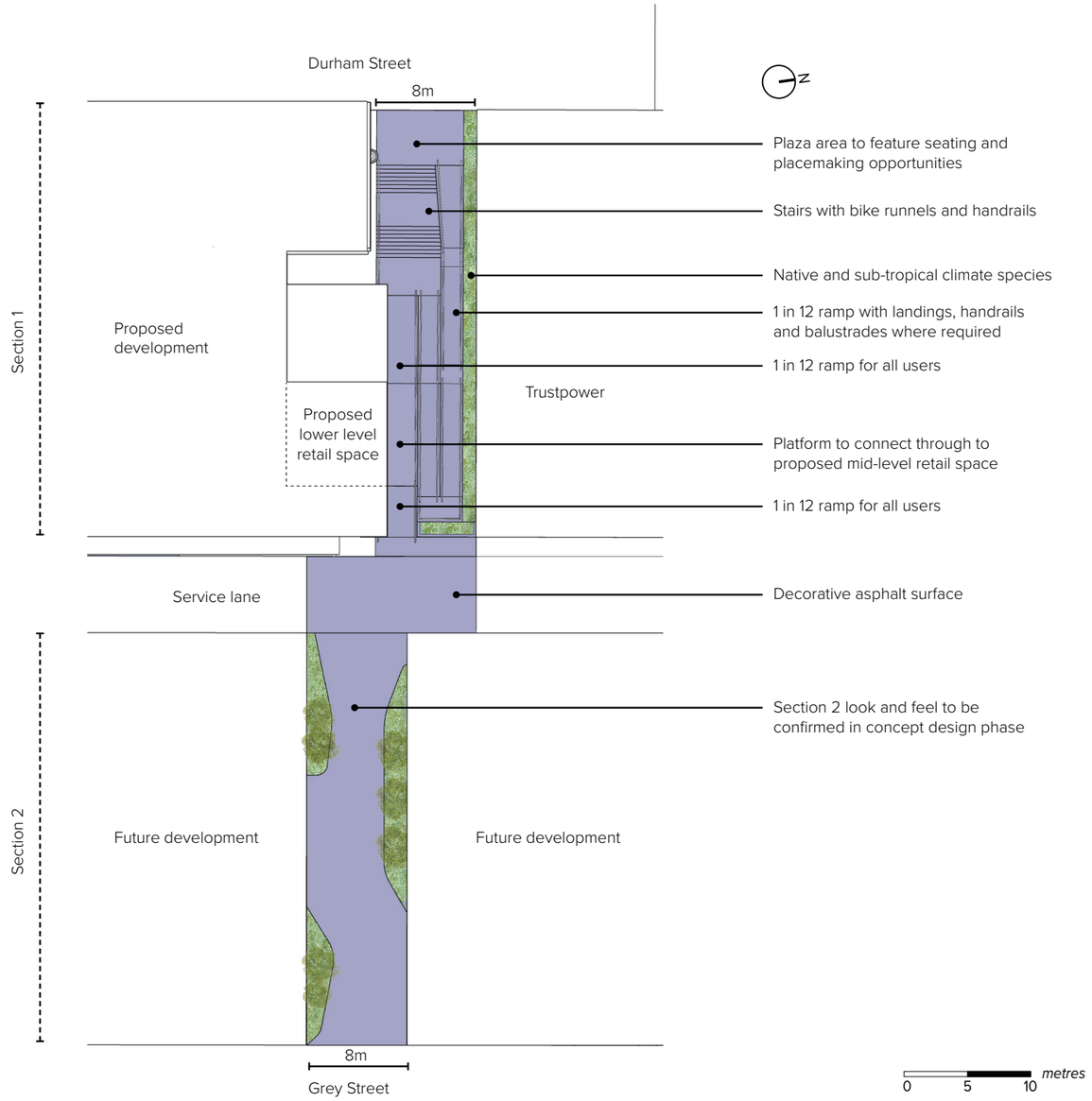

Figure 24 - Option 3b Concept Plan

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Option 3b render

Service lane looking west to Durham Street

Durham Street looking east to service lane

Option 3b section

Option 4 - Stairs only

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During workshop 1 and 2, it was discussed that a stair only option would be provided. This option utilises the stairs to create spaces along section 1, providing a comfortable step tread / rise between the two levels.

Features

- 7.0m laneway width (retain proposed laneway width (Pre-concept study, 134-142 Durham St, January 2022))
- Option 4 works best with the proposed development layout. Access and spill out space is provided to the lower level retail space and the stairs have flexibility to move east-west to best respond with the building
- Option does not meet accessibility requirements as it is a stair only option. Handrail and balustrade design to be developed in concept phase
- The stair option provides greater flexibility and larger areas of space for placemaking opportunities compared to Option 3b
- A high proportion of planting areas are provided compared to Option 3b. Planting widths vary and run along Trustpower and proposed building facades aswell as at service lane and Durham St entrances. Existing trees could be retained for this option however are not shown in this option
- A high proportion of building and laneway interface (based on current building design) is provided in this option
- This option has been estimated to have the lowest cost compared to Option 1 and Option 3b (refer Durham St to Grey St Laneway Optioneering Cost Estimate Report, Dec 2022)

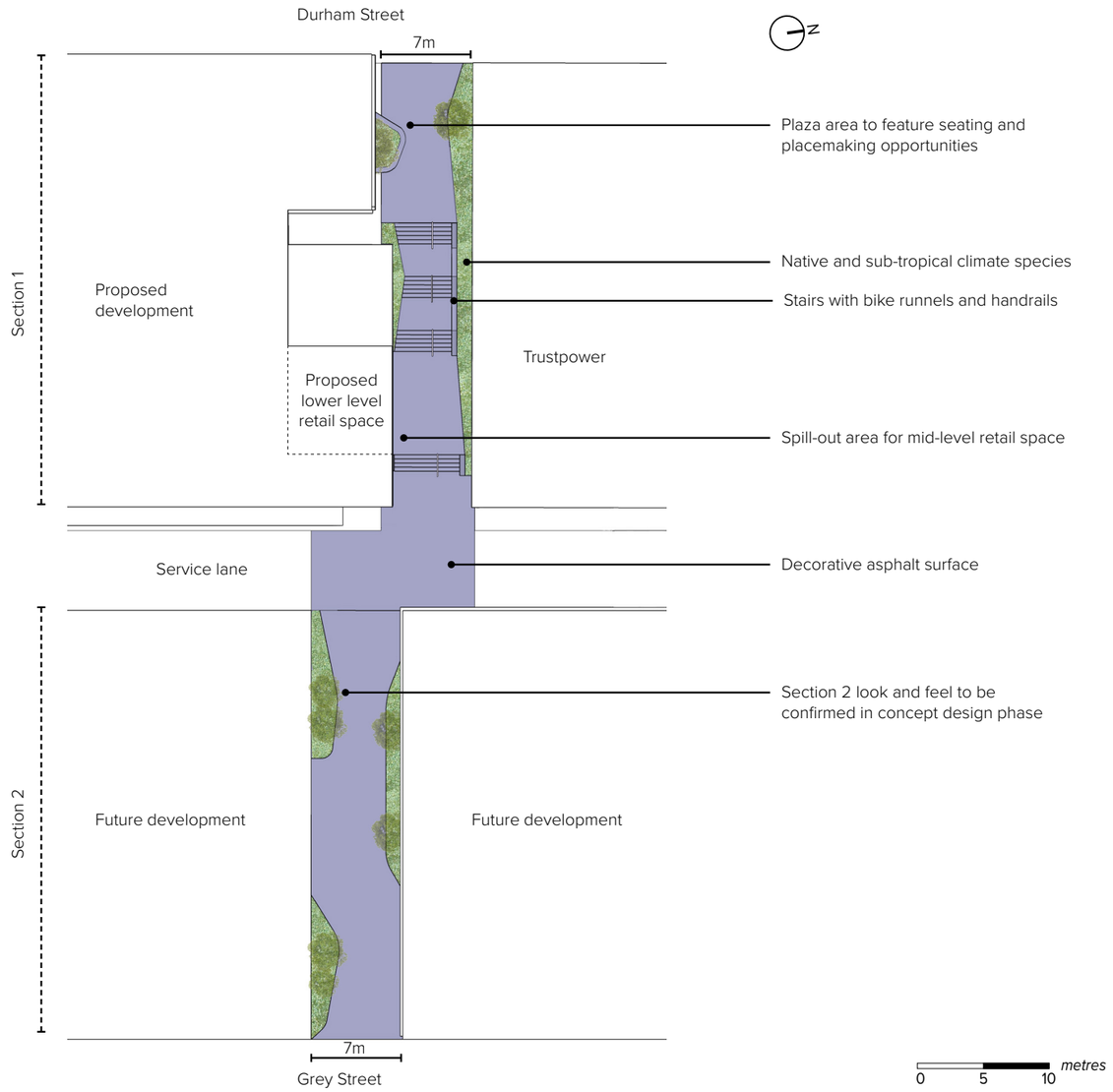

Figure 25 - Option 4 Concept Plan

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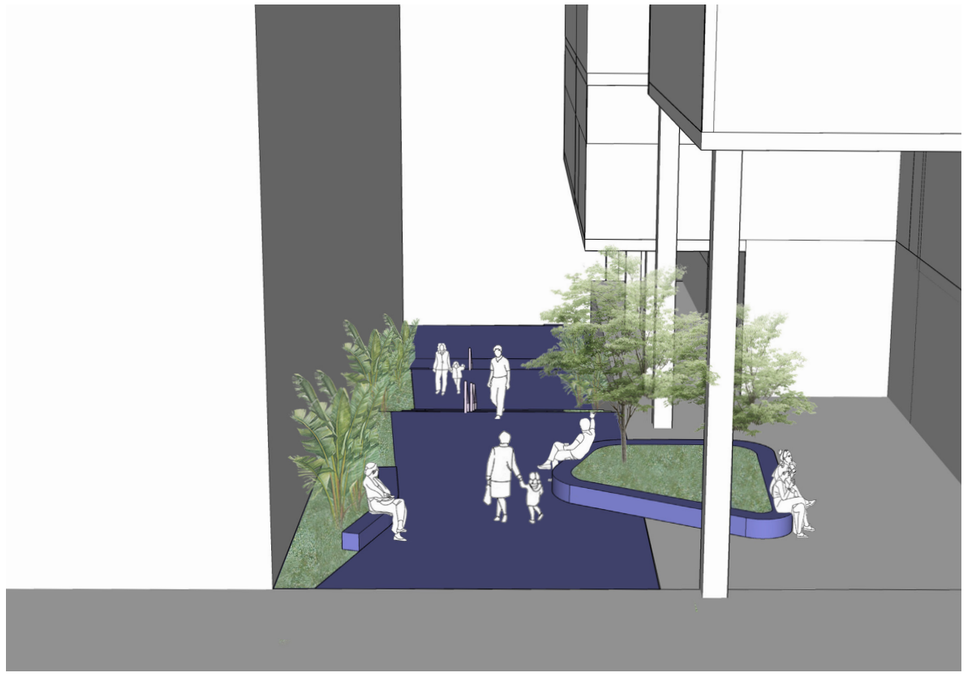
Option 4 render

Service lane looking west to Durham Street



Durham Street looking east to service lane

Option 4 section

Optioneering summary

The summary below provides a ‘high’ to ‘low’ comparison of the key moves of each option;

Features	Option 1 - Elevator and stairs	Option 3b - Ramp and stairs	Option 4 - Stairs only
Achieves minimum requirements for accessibility	High	High	Low
Design provides flexibility to respond to adjacent land use / building design changes	High	Medium	High
Proportion of building and laneway interface through design (based on current building design)	High	Medium	High
Proportion of meaningful planting outcomes	High	Low	High
Spaces for activation and place will be provided at either end of the laneway, interfacing with the proposed development, Durham Street and Grey Street	High	Low	High
Cost (based on Durham St to Grey St Laneway Optioneering, Dec 2022)	Highest cost	High-medium cost	Lowest cost

Next steps

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Following this optioneering report, TCC will review and confirm one option to be taken forward into the concept design early 2023. The concept plan, following workshop 3, will continue to develop the design of the preferred option of section 1 and 2 of the laneway and incorporate look and feel elements alongside the confirmed outcomes from the TCC PRDG.

After all stakeholders have agreed the preferred option and following the delivery of the concept report, a land requirement plan will be produced.

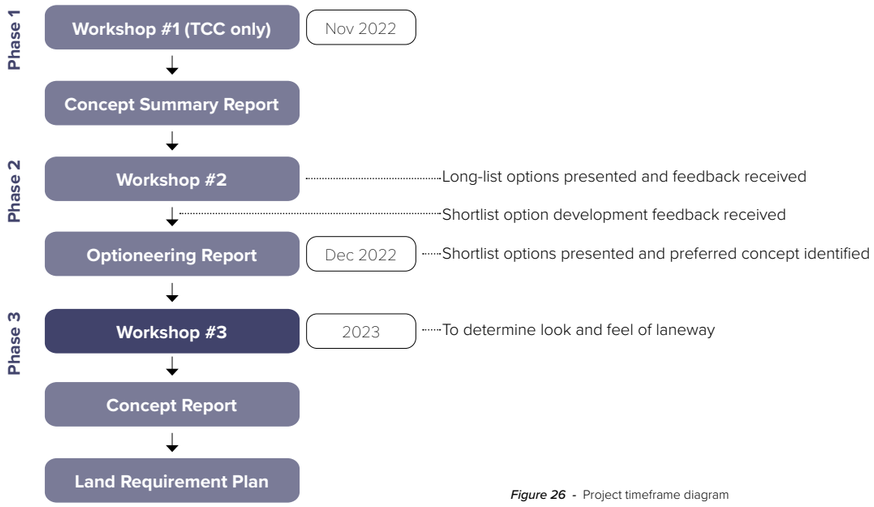

Figure 26 - Project timeframe diagram

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CPTED and Accessibility Assessment

Appendix A

CPTED and Accessibility Assessment

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1.1 Purpose and Scope

A Crime Prevention through Environmental Design (CPTED) and Accessibility Assessment has been requested by Tauranga City Council to inform the concept design of the proposed Durham Street to Grey Street laneway at 132 Durham St. The assessment provides a high level analysis of the current environment, issues related to accessibility and personal safety, and presents a range of best-practice recommendations to consider in order to achieve a more accessible and safe environment.

The assessment covers the extents of the laneway project between Durham Street and Grey Street, via an existing unused accessway, service lane and building (future connection).

1.2 Site description

The laneway will be located between Durham Street and Grey Street within Tauranga's central business district (CBD). Grey Street is a commercial and retail street running north to south featuring a footpath, angled parking and mature trees. Durham Street has been identified as a strategic public transport connection and has recently undergone a streetscape upgrade that coincided with the construction of the Waikato University campus also located along the street. The streetscape upgrade provided improved surfaces, public amenity (seats, bike parking), planting (rain gardens), lighting, and road narrowing to improve pedestrian accessibility.

Running parallel between the two streets is a 5m wide service lane that varies in width (5m+) along its length by building setbacks. The service lane presents a back of house environment, with carparking, rubbish bins and other services and is generally dark at night with limited lighting.

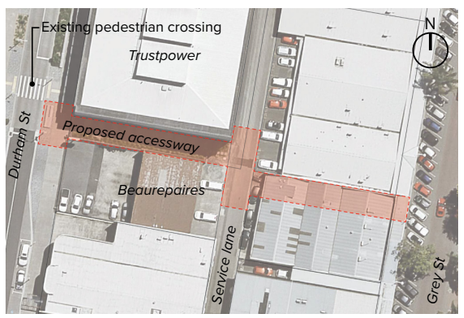

Figure 27 - CPTED and Accessibility Assessment context and scope

A proposed accessway between the Trustpower and the Beaurepaires buildings connects the service lane with Durham Street, however this is currently planted and fenced with no public thoroughfare.

There is a large (4.1m) elevation change over 37m between Durham Street and the service lane which presents a key accessibility issue.

1.3 Methodology

A site investigation was undertaken on Thursday 27th October between 9am and 10am and Thursday 3rd November at 8pm using the National Guidelines for CPTED. This involved viewing the proposed laneway from Durham Street and Grey Street and walking the length of the service lane, then driving the service lane at night. Photographs were taken on the walk-over to support the findings summarised in this report. Areas of concern have been noted with mitigation and possible interventions identified for each safety issue within the 'recommendations' section.

Limitations of this assessment include;

- the time and date of the assessment (during spring on a Thursday morning between the hours of 9-10am and Thursday night between 8-8.30pm)

1.4 Crime Prevention Through Environmental Design

The CPTED assessment has been appraised against the National Guidelines for Crime Prevention through Environmental Design produced by the Ministry of Justice. These national guidelines define the seven qualities that characterise well designed and safer places. These have been incorporated into the analysis and recommendations section of this assessment. The seven qualities include;

Access: Safe movement and connections.

Places with well-defined routes, spaces and entrances that provide for convenient and safe movement without compromising security.

Surveillance and sight lines: See and be seen.

Places where all publicly accessible spaces are overlooked, and clear sightlines and good lighting provide maximum visibility.

Layout: Clear and logical orientation.

Places laid out to discourage crime, enhance perception of safety and help orientation and way-finding.

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.

Sense of ownership: Showing a place is cared for.

Places that promote a sense of ownership, respect, territorial responsibility and community.

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.

Physical protection: Using active security measures.

If required, places that include necessary, well designed security features and elements.

1.5 Universal Design

Universal design refers to the provision of good access for all members of the community, including those with disabilities. Importantly, universal design is premised on the fact that good access for everyone should be standard. As well as promoting safe and accessible environments for all members of the community, it recognises that people with disabilities have a significant contribution to make to the economic and social activities within our society. Taking into account that almost one quarter of all people have a disability of some type, the provision of universal access is a key contributor to community wellbeing.

The need for accessibility affects most of the population at some stage in their lives. Design for accessibility should consider people with temporary as well as permanent disabilities who use mobility aids for walking, as well as people with hidden disabilities such as those with:

- Poor balance and/or co-ordination
- Reduced stamina and limited strength
- Difficulties in reaching and/or impaired hand function
- Vision, hearing and brain based conditions (strokes, cognitive impairment/ mental health issues.

For example, older people can experience several of the above, together with loss of confidence. Their increased need to use public transport means that issues of accessibility can be particularly important in this respect. An environment that meets the needs of mobility-impaired people is also user-friendly for parents with prams or pushchairs and deliveries using trolleys. Signage that meets the needs of vision or intellectually impaired people can be beneficial for people who don't speak English as a first language.

As outlined on the Barrier Free New Zealand Trust website, three practical design principles relate to the concept of the Accessible Journey:

a. Approachability – the design of the exterior environment of a building and/or public space, including car parking, works to ensure that people with disabilities can get to a building and or space;

b. Accessibility – the design ensures that people with disabilities can enter and move about freely within a building and/or public space without having to call for assistance; and

c. Usability – the public spaces, buildings and facilities are, in fact, usable by all people with disabilities. This premise of providing an accessible environment in line with the above principles for all members of the community provides the basis for this accessibility assessment.

The following documents also provide assistance in understanding principles and standards for designing universal access, and have been considered as part of this assessment:

- New Zealand Standard 4121:2001, Design for Access and Mobility
- New Zealand Transport Agency's RTS14, Guidelines for facilities for blind and vision impaired pedestrians
- Tauranga City Infrastructure Development Code, 2021

These documents should be used as guiding documents through the laneway design process to assist in facilitating universal access for the laneway.

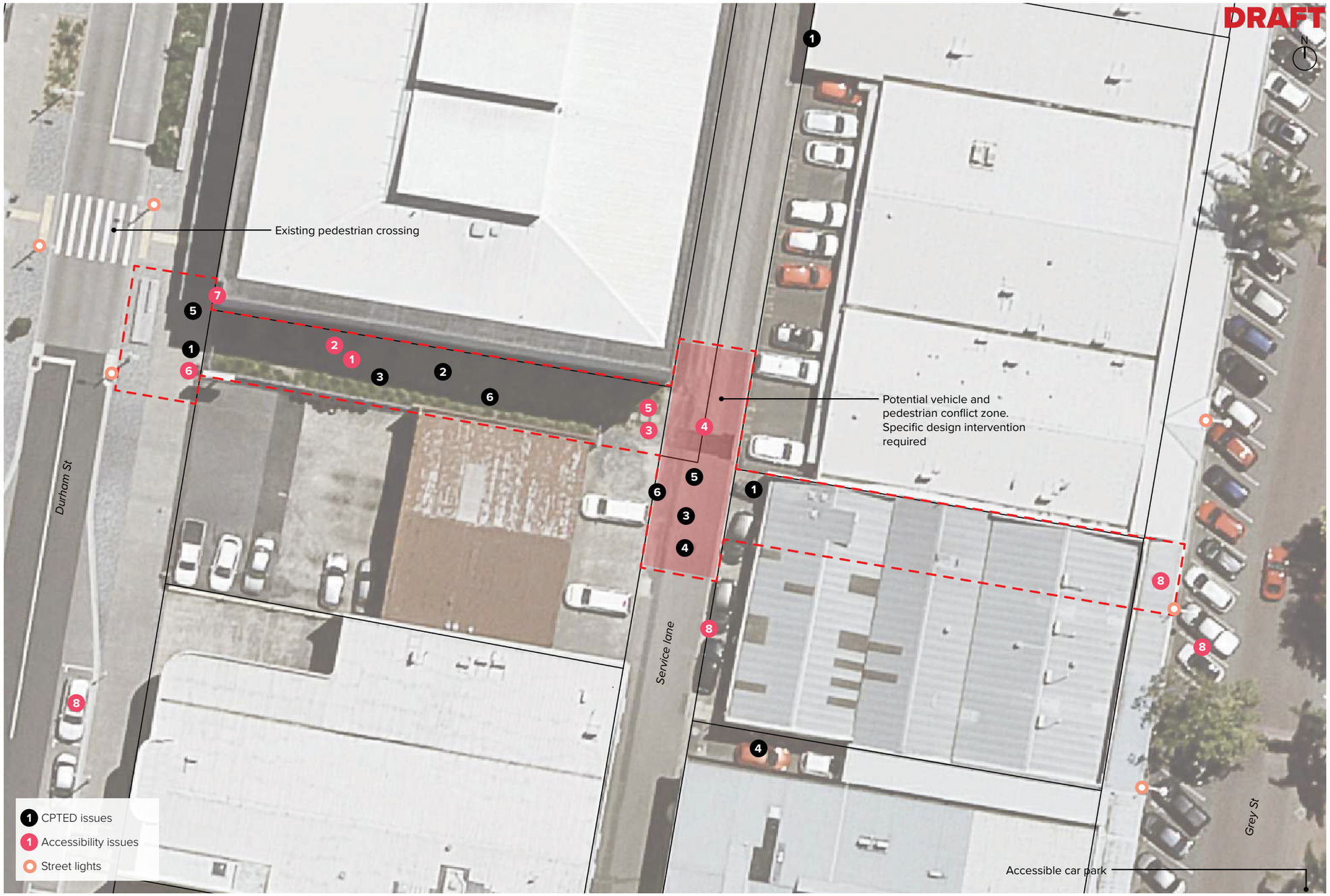

Figure 28 - CPTED and Accessibility Assessment issues map

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2 CPTED Assessment

2.1 Existing crime environment

No baseline analysis or reference has been provided by TCC on the level of crime around the site. For the purpose of this assessment, a general overview of crime within the Cameron Road to Devonport Road meshblock area has been concluded from NZ Police crime maps and statistics (www.policedata.govt.nz) with data from 31 August 2021 to 31 August 2022. This showed 74 victimisations within the Tauranga Central area unit. 51 of these crimes had time and day associated, these peaked on Fridays with occurrence elevated between 11am and 4pm. During the walkover there were minimal security cameras visible.

Figure 29 - Meshblock area sourced from NZ Police crime maps

2.2 Existing CPTED context

The existing context for CPTED principles and issues were identified on site during the site walk-over and have been categorised into the following categories;

- Lighting and wayfinding
- Vegetation
- Vandalism
- Street corridor (pedestrian crossings and footpaths)
- Built form (frontage, fencing/barriers and obstacles)

Lighting and wayfinding

New light poles with LED luminaries over the footpath and street are located along the length of Durham St. A light pole is located at the future entrance of the laneway. Adjacent is a pedestrian crossing that is also well luminated. The Trustpower building canopy doesn't contain any downlighting, however at the time of the assessment the windows were all lit including the fire escape from the building. The University of Waikato windows were lit however the Beaurepaires building didn't contain any lighting.

There are no stand-alone light poles along the service lane and minimal lighting directed from building security lights. Security lights were noted however appeared to not be working at the time of the assessment. There are no lights currently illuminating the fenced accessway or the area around the entrance from the service lane.

Lighting along Grey Street consists of canopy downlights, security lighting from buildings and street pole lighting. As a popular pedestrian street with Tauranga's CBD this area is well lit at night however there are some canopy lighting not working. This includes the area of the proposed laneway entrance.

In all areas no wayfinding signage directing pedestrians to key destinations was noted.

Vegetation

Vegetation was limited across all areas of the site. Durham Street features vegetated rain gardens, however, these end before the proposed laneway entrance. This planting is low and does not present any CPTED issues.

The fenced accessway is vegetated with lomandra species (under 1m) and young deciduous exotic tree species. Due to the current height of the trees, with a full canopy these may present hiding opportunities if retained however, at the time of the assessment the tree's had no leaves. Along Grey Street there is minimal vegetation other than mature palm and frangipani trees, that do not pose any CPTED risk. There is no vegetation along the service lane aside from some lomandra's at the entrance to the fenced accessway.

Vandalism

In all areas there was evidence of minor vandalism, mainly graffiti. These appeared to be isolated cases with graffiti predominantly occurring on service boxes and some blank walls. Aside from graffiti, there was no other vandalism noted to buildings and street furniture at the time of this assessment.

Street corridor (pedestrian crossings and footpaths)

The footpath along Durham and Grey Street is accessible and flat with generous widths (2.5m+) making for a comfortable walking environment. On Durham Street, a pedestrian crossing is located directly across from the future laneway entrance connecting to the University of Waikato. On Grey Street there are two pedestrian crossings either side of the future laneway entrance. The service area is predominantly for vehicles with pedestrians moving between carparks and buildings. There are four vehicle entry and exit points, one to the north and three to the southern end.

There were no obstacles such as large signs or phone boxes identified along footpaths which could present concealment issues.

Built form (frontages, fencing/barriers and obstacles)

The landuse around the future laneway varies and includes commercial, retail and education. Many of these landuses only operate during daylight hours and have limited activity at night. The two storey office buildings along Durham Street have minimal active frontages, however, offer passive surveillance from office windows on to the street during the day. The University of Waikato and Trustpower building collectively create activation in the area with a number of students and workers using the street to access these. Within the fenced accessway, a blank facade runs along the northern boundary with the southern boundary consisting of the Beaurepaires building (refer Figure 32) and car yard that is busy during the day.

There is minimal passive surveillance from neighbouring buildings along the service lane due to the area being treated as back of house. The service lane is utilised by commuters for carparking therefore limited pedestrian activation during work hours.

Grey Street predominantly consists of active frontages with passive surveillance offered to the street during the day. This passive surveillance is limited at night due to the types of land use (mostly retail).

2.3 Opportunities and Recommendations

The addition of a public laneway connection between Durham and Grey Street will bring further activation and surveillance through pedestrian movement. This assessment has considered the existing environment however any new building developments in the area will provide opportunities to further mitigate any CPTED issues. Design considerations for the proposed laneway design should include;

- Lighting - incorporate lighting to support passive surveillance along the laneway by lighting pedestrian routes and spaces
- Wayfinding - to enhance legibility of the laneway connection and provide directions to key destinations in the area
- Passive surveillance - support pedestrian use and activation of the laneway during day and night
- Facade design - provision of artwork or vegetation along large areas of blank walls to deter vandalism

CPTED considerations and mitigation recommendations have been detailed in the table on pages 19.

Figure 30 - Entrance to accessway from service lane

Figure 31 - Entrance to laneway from Durham Street

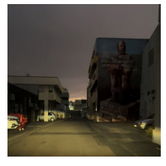
No.	Location	Issue		Mitigation	Responsible
CPTED					DRAFT
1	Durham Street, Service Lane	**Graffiti** The presence of graffiti can make an area feel uncared for and reduces the sense of perceived safety. Evidence of graffiti was found on pillar boxes, signs and blank walls.		Reduce opportunities for graffiti and vandalism by; • using robust and resistant materials and minimise blank facades • all future signs, artwork, structures and furniture should have a graffiti guard applied for easy removal of graffiti • increased passive surveillance and lighting can deter graffiti	Landowner
2	Accessway	**Vegetation** Vegetation can create sightline issues, shield lighting and provide areas of concealment		• Use low permeable vegetation • Consider trees that have narrow trunks and canopy foliage above eye level • Consider limbing trees to create foliage canopy above eye level	Landowner
3	Accessway, Service Lane	**Lack of passive surveillance** The accessway and service lane currently lack passive surveillance from adjacent buildings and low number of pedestrians using the space		The design of the laneway should maximise the number of people using the space to encourage good passive surveillance; • Facilitate passive surveillance from adjacent land uses by orientating buildings and windows to appropriately overlook the laneway • Encourage a mix of complementary land uses to extend the hours of surveillance and encourage active frontages along edges of laneway to increase passive surveillance at pedestrian level	Landowner
4	Service lane	**Potential entrapment spaces** The service lane is 178m long with minimal entry and exit points and alcoves which are created between buildings		The proposed laneway connection through the centre of the service lane will break up the block and create additional entry/exit points • Consider appropriate lighting together with the layout of the laneway to enhance sightlines throughout the space to avoid entrapment spots	TCC
5	All	**Lack of wayfinding** Wayfinding is important to aid orientation and connections that support safe and legible pedestrian and cyclist movement		Provision of wayfinding signage will enhance legibility of the laneway connection and provide directions to key destinations in the area and possible routes. Consider using unique local elements or colours to aid wayfinding	TCC
6	Accessway, Service Lane	**Lack of lighting** Lighting increases surveillance, perception of safety and can deter crime		Incorporate lighting to support passive surveillance and clear sightlines along the laneway by lighting pedestrian routes and spaces; • Provide lighting at an appropriate scale for pedestrians and at a range of heights for multiple surveillance points (interior and exterior) • Fix broken downlighting and security lighting to provide lighting consistency • Use lighting to enhance visibility at both ends of the laneway • Focus lighting on areas that are intended for night time uses • Ensure alcoves, recessed areas and entrances/exits are well lit • Avoiding glare from up-lights where possible • Feature lighting can also improve the attractiveness of the area.	Landowner

Figure 32 - CPTED Assessment table

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3 Accessibility Assessment

This section provides a high level outline of the 'accessibility' matters that require addressing to achieve good universal access for the laneway. The accessibility assessment covers issues under the following key themes;

- Accessible zone
- Injury prevention through environmental design (IPTED)
- Material selection
- Parking

A key objective of the proposed laneway development is to create an accessible route for users of all ages and abilities. There is a 4.1m change in topography between Durham Street and the service lane which will require a specific design response. This response may include ramps (1 in 12 minimum grade requirement), stairs or an elevator. This assessment is aimed at identifying the key universal accessibility considerations and high level design outcomes that should be integrated into the future design of the laneway. It does not seek to provide a detailed solution, which will be addressed as the projects moves through the design phases.

Durham St

There are few accessibility issues around the existing entrance of the laneway on Durham Street due the recent streetscape upgrade that provided suitable universal design outcomes and a pedestrian oriented street. The adjacent footpath by the proposed laneway entrance is wide and flush with accessible seating and a pedestrian crossing adjacent.

A service box is located along the edge of the footpath in the corner of the proposed laneway entrance.

Parking along Durham Street is generally limited due to the public transport and pedestrian orientated nature of the street, however there appears to be no designated accessible parking spaces.

Existing accessway

The existing accessway is fenced and does not provide a thoroughfare for the public. Access into the fenced area is provided through a secure gate off the service lane. The primary accessibility issue through this area is the existing level change of 4m+ between the top of the accessway (Durham Street) and the bottom (service lane). Given the accessibility requirements that the laneway design will need to meet, the grade and design of ramps and steps will need careful consideration to make sure these meet universal design standards. This also includes the use of handrails, tactiles and other accessibility elements.

Service lane

The service lane is predominantly a vehicle space and lacks appropriate amenity for pedestrians to feel safe. In the future it will provide an important pedestrian link between the two main laneway areas while also having to retain its movement function for vehicles along the corridor. Through the concept design phase this will need to be carefully considered so both accessibility and vehicle requirements can be met. This includes surfacing and grade (cross fall).

Currently the surfacing of the service lane is a mixture of asphalt, patched seal and gravel an is uneven in places, making for an uncomfortable surface for a mobility or visually impaired person to navigate. The service lane is not considered an accessible pedestrian route however consideration could be given to improving surfacing in future projects.

Private parking for businesses is provided along the service lane. This appears orderly however there is no defined parking.

Grey St

There are few accessibility issues around the entrance of the laneway on Grey St. The footpath is flush and wide, with street elements such as signs and light poles situated off the movement zone.

The surface types include clay brick pavers and a service lid. Consideration should be given to the comfort of these for mobility impaired pedestrians and the slip resistance once the entrance to the laneway is formed especially if open to the weather, with no overhead cover.

Pedestrian movements when exiting the laneway onto Grey Street should be considered, including the use of wayfinding to other key destinations and future laneway connections. As Grey Street is a popular pedestrian route, clear sightlines when exiting the laneway onto Grey Street should be considered especially with an increase in use of active modes such as e-scooters.

There is one accessible carpark across the street from the laneway entrance and two pedestrian crossings either side which will provide access over the road to connect to future laneways and the waterfront.

3.1 Opportunities and Recommendations

The proposed laneway design provides an opportunity to enhance accessibility throughout Tauranga's CBD. This is especially important given the role the laneway will play in connecting pedestrians to key destinations such as public transport hubs, University of Waikato and civic areas.

Key design considerations include;

- 1 in 12 (minimum grade) or 1 in 14 ramps (preferred grade) to Pedestrian Planning and Design Guide (NZTA) and NZS 4121:2001
- Handrails, tactiles and other accessibility elements to be included to NZS 4121:2001
- Surfacing of laneway and crossfalls to NZS 4121:2001
- Sightlines at entrances and exits
- Visual cues such as wayfinding and signage
- Rationalise amount of service lids and boxes in the laneway especially in pedestrian thoroughfare zones

Other accessibility considerations and mitigation recommendations have been detailed in the table on pages 21.

4 Next Steps

Following this assessment the recommended mitigations identified for each issue in the table should be considered and incorporated into the laneway concept design and any future design iterations where possible.

Figure 33 - Elevation change of accessway looking towards Durham Street

Figure 34 - Uneven level and surface types in service lane

Figure 35 - Pedestrian crossing adjacent to future laneway entrance

No.	Location	Issue		Mitigation	Responsible
Accessibility					DRAFT
1	Accessway	**Grades** Surface grades need to meet universal design standards for all users. There is currently a level change of 4m+ along a 30m length of laneway		While 1 in 12 is recommended by the Pedestrian Planning and Design Guide (NZTA) as the maximum grade, a desirable grade of 1 in 14 is more accessible for wheelchair users. Maximum crossfall of 1% is recommended to prevent wheelchair users from rolling over the. This will need to be considered in the design of the laneway including the use of ramps, stairs and handrails to standards.	TCC
2	Accessway	**Accessible path of travel** The existing ground plane of the laneway presents a mulch and paver surface which does not meet accessibility standards		The through-route surfacing should be smooth and level, using textural differences only to delineate specific areas and to aid orientation. Consider large format paving or monolithic surfaces that are less prone to movement and provide a more consistent surface in the long term. Large pavers have a smaller number of joints and minimise potential tripping hazards. New pavements to be installed in alignment with NZS 4121:2001, Section 4 - Accessible Routes	TCC
3	Service lane	**Service lids** There is evidence of existing service lids within the laneway extent. Maintenance service lids can present slippery surfaces when wet and can be a slip hazard for users		Rationalise the amount and location of services within the 'through route' zone of the laneway as much as possible. Changes to ground levels should take into account maximum crossfalls and provide warning cues if appropriate. Drains or dish channel covers that are flush to the ground with smooth and narrow gaps are recommended. Recessed covers or using paver infills provide a clearer solution – reducing potential slip/trip hazards and improving amenity.	TCC
4	Service lane	**Service lane accessibility** A 'Through Route' is an area dedicated to pedestrian movement along the street. The service lane between Grey Street and Durham Street provides access for vehicles and parking. This area is not suited for pedestrians or mobility impaired users due to the existing vehicle priority and lack of dedicated footpath facilities		The service lane will play an important role in connecting the two laneways for pedestrians If there is a desire to enhance pedestrian connectivity along the service lane in general, a formalised pedestrian route or shared space should be considered for future development. It is recommended to provide signage or visual cues at the entrances to the service lane that this area is a shared space. NZS 4121:2001 Design for Access and Mobility requires tactile ground surface indicators (TGSI) to be used at vehicle crossings as an essential safety feature for pedestrians who are blind or visually impaired to provide clear visual contrast between the footpath and roadway and navigate the crossing.	TCC
5	Service lane	**Uneven surfaces create a tripping hazard** Step changes and uneven surfaces create a general tripping hazard and are obstacles to pedestrians and people with mobility and visual impairments.		The through route surfacing should be a smooth and level surface, using textural differences only to delineate specific areas and to aid orientation (e.g., shop fronts, dining/retail zone). Consider large format paving or monolithic surfaces that are less prone to movement and provide a more consistent surface in the long term. Larger pavers have a smaller number of joints and minimise potential tripping hazards. NZS 4121:2001 Design for Access and Mobility. A maximum crossfall of 1% is recommended to. There is an opportunity to replace the pavement section that links the two laneways to improve accessibility for wheelchair and visually impaired users to provide a safer route and remove any tripping hazards.	TCC
6	Durham St	**Footpath obstructions** The service boxes located at the entrance of the proposed laneway will create an obstruction to movement within the 'through route' zone.		A 'through route' zone should be provided along the footpath that contains an accessible and unobstructed path for pedestrian movement. Service boxes located in the road corridor should be relocated away from these areas	TCC
7	Durham and Grey St	**Sight lines** Grey Street and Durham Street feature larger numbers of pedestrians and with an increase in use of e-scooters, consider layout and hazards for pedestrians exiting the laneway into these movement zones.		Consider design of laneway entrances/exits to prevent creating blind corners. Provide visual cues to aid in slowing pedestrian and cyclist movements	TCC
8	All	**Parking capacity** There are limited accessible carparks around the laneway area aside from one along Grey St on the opposite side of the street		It is recommended that accessible carparking numbers are reviewed and provided in alignment with disability requirements. This is to minimise the distance of travel for people with mobility impairments who may be visiting the laneway or associated developments.	TCC

Figure 36 - Accessibility Assessment table

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Shadow study

Appendix B

Shadow studies

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Shadow study

The diagrams on the following pages provide a shadow study based on the proposed development (Pre-concept Study, Evatt Martin, January 2022) and existing Trustpower building only. No buildings have been modelled along Grey Street or Durham Street, and a building height of 10m has been provided to show indicative buildings along the length of section 2 of the laneway.

The shadow studies show that at an 8m width, the laneway during the summer equinox would be partially shaded from the Trustpower building to the north during the morning and early afternoon. The southern edge of Section 1 would not be shaded by either building. Section 2 is likely to be shaded by the proposed development during the afternoon in summer.

During the winter solstice, due to the low angle of the sun, both section 1 and 2 of the laneway will be shaded by both buildings.

At a 7m width, the laneway will be further partially shaded during the summer equinox by the Trustpower building than at an 8m width, however there are still areas along the southern edge of section 1 that will not be shaded by either building. During the winter solstice, similar to the 8m width, both section 1 and 2 of the laneway will be shaded by both buildings.

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Option 1 - Elevator and stairs (8m width)

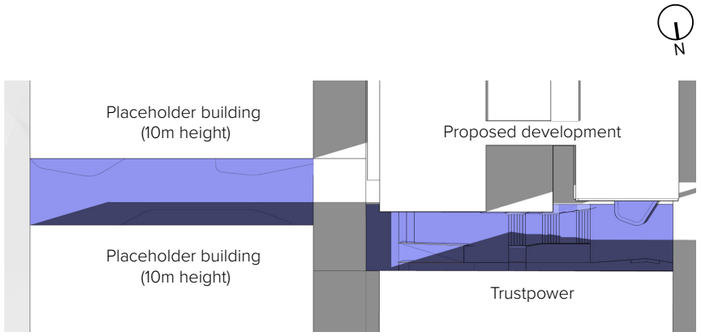

Figure 37 - December 22nd 9am

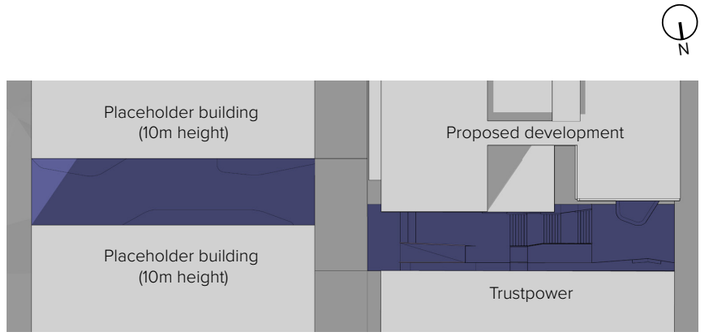

Figure 40 - June 22nd 9am

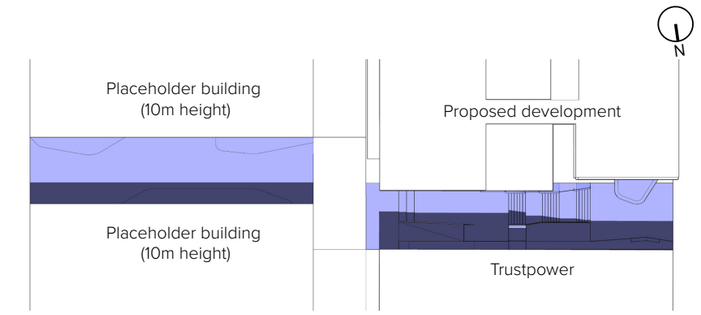

Figure 38 - December 22nd 12pm

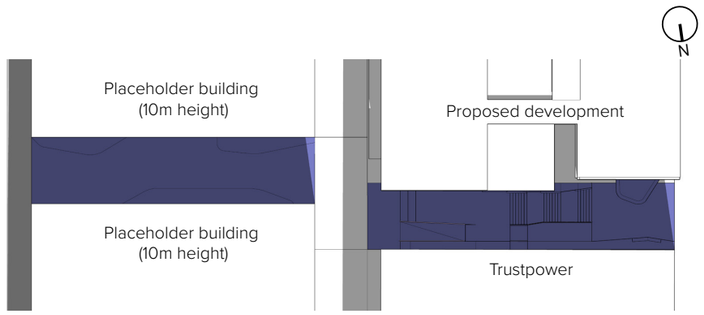

Figure 41 - June 22nd 12pm

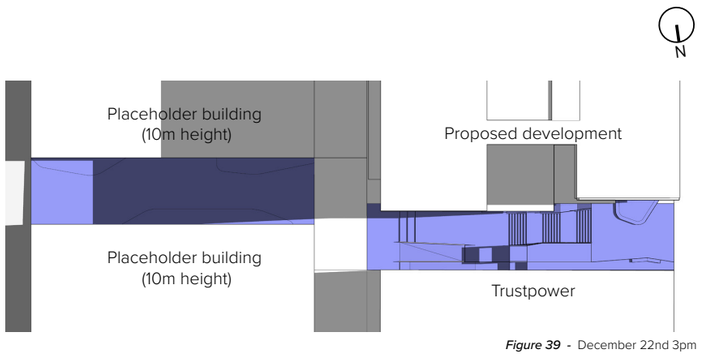

Figure 39 - December 22nd 3pm

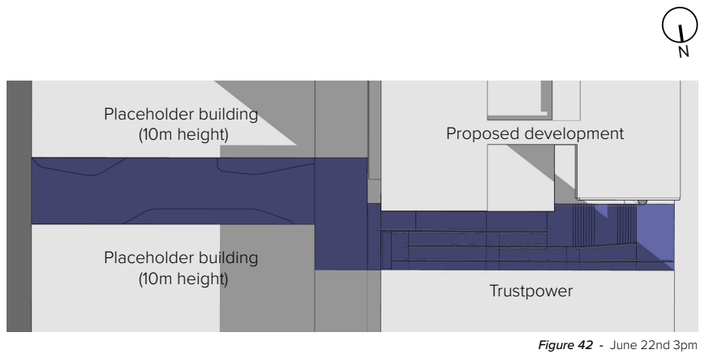

Figure 42 - June 22nd 3pm

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Option 3b - 1 in 12 ramp (8m width)

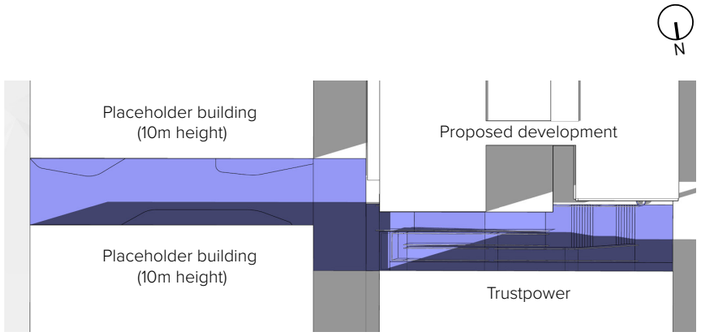

Figure 43 - December 22nd 9am

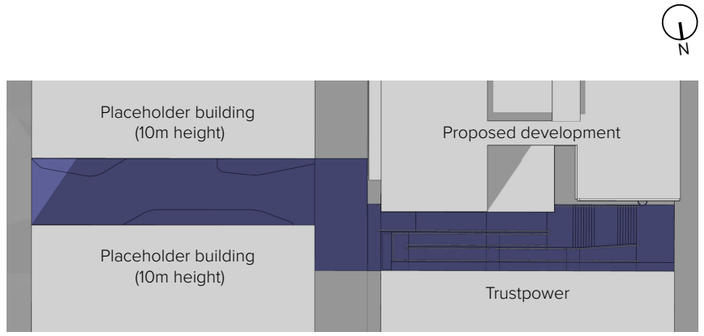

Figure 46 - June 22nd 9am

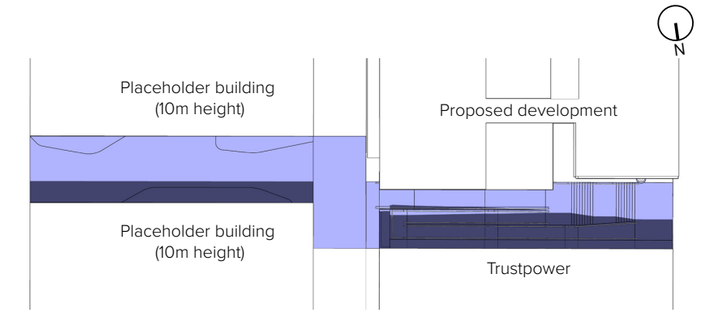

Figure 44 - December 22nd 12pm

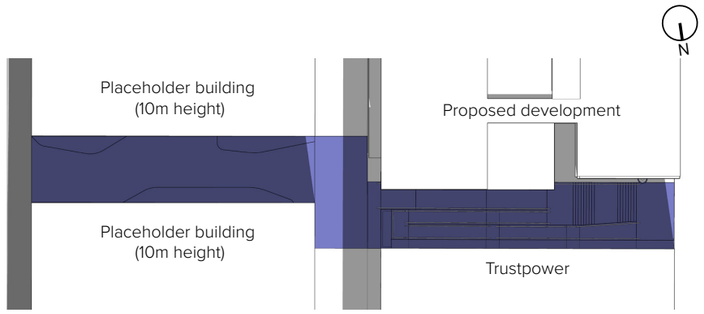

Figure 47 - June 22nd 12pm

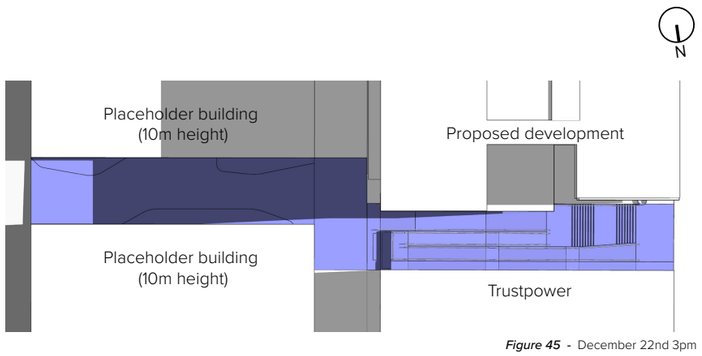

Figure 45 - December 22nd 3pm

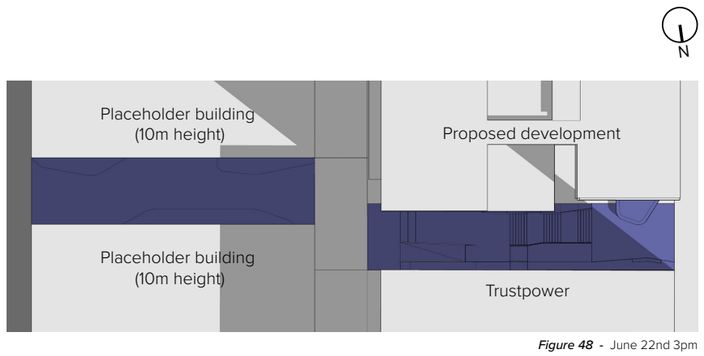

Figure 48 - June 22nd 3pm

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Option 4 - Stairs only (7m width)

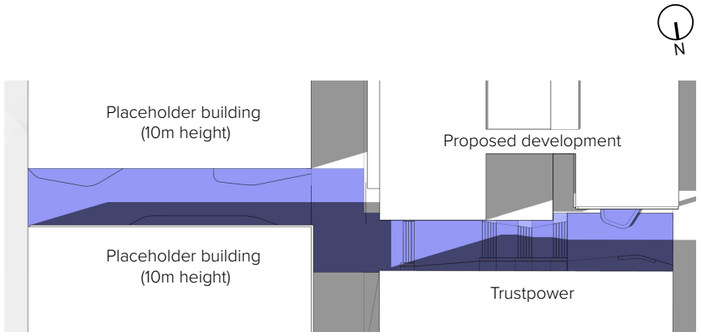

Figure 49 - December 22nd 9am

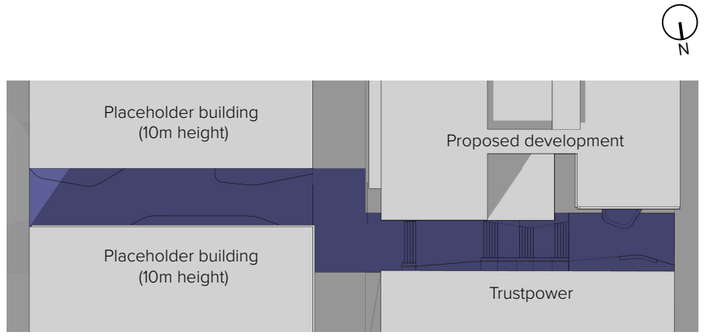

Figure 52 - June 22nd 9am

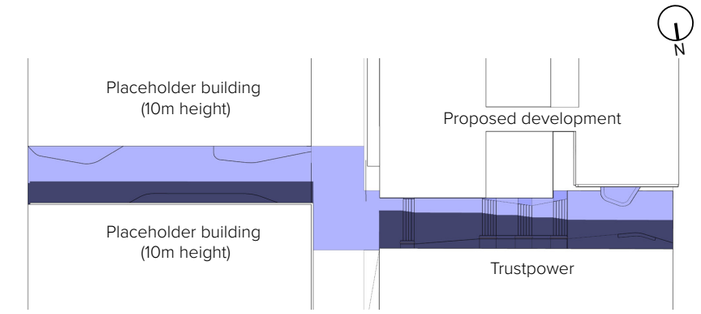

Figure 50 - December 22nd 12pm

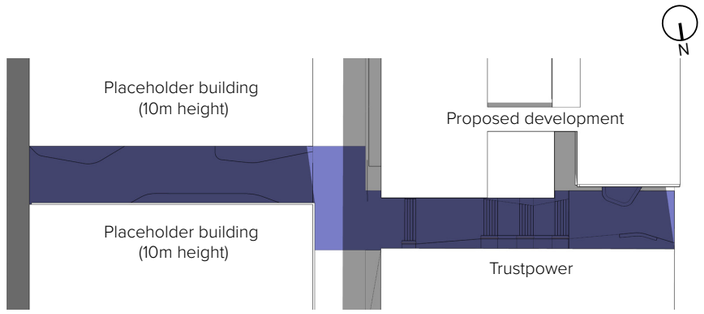

Figure 53 - June 22nd 12pm

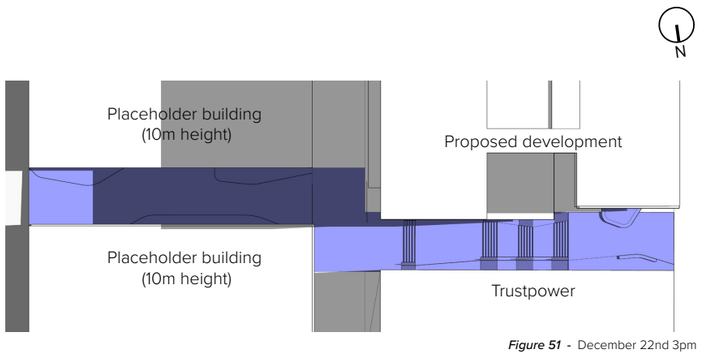

Figure 51 - December 22nd 3pm

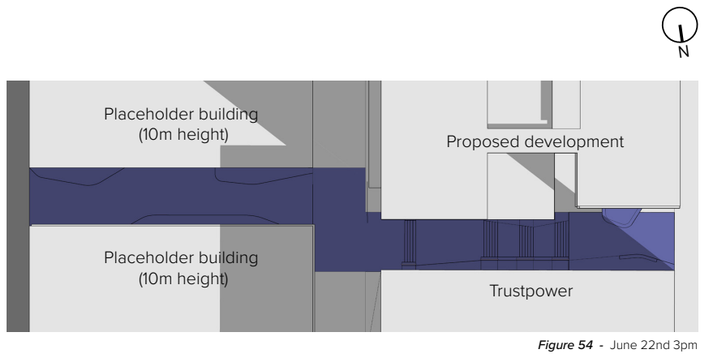

Figure 54 - June 22nd 3pm

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Optioneering Cost Summary

Appendix C

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make
everyday
better.

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Durham St to Grey St Laneway

Revised Optioneering

July 2023

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Revision History

Project Number: 4671520

Revision	Prepared By	Description	Date
B	Chris Judd / Logan Bunn	Draft For issue	22/07/23

Document Acceptance

Action	Name	Signed	Date
Prepared by	Chris Judd		21/07/23
Reviewed by	Annette Jones		21/07/23
Approved by	Tom Abbott		21/07/23

on behalf of Beca Ltd.

This document should be printed double sided at A3.

Images in this document: Unless otherwise noted, drawings, illustrations, photos and other images have been provided directly by Beca. In all other instances, best efforts have been made to reference the image to its original source.

Contents

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Figure 1 - Looking west towards Durham Street from the service lane

Figure 2 - Looking north along service lane to Trustpower building and entrance to laneway

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Part A

Concept Summary

Introduction

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As part of a wider plan to better link up Tauranga's City Centre, Tauranga City Council (TCC) are exploring a laneway connection between Durham Street and Grey Street. This connection will support pedestrian movement between proposed transport destinations and the Knowledge precinct to the waterfront via the Commercial and Retail precinct. TCC have purchased 79 Grey Street, and are considering the purchase of 134 Durham Street. The project will need to utilise an existing service lane to enable the connection between the two properties.

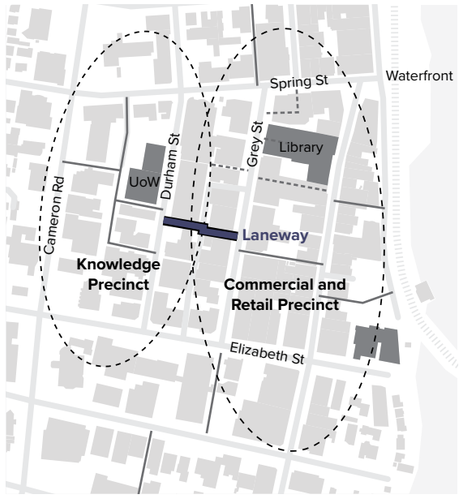

Figure 3 - Tauranga City Centre Precincts

The project

The proposed laneway development has three clear objectives;

1. to create an active east-west connection within the CBD to support connections to destinations such as the commercial and retail precinct, public transport and University of Waikato

2. to create an accessible route for pedestrian and active mode users of all ages and abilities

3. to support placemaking outcomes through attractive and inviting spaces that are adaptable and create positive landuse interfaces

For the purposes of the 2022 optioneering process, the design of the laneway options considered the proposed development at 134-142 Durham St (Pre-concept Study, Evatt Martin, January 2022).

Since the initial optioneering process was completed, the development of 134-142 is no longer going ahead and therefore the most recent options (Part B of this report) focus on the development of the entire 79 Grey Street site.

This updated optioneering report (Rev B) takes the preferred option (option 1) forward from the previous process as a low land take comparative option.

The laneway has been divided into two sections, the first running between Durham Street to the service lane, and the second from the service lane through to Grey Street. The latest optioneering study focuses on section 1 (Durham St) of the laneway until TCC provides direction on the approach for the Grey Street site.

Purpose

The first part of this report establishes the context, analysis, design drivers and assumptions leading into the optioneering and concept design phases. The second part of the optioneering study within this report (page 17) explores three new layouts for section 1 of the laneway (between Durham Street and the service lane), providing a high level concept cost comparison for each. One of these options will be selected by TCC and taken forward into concept design along with section 2.

These deliverables can then support a land requirement plan that will aid TCC in the potential purchase of any required land.

A kick-off workshop was held with the TCC design team to understand Council's drivers for the laneway prior to the delivery of the Summary report. Following this, a long list of options were circulated and presented at workshop 2 with the TCC design team, developer and Evatt Martin Architects.

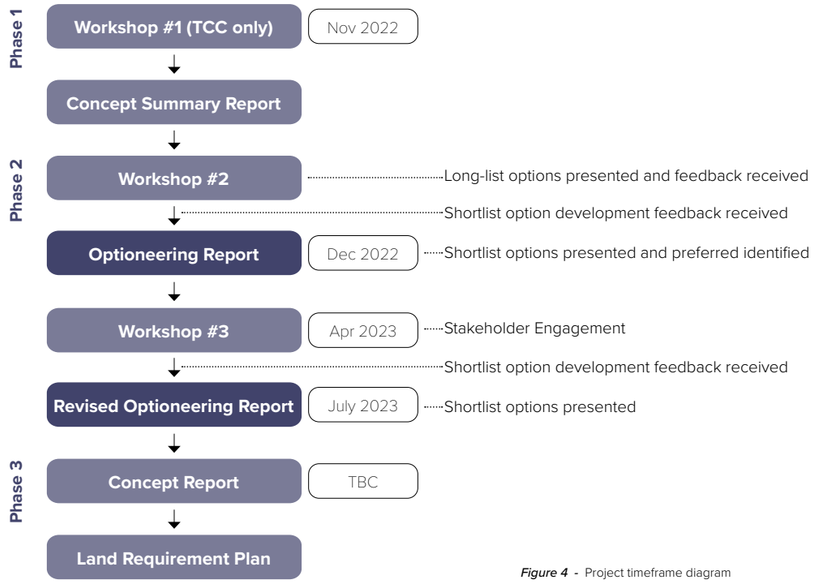

Figure 4 - Project timeframe diagram

A stakeholder engagement workshop was held in April 2023 to inform the adjacent landowners of council's aspirations.

Three further options for 134 Durham St have been developed in this updated optioneering report in addition to option 1;

- Option 1 - Elevator + Stairs
- Option 5 - Cascade
- Option 6 - Plaza + Elevator + Building
- Option 7 - ZigZag

As the Tauranga City Centre Public Realm Design Guidelines (TCC PRDG) are still being developed, directive on the look and feel for the laneway including aesthetic drivers will be incorporated in to the concept design phase. Delivery of the concept design programme of this project will therefore be linked to the delivery of those guidelines.

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User types

Pedestrian user data was received from Tauranga City Council in December 2022 as part of wider external transport studies within the city centre. Data validation is still an on-going process and there are some data gaps for certain devices. From this analysis, four user types were detected within the city centre area;

1. Pedestrians
2. Cyclists
3. E-scooters
4. Motorcycle/mopeds (excluded from the data in this report)

A summary of user data is provided in figures 6 and 7 adjacent.

Figure 5 - Device locations

Total monthly users passing Willow/Spring Street, Grey Street, Durham Street lower, Elizabeth Street Opt B cameras

Month Summer vs winter	Pedestrians	Cyclists	E-scooters
June 2022 (winter)	81,395	1,081	149
November 2022 (summer)	96,344	2,275	75

Figure 6 - Total monthly users June and November 2022

The data shows a higher proportion of pedestrians utilise the area monthly compared with cyclists and e-scooters with the summer period featuring more pedestrians and cyclists than winter. A smaller number of cyclists utilise Grey Street and Durham Street compared to the east-west connections of Elizabeth Street and Willow Street.

Daily users passing Grey Street and Durham St lower cameras (7th, 9th and 11th November 2022)

Average numbers (November 7th, 9th and 11th 2022	Pedestrians		Cyclists		E-scooters	
	Grey St	Durham St	Grey St	Durham St	Grey St	Durham St
Monday 7am - 10am	179	130	2	4	0	0
Monday 11am - 2pm	575	130	1	5	0	1
Monday 4pm - 6pm	142	98	9	2	1	1
Wednesday 7am - 9am	217	201	1	10	0	1
Wednesday 11am - 1pm	670	122	0	5	0	1
Wednesday 4pm - 6pm	132	88	3	3	0	1
Saturday 7am - 9am	277	122	1	3	0	0
Saturday 11am - 1pm	872	138	4	4	0	0
Saturday 4pm - 6pm	207	80	0	2	0	0

Figure 7 - Daily user types 7th, 9th and 11th November 2022

A random week in November was selected, with the data showing that the busiest period of the day for Grey Street was between 11am and 1pm, with the morning and midday period the busiest for Durham Street. Pedestrians make up the majority of the user type in both areas, with cyclists more common along Durham Street.

User requirements

Typical user dimensions for future laneway users have been taken from AS4121:2001 and AT Engineering Design Code Cycling Infrastructure;

Pedestrians

- Single pedestrian 1.0m - 1.5m
- Two single pedestrians passing 2.0m

Wheelchair users

- Single stationary wheelchair 0.8m min.
- Wheelchair passing a walking pedestrian 1.2m min.
- Wheelchair passing a pram 1.5m min.
- Two wheelchairs passing each other 1.8m min.

Cyclists

- Single standard bike 1.0m - 1.5m min.
- Single non-standard (cargo, trailer etc) bike 1.3m min.
- Two standard bikes passing - 3.0m min.

E-scooters

- Single e-scooter user 1.0m - 1.5m min.

Width requirements

Typical widths that have been used for the laneway optioneering include;

- Through route zone for pedestrians (kept clear of all obstructions) - 3.0m - 4.0m
- Planting (trees in tree pits) - 2.0m - 3.0m
- Furniture zone (seating, spill out spaces) - 2.0m

Context

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Strategic context

The following strategic documents will be considered in the design development of the laneway;

- Tauranga Taurikura (Draft Environmental Strategy), 2022
- Fine-grained Spaces Amenity Report, 2017
- Tauranga City Centre Public Realm Design Guidelines (ongoing)
- Tauranga City Centre Action and Implementation Plan (CCAIP), 2022

Tauranga Taurikura

TCC's draft environmental strategy outlines five goals that will help to value, protect and enhance the natural environment of Tauranga. The two goals that are relevant to the design of the proposed laneway include;

1. Thriving nature and biodiversity at the heart of our communities - increase canopy cover and urban forest across the city and include biophillic principles in urban planning and design.

2. Tauranga is a low emissions and climate resilient city - consider climate impacts such as rising temperatures, wind, rainfall and seasonal patterns. Support increased use of public transport, walking and cycling, increase uptake of walking, cycling and micro-mobility devices by improving safety and connectivity.

Fine-Grained Spaces Amenity Report

The purpose of this internal TCC report was to undertake analysis of under-utilised urban spaces that could be redeveloped, regenerated and/or reconfigured to improve the urban amenity and vibrancy within Tauranga's CBD.

Tauranga City Centre Public Real Design Guidelines

The guidelines are currently being developed with a draft issue expected end of 2022. Following the release of this document, any directive on the look and feel for the laneways and aesthetic drivers will be incorporated into the concept design.

Tauranga City Centre Action and Implementation Plan

The CCAIP reaffirms the long-term vision for the city and identifies a number of actions for implementation over the next 10 years. An action for the wider City is to provide 'a network of vibrant laneways', encouraging a pedestrian focused city centre. The Durham Street to Grey Street laneway is part of this network and has also been outlined as its own priority action for the City Centre's Knowledge Precinct.

CCAIP key moves

Whilst being a priority action itself, the proposed laneway also interfaces with several other CCAIP actions and key moves;

1. Rapid bus spine - a clear, prioritised public transport route which will travel through the city centre along Durham St past the laneway and the University of Waikato. Private vehicle priority will be reduced in this area with a larger focus on public transport and pedestrian movements at the entrance of the laneway.

2. Key transport destinations - a permanent bus facility or 'super stops' (to be confirmed) will be located along Durham Street. These stops will collect the walking and cycling catchment of the Knowledge and Commercial and Retail Precincts, with the proposed laneway supporting these connections through to the stops.

3. Te Manawa Huanui (central pedestrian spine) - a pedestrian-focused north-south central walking route that connects key destinations and places with Te Manawataki o Te Papa, supported by laneways, wayfinding and storytelling. The proposed laneway will provide east-west connections to and from this main pedestrian route to key destinations to the west such as the University of Waikato, transport hubs and Cameron Road.

4. Future development - a number of major developments are committed for the city centre within the next eight years, highlighting the transformation the current city centre will undertake into a thriving and revitalised centre. The laneway will provide a key connection between these and should support higher pedestrian numbers.

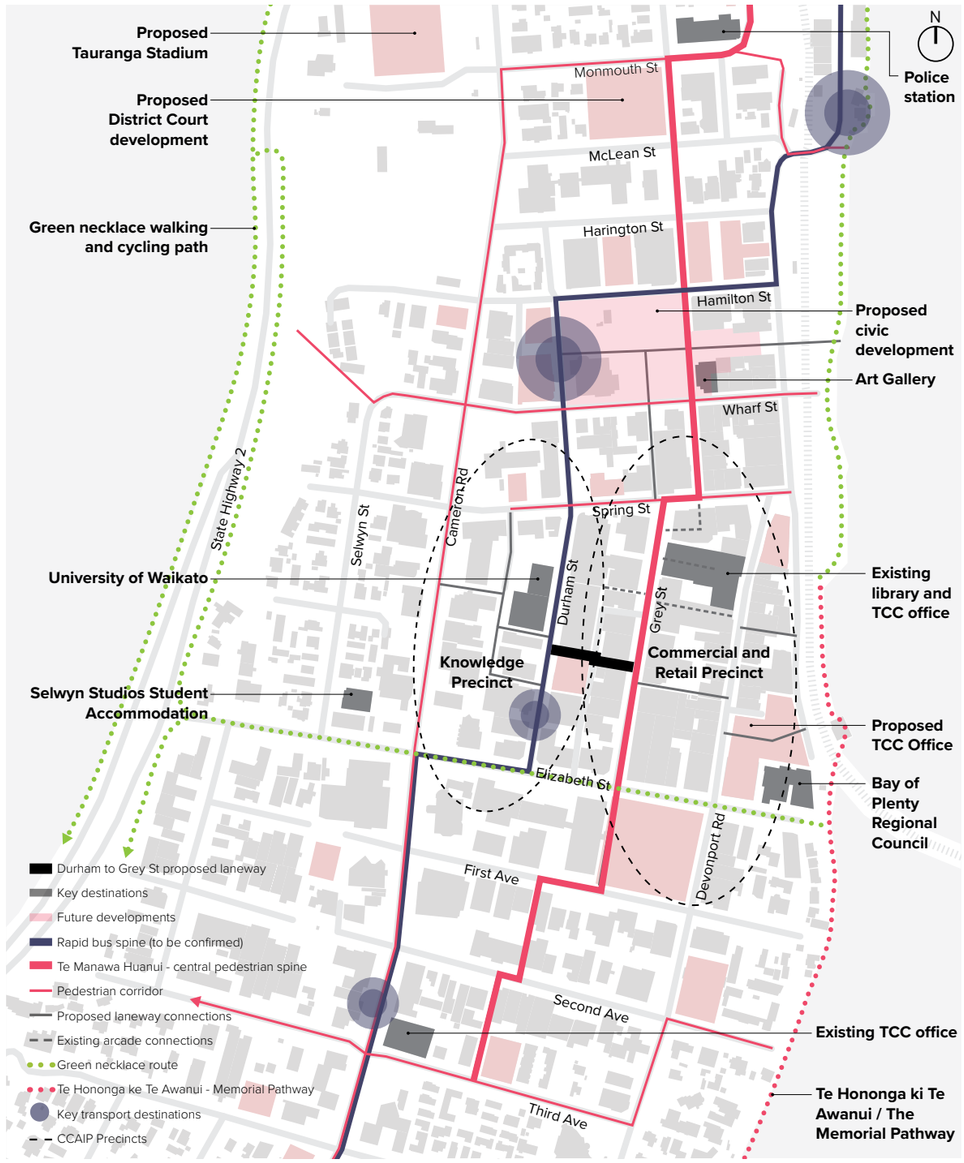

Figure 9 - City Centre Action and Investment Plan Key Moves

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Tauranga City Centre Context

The laneway is located in the heart of Tauranga's CBD, on the boundary of the Knowledge and Commercial and Retail precincts. To the west, Durham Street has been identified as a strategic public transport connection, having recently undergone a streetscape upgrade that coincided with the construction of the University of Waikato campus. The University of Waikato campus is set to accommodate up to 5000 students and further development is still intended for the campus. This could also include future student accommodation in the area.

To the east, Grey Street is one of the main commercial and retail streets in Tauranga's CBD. It is characterised by its brick paving, character banner and light poles and mature trees (palms and Australian Frangipani) along both sides of the road.

Movement

Three pedestrian and active mode user types are assumed to currently utilise the city centre; commuters, students and tourists, with residents likely to increase in the future. Each require different place and movement needs and will have unique travel patterns based on their destinations and travel choice. This will determine the type and level of amenity the laneway needs to support.

Commuters are likely to arrive and depart the city centre by cycling, public transport or by private vehicle, with all day parking provided to the north and south of the city centre. There are also multi-storey covered carpark buildings on Durham Street and Elizabeth Street. Commuter movements across the city are likely to remain fixed unless a more convenient route is presented. They will take the same route to their respective offices daily and support retailers, especially food and beverage outlets, during lunch hours and before and after work. In future it is expected that there will be changes in active mode transport, with greater uptake of electric bikes, skateboards and scooters. Design of spaces that accommodate these options should be considered.

Tourists numbers are expected to increase post-covid with visiting times varying during the week and the weekend. Previously, cruise ship tourists were bused into the city centre. An activity that engages tourists with the city centre includes an historic walking tour and also an art walking tour. In the future, key destinations will include the civic development, museum, waterfront development and historic precinct.

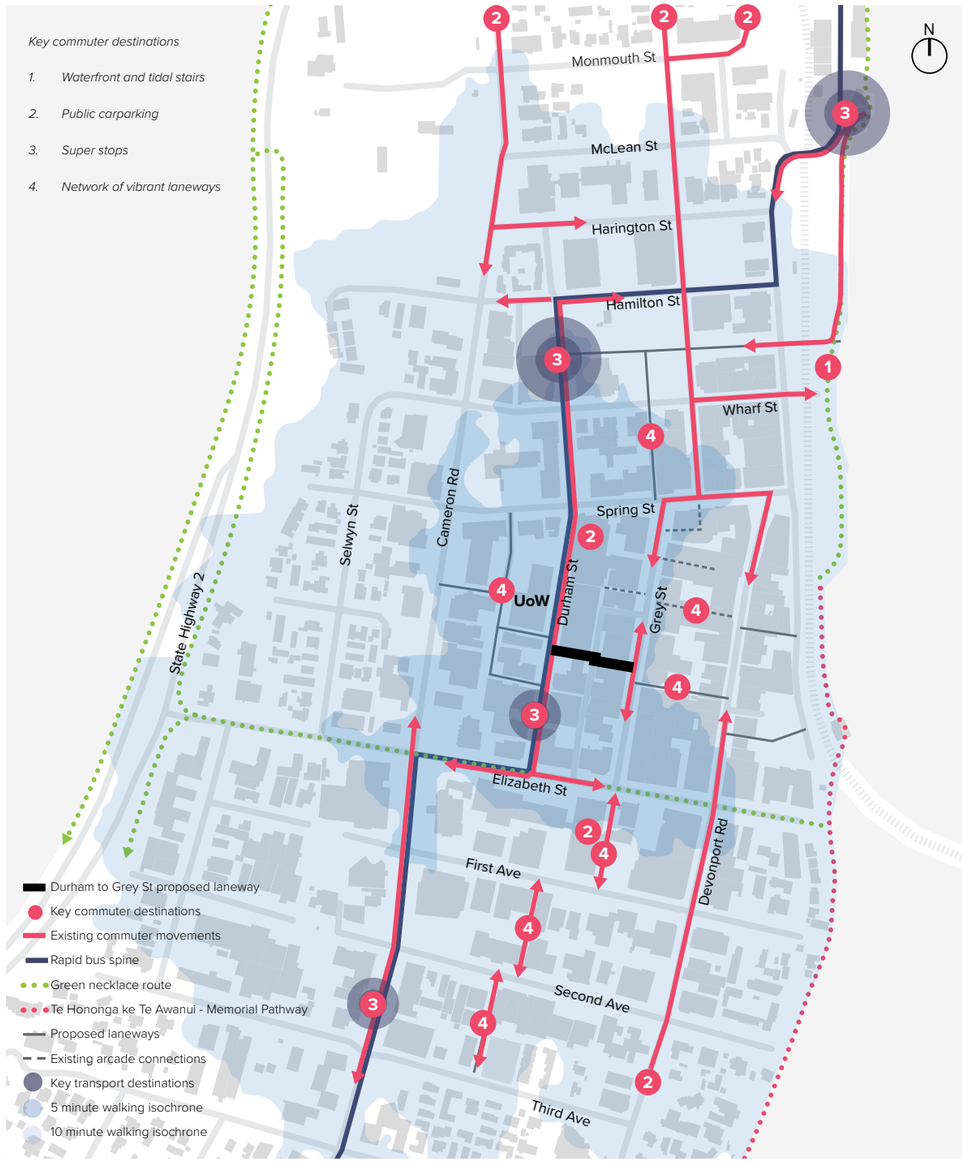
Student movements are predominantly based around the University of Waikato Campus, public transport hubs and Cameron Road. As students need to move around cheaply and quickly, active transport modes such as bicycles, skateboards and scooters will be popular in this area. A larger daily population in this area results in a need for students to be able to filter easily through the city centre to access food and beverage outlets and destinations such as the Tauranga City Library.

Place

Commuters will likely spend the majority of the day at their place of work, with lunch hours seeing more demand for people out eating their lunch or taking a break. Spaces such as the waterfront and parks are popular spots for this however small spaces should also be considered e.g. for short breaks and to take phone calls. An important aspect to consider is Tauranga's climate with coastal rain and wind common during the year. There are minimal covered spaces around the city to spend time in other than within buildings.

Tourists will likely want to be exploring the city, taking in experiences such as the waterfront and proposed civic precinct. A vibrant network of laneways will attract tourists engaging them with finer grain spaces. Art and cultural walking trails utilised across the city will draw tourists into the vibrant spaces of city centre where they can spend time.

Students will spend most of their day in and around the University of Waikato campus. Destinations for students include places that accommodate socialising between lectures, eating and places to study. Areas for recreation may also be popular with a number of pop up parks across the city featuring a basketball half court, football and table tennis tables. Areas for study should consider student needs such as SMART technology, free wifi and power sources embedded into street furniture. Shelter will also be an important consideration to create continuous cover between transport destinations, the University and retail streets.



Commuter movement and place patterns

Figure 10 - Tauranga City Centre commuter patterns

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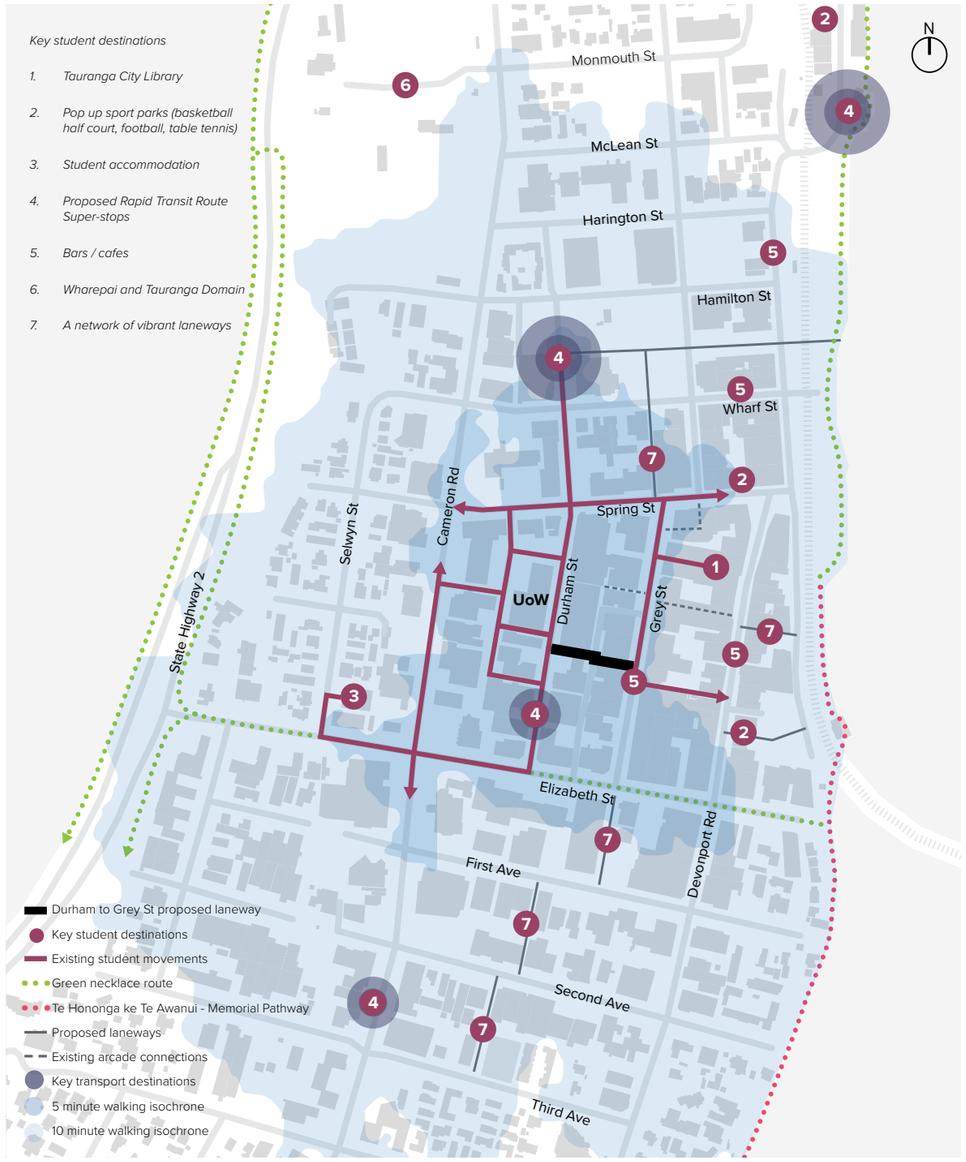
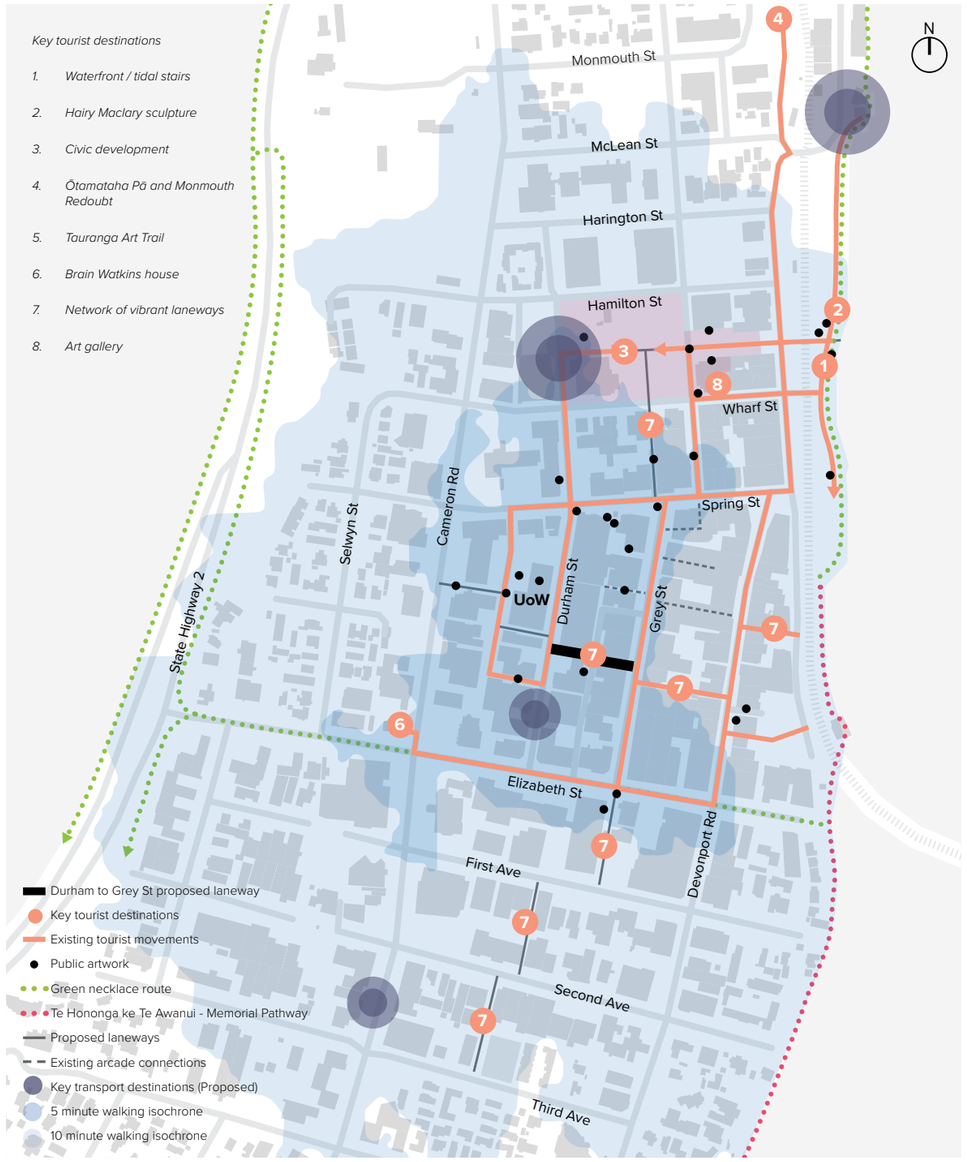


Student movement and place patterns

Figure 11 - Tauranga City Centre student patterns



Tourist movement and place patterns

Figure 12 - Tauranga City Centre tourist patterns

The majority of pedestrian and vehicle movements through the Grey Street and Durham Street blocks is north to south. The blocks are long, (280m) and contain limited mid-block east-west connections aside from private accesses and internal arcades. The proposed laneway will build on the existing east-west connections via the University of Waikato and provide continuous access through to Grey Street with future development then linking through to the Strand.

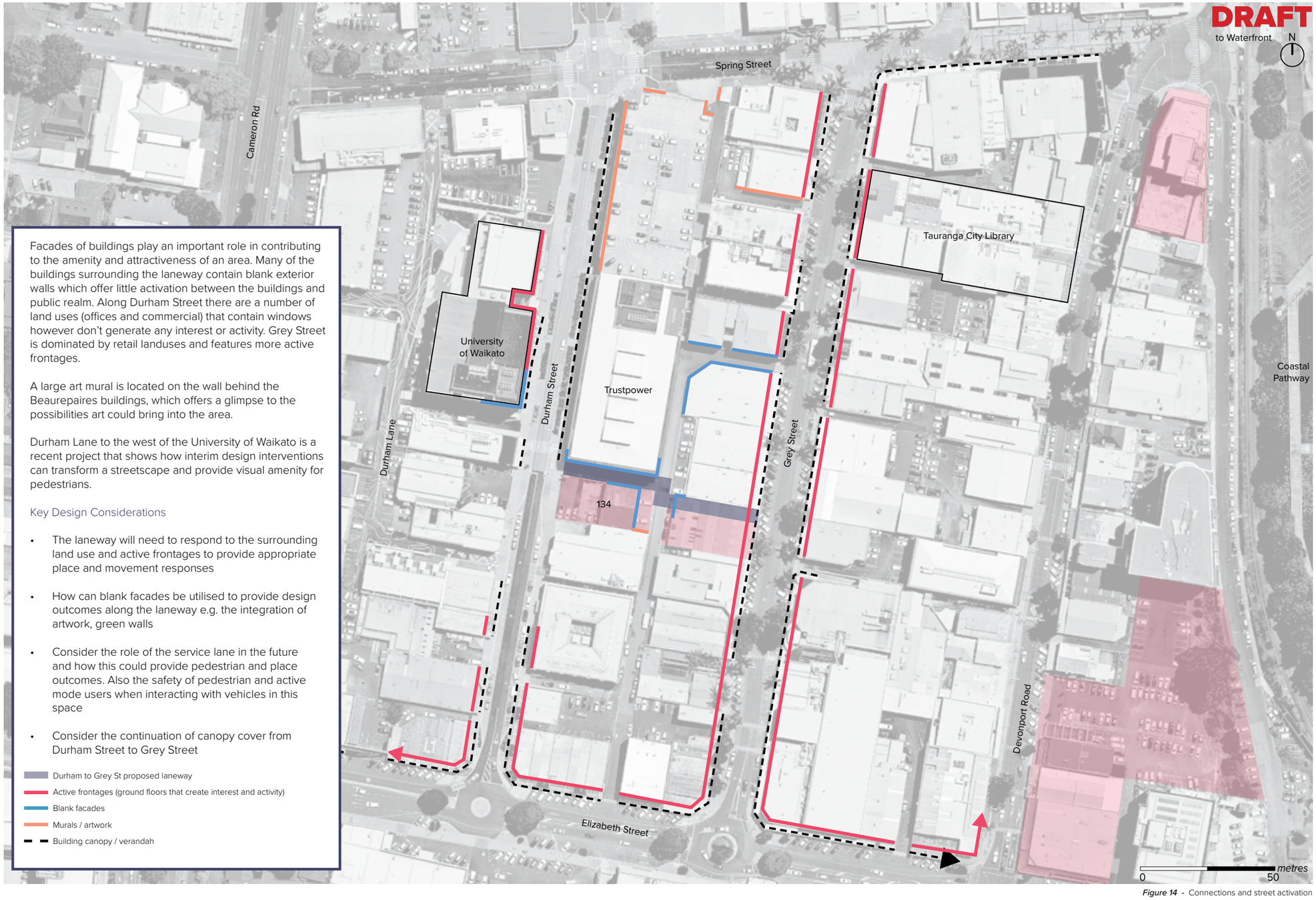
There are limited spaces that encourage place and activation along Durham Street and Grey Street with the majority of space allocated to transport outcomes (parking and movement functions) with some existing seating and limited other amenity.

Key Design Considerations

- The laneway is centrally placed along Durham Street and Grey Street and would support an amenity node given the limited existing seating and gathering spaces along the street.

Durham to Grey St proposed laneway
Existing mid-block pedestrian connections
Vehicle circulation
Future mid-block pedestrian connections
Existing seating and activity nodes
Future laneway nodes
Future development

Figure 13 - Connections and street activation



Facades of buildings play an important role in contributing to the amenity and attractiveness of an area. Many of the buildings surrounding the laneway contain blank exterior walls which offer little activation between the buildings and public realm. Along Durham Street there are a number of land uses (offices and commercial) that contain windows however don't generate any interest or activity. Grey Street is dominated by retail landuses and features more active frontages.

A large art mural is located on the wall behind the Beaurepaires buildings, which offers a glimpse to the possibilities art could bring into the area.

Durham Lane to the west of the University of Waikato is a recent project that shows how interim design interventions can transform a streetscape and provide visual amenity for pedestrians.

Key Design Considerations

- The laneway will need to respond to the surrounding land use and active frontages to provide appropriate place and movement responses
- How can blank facades be utilised to provide design outcomes along the laneway e.g. the integration of artwork, green walls
- Consider the role of the service lane in the future and how this could provide pedestrian and active mode users when interacting with vehicles in this space
- Consider the continuation of canopy cover from Durham Street to Grey Street

- Durham to Grey St proposed laneway
- Active frontages (ground floors that create interest and activity)
- Blank facades
- Murals / artwork
- Building canopy / verandah

Figure 14 - Connections and street activation

The Site

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The proposed sites of the Durham Street to Grey Street laneway connection consists of three separate sections;

- Section 1 - an existing accessway and building on private property, accessed off Durham Street
- Section 2 - an existing service lane (contains multiple vehicle access points)
- Section 3 - an existing building on private property, accessed off Grey Street

Both private properties are targeted for development in the near future, with opportunities for TCC to acquire a portion of land on each property to formalise the laneway.

Section 1 is located off Durham Street which has recently undergone streetscape upgrades. The upgrades provided improved surfaces, public amenity (seats, bike parking), planting (rain gardens), lighting, and road narrowing to improve pedestrian accessibility. Opposite the site is the new University of Waikato campus and adjacent is the Trustpower building, a recent development that accommodates up to 600 staff. The southern wall of Trustpower borders the site and consists of a blank facade with several exotic trees planted along the length within an accessway. The accessway connects Durham Street to the service lane, however this is currently planted with lomandra and fenced, with no public thoroughfare. Running along the other edge of the accessway is a Beaurepaires tyre shop with forecourt. This is often busy with private vehicles.

Section 2 contains a portion of service lane that runs parallel between Durham Street and Grey Street. The service lane is 5m wide but varies in width (5m+) along its length by the building setbacks. The service lane is primarily vehicle oriented with private parking for adjacent retail and commercial buildings. The service lane presents a back of house environment, with carparking, rubbish bins and other services. There is a large mural on one of the exterior building walls that adds character to the space.

Section 3 is currently located under an existing building that is earmarked for redevelopment. The laneway will open out to the service lane to the west and Grey Street to the east through this site.

Across the site there is an elevation change of 4.7m with 4.1m of this occurring across a 37m length between Durham Street and the service lane. This elevation change and grade will need to be considered in the design phase to accommodate accessibility requirements for pedestrians and also active mode users eg. cyclists.

Biodiversity and sustainability

There is minimal vegetation coverage on the site aside from a row of lomandra and young deciduous exotic trees in the existing accessway between Beaurepaires and Trustpower. Durham Street contains rain gardens with exotic and native tree planting (Fastigiata Ginkgo, Chinese Tupelo and Taraire) and Grey Street contains mature exotic trees (palms and Australian Frangipani) in tree pits.

Key Design Considerations

- Consider planting and how this could support canopy cover and urban forest goals
- Incorporate biophillic principles into design
- Support the use of multi-modal transport options
- Consider sustainability outcomes driven from the Public Realm Design Guidelines

Climate

Due to it's unique topography, the climate in Tauranga is sub-tropical and humid with summers generally warm and winters mild. Tauranga has less frequent rainfall than other areas of New Zealand, but due to it's coastal setting rainfall can occur unexpectedly. The prevailing wind is from the west and south-west, however the city is largely sheltered by the Coromandel, Kaimai and Mamaku Ranges.

In a coastal city such as Tauranga, climate change is an important factor to consider when future-proofing the cities infrastructure including the provision of shade for pedestrians. The current climate and projected effects of climate change on Tauranga are supportive of a walking and cycling environment. The site is relatively shaded during the day in section 1 due to the height of the Trustpower building and the orientation of the laneway along the southern wall.

Key Design Considerations

- How can the laneway provide a sheltered thoroughfare for pedestrian moving between the University and Grey Street
- Consider additional shade and shelter for pedestrians spending time in the space
- Consider a design response that reflects the local climate conditions

Proposed development

The development which was proposed at 134-142 Durham Street (Beaurepaires site) has influenced the development of option 1 and was to feature retail and office space. The proposed building was 10 levels (38m+ high off Durham Street) and due to the topography of the land the first floor, containing retail and the lobby, was to be accessed off Durham Street. Retail and basement carparking would have been accessed off the rear service lane. Option 1 there fore considered the positive and complementary interfaces the building will have with Durham Street and the laneway, including activation of spaces from future tenancies.

Figure 15 - Looking towards new development from Durham Street

Figure 16 - Looking towards new development from the Service Lane

Figure 17 - Proposed laneway site plan

Design Drivers

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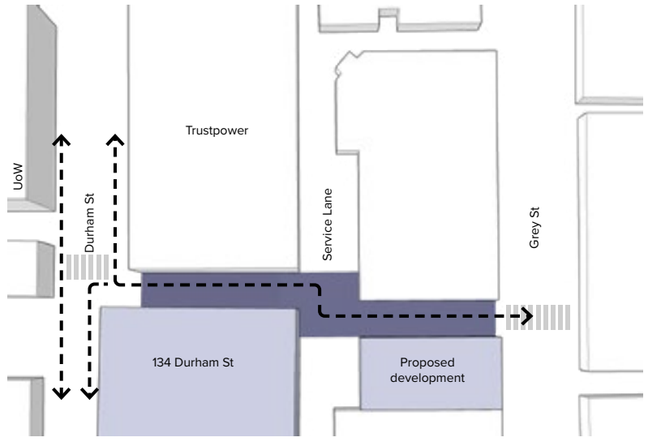
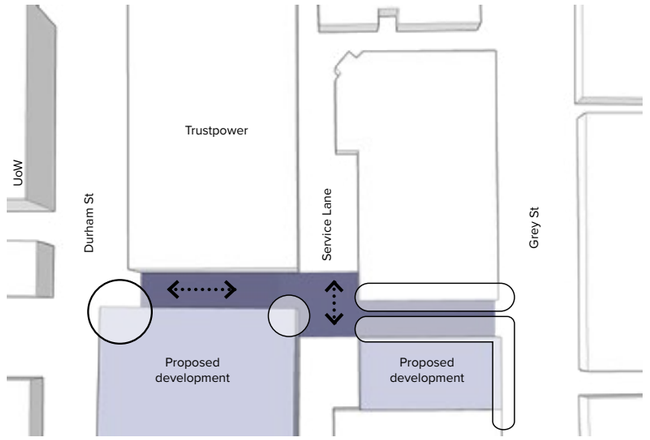
These four design drivers have been derived from analysis of the site and the project objectives. While the outcomes are influenced by the former development proposed for 134-145 Durham Street the design drivers still remain relevant.



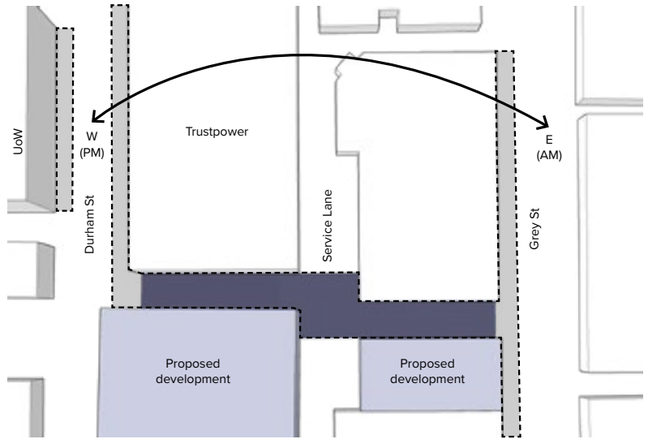
1 *Figure 18* - Accessibility

The laneway will need to provide universal access for pedestrians and active mode users of all ages and abilities (e.g. wheelchairs) with the design response needing to meet accessibility codes.



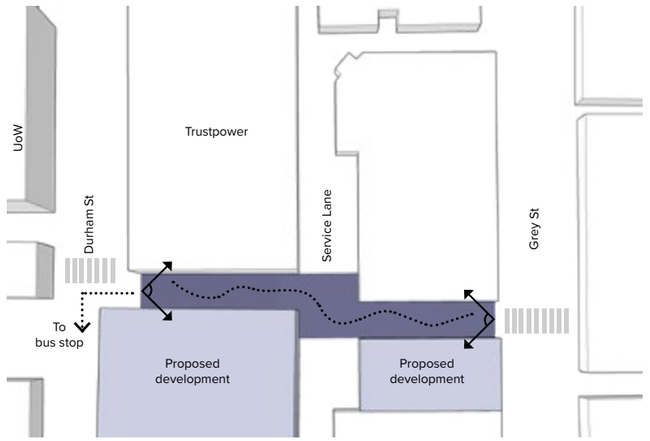
2 *Figure 19* - Place and movement

The laneway will need to consider the adjacent built environment and land use to provide suitable areas for place and movement.



3 *Figure 20* - Shelter

The laneway will need to contain an appropriate response to the local climate including the provision of shelter and whether additional shade is required.



4 *Figure 21* - Safe and inclusive

The laneway will need to be inviting, safe and inclusive. Consider CPTED and accessibility outcomes, and the layout of the laneway to attract all types of users into the space.

Design Response

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The following key moves will form the design response for the laneway through the optioneering and concept design process;

1. Access will be provided for pedestrians (including mobility and vision impaired users), cyclists and other active mode users along the entire length of the laneway

2. A combination of stairs, and either a ramp or elevator, will be provided to meet accessibility requirements and meet the needs of active mode users

3. Preferred ramp grades will be 1 in 14, with 1 in 12 the minimum requirement.

4. Spaces for activation and place will be provided at either end of the laneway, interfacing with the proposed development, Durham Street and Grey Street

5. Shelter will be provided along the length of the laneway to provide pedestrians and active mode users with a covered connection between the Knowledge and Retail and Commercial precincts

6. Meaningful planting outcomes will be incorporated into the laneway to achieve a softer and greener space. Planting will provide amenity and visually breakup the space, continuing planting outcomes from Durham Street and Elizabeth Street

7. The Tauranga Moana Design Principles (or similar) will be agreed with mana whenua during the concept phase and applied to the laneway development to celebrate and elevate te ao māori values, history and cultural heritage of the city centre

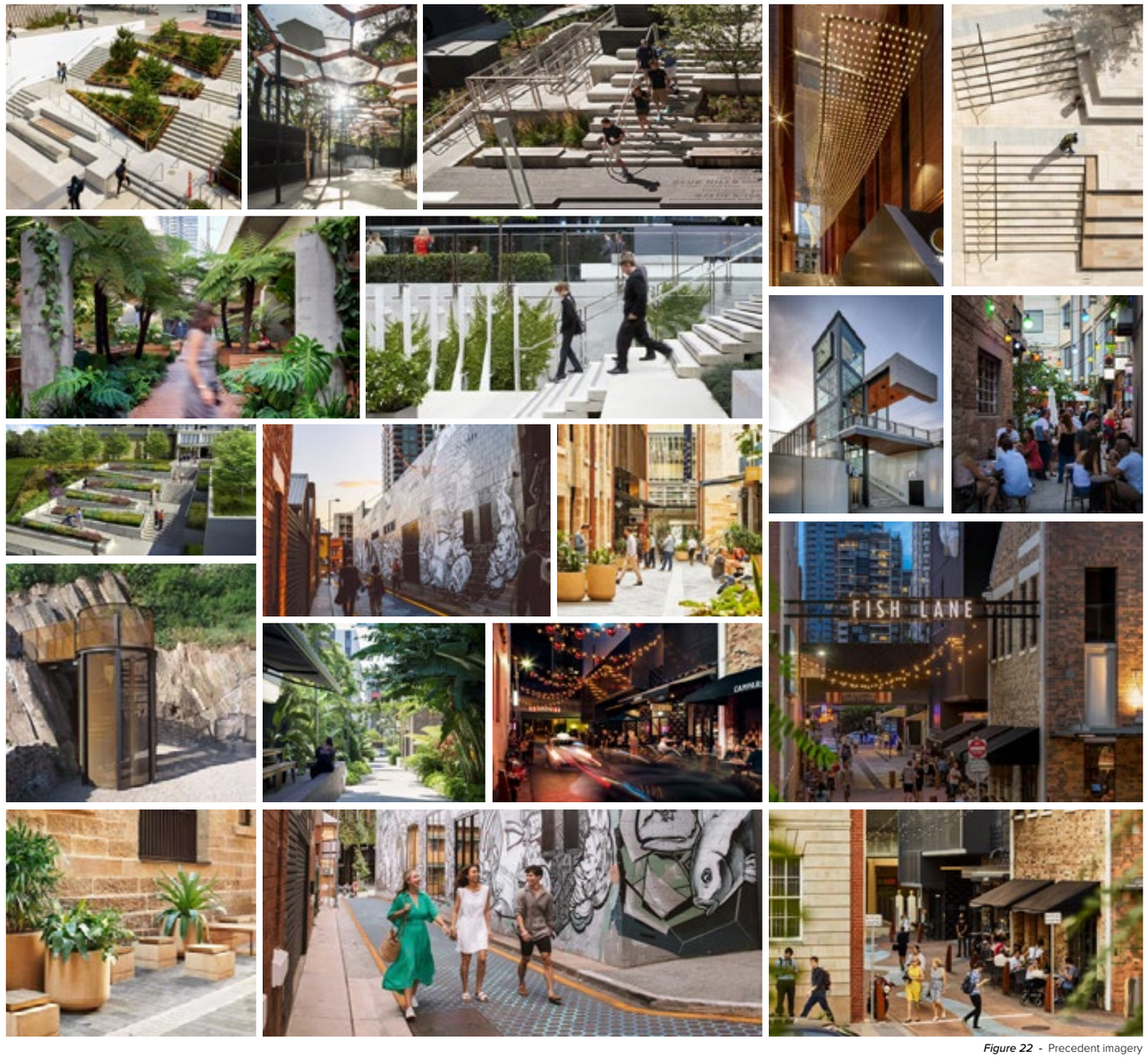

Figure 22 - Precedent imagery

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Part B

Optioneering

Option 1 - Elevator and Stairs

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Option 1 (from the initial optioneering process) provides a laneway option through 134 Durham Street and assumed the remaining property will be sold for redvelopment. Option 1 provides access between Durham Street and Grey Street via stairs and an elevator. Given the elevational change of 4.1m between Durham Street and the service lane, an elevator option was discussed in workshop 1 and 2 as a way to meet accessibility requirements within a relatively constrained laneway width. The elevator would provide flexibility for the layout of the laneway to respond to any future development of the Durham Street site to the south of section 1.

Features

- 8.0m laneway width (the existing property or proposed building to accommodate an extra 1.0m width)
- The elevator option responds best with the proposed development layout. Due to the internal level change for the proposed lower level retail space, a shorter 1 in 14 ramp has been provided to access the elevator (number of steps reduced from original Evatt Martin design)
- There is an opportunity for the elevator tower to become a design feature of the laneway, featuring artwork or planting
- Option 1 can be adapted to respond to active building edges by shifting the elevator east or west. Further discussions around the elevator being located within the building footprint are required
- Access is enabled into the lower lever retail space off the laneway, with a larger area for a spill out space provided
- The elevator option provides greater flexibility and larger areas of space for placemaking opportunities
- A high proportion of planting areas are provided along the edge of Trustpower building, stairs and at the service lane and Durham Street entrances
- A high proportion of building and laneway interface (based on proposed building design) is provided in this option
- This option has been estimated to have a moderate / high cost compared.

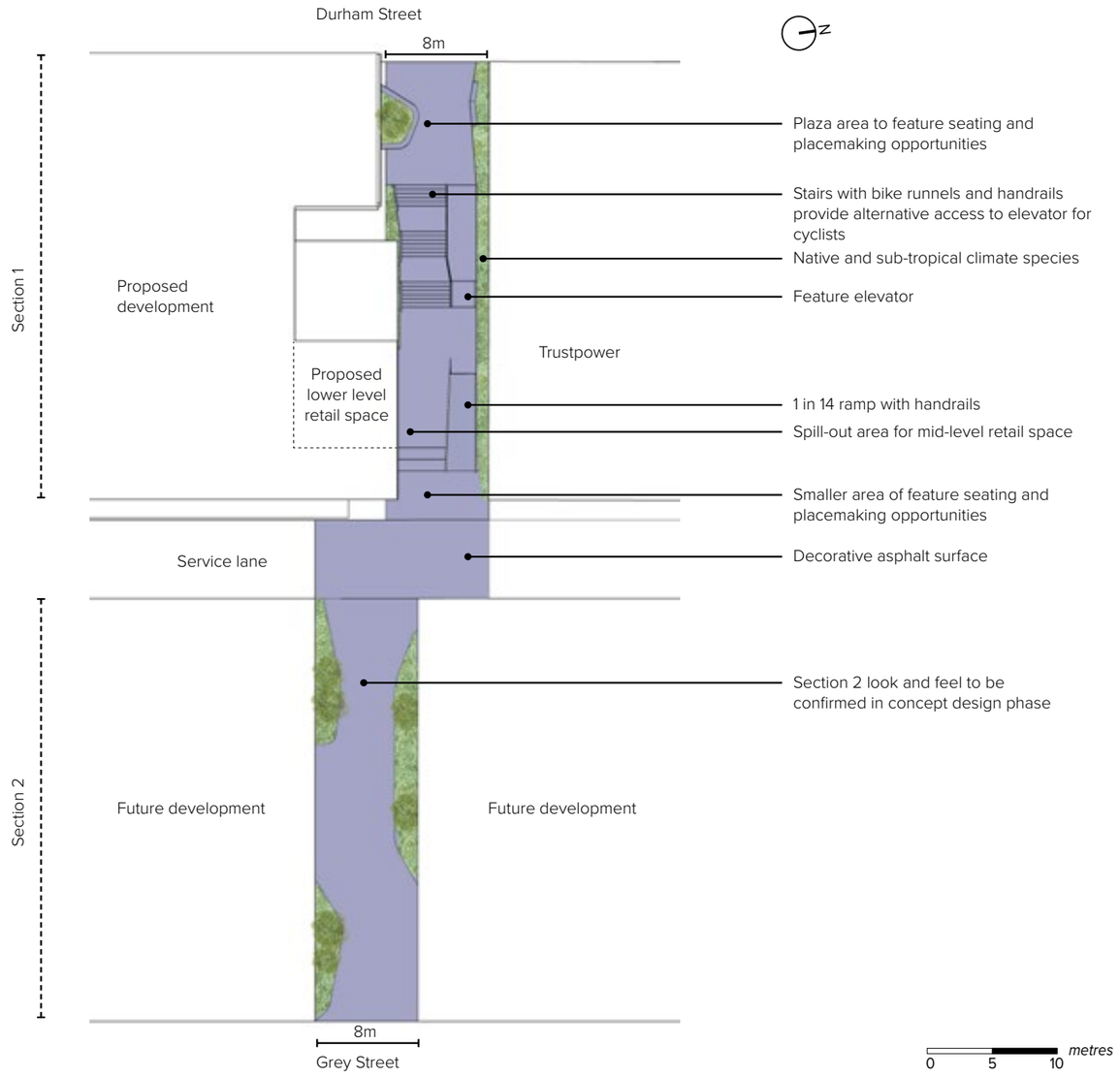

Figure 23 - Option 1 Concept Plan

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Option 1 render

Service lane looking west to Durham Street

Durham Street looking east to service lane

Option 1 section

Option 5 - Plaza + Elevator + Building

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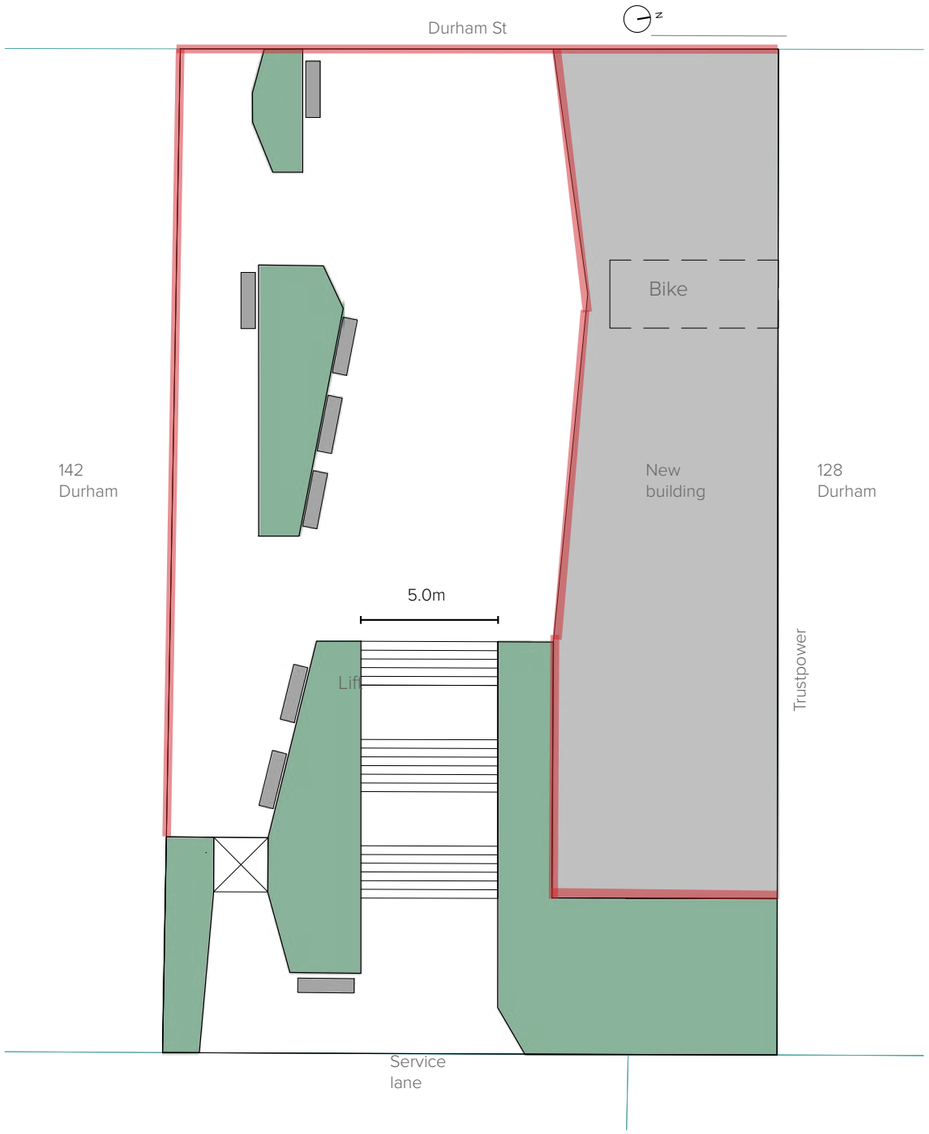
This (do max.) option utilises the entire 134 Durham Street site creating a large plaza activated by a proposed building. An elevator meets accessibility requirements and maximises spaces for greater placemaking outcomes adjacent to the university.

Features

- This option provides high placemaking and high accessibility outcomes
- This option provides a large plaza that interfaces with Durham Street situated on the southern edge of the site maximising solar access.
- Generous steps are centrally located to provide a direct and safe connection to the 79 Grey Street site.
- A proposed building (240m2) could include a number of smaller tenancies, while incorporating bike storage and the option for end-of-trip facilities.
- The proposed building is situated on the southern aspect of the Trustpower building. A building in this location reduces the scale of the blank facade while occupying the shady area of the site.
- The proposed building will interface positively with Durham Street, bridging the gap between two buildings that do not. To the east the building will be elevated and overlooking the service lane and the Grey Street site to improve passive surveillance.
- The proposed building will provides an awning / shelter that extends from the Trustpower building and wraps around the facade to connect with the steps.
- Opportunity for the elevator tower to become a design element featuring artwork
- Generous areas of subtropical planting through the site supports city greening and biodiversity outcomes. Native trees provides shade for outdoor seating and study areas.
- As per option 1 the steps of option 5 will include a bike gutter for cyclists to wheel their bikes up or down, as an alternative to the elevator.
- High level of activation on sides of the site

Note: The need for lighting, retaining walls, handrails and fall protection are assumed in all options but not included in the optioneering plans / visuals.



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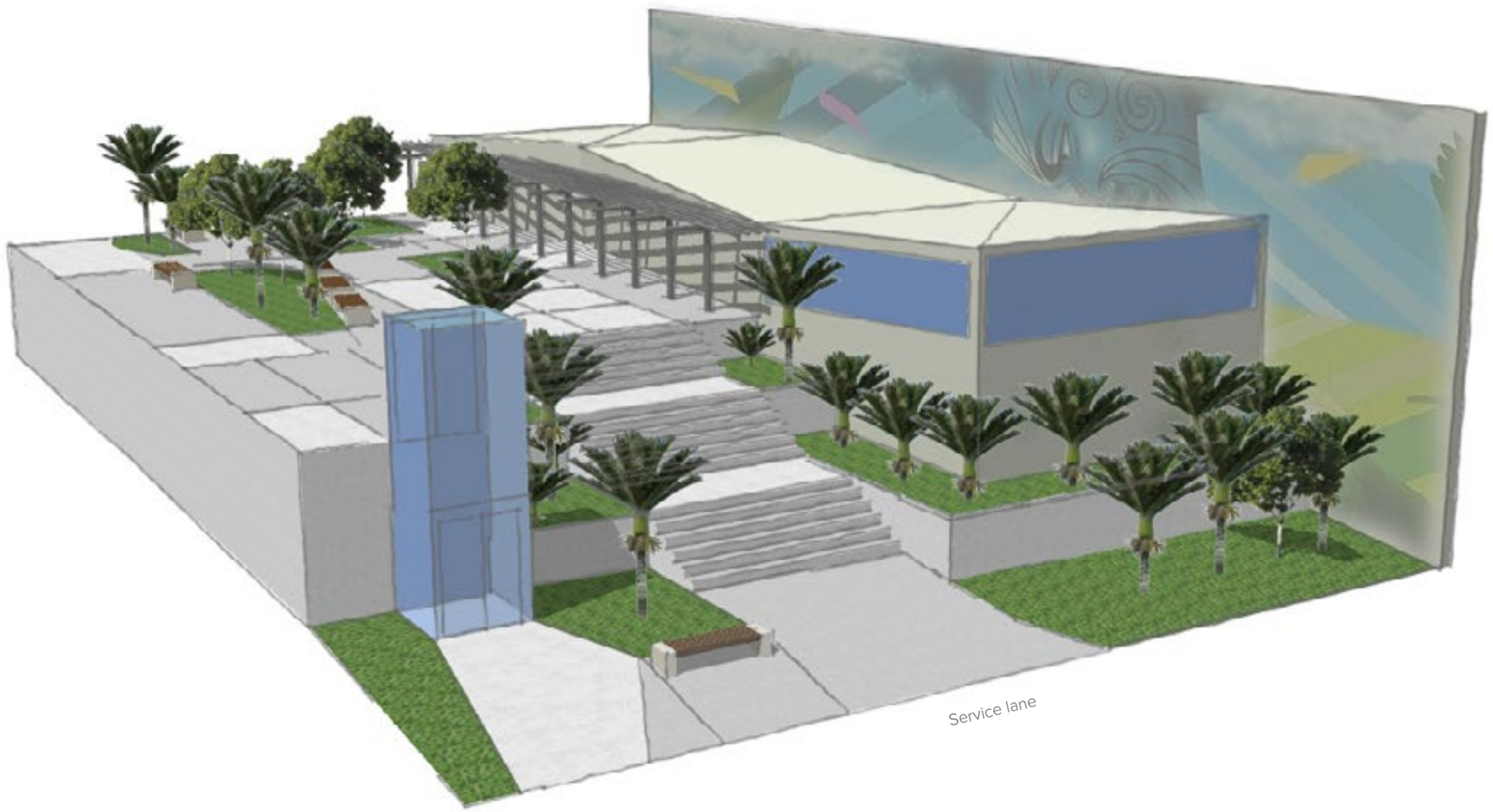
Option 5 render



Option 6 - Cascade

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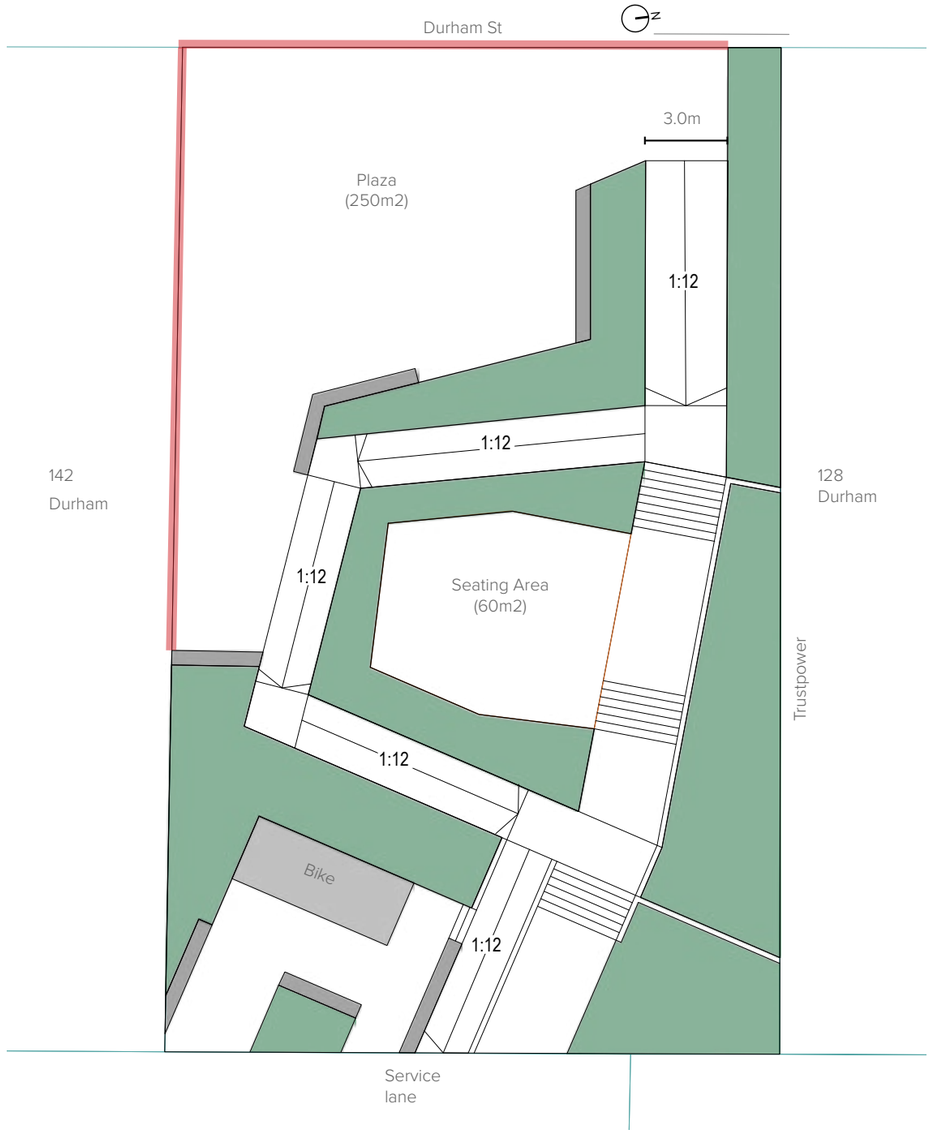
This option utilises the full 134 Durham Street site, creating a series of attractive urban park spaces that cascade down the site connected by ramps (1:12) to meet accessibility requirements.

Features

- This option provides a high level of placemaking with a high to moderate level of accessibility
- High amenity public realm spaces feature custom furniture, shelters, artwork, water features and lighting. The plaza is situated on the south western corner of the site to maximise solar access.
- A smaller area in the centre of the site provides a space for outdoor seating and shelters for people to eat lunch or study near the university.
- A mix of incidental play (artwork and small climbing elements) and structured play (lighting / outdoor games) are a feature of this option.
- Bike storage and charging facilities are located off the service lane.
- Planting screens the blank facade of the Trustpower building
- A combination of steps and ramps provide a direct and safe connection to the 79 Grey Street site.
- A generous framework of subtropical planting through the site supports city greening and biodiversity outcomes. Native trees provides shade for outdoor seating and study areas.
- While all options could accommodate water features, option 6 would lend it self to a water feature that extended through the site, reinforcing the spring fed streams which traditionally drained into the harbour. Water features have not been included in the cost estimate for any option and could be explored further in the following design phases.
- Moderate level of edge activation on two sides



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Option 6 render

Option 7 - Zig zag

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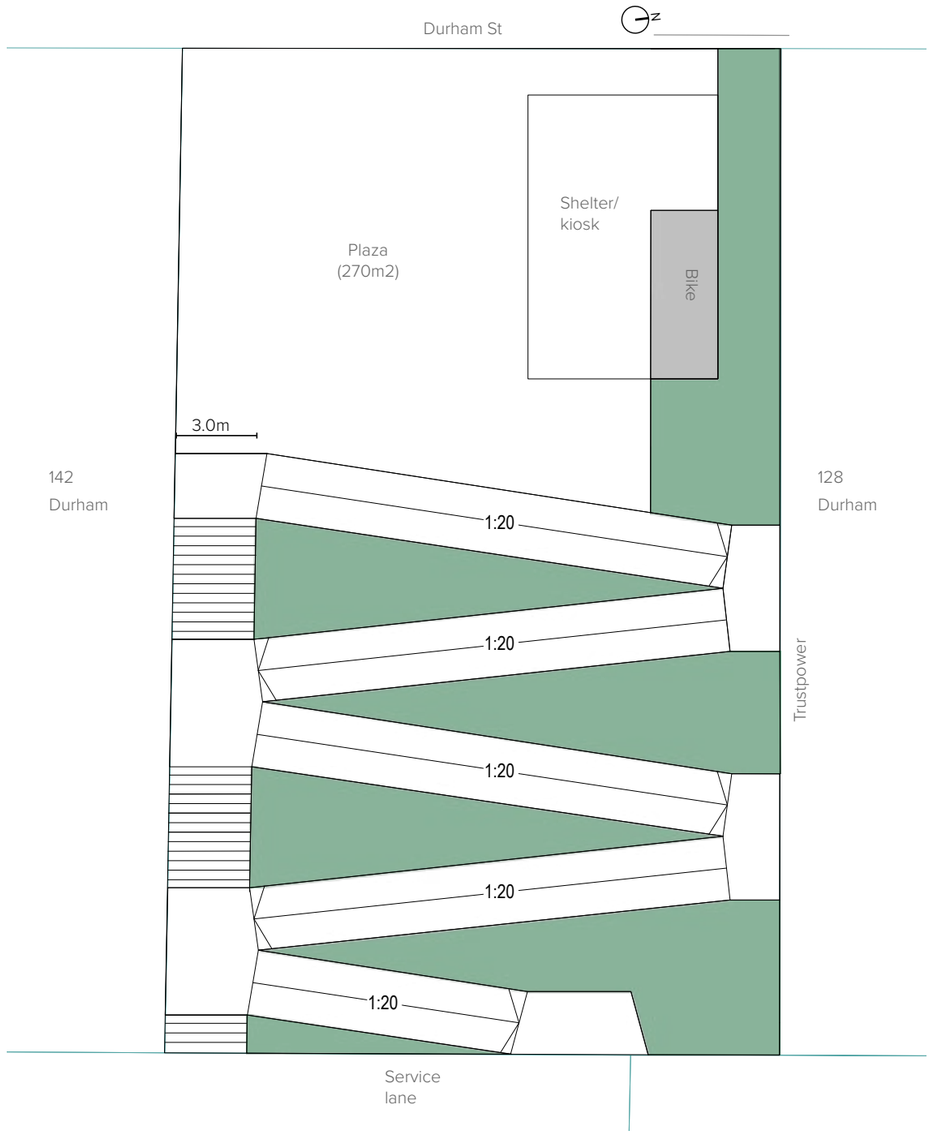
This (do min.) option utilises the full 134 Durham Street site, creating a series of spaces that cascade down the site connected by ramps (1:20) to meet accessibility requirements.

Features

- This option provides a moderate level of placemaking and accessibility.
- A series of ramps provide a comfortable gradient at 1:20 for improved accessibility without the need for handrails.
- Generous ramp widths and comfortable 1:20 gradients will support active modes to utilise the laneway.
- A high amenity plaza features custom furniture, shelters, artwork, lighting situated on the southern western corner of the site maximising solar access.
- Bike storage and charging facilities are located in the plaza close to the university.
- A combination of steps and ramps provide a connection to the 79 Grey Street site.
- Subtropical planting surrounding the ramps supports city greening and biodiversity outcomes. Native trees provides shade for outdoor seating and study areas.
- The significant network of ramps is considered to be an inefficient use of the site
- Low to moderate level of edge activation
- As a do minimum option this would not typically include a structure or building however a shelter would increase the functionality and activation of the outdoor space, while offering shelter for commuters using the laneway. A shelter with wifi and charging facilities could support outdoor study or learning opportunities near the university, as well as bike lockers / end of trip facilities.



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Option 7 render

Optioneering summary

The summary below provides a 'high' to 'low' comparison of the key moves of each option;

Features	Option 1 - Elevator and stairs	Option 5 - Plaza + Elevator + Building	Option 6 - Cascade	Option 7 - Zig zag
Inclusive & Accessible	High	High	Mod-High	High
Design provides flexibility to respond to adjacent land use / building design changes	High	High	Mod	Mod
Proportion of building and laneway interface through design (based on current building design)	High	High	Mod	Mod
Proportion of meaningful planting outcomes	Low	Mod	Mod-High	High
Spaces for activation and place will be provided at either end of the laneway, interfacing with the proposed development, Durham Street and Grey Street	High	High	High	Mod-Low
Cost (based on Durham St to Grey St Laneway Optioneering, July 2023)	$$	$$$$*	$$$$	$$$

*excludes building cost

**all options include a comparative cost for an 8m wide Grey St laneway connection

Next steps

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Following this optioneering report, TCC will review and confirm a preferred option for the Durham Street site. The preferred option will be used for property negotiations with the landowner and to guide future design and funding considerations. A feasibility study for 79 Grey Street is underway (to investigate the options of retaining the building) and in conjunction with this report will provide the brief for the development of a concept plan for the entire laneway connection.

After all stakeholders have agreed the preferred option and following the delivery of the concept report, a land requirement plan can be produced to support any future property acquisition.

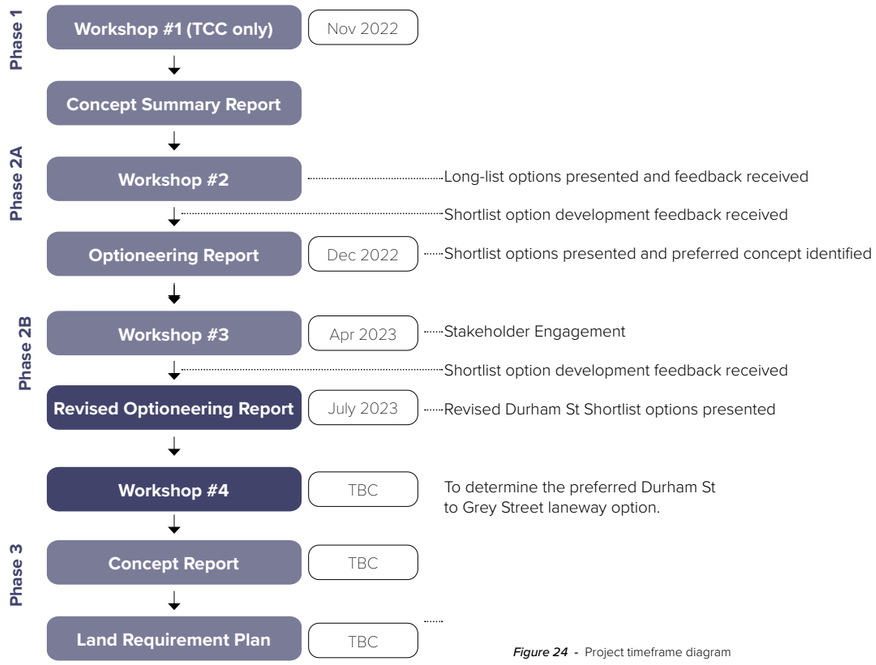

Figure 24 - Project timeframe diagram

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CPTED and Accessibility Assessment

Appendix A

CPTED and Accessibility Assessment

DRAFT

1.1 Purpose and Scope

A Crime Prevention through Environmental Design (CPTED) and Accessibility Assessment has been requested by Tauranga City Council to inform the concept design of the proposed Durham Street to Grey Street laneway at 132 Durham St. The assessment provides a high level analysis of the current environment, issues related to accessibility and personal safety, and presents a range of best-practice recommendations to consider in order to achieve a more accessible and safe environment.

The assessment covers the extents of the laneway project between Durham Street and Grey Street, via an existing unused accessway, service lane and building (future connection).

1.2 Site description

The laneway will be located between Durham Street and Grey Street within Tauranga's central business district (CBD). Grey Street is a commercial and retail street running north to south featuring a footpath, angled parking and mature trees. Durham Street has been identified as a strategic public transport connection and has recently undergone a streetscape upgrade that coincided with the construction of the Waikato University campus also located along the street. The streetscape upgrade provided improved surfaces, public amenity (seats, bike parking), planting (rain gardens), lighting, and road narrowing to improve pedestrian accessibility.

Running parallel between the two streets is a 5m wide service lane that varies in width (5m+) along its length by building setbacks. The service lane presents a back of house environment, with carparking, rubbish bins and other services and is generally dark at night with limited lighting.

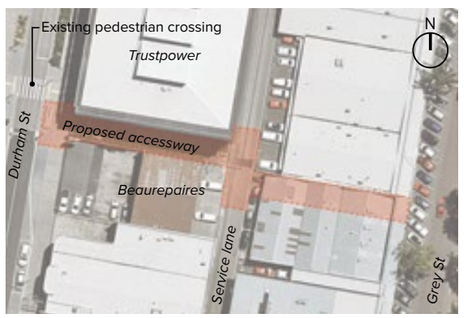

Figure 25 **-** CPTED and Accessibility Assessment context and scope

A proposed accessway between the Trustpower and the Beaurepaires buildings connects the service lane with Durham Street, however this is currently planted and fenced with no public thoroughfare.

There is a large (4.1m) elevation change over 37m between Durham Street and the service lane which presents a key accessibility issue.

1.3 Methodology

A site investigation was undertaken on Thursday 27th October between 9am and 10am and Thursday 3rd November at 8pm using the National Guidelines for CPTED. This involved viewing the proposed laneway from Durham Street and Grey Street and walking the length of the service lane, then driving the service lane at night. Photographs were taken on the walk-over to support the findings summarised in this report. Areas of concern have been noted with mitigation and possible interventions identified for each safety issue within the 'recommendations' section.

Limitations of this assessment include;

- the time and date of the assessment (during spring on a Thursday morning between the hours of 9-10am and Thursday night between 8-8.30pm)

1.4 Crime Prevention Through Environmental Design

The CPTED assessment has been appraised against the National Guidelines for Crime Prevention through Environmental Design produced by the Ministry of Justice. These national guidelines define the seven qualities that characterise well designed and safer places. These have been incorporated into the analysis and recommendations section of this assessment. The seven qualities include;

Access: Safe movement and connections.

Places with well-defined routes, spaces and entrances that provide for convenient and safe movement without compromising security.

Surveillance and sight lines: See and be seen.

Places where all publicly accessible spaces are overlooked, and clear sightlines and good lighting provide maximum visibility.

Layout: Clear and logical orientation.

Places laid out to discourage crime, enhance perception of safety and help orientation and way-finding.

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.

Sense of ownership: Showing a place is cared for.

Places that promote a sense of ownership, respect, territorial responsibility and community.

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.

Physical protection: Using active security measures.

If required, places that include necessary, well designed security features and elements.

1.5 Universal Design

Universal design refers to the provision of good access for all members of the community, including those with disabilities. Importantly, universal design is premised on the fact that good access for everyone should be standard. As well as promoting safe and accessible environments for all members of the community, it recognises that people with disabilities have a significant contribution to make to the economic and social activities within our society. Taking into account that almost one quarter of all people have a disability of some type, the provision of universal access is a key contributor to community wellbeing.

The need for accessibility affects most of the population at some stage in their lives. Design for accessibility should consider people with temporary as well as permanent disabilities who use mobility aids for walking, as well as people with hidden disabilities such as those with:

- Poor balance and/or co-ordination
- Reduced stamina and limited strength
- Difficulties in reaching and/or impaired hand function
- Vision, hearing and brain based conditions (strokes, cognitive impairment/ mental health issues.

For example, older people can experience several of the above, together with loss of confidence. Their increased need to use public transport means that issues of accessibility can be particularly important in this respect. An environment that meets the needs of mobility-impaired people is also user-friendly for parents with prams or pushchairs and deliveries using trolleys. Signage that meets the needs of vision or intellectually impaired people can be beneficial for people who don't speak English as a first language.

As outlined on the Barrier Free New Zealand Trust website, three practical design principles relate to the concept of the Accessible Journey:

a. Approachability – the design of the exterior environment of a building and/or public space, including car parking, works to ensure that people with disabilities can get to a building and or space;

b. Accessibility – the design ensures that people with disabilities can enter and move about freely within a building and/or public space without having to call for assistance; and

c. Usability – the public spaces, buildings and facilities are, in fact, usable by all people with disabilities. This premise of providing an accessible environment in line with the above principles for all members of the community provides the basis for this accessibility assessment.

The following documents also provide assistance in understanding principles and standards for designing universal access, and have been considered as part of this assessment:

- New Zealand Standard 4121:2001, Design for Access and Mobility
- New Zealand Transport Agency's RTS14, Guidelines for facilities for blind and vision impaired pedestrians
- Tauranga City Infrastructure Development Code, 2021

These documents should be used as guiding documents through the laneway design process to assist in facilitating universal access for the laneway.

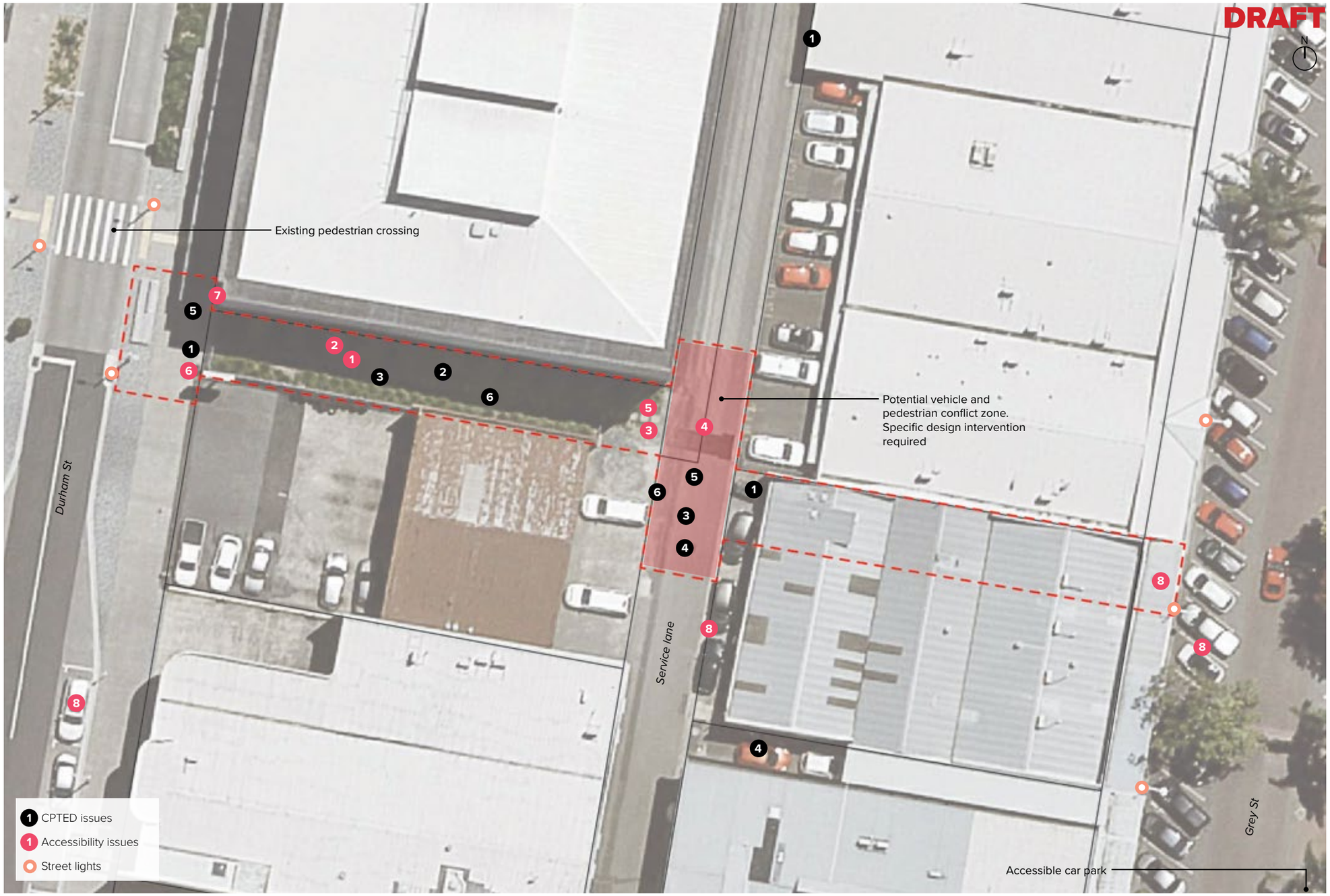

Figure 26 - CPTED and Accessibility Assessment issues map

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2 CPTED Assessment

2.1 Existing crime environment

No baseline analysis or reference has been provided by TCC on the level of crime around the site. For the purpose of this assessment, a general overview of crime within the Cameron Road to Devonport Road meshblock area has been concluded from NZ Police crime maps and statistics (www.policedata.govt.nz) with data from 31 August 2021 to 31 August 2022. This showed 74 victimisations within the Tauranga Central area unit. 51 of these crimes had time and day associated, these peaked on Fridays with occurrence elevated between 11am and 4pm. During the walkover there were minimal security cameras visible.

Figure 27 - Meshblock area sourced from NZ Police crime maps

2.2 Existing CPTED context

The existing context for CPTED principles and issues were identified on site during the site walk-over and have been categorised into the following categories;

- Lighting and wayfinding
- Vegetation
- Vandalism
- Street corridor (pedestrian crossings and footpaths)
- Built form (frontage, fencing/barriers and obstacles)

Lighting and wayfinding

New light poles with LED luminaries over the footpath and street are located along the length of Durham St. A light pole is located at the future entrance of the laneway. Adjacent is a pedestrian crossing that is also well luminated. The Trustpower building canopy doesn't contain any downlighting, however at the time of the assessment the windows were all lit including the fire escape from the building. The University of Waikato windows were lit however the Beaurepaires building didn't contain any lighting.

There are no stand-alone light poles along the service lane and minimal lighting directed from building security lights. Security lights were noted however appeared to not be working at the time of the assessment. There are no lights currently illuminating the fenced accessway or the area around the entrance from the service lane.

Lighting along Grey Street consists of canopy downlights, security lighting from buildings and street pole lighting. As a popular pedestrian street with Tauranga's CBD this area is well lit at night however there are some canopy lighting not working. This includes the area of the proposed laneway entrance.

In all areas no wayfinding signage directing pedestrians to key destinations was noted.

Vegetation

Vegetation was limited across all areas of the site. Durham Street features vegetated rain gardens, however, these end before the proposed laneway entrance. This planting is low and does not present any CPTED issues.

The fenced accessway is vegetated with lomandra species (under 1m) and young deciduous exotic tree species. Due to the current height of the trees, with a full canopy these may present hiding opportunities if retained however, at the time of the assessment the tree's had no leaves. Along Grey Street there is minimal vegetation other than mature palm and frangipani trees, that do not pose any CPTED risk. There is no vegetation along the service lane aside from some lomandra's at the entrance to the fenced accessway.

Vandalism

In all areas there was evidence of minor vandalism, mainly graffiti. These appeared to be isolated cases with graffiti predominantly occurring on service boxes and some blank walls. Aside from graffiti, there was no other vandalism noted to buildings and street furniture at the time of this assessment.

Street corridor (pedestrian crossings and footpaths)

The footpath along Durham and Grey Street is accessible and flat with generous widths (2.5m+) making for a comfortable walking environment. On Durham Street, a pedestrian crossing is located directly across from the future laneway entrance connecting to the University of Waikato. On Grey Street there are two pedestrian crossings either side of the future laneway entrance. The service area is predominantly for vehicles with pedestrians moving between carparks and buildings. There are four vehicle entry and exit points, one to the north and three to the southern end.

There were no obstacles such as large signs or phone boxes identified along footpaths which could present concealment issues.

Built form (frontages, fencing/barriers and obstacles)

The landuse around the future laneway varies and includes commercial, retail and education. Many of these landuses only operate during daylight hours and have limited activity at night. The two storey office buildings along Durham Street have minimal active frontages, however, offer passive surveillance from office windows on to the street during the day. The University of Waikato and Trustpower building collectively create activation in the area with a number of students and workers using the street to access these. Within the fenced accessway, a blank facade runs along the northern boundary with the southern boundary consisting of the Beaurepaires building (refer Figure 32) and car yard that is busy during the day.

There is minimal passive surveillance from neighbouring buildings along the service lane due to the area being treated as back of house. The service lane is utilised by commuters for carparking therefore limited pedestrian activation during work hours.

Grey Street predominantly consists of active frontages with passive surveillance offered to the street during the day. This passive surveillance is limited at night due to the types of land use (mostly retail).

2.3 Opportunities and Recommendations

The addition of a public laneway connection between Durham and Grey Street will bring further activation and surveillance through pedestrian movement. This assessment has considered the existing environment however any new building developments in the area will provide opportunities to further mitigate any CPTED issues. Design considerations for the proposed laneway design should include;

- Lighting - incorporate lighting to support passive surveillance along the laneway by lighting pedestrian routes and spaces
- Wayfinding - to enhance legibility of the laneway connection and provide directions to key destinations in the area
- Passive surveillance - support pedestrian use and activation of the laneway during day and night
- Facade design - provision of artwork or vegetation along large areas of blank walls to deter vandalism

CPTED considerations and mitigation recommendations have been detailed in the table on pages 19.

Figure 28 - Entrance to accessway from service lane

Figure 29 - Entrance to laneway from Durham Street

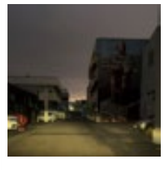
No.	Location	Issue		Mitigation	Responsible
CPTED					DRAFT
1	Durham Street, Service Lane	**Graffiti** The presence of graffiti can make an area feel uncared for and reduces the sense of perceived safety. Evidence of graffiti was found on pillar boxes, signs and blank walls.		Reduce opportunities for graffiti and vandalism by; • using robust and resistant materials and minimise blank facades • all future signs, artwork, structures and furniture should have a graffiti guard applied for easy removal of graffiti • increased passive surveillance and lighting can deter graffiti	Landowner
2	Accessway	**Vegetation** Vegetation can create sightline issues, shield lighting and provide areas of concealment		• Use low permeable vegetation • Consider trees that have narrow trunks and canopy foliage above eye level • Consider limbing trees to create foliage canopy above eye level	Landowner
3	Accessway, Service Lane	**Lack of passive surveillance** The accessway and service lane currently lack passive surveillance from adjacent buildings and low number of pedestrians using the space		The design of the laneway should maximise the number of people using the space to encourage good passive surveillance; • Facilitate passive surveillance from adjacent land uses by orientating buildings and windows to appropriately overlook the laneway • Encourage a mix of complementary land uses to extend the hours of surveillance and encourage active frontages along edges of laneway to increase passive surveillance at pedestrian level	Landowner
4	Service lane	**Potential entrapment spaces** The service lane is 178m long with minimal entry and exit points and alcoves which are created between buildings		The proposed laneway connection through the centre of the service lane will break up the block and create additional entry/exit points • Consider appropriate lighting together with the layout of the laneway to enhance sightlines throughout the space to avoid entrapment spots	TCC
5	All	**Lack of wayfinding** Wayfinding is important to aid orientation and connections that support safe and legible pedestrian and cyclist movement		Provision of wayfinding signage will enhance legibility of the laneway connection and provide directions to key destinations in the area and possible routes. Consider using unique local elements or colours to aid wayfinding	TCC
6	Accessway, Service Lane	**Lack of lighting** Lighting increases surveillance, perception of safety and can deter crime		Incorporate lighting to support passive surveillance and clear sightlines along the laneway by lighting pedestrian routes and spaces; • Provide lighting at an appropriate scale for pedestrians and at a range of heights for multiple surveillance points (interior and exterior) • Fix broken downlighting and security lighting to provide lighting consistency • Use lighting to enhance visibility at both ends of the laneway • Focus lighting on areas that are intended for night time uses • Ensure alcoves, recessed areas and entrances/exits are well lit • Avoiding glare from up-lights where possible • Feature lighting can also improve the attractiveness of the area.	Landowner

Figure 30 - CPTED Assessment table

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3 Accessibility Assessment

This section provides a high level outline of the 'accessibility' matters that require addressing to achieve good universal access for the laneway. The accessibility assessment covers issues under the following key themes;

- Accessible zone
- Injury prevention through environmental design (IPTED)
- Material selection
- Parking

A key objective of the proposed laneway development is to create an accessible route for users of all ages and abilities. There is a 4.1m change in topography between Durham Street and the service lane which will require a specific design response. This response may include ramps (1 in 12 minimum grade requirement), stairs or an elevator. This assessment is aimed at identifying the key universal accessibility considerations and high level design outcomes that should be integrated into the future design of the laneway. It does not seek to provide a detailed solution, which will be addressed as the projects moves through the design phases.

Durham St

There are few accessibility issues around the existing entrance of the laneway on Durham Street due the recent streetscape upgrade that provided suitable universal design outcomes and a pedestrian oriented street. The adjacent footpath by the proposed laneway entrance is wide and flush with accessible seating and a pedestrian crossing adjacent.

A service box is located along the edge of the footpath in the corner of the proposed laneway entrance.

Parking along Durham Street is generally limited due to the public transport and pedestrian orientated nature of the street, however there appears to be no designated accessible parking spaces.

Existing accessway

The existing accessway is fenced and does not provide a thoroughfare for the public. Access into the fenced area is provided through a secure gate off the service lane. The primary accessibility issue through this area is the existing level change of 4m+ between the top of the accessway (Durham Street) and the bottom (service lane). Given the accessibility requirements that the laneway design will need to meet, the grade and design of ramps and steps will need careful consideration to make sure these meet universal design standards. This also includes the use of handrails, tactiles and other accessibility elements.

Service lane

The service lane is predominantly a vehicle space and lacks appropriate amenity for pedestrians to feel safe. In the future it will provide an important pedestrian link between the two main laneway areas while also having to retain its movement function for vehicles along the corridor. Through the concept design phase this will need to be carefully considered so both accessibility and vehicle requirements can be met. This includes surfacing and grade (cross fall).

Currently the surfacing of the service lane is a mixture of asphalt, patched seal and gravel an is uneven in places, making for an uncomfortable surface for a mobility or visually impaired person to navigate. The service lane is not considered an accessible pedestrian route however consideration could be given to improving surfacing in future projects.

Private parking for businesses is provided along the service lane. This appears orderly however there is no defined parking.

Grey St

There are few accessibility issues around the entrance of the laneway on Grey St. The footpath is flush and wide, with street elements such as signs and light poles situated off the movement zone.

The surface types include clay brick pavers and a service lid. Consideration should be given to the comfort of these for mobility impaired pedestrians and the slip resistance once the entrance to the laneway is formed especially if open to the weather, with no overhead cover.

Pedestrian movements when exiting the laneway onto Grey Street should be considered, including the use of wayfinding to other key destinations and future laneway connections. As Grey Street is a popular pedestrian route, clear sightlines when exiting the laneway onto Grey Street should be considered especially with an increase in use of active modes such as e-scooters.

There is one accessible carpark across the street from the laneway entrance and two pedestrian crossings either side which will provide access over the road to connect to future laneways and the waterfront.

3.1 Opportunities and Recommendations

The proposed laneway design provides an opportunity to enhance accessibility throughout Tauranga's CBD. This is especially important given the role the laneway will play in connecting pedestrians to key destinations such as public transport hubs, University of Waikato and civic areas.

Key design considerations include;

- 1 in 12 (minimum grade) or 1 in 14 ramps (preferred grade) to Pedestrian Planning and Design Guide (NZTA) and NZS 4121:2001
- Handrails, tactiles and other accessibility elements to be included to NZS 4121:2001
- Surfacing of laneway and crossfalls to NZS 4121:2001
- Sightlines at entrances and exits
- Visual cues such as wayfinding and signage
- Rationalise amount of service lids and boxes in the laneway especially in pedestrian thoroughfare zones

Other accessibility considerations and mitigation recommendations have been detailed in the table on pages 21.

4 Next Steps

Following this assessment the recommended mitigations identified for each issue in the table should be considered and incorporated into the laneway concept design and any future design iterations where possible.

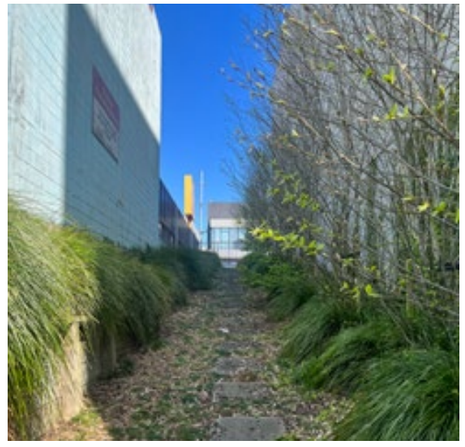


Figure 31 - Elevation change of accessway looking towards Durham Street

Figure 32 - Uneven level and surface types in service lane

Figure 33 - Pedestrian crossing adjacent to future laneway entrance

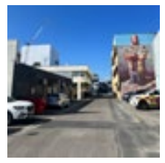
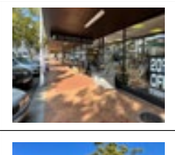
No.	Location	Issue		Mitigation	Responsible
Accessibility					
1	Accessway	**Grades** Surface grades need to meet universal design standards for all users. There is currently a level change of 4m+ along a 30m length of laneway		While 1 in 12 is recommended by the Pedestrian Planning and Design Guide (NZTA) as the maximum grade, a desirable grade of 1 in 14 is more accessible for wheelchair users. Maximum crossfall of 1% is recommended to prevent wheelchair users from rolling over the. This will need to be considered in the design of the laneway including the use of ramps, stairs and handrails to standards.	TCC
2	Accessway	**Accessible path of travel** The existing ground plane of the laneway presents a mulch and paver surface which does not meet accessibility standards		The through-route surfacing should be smooth and level, using textural differences only to delineate specific areas and to aid orientation. Consider large format paving or monolithic surfaces that are less prone to movement and provide a more consistent surface in the long term. Large pavers have a smaller number of joints and minimise potential tripping hazards. New pavements to be installed in alignment with NZS 4121:2001, Section 4 - Accessible Routes	TCC
3	Service lane	**Service lids** There is evidence of existing service lids within the laneway extent. Maintenance service lids can present slippery surfaces when wet and can be a slip hazard for users		Rationalise the amount and location of services within the 'through route' zone of the laneway as much as possible. Changes to ground levels should take into account maximum crossfalls and provide warning cues if appropriate. Drains or dish channel covers that are flush to the ground with smooth and narrow gaps are recommended. Recessed covers or using paver infills provide a clearer solution – reducing potential slip/trip hazards and improving amenity.	TCC
4	Service lane	**Service lane accessibility** A 'Through Route' is an area dedicated to pedestrian movement along the street. The service lane between Grey Street and Durham Street provides access for vehicles and parking. This area is not suited for pedestrians or mobility impaired users due to the existing vehicle priority and lack of dedicated footpath facilities		The service lane will play an important role in connecting the two laneways for pedestrians If there is a desire to enhance pedestrian connectivity along the service lane in general, a formalised pedestrian route or shared space should be considered for future development. It is recommended to provide signage or visual cues at the entrances to the service lane that this area is a shared space. NZS 4121:2001 Design for Access and Mobility requires tactile ground surface indicators (TGSI) to be used at vehicle crossings as an essential safety feature for pedestrians who are blind or visually impaired to provide clear visual contrast between the footpath and roadway and navigate the crossing.	TCC
5	Service lane	**Uneven surfaces create a tripping hazard** Step changes and uneven surfaces create a general tripping hazard and are obstacles to pedestrians and people with mobility and visual impairments.		The through route surfacing should be a smooth and level surface, using textural differences only to delineate specific areas and to aid orientation (e.g., shop fronts, dining/retail zone). Consider large format paving or monolithic surfaces that are less prone to movement and provide a more consistent surface in the long term. Larger pavers have a smaller number of joints and minimise potential tripping hazards. NZS 4121:2001 Design for Access and Mobility. A maximum crossfall of 1% is recommended to. There is an opportunity to replace the pavement section that links the two laneways to improve accessibility for wheelchair and visually impaired users to provide a safer route and remove any tripping hazards.	TCC
6	Durham St	**Footpath obstructions** The service boxes located at the entrance of the proposed laneway will create an obstruction to movement within the 'through route' zone.		A 'through route' zone should be provided along the footpath that contains an accessible and unobstructed path for pedestrian movement. Service boxes located in the road corridor should be relocated away from these areas	TCC
7	Durham and Grey St	**Sight lines** Grey Street and Durham Street feature larger numbers of pedestrians and with an increase in use of e-scooters, consider layout and hazards for pedestrians exiting the laneway into these movement zones.		Consider design of laneway entrances/exits to prevent creating blind corners. Provide visual cues to aid in slowing pedestrian and cyclist movements	TCC
8	All	**Parking capacity** There are limited accessible carparks around the laneway area aside from one along Grey St on the opposite side of the street		It is recommended that accessible carparking numbers are reviewed and provided in alignment with disability requirements. This is to minimise the distance of travel for people with mobility impairments who may be visiting the laneway or associated developments.	TCC

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Figure 34 - Accessibility Assessment table

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Shadow study

Appendix B

Shadow studies

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Shadow study

The diagrams on the following pages provide a shadow study based on the proposed development (Pre-concept Study, Evatt Martin, January 2022) and existing Trustpower building only. No buildings have been modelled along Grey Street or Durham Street, and a building height of 10m has been provided to show indicative buildings along the length of section 2 of the laneway.

The shadow studies show that at an 8m width, the laneway during the summer equinox would be partially shaded from the Trustpower building to the north during the morning and early afternoon. The southern edge of Section 1 would not be shaded by either building. Section 2 is likely to be shaded by the proposed development during the afternoon in summer.

During the winter solstice, due to the low angle of the sun, both section 1 and 2 of the laneway will be shaded by both buildings.

At a 7m width, the laneway will be further partially shaded during the summer equinox by the Trustpower building than at an 8m width, however there are still areas along the southern edge of section 1 that will not be shaded by either building. During the winter solstice, similar to the 8m width, both section 1 and 2 of the laneway will be shaded by both buildings.

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Option 1 - Elevator and stairs (8m width)

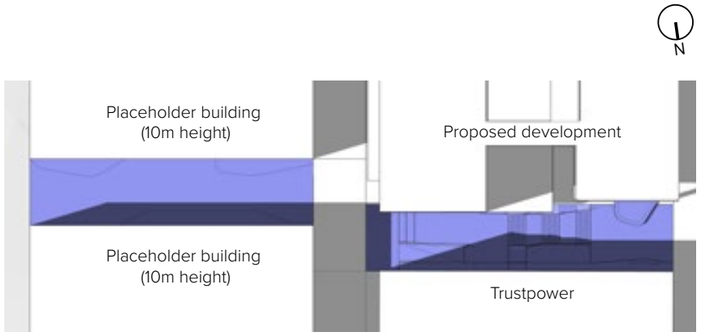


Figure 35 - December 22nd 9am

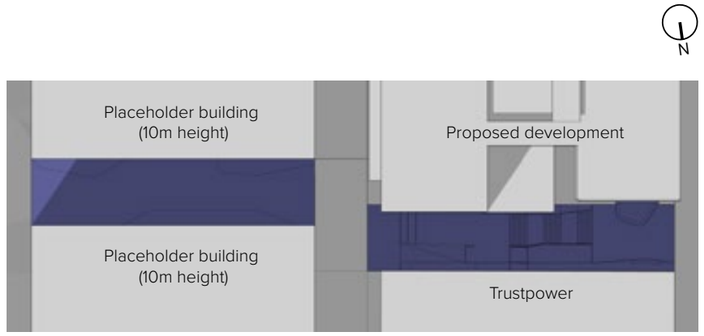


Figure 38 - June 22nd 9am

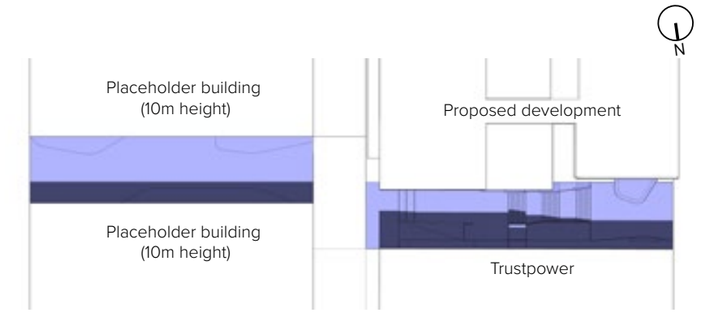


Figure 36 - December 22nd 12pm

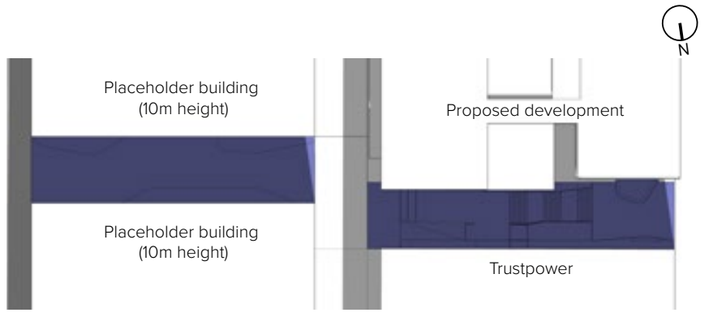
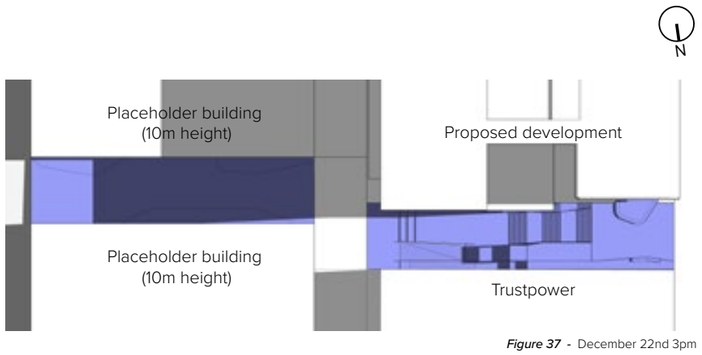


Figure 39 - June 22nd 12pm



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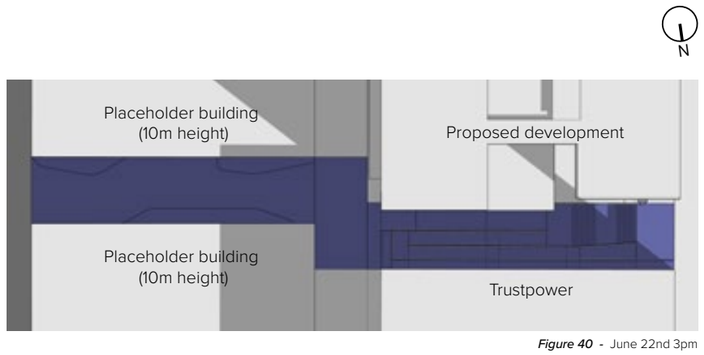

Figure 40 - June 22nd 3pm

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Option 3b - 1 in 12 ramp (8m width)

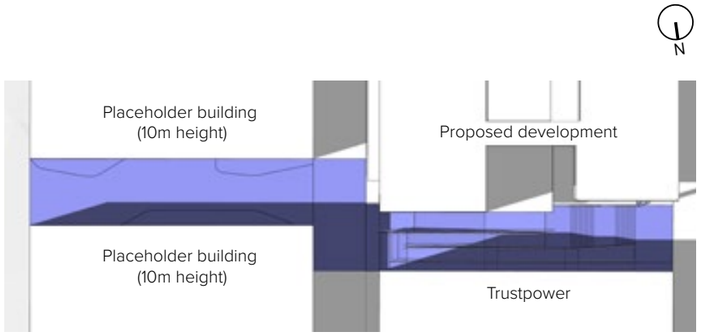

Figure 41 - December 22nd 9am

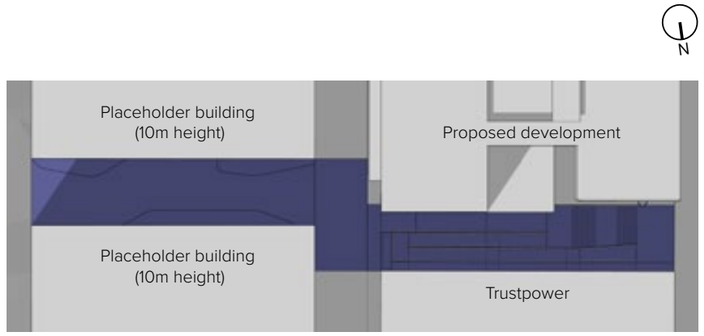

Figure 44 - June 22nd 9am

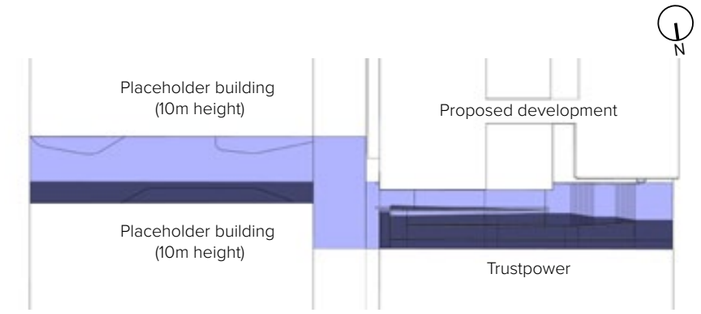

Figure 42 - December 22nd 12pm

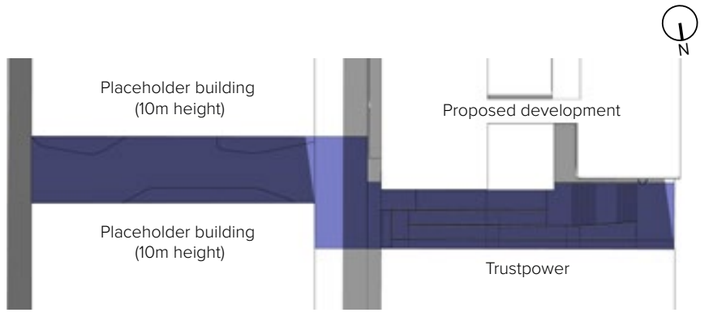

Figure 45 - June 22nd 12pm

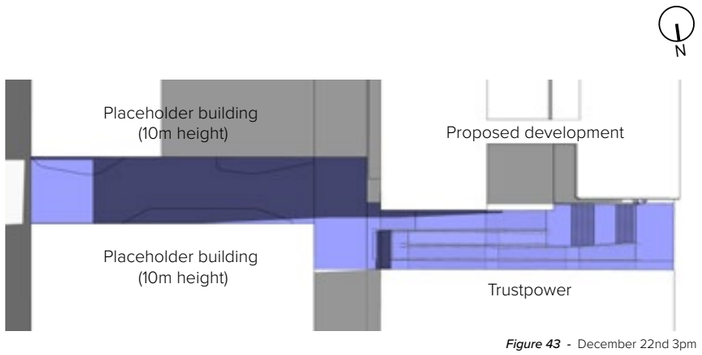

Figure 43 - December 22nd 3pm

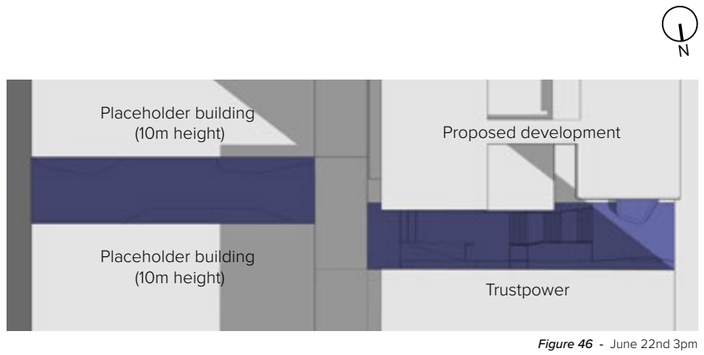

Figure 46 - June 22nd 3pm

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Option 4 - Stairs only (7m width)

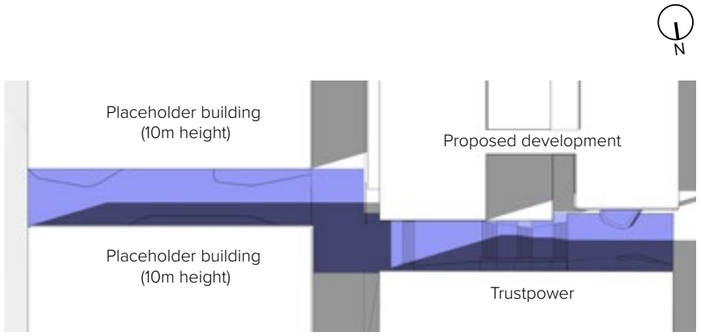

Figure 47 - December 22nd 9am

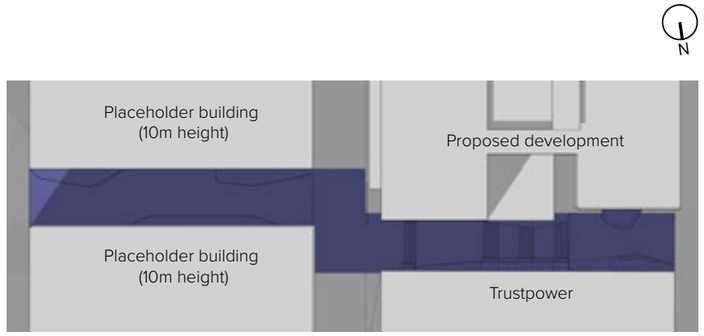

Figure 50 - June 22nd 9am

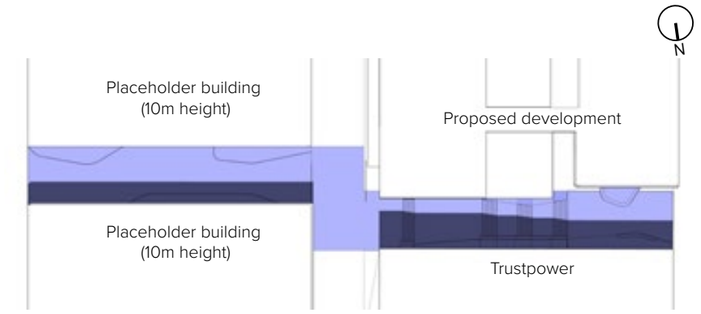

Figure 48 - December 22nd 12pm

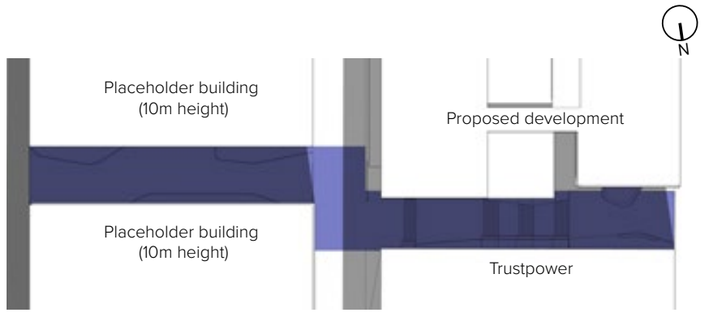

Figure 51 - June 22nd 12pm

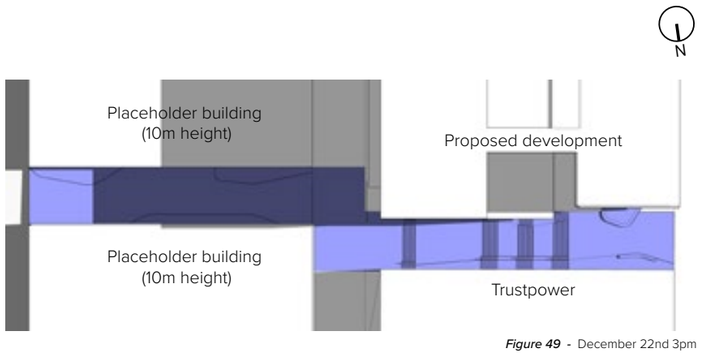

Figure 49 - December 22nd 3pm

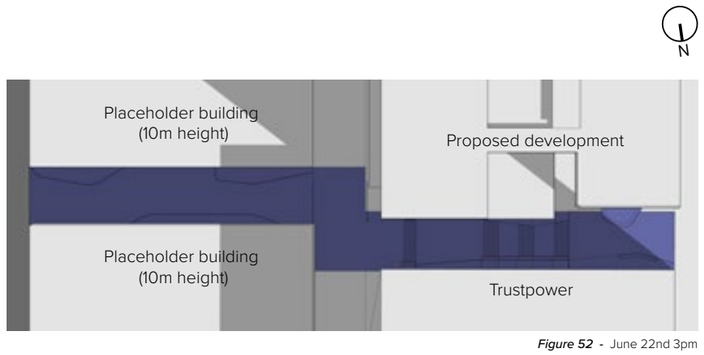

Figure 52 - June 22nd 3pm

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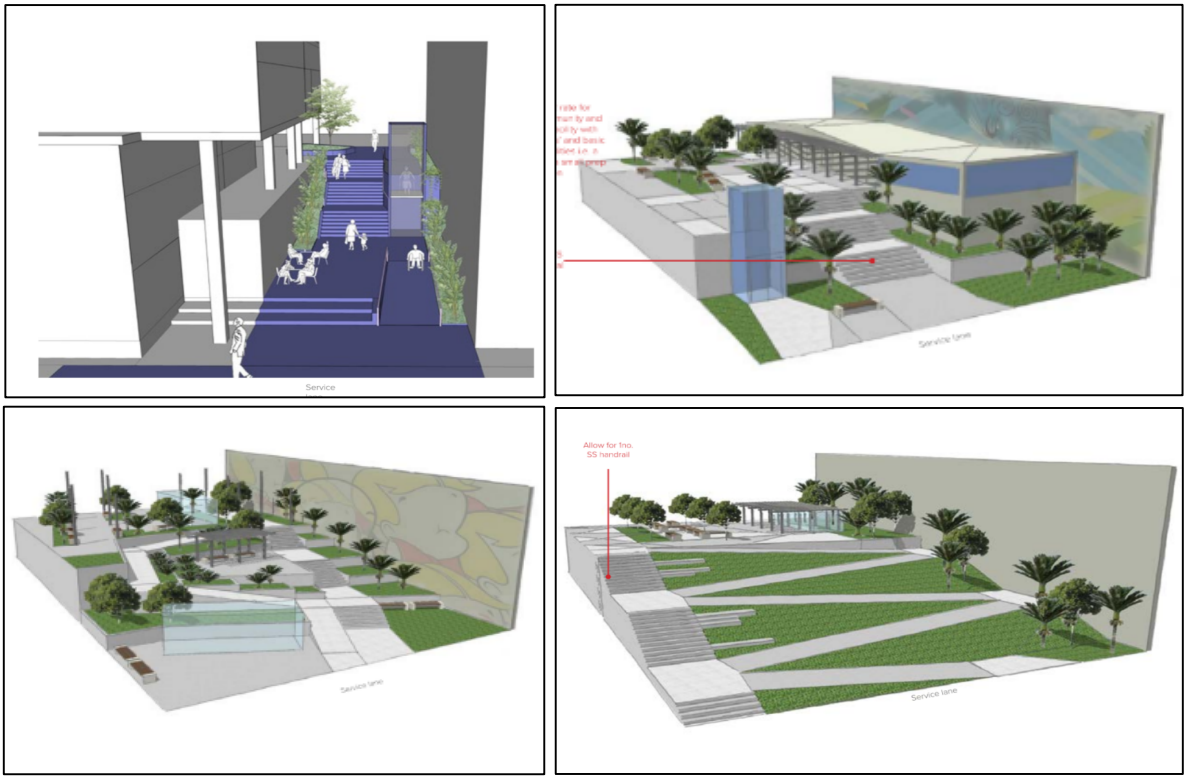
Optioneering Cost Summary

Appendix C

DURHAM STREET TO GREY STREET LANEWAY PROJECT
COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7

Prepared for Tauranga City Council
Prepared by Beca Limited

21 July 2023



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Revision History

Revision No	Prepared By	Description	Date
A	Stefanie Moke	Draft - Options 1, 3B & 4 - Issued internally for review and comment	14-12-2022
B	Mark Wilson	Final - Options 1, 3B & 4 - Includes review comments noted by the Design Practice	21-12-2022
C	Sakkie Theron	Draft - Options 5, 6 & 7 - Issued for verification	17-07-2023
D	Mark Wilson	Final - Options 5, 6 & 7	20-07-2023
E	Mark Wilson	Final - Options 1, 5, 6 & 7 - Updated with amendments advised by Design Team	21-07-2023

Document Acceptance

Action	Name	Signed	Date
Prepared by	Sakkie Theron		21-07-2023
Verified by	Mark Wilson		21-07-2023
Approved by	Tom Abbott		21-07-2023
on behalf of	Beca Limited		

Contents

Appendices

1 Introduction

Beca has been engaged by Tauranga City Council (TCC), to provide indicative, feasibility level cost estimates for the proposed new laneway connection, located between Durham Street and Grey Street, Tauranga. We note that this estimate is a contextual assessment which has been prepared for the purposes of screening and selection only. We recommend caution in the use of the reported values for anything other than the specified use noted in this report.

2 Executive Summary

The following cost estimate has been prepared for the proposed new laneway connection between Durham Street and Grey Street, Tauranga. This estimate is a high-level indicative assessment of the likely capital cost requirements of the project, based on the June 2023 Optioneering drawings, produced by Beca.

The values contained within this report are intended for high level evaluation, screening and selection purposes only. The estimates should not be considered as absolute/final, used for funding applications or final investment decisions. Further investigation and design to confirm the project scope requirements and provide definition to other elements of consequential work that may be required as part of the project.

In preparing this estimate, we have aligned the format and breakdown structure of our cost estimate summary, to align with the TCC Guideline Document for Project Cost Estimates for LTP (Revision 1.1 - Dated 18-08-2020). We note that the format prescribed in section 2 of this document follows similar format for estimating projects using risk based estimating principles.

In preparing this estimate, Beca has adopted risk based estimating principles to provide estimates with a level of confidence. The purpose of risk based estimating is to account for varying factors that influence the final cost outcome of any project (e.g. lack of scope definition, uncertainty, complexity/difficulty, external market factors, etc). Please note that a quantitative risk analysis (QRA) has not been prepared for this estimate however, class based accuracy ranges have been adopted to determine sensible levels of risk provisioning, relative to the current stage.

This assessment is generally considered to be a **Class 4 estimate with a level of accuracy of -30% (P5) to +30% (P95).** Please note that the estimate class is generally derived by the maturity of design information available, relative to the project stage. We also note that accuracy and certainty/confidence ranges have been collectively assessed to derive risk provisioning for this project.

General care and acknowledgement of potential optimism bias is recommended when interpreting/using the estimated costs for internal reporting purposes. This estimate must be read in conjunction with the estimate detail, assumptions, exclusions and identified risks/opportunities outlined within this report.

Detailed below is our summary of cost for the options proposed for this project:

	Option 1	Option 5		Option 6	Option 7
DURHAM STREET TO GREY STREET LANEWAY PROJECT	**Elevator & Stairs**	**Plaza & Elevator**	**Building**	**Cascade**	**Zig Zag**
Item Description	**NZD ($)**	**NZD ($)**	**NZD ($)**	**NZD ($)**	**NZD ($)**
Physical Works (Construction)	2,070,000	2,727,000	1,600,000	2,892,000	2,400,000
Project/Non-Construction Costs	519,000	602,000	352,000	638,000	528,000
Total Base Estimate - P5 (Lower Bound Accuracy Range)	**2,589,000**	**3,329,000**	**1,952,000**	**3,530,000**	**2,928,000**
Assessed Risk	777,000	999,000	587,000	1,059,000	879,000
Optimism Bias	Excluded	Excluded	Excluded	Excluded	Excluded
Total Expected Estimate - P50 (Mean & Likely Assessment)	**3,366,000**	**4,328,000**	**2,539,000**	**4,589,000**	**3,807,000**
Contingency/Funding Risk	1,010,000	1,299,000	761,000	1,377,000	1,143,000
Total 95th Percentile/Project Estimate - P95 (Upper Bound Accuracy Range)	**4,376,000**	**5,627,000**	**3,300,000**	**5,966,000**	**4,950,000**
Escalation	Excluded	Excluded	Excluded	Excluded	Excluded

Note: All costs exclude Goods & Services Tax (GST) & Escalation. Further detail relating to the above assessment is outlined in Section 6 of this report and in the Appendices section.

Our recommendations based on the results of the cost estimate assessment are as detailed below:

- The assessed contingency/risk provisions included in this estimate at the Expected Estimate (P50) level should not be regarded as discretionary or 'buffer' in the assessed costs. These allowances will eventually take form as additional scope of work in the developed design.

- That the investment plan strategy considers funding risk between the P50 & P95 ranges (e.g. 100% funded or 1/2, 1/5, 1/10, 1/20 recognising that not all projects will exceed the P50 range). We generally recommend investigation and statistical analysis into comparable projects which have resulted in deviation above the P50

- That all project risks and opportunities are considered jointly in the strategy for meeting budget target. Please note that opportunities (e.g. reductions in form/location/type/specification/scope or construction methodology, etc) have not been considered in this assessment.

- Review of the estimating framework/work break-down structure and appropriateness for meeting business case reporting needs.

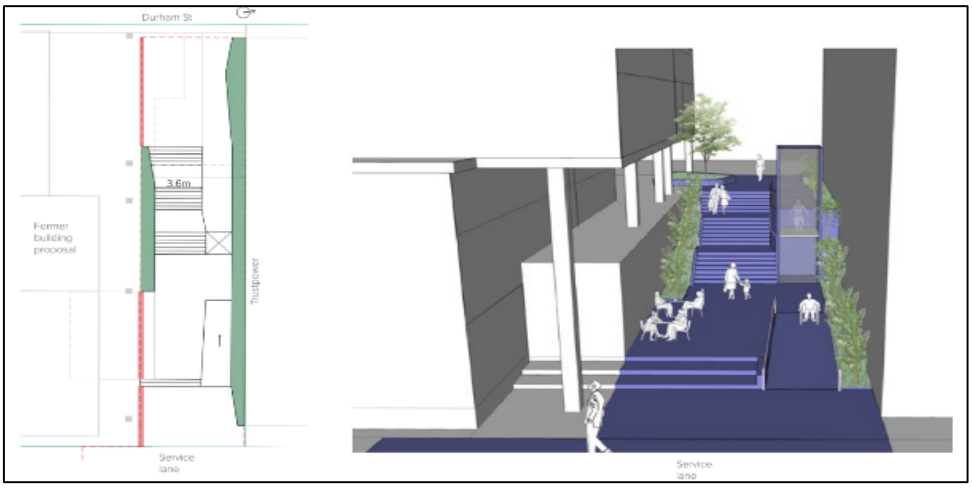
- That all non-construction/project related costs and noted estimate exclusions/assumptions are reviewed, considered and understood. Where items are required (but have been excluded), the project cost estimate should be adjusted accordingly.

- The project is at an early stage of development and therefore, a significant degree of the cost estimate is based on interpretation and professional judgement, particularly in respect of performance and quality. At this stage of the cost estimation process, this can lead to variances in assessed scope, cost and allocation of risk. As there is limited design information available, the project team may have a variable understanding of the project requirements. Where cost differences occur in the estimate, professional experience and judgement should be exercised to confirm whether there is opportunity to shape the project in a manner that provides a cost envelope that is achievable.

3 Report Scope

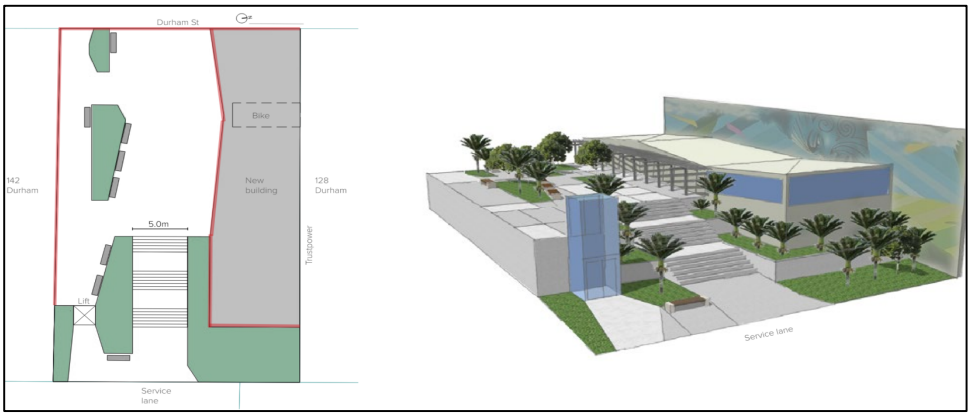
The following scope of work is included in this assessment:

Option 1 - Elevator & Stairs
- Construction of a elevator building and installation of elevator
- Precast reinforced concrete stairs and ramps to multiple levels, with stainless steel handrails
- Insitu reinforced concrete retaining walls
- Steel framed and glazed canopy
- New drainage and electrical services
- Landscaping, feature artwork and street furniture
- Feature cobble pavements

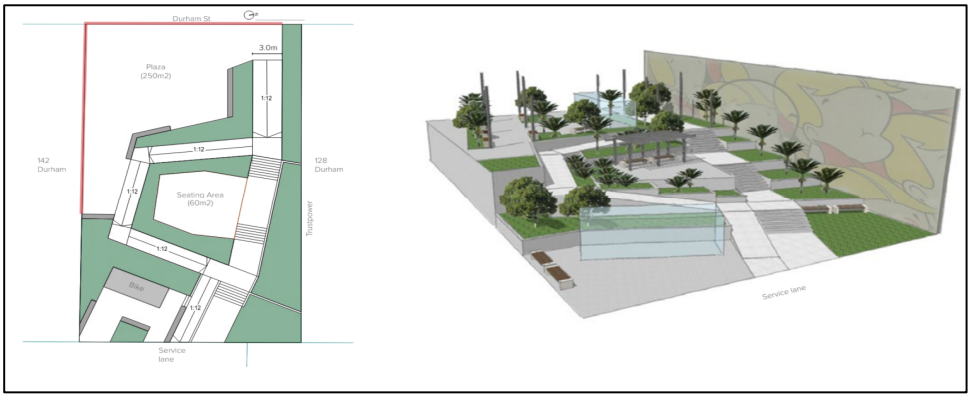


- **Option 5 - Plaza & Elevator**
  - Construction of a elevator building and installation of elevator
  - New Plaza
  - Precast reinforced concrete stairs and ramps to multiple levels, with stainless steel handrails
  - Insitu reinforced concrete retaining walls
  - Steel framed and glazed canopy to provide shelter
  - New drainage and electrical services
  - Landscaping, feature artwork and street furniture
  - Feature cobble pavements

- **New Building**
  - Construction of a 242m2 new building **(**Community and/or University Facility**)** with bike shelter incorporated



- **Option 6 - Cascade**
  - Precast reinforced concrete stairs and concrete ramps to multiple levels, with stainless steel handrails
  - New Plaza with basic shelter at top platform
  - New Bike Lockers at Service Lane platform
  - New Outdoor Seating area
  - Insitu reinforced concrete retaining walls to all ramps and perimeter
  - Steel framed and glazed canopy to provide shelter
  - New drainage and electrical services
  - Landscaping, feature artwork and street furniture
  - Feature cobble pavements



- **Option 7 - Zig Zag**
  - Precast reinforced concrete stairs and concrete ramps with access to multiple levels, including stainless steel handrails to stairs
  - New Plaza with Shelter/Kiosk
  - New Bike Lockers
  - Insitu reinforced concrete retaining walls
  - New drainage and electrical services
  - Landscaping, feature artwork and street furniture
  - Feature cobble pavements

4 Report Objectives

This report sets out to achieve the following objectives:

- Provide clarity and context to the expected capital cost requirements needed to deliver the Laneway development (expected and pessimistic forecasts).
- Establish a common estimation framework that will link into TCC's own guidelines for delivering LTP cost estimates.
- Provide definition to the scope of work assessed for the purposes of assessing/allocating risk and continency provisions.
- Advise important aspects of the assessment including the basis of estimate (in terms of design information or market enquiry relied on), estimate class adopted for assessment and, the purpose/use/reliance of the final estimate deliverable.
- Level all cost assessment work to a specific reference date for LTP inflation modelling.

5 Report Methodology

5.01 Cost Reporting Format

In preparing this is estimate, we have updated the format and breakdown structure of the estimate summaries, to align with the TCC Guideline Document for Project Cost Estimates for LTP (Revision 1.1 - Dated 18-08-2020). We note that format prescribed in section 2 of this document follows similar format for estimating major infrastructure projects using risk based method of assessment.

Figure 1 below is an extract of the format set out in section 2 of the TCC Guideline Document for Project Cost Estimates for LTP which has been adopted for use in this report:

What we know	**Construction Cost Estimate**	Physical works costs, procurement, contract administration and quality assurance, commissioning and handover etc.
	+	
	Non-Construction Cost Estimate	Internal management costs, consultation, business case development, planning, design, consents, investigations property acquisition etc.
	=	
	Base Estimate	Estimate of known expected costs
	+	
Dealing with the unknowns	**Risk Quantification**	Quantification (probable cost) of the 'known unknowns'[3] i.e. potential risk events which may or may not occur, using previous project experience. The user needs to ensure cost of any mitigations is included in the Base Estimate.
	+	
	Optimism Bias Adjustment	Being realistic with our estimates and making an informed adjustment based on how much risk has already been allowed for above, and how optimistic we may have been in the Base Estimate
	=	
	Expected Estimate	What we expect the project to cost in total
	+	
	Contingency	Based on judgment and previous project experience, what additional contingency may be required i.e. allow for the 'unknown knowns[4]'
	=	
	Total Project Cost Estimate	Total expected project cost at completion, to be taken forward into the LTP business case

Figure 1 Project cost estimation overview

We note for clarity that that the Expected Estimate and Project Cost Estimate levels used in the TCC guidelines are equivalent to the risk based estimating methods used in this assessment (i.e. Expected Estimate = P50 Confidence Range / Project Cost Estimate = P95 Confidence Range).

The estimates included in this report have been prepared using a risk based estimating framework to define cost with a level of confidence. The confidence levels referred to in this report are generally defined below:

- **Expected Estimate (P50)** - The mean assessment which the final project out-turn cost is not expected to exceed.
- **95th Percentile Estimate (P95)** - The pessimistic assessment (bias) which the final project out-turn cost is not expected to exceed.

The contingency/risk provisions included in the 50/95th percentile estimates, generally account for all aspects of uncertainty expected for the project. Further details relating to the types of risks expected are explained further later in this report.

5.02 Estimation Methodology

New estimates will generally be prepared using a combination of high level and detailed estimating principles (i.e. cost per functional area, cost per elemental item, cost resourcing, first principals, etc) for the key scope items identified. These estimates will be valued using historical project records and tender returns, budget quotes from suppliers for specialist plant and equipment, industry rates sourced from public sector data-bases (i.e. QV Cost Builder) and Beca's own general experience.

5.03 Estimation Accuracy

The estimate accuracy range is an indication of the degree to which the final cost outcome for a given project may vary from the estimated cost. Accuracy is expressed as a +/- percentage range around the point of estimate after the application of contingency, with a stated level of confidence that the actual cost outcome would fall within this range. As the level of project definition increases the expected accuracy of the estimate generally improves, as indicated by the reduced +/- range. Please note that the upper bound estimate for this assessment is the 95th percentile confidence range.

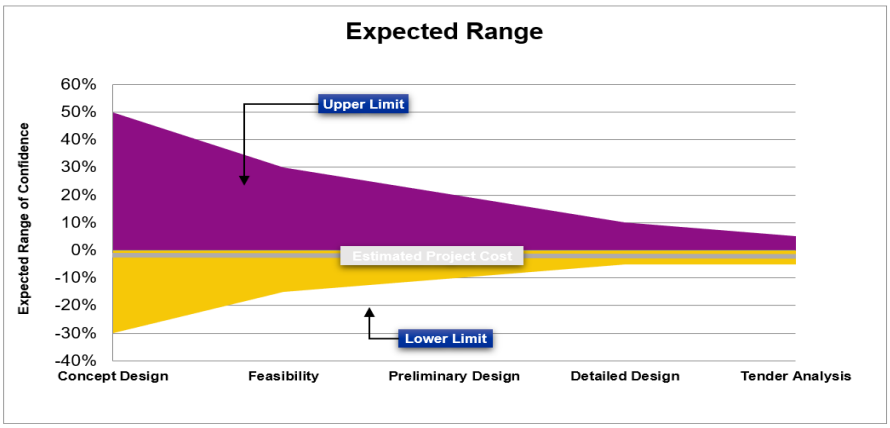


Figure 1: A typical estimate range envelope (for illustration purposes only) for NZ projects

This accuracy range highlights the following unknown risks that can impact the project that are difficult to predict or value. As the project gets closer to tender this range will reduce to reflect the level of confidence in the design and information available and level of risk. These risks could include (but are not limited to) the following:

The accuracy of any estimate is generally commensurate with the level of design information completed as indicated in the following table:

	Primary Characteristic	*Secondary Characteristic*			
ESTIMATE CLASS	**LEVEL OF PROJECT DEFINITION** Expressed as % of complete definition	**END USAGE** Typical purpose of estimate	**METHODOLOGY** Typical estimating method	**EXPECTED ACCURACY RANGE** Typical variation in low and high ranges [a]	**PREPARATION EFFORT** Typical degree of effort relative to least cost index of 1 [b]
Class 5	0% to 2%	Concept Screening	Capacity Factored, Parametric Models, Judgment, or Analogy	L: -20% to -50% H: +30% to +100%	1
Class 4	1% to 15%	Study or Feasibility	Equipment Factored or Parametric Models	L: -15% to -30% H: +20% to +50%	2 to 4
Class 3	10% to 40%	Budget, Authorization, or Control	Semi-Detailed Unit Costs with Assembly Level Line Items	L: -10% to -20% H: +10% to +30%	3 to 10
Class 2	30% to 70%	Control or Bid/ Tender	Detailed Unit Cost with Forced Detailed Take-Off	L: -5% to -15% H: +5% to +20%	4 to 20
Class 1	50% to 100%	Check Estimate or Bid/Tender	Detailed Unit Cost with Detailed Take-Off	L: -3% to -10% H: +3% to +15%	5 to 100

Notes:
[a] The state of process technology and availability of applicable reference cost data affect the range markedly. The +/- value represents typical percentage variation of actual costs from the cost estimate after application of contingency (typically at a 50% level of confidence) for given scope.
[b] If the range index value of "1" represents 0.005% of project costs, then an index value of 100 represents 0.5%. Estimate preparation effort is highly dependent upon the size of the project and the quality of estimating data and tools.

This assessment is generally considered to be a **Class 4 estimate with a level of accuracy of -30% (P5) to +30% (P95).** Please note that the estimate class is generally derived by the maturity of design information available, relative to the project stage. We also note that accuracy and certainty/confidence ranges have been collectively assessed to derive risk provisioning for this project.

6 Results/Findings

6.01 Summary of Cost

		Option 1	Option 5		Option 6	Option 7
	DURHAM STREET TO GREY STREET LANEWAY PROJECT	Elevator & Stairs	Plaza & Elevator	Building	Cascade	Zig Zag
Ref	Item Description	NZD ($)	NZD ($)	NZD ($)	NZD ($)	NZD ($)
A	**Physical Works (Construction)**					
A1	Environmental Compliance	12,000	12,000	-	12,000	12,000
A2	Traffic Management & Temp Works	12,000	12,000	-	12,000	12,000
A3	Service Relocations	50,000	50,000	-	50,000	50,000
A4	Demolition and Enabling	7,000	72,000	-	72,000	72,000
A5	Earthworks	32,000	51,000	-	51,000	51,000
A6	Structures	320,000	637,000	-	995,000	503,000
A6A	Canopy/Shelters & Buildings	470,000	350,000	1,600,000	180,000	280,000
A7	Pavements and Surfacing	84,000	103,000	-	136,000	155,000
A8	Kerb and Channels	4,000	9,000	-	26,000	24,000
A9	Drainage Services	50,000	68,000	-	62,000	62,000
A10	Electrical Services	137,000	172,000	-	192,000	203,000
A11	Vertical Transportation	150,000	150,000	-	0	0
A12	Soft Landscaping & Artwork	258,000	407,000	-	426,000	421,000
A13	Street Furniture & Signage	49,000	62,000	-	72,000	51,000
A14	Main Contractors P&G (15%)	246,000	324,000	Included	343,000	285,000
A15	Main Contractors Off-Site OH&P (10%)	189,000	248,000	Included	263,000	219,000
	Total Physical Works Estimate	**2,070,000**	**2,727,000**	**1,600,000**	**2,892,000**	**2,400,000**
B	**Project/Non-Construction Costs**					
B1	Internal Management Costs (4%)	83,000	110,000	64,000	116,000	96,000
B2	Land & Property Costs	Excluded	Excluded	Excluded	Excluded	Excluded
B3	Procurement	Included	Included	Included	Included	Included
B4	Consenting	Included	Included	Included	Included	Included
B5	Iwi Consultation	Excluded	Excluded	Excluded	Excluded	Excluded
B6	Pre-Construction Public Consultation	Excluded	Excluded	Excluded	Excluded	Excluded
B7	Site Investigations	Included	Included	Included	Included	Included
B8	Professional Services (15%)	311,000	328,000	192,000	348,000	288,000
B9	Specialist Advisors	Excluded	Excluded	Excluded	Excluded	Excluded
B10	Contract Admin & Const. Monitor (6%)	125,000	164,000	96,000	174,000	144,000
B11	Insurances	Excluded	Excluded	Excluded	Excluded	Excluded
B12	Commissioning	Included	Included	Included	Included	Included
B13	Sunk Costs to Date	Excluded	Excluded	Excluded	Excluded	Excluded
	Total Project/Non-Construction Costs	**519,000**	**602,000**	**352,000**	**638,000**	**528,000**
	Total Base Estimate - P5 (A + B)	**2,589,000**	**3,329,000**	**1,952,000**	**3,530,000**	**2,928,000**
C	**Assessed Risk & Optimism Bias**					
C1	AR-Design/Scope Dev. (20%)	518,000	666,000	391,000	706,000	586,000
C2	AR-Const. Contingency (10%)	259,000	333,000	196,000	353,000	293,000
C3	OB-Procurement	Excluded	Excluded	Excluded	Excluded	Excluded
C4	OB-Project Specific	Excluded	Excluded	Excluded	Excluded	Excluded
C5	OB-Client Specific	Excluded	Excluded	Excluded	Excluded	Excluded
C6	OB-Environment	Excluded	Excluded	Excluded	Excluded	Excluded
C7	OB-External Influences	Excluded	Excluded	Excluded	Excluded	Excluded
	Total Assessed Risk & Optimism Bias	**777,000**	**999,000**	**587,000**	**1,059,000**	**879,000**
	Total Expected Estimate - P50 (A + B + C)	**3,366,000**	**4,328,000**	**2,539,000**	**4,589,000**	**3,807,000**
D	**Contingency/Funding Risk**					
D1	Contingency/Funding Risk (30%)	1,010,000	1,299,000	761,000	1,377,000	1,143,000
	Total Contingency/Funding Risk	**1,010,000**	**1,299,000**	**761,000**	**1,377,000**	**1,143,000**
	Total 95th Percentile/Project Estimate - P95 (A + B + C + D)	**4,376,000**	**5,627,000**	**3,300,000**	**5,966,000**	**4,950,000**
E	**Escalation**					
E1	Escalation Allowance	Excluded	Excluded	Excluded	Excluded	Excluded
	Total Escalation	**0**	**0**	**0**	**0**	**0**

Note: All costs exclude Goods & Services Tax (GST) & Escalation.

6.04 Escalation/Inflation

We note the following points in relation to escalation provisions for this project:

- Where supplier, contractor, consultant costs have been advised (but are out of date), these have been updated to reflect todays expected value using indices provided by the NZ Institute of Economic Research (NZIER).
- Escalation/inflationary provisions beyond 4Q2022 are excluded from this estimate.
- We have assumed that the approximate delivery dates for implementing each project are still yet to be determined for the investment plan.
- The impacts of escalation/inflation is expected to be significant on any project. We generally recommend that inflation is calculated to the mid-point of construction to account for costs incurred over this period.

6.05 Project Benchmarking

The applied rates have generally been built-up using first principles basis, for labour, plant and material resources required to complete the work including indicative costs for specialist contractors and/or suppliers. These elements have been benchmarked against similar projects, although a general comparison is not always possible due to difference of the overall project scope and complexity.

6.06 Project Risks

We note that a detailed Quantitative Risk Assessment has not been prepared for this project. A high level assessment of the P50/95 risk provisioning has been made based on perceived uncertainty on the scope of work required and risks expected, relative to the information provided. Should the client wish to adopt the estimated costs for anything other than its specified use (as noted in the executive summary) then it is highly recommended that the 95th Percentile Estimate range (i.e. pessimistic bias) be used to account for scope and risk uncertainty in the project.

A detailed risk review has not been undertaken however, the following project risks have been identified with the current scheme:

- Scoping risk as identified above.
- Procurement / low market appetite, etc.
- Overheated construction market limiting resource availability, resulting in prolonged programme and/or inflated costs.
- Pandemic and conflict related economic pressures (e.g. shortages of raw materials and rising fuel costs).
- Prolonged delivery programme.
- Unexpected ground or site conditions.
- Low contracting capability and/or availability locally to deliver the work resulting in premiums for mobilising from other regions.
- Natural events (adverse weather, earthquake, tsunami, etc).

6.07 Value Management Opportunities

The following Value Management Opportunities have been identified with the current scheme:

- Not reviewed due to limited information.

6.08 Construction Programme

This estimate is based on the following construction programme assumptions:

- TBC. Not reviewed

6.09 Procurement

This estimate is based on the following construction procurement assumptions:

- TBC. Not reviewed

6.10 Estimate Assumptions

Our estimate of cost is based on the following working assumptions:

- The works will be procured under competitive bid scenario via local building contractors (Generally - In the absence of a defined procurement strategy).
- Unrestricted access to carry out the works.
- The works will be undertaken under normal working hours.
- The works will be undertaken concurrently. No allowance has been made in our estimate for staged works.
- The works will be carried out by a Single Main Contractor. No allowance has been made for multiple contracts.
- Assumptions as noted specifically in the detailed estimate.

6.11 Estimate Exclusions

Our estimate of cost excludes the following:

- Goods & Services Tax (GST).
- Escalation provisions beyond present date pricing.
- All sunk design & engineering costs to date.
- Maintenance and renewal works to existing adjacent assets.
- Land acquisition costs.
- All ancillary client operational costs including (but not limited to) staff & accommodation insurance, legal, Accounting, financing, marketing & sales, etc.
- Acceleration costs or out of hours working.
- Noise mitigation works.
- The impacts of extraordinary events such as (but not limited to) global pandemic, world conflict, earthquake, tsunami, etc.
- Asset renewal works due to 'end of life' issues.
- A detailed quantitative risk analysis (QRA). Note: Risk/contingency values are based percentages relative to the estimate Class.
- Reinstatement of building damage to adjacent properties during construction
- All other exclusions specifically noted in the cost estimate and covering summary.

7 Recommendations

The following summary forms the basis of our recommendation:

	Option 1	Option 5		Option 6	Option 7
DURHAM STREET TO GREY STREET LANEWAY PROJECT	**Elevator & Stairs**	**Plaza & Elevator**	**Building**	**Cascade**	**Zig Zag**
Item Description	**NZD ($)**	**NZD ($)**	**NZD ($)**	**NZD ($)**	**NZD ($)**
Physical Works (Construction)	2,070,000	2,727,000	1,600,000	2,892,000	2,400,000
Project/Non-Construction Costs	519,000	602,000	352,000	638,000	528,000
Total Base Estimate - P5 (Lower Bound Accuracy Range)	**2,589,000**	**3,329,000**	**1,952,000**	**3,530,000**	**2,928,000**
Assessed Risk	777,000	999,000	587,000	1,059,000	879,000
Optimism Bias	Excluded	Excluded	Excluded	Excluded	Excluded
Total Expected Estimate - P50 (Mean & Likely Assessment)	**3,366,000**	**4,328,000**	**2,539,000**	**4,589,000**	**3,807,000**
Contingency/Funding Risk	1,010,000	1,299,000	761,000	1,377,000	1,143,000
Total 95th Percentile/Project Estimate - P95 (Upper Bound Accuracy Range)	**4,376,000**	**5,627,000**	**3,300,000**	**5,966,000**	**4,950,000**
Escalation	Excluded	Excluded	Excluded	Excluded	Excluded

Note: All costs exclude Goods & Services Tax (GST) & Escalation. Further detail relating to the above assessment is outlined in Section 6 of this report and in the Appendices section.

Our recommendations based on the results of the cost estimate assessment are as detailed below:

- The assessed contingency/risk provisions included in this estimate at the Expected Estimate (P50) level should not be regarded as discretionary or 'buffer' in the assessed costs. These allowances will eventually take form as additional scope of work in the developed design.
- That the investment plan strategy considers funding risk between the P50 & P95 ranges (e.g. 100% funded or 1/2, 1/5, 1/10, 1/20 recognising that not all projects will exceed the P50 range). We generally recommend investigation and statistical analysis into comparable projects which have resulted in deviation above the P50
- That all project risks and opportunities are considered jointly in the strategy for meeting budget target. Please note that opportunities (e.g. reductions in form/location/type/specification/scope or construction methodology, etc) have not been considered in this assessment.
- Review of the estimating framework/work break-down structure and appropriateness for meeting business case reporting needs.
- That all non-construction/project related costs and noted estimate exclusions/assumptions are reviewed, considered and understood. Where items are required (but have been excluded), the project cost estimate should be adjusted accordingly.
- The project is at an early stage of development and therefore, a significant degree of the cost estimate is based on interpretation and professional judgement, particularly in respect of performance and quality. At this stage of the cost estimation process, this can lead to variances in assessed scope, cost and allocation of risk. As there is limited design information available, the project team may have a variable understanding of the project requirements. Where cost differences occur in the estimate, professional experience and judgement should be exercised to confirm whether there is opportunity to shape the project in a manner that provides a cost envelope that is achievable.

8 Reference Documentation

Our estimate is based on the following documentation:

- Durham Street to Grey Street Laneway Optioneering Drawings, June 2023 Options 5,6 and 7
- TCC Guideline Document for Project Cost Estimates for LTP (Revision 1.1 - Dated 18-08-2020)
- Inflation indices provided by the NZ Institute of Economic Research (NZIER).

9 Limitations

This report is commensurate to the level of technical information available at the time of the assessment undertaking. We therefore advise absolute caution in the use/application of the reported figures for anything other than its intended use.

In preparing this report we have acted solely in our capacity as Quantity Surveyors therefore, our comments in this report should not be construed as legal, insurance, tax, engineering, planning, construction or any other specialist advice, irrespective of whether Beca is capable of providing such advice. In particular, but without limiting any other statement in this report, our review comments on any such matters have been restricted to identifying whether there are any aspects that appear to be unusual, based on our experience as qualified Quantity Surveyors.

The preparation of this report does not imply in any way that Beca has audited the financial statements, management accounts, engineering or other records. Where another party has supplied information for use in this report, it is assumed to be reliable.

This report has been prepared by Beca on the specific instructions of our Client. It is solely for our Client’s use for the purpose for which it is intended in accordance with the agreed scope of work. Any use or reliance by any person contrary to the above, to which Beca has not given its prior written consent, is at that person's own risk.

This report must be read in its entirety and no portion of it should be relied on without regard to the report as a whole, especially the assumptions, limitations and disclaimers set out in the estimate notes and elsewhere in the report.

While Beca believes that the use of the assumptions in the report are reasonable for the purposes of this study, Beca makes no assurances with respect to the accuracy of such assumptions and some may vary significantly due to unforeseen events and circumstances.

In preparing this estimate, Beca has relied on the accuracy, completeness and currency of the information provided, therefore is not responsible for the information provided, and has not sought to independently verify it. To the extent that the information is inaccurate or incomplete, the opinions expressed by Beca may no longer be valid and should be reviewed.

Beca reserves the right, but not the obligation, to review all calculations included or referred to in this report and, if considered necessary, to revise its opinion in the light of any new or existing information.

A1

Appendix A1 - Option 1 - Elevator & Stairs - Cost Estimate Detail

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 21 July 2023

Author: Stefanie Moke - Modified by Mark Wilson (Verified by Mark Wilson)

Appendix A1 - Option 1 - Elevator & Stairs - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A0	**Key Metric Data**					
A0.01	Section 1 Area	296.00	m2	-	-	
A0.02	Service Lane Area	83.00	m2	-	-	
A0.03	Section 2 Area	234.00 Excluded	m2	-	-	
A0.04	Total Area	379.00	m2	-	-	
A0.05	Cost/Area	5,461.74	$/m2	-	-	
A1	**Environmental Compliance**					**12,000.00**
A1.01	Prepare the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan	1.00	LS	2,000.00	2,000.00	
A1.02	Update, implement & maintain the Contractor's Environmental Management Plan & Erosion & Sediment Control Plan incl. all temporary works & removal on completion	1.00	LS	10,000.00	10,000.00	
A1.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A2	**Traffic Management & Temporary Works**					**12,000.00**
A2.01	Prepare Contractor's Temporary Traffic Management Plan	1.00	LS	2,000.00	2,000.00	
A2.02	Update, implement and maintain the Contractor's temporary traffic management plan including temporary works and removal on completion - Work completed outside road	1.00	LS	10,000.00	10,000.00	
A2.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A3	**Service Relocations**					**50,000.00**
A3.01	Allowance for service relocations, protection and isolation works (Minor work assumed - Extent not defined)	1.00	LS	50,000.00	50,000.00	
A3.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A4	**Demolition and Enabling**					**7,000.00**
A4.01	Allow for general site clearance	1.00	LS	2,000.00	2,000.00	
A4.02	Remove and dispose all soft landscaping	1.00	LS	2,070.00	2,070.00	
A4.03	Remove and dispose hard landscaping - Section 1	296.00	m2	55.00	Not Required Included Above	
A4.04	Remove and dispose hard landscaping - Service Lane - Assumed asphalt concrete	83.00	m2	35.00	2,905.00	
A4.05	Remove and dispose hard landscaping - Section 2 - Assumed reinforced concrete	234.00	m2	65.00	Excluded	
A4.06	Rounding Adjustment	1.00	LS	25.00	25.00	
A5	**Earthworks**					**32,000.00**
A5.01	Cut to waste - Section 1 - Average 1.0m deep assumed	296.00	m3	45.00	13,320.00	
A5.02	Cut to waste - Service Lane - Average 0.3m deep assumed	24.90	m3	45.00	1,120.50	
A5.03	Cut to waste - Section 2 - Average 0.3m deep assumed	70.20	m3	45.00	Excluded	
A5.04	GAP65 imported engineering fill, compacted - Section 1 - 50% of excavated volume assumed	148.00	m3	100.00	14,800.00	
A5.05	GAP65 imported engineering fill, compacted - Service Lane - Average 0.3m deep assumed	24.90	m3	100.00	2,490.00	
A5.06	GAP65 imported engineering fill, compacted - Section 2 - Average 0.3m deep assumed	70.20	m3	100.00	Excluded	
A5.07	Rounding Adjustment	1.00	LS	269.50	269.50	
A6	**Structures**					**320,000.00**
A6.01	400 x 400mm, insitu reinforced concrete foundation to stairs & ramp - Section 1	32.00	m	560.00	17,920.00	
A6.02	1,800 x 400mm, insitu reinforced concrete foundation (including 200 x 200mm toe) to retaining walls - Section 1	17.00	m	2,660.00	45,220.00	
A6.03	400 x 400mm, insitu reinforced concrete foundation to planter box/seating - Section 1	121.00	m	560.00	67,760.00	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 21 July 2023

Author: Stefanie Moke - Modified by Mark Wilson (Verified by Mark Wilson)

Appendix A1 - Option 1 - Elevator & Stairs - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A6.04	400 x 400mm, insitu reinforced concrete foundation to planter box/seating - Section 2	89.00	m	560.00	Excluded	
A6.05	200mm thick, insitu reinforced concrete retaining wall - Section 1 - Assumed for major level differences - Adjacent stairs & ramp	17.93	m2	670.00	12,009.75	
A6.06	200mm thick, insitu reinforced concrete retaining wall - Section 1 - Assumed for major level differences - Adjacent Trustpower building	39.00	m2	670.00	26,130.00	
A6.07	200mm thick, insitu reinforced concrete retaining wall - Section 1 - Assumed for major level differences - Adjacent proposed development site	39.00	m2	670.00	26,130.00	
A6.08	600mm high x 200mm thick, insitu reinforced concrete planter box - Section 1	72.60	m2	670.00	48,642.00	
A6.09	600mm high x 200mm thick, insitu reinforced concrete planter box - Section 2	53.40	m2	670.00	Excluded	
A6.10	4,000mm x 100mm thick, precast reinforced concrete stairs & landings including prepared sub-base	4.00	m/rise	18,000.00	72,000.00	
A6.11	100mm thick, insitu reinforced concrete ramp including prepared sub-base - Section 1	16.00	m2	123.00	1,968.00	
A6.12	100mm thick, insitu reinforced concrete slab including prepared sub-base - Section 1	17.00	m2	123.00	2,091.00	
A6.13	100mm thick, insitu reinforced concrete slab including prepared sub-base - Section 2	172.00	m2	123.00	Excluded	
A6.14	Rounding Adjustment	1.00	LS	129.25	129.25	
A6A	**Canopy/Shelters & Buildings**					**470,000.00**
A6A.01	Steel framed and glazed canopy - Section 1	148.00	m2	2,500.00	370,000.00	
A6A.02	Steel framed and glazed canopy - Section 2	130.00	m2	2,500.00	Excluded	
A6A.03	Lift Building	1.00	LS	100,000.00	100,000.00	
A6A.04	Rounding Adjustment	1.00	LS	0.00	0.00	
A7	**Pavements and Surfacing**					**84,000.00**
A7.01	Feature cobble pavement - Section 1	259.20	m2	250.00	64,800.00	
A7.02	Feature cobble pavement - Section 2	172.00	m2	250.00	Excluded	
A7.03	Optional - Architectural finishes to concrete pavement - Section 1 (Exposed aggregate, coloured concrete, stencilling)	259.20	m2	85.00	Excluded	
A7.04	Optional - Architectural finishes to concrete pavement - Section 2 (Exposed aggregate, coloured concrete, stencilling)	172.00	m2	85.00	Excluded	
A7.05	Asphalt concrete with painted decorative asphalt pattern - Service Lane	83.00	m2	150.00	12,450.00	
A7.06	Allowance for tactile markers	20.00	m2	350.00	7,000.00	
A7.07	Rounding Adjustment	1.00	LS	(250.00)	(250.00)	
A8	**Kerb and Channels**					**4,000.00**
A8.01	Reinforced concrete kerb and channel - Section 1	8.00	m	100.00	800.00	
A8.02	Reinforced concrete kerb and channel - Service Lane	27.00	m	100.00	2,700.00	
A8.03	Reinforced concrete kerb and channel - Section 2	8.00	m	100.00	Excluded	
A8.04	Rounding Adjustment	1.00	LS	500.00	500.00	
A9	**Drainage Services**					**50,000.00**
A9.01	New stormwater manhole	1.00	No.	8,000.00	8,000.00	
A9.02	New stormwater cesspit and leads	4.00	No.	3,000.00	12,000.00	
A9.03	Grated drains - Section 1	34.00	m	350.00	11,900.00	
A9.04	Grated drains - Section 2	23.00	m	350.00	Excluded	
A9.05	Allowance for stormwater pipework connected to existing main - Section 1	40.00	m	450.00	18,000.00	
A9.06	Allowance for stormwater pipework connected to existing main - Section 2	33.00	m	450.00	Excluded	
A9.07	Rounding Adjustment	1.00	LS	200.00	100.00	
A10	**Electrical Services**					**137,000.00**

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

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Appendix A1 - Option 1 - Elevator & Stairs - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A10.01	Lighting - Assumed catenary, up lighting & pole mounted - Section 1	296.00	m2	250.00	74,000.00	
A10.02	Lighting - Assumed catenary, up lighting & pole mounted - Service Lane	83.00	m2	150.00	12,450.00	
A10.03	Lighting - Assumed catenary, up lighting & pole mounted - Section 2	260.00	m2	250.00	Excluded	
A10.04	Allowance for transformer upgrade	1.00	LS	50,000.00	50,000.00	
A10.05	Rounding Adjustment	1.00	LS	550.00	550.00	
A11	**Vertical Transportation**					**150,000.00**
A11.01	Elevator (excluding building)	1.00	No.	150,000.00	150,000.00	
A12	**Soft Landscaping & Artwork**					**258,000.00**
A12.01	Irrigation - Section 1	52.00	m2	30.00	1,560.00	
A12.02	Irrigation - Section 2	62.00	m2	30.00	Excluded	
A12.03	Topsoil to planter boxes (600mm deep) - Section 1	31.20	m3	90.00	2,808.00	
A12.04	Topsoil to planter boxes (600mm deep) - Section 2	37.20	m3	90.00	Excluded	
A12.05	Mulching - Section 1	52.00	m2	10.00	520.00	
A12.06	Mulching - Section 2	62.00	m2	10.00	Excluded	
A12.07	Shrubs / Small trees - Section 1	52.00	m2	50.00	2,600.00	
A12.08	Shrubs / Small trees - Section 2	62.00	m2	50.00	Excluded	
A12.09	150L trees in tree pit	10.00	No.	5,000.00	50,000.00	
A12.10	Artwork	1.00	LS	200,000.00	200,000.00	
A10.05	Rounding Adjustment	1.00	LS	512.00	512.00	
A13	**Street Furniture & Signage**					**49,000.00**
A13.01	Seating - timber bench with back and arm rest	6.00	No.	3,500.00	21,000.00	
A13.02	Rubbish bins	2.00	No.	2,500.00	5,000.00	
A13.03	Signage	1.00	LS	3,000.00	3,000.00	
A13.04	Pavement Markings	1.00	LS	5,000.00	5,000.00	
A13.05	Stainless steel handrail - Section 1	47.00	m	210.00	9,870.00	
A13.06	Stainless steel balustrade - Section 1	7.00	m	720.00	5,040.00	
A13.07	Rounding Adjustment	1.00	LS	90.00	90.00	
A14	**Main Contractors Preliminary & General**					**246,000.00**
A14.01	Main Contractors Preliminary & General	1,635,000.00	LS	15.0%	246,000.00	
A14.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A15	**Main Contractors Off-Site Overheads & Profit**					**189,000.00**
A15.01	Main Contractors Off-Site Overheads & Profit	1,881,000.00	LS	10.0%	189,000.00	
A15.02	Rounding Adjustment	1.00	LS	0.00	0.00	
	Total Physical Works Estimate				**2,070,000.00**	**2,070,000.00**
B	**Project/Non-Construction Costs**					**519,000.00**
B1	Internal Management Costs	2,070,000.00	LS	4.0%	83,000.00	
B2	Land & Property Costs	-	LS	-	Excluded	

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Appendix A1 - Option 1 - Elevator & Stairs - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
B3	Procurement	-	LS	-	Included in Professional Services	
B4	Consenting	-	LS	-	Included in Professional Services	
B5	Iwi Consultation	-	LS	-	Not Required	
B6	Pre-Construction Public Consultation	-	LS	-	Excluded	
B7	Site Investigations	-	LS	-	Included in Professional Services	
B8	Professional Services	2,070,000.00	LS	15.0%	311,000.00	
B9	Specialist Advisors	-	LS	-	Not Required	
B10	Contract Admin & Construction Monitoring	2,070,000.00	LS	6.0%	125,000.00	
B11	Insurances	-	LS	-	Excluded	
B12	Commissioning	-	LS	-	Included in Professional Services	
B13	Sunk Costs to Date	-	LS	-	Excluded - TBC by TCC if Required	
	Total Base Estimate - P5				**2,589,000.00**	**2,589,000.00**
C	**Assessed Risk & Optimism Bias**					**777,000.00**
C1	Assessed Risk - Design/Scope Development	2,589,000.00	LS	20.0%	518,000.00	
C2	Assessed Risk - Construction Contingency	2,589,000.00	LS	10.0%	259,000.00	
C3	Optimism Bias - Procurement	-	LS	-	Excluded	
C4	Optimism Bias - Project Specific	-	LS	-	Excluded	
C5	Optimism Bias - Client Specific	-	LS	-	Excluded	
C6	Optimism Bias - Environment	-	LS	-	Excluded	
C7	Optimism Bias - External Influences	-	LS	-	Excluded	
	Total Expected Estimate - P50				**3,366,000.00**	**3,366,000.00**
D	**Contingency**					**1,010,000.00**
D1	Contingency/Funding Risk	3,366,000.00	LS	30.0%	1,010,000.00	
	Total 95th Percentile/Project Estimate - P95				**4,376,000.00**	**4,376,000.00**

A2

Appendix A2 - Option 5 - Plaza & Elevator - Cost Estimate Detail

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 21 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix A2 - Option 5 - Plaza & Elevator - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A0	**Key Metric Data**					
A0.01	New Building Area	242.00	m2	-	-	
A0.02	New Plaza Area	328.00	m2	-	-	
A0.03	Stairs, Pavement and Landscaping Area	262.00	m2	-	-	
A0.04	Total Area (22.5 x 37m)	832.00	m2	-	-	
A0.05	Cost/Area	3,277.64	$/m2	-	-	
A1	**Environmental Compliance**					**12,000.00**
A1.01	Prepare the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan	1.00	LS	2,000.00	2,000.00	
A1.02	Update, implement & maintain the Contractor's Environmental Management Plan & Erosion & Sediment Control Plan incl. all temporary works & removal on completion	1.00	LS	10,000.00	10,000.00	
A1.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A2	**Traffic Management & Temporary Works**					**12,000.00**
A2.01	Prepare Contractor's Temporary Traffic Management Plan	1.00	LS	2,000.00	2,000.00	
A2.02	Update, implement and maintain the Contractor's temporary traffic management plan including temporary works and removal on completion - Work completed outside road	1.00	LS	10,000.00	10,000.00	
A2.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A3	**Service Relocations**					**50,000.00**
A3.01	Allowance for service relocations, protection and isolation works (Minor work assumed - Extent not defined)	1.00	LS	50,000.00	50,000.00	
A3.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A4	**Demolition and Enabling**					**72,000.00**
A4.01	Allow for general site clearance	1.00	LS	0.00	0.00	
A4.02	Remove and dispose all soft landscaping	1.00	LS	2,070.00	2,070.00	
A4.03	Remove and dispose existing block retaining wall, metal fence, signage post and signage	1.00	LS	5,000.00	5,000.00	
A4.04	Remove and dispose existing building	200.00	m2	200.00	40,000.00	
A4.05	Remove and dispose hard landscaping - Asphalt concrete Durham Street end	200.00	m2	35.00	7,000.00	
A4.06	Remove and dispose hard landscaping - Reinforced concrete Durham Street end	200.00	m2	65.00	13,000.00	
A4.07	Remove and dispose hard landscaping - Asphalt concrete Service Lane end	140.00	m2	35.00	4,900.00	
A4.08	Rounding Adjustment	1.00	LS	30.00	30.00	
A5	**Earthworks**					**51,000.00**
A5.01	Cut to waste - Average 1.0m deep assumed	412.50	m3	45.00	18,562.50	
A5.02	Cut to waste - Average 0.3m deep assumed	123.75	m3	45.00	5,568.75	
A5.03	GAP65 imported engineering fill, compacted - 50% of excavated volume assumed	206.25	m3	100.00	20,625.00	
A5.04	GAP65 imported engineering fill, compacted - 50% - Average 0.3m deep assumed	61.88	m3	100.00	6,187.50	
A5.05	Rounding Adjustment	1.00	LS	56.25	56.25	
A6	**Structures**					**637,000.00**
A6.01	400 x 400mm, insitu reinforced concrete foundation to stairs & ramp	26.00	m	560.00	14,560.00	
A6.02	1,800 x 400mm, insitu reinforced concrete foundation (including 200 x 200mm toe) to retaining walls	84.00	m	2,660.00	223,440.00	
A6.03	400 x 400mm, insitu reinforced concrete foundation to planter box/seating	127.00	m	560.00	71,120.00	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

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Appendix A2 - Option 5 - Plaza & Elevator - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A6.04	200mm thick, insitu reinforced concrete retaining wall (average 2m high)	168.00	m2	670.00	112,560.00	
A6.05	600mm high x 200mm thick, insitu reinforced concrete planter box	154.00	m2	670.00	103,180.00	
A6.06	4,000mm x 100mm thick, precast reinforced concrete stairs & landings including prepared sub-base	4.00	m/rise	18,000.00	72,000.00	
A6.07	100mm thick, insitu reinforced concrete slab including prepared sub-base on Plaza area	328.00	m2	123.00	40,344.00	
A6.08	Rounding Adjustment	1.00	LS	(204.00)	(204.00)	
A6A	**Canopy/Shelters, Buildings and Bike Shelters**					**350,000.00**
A6A.01	New community/university building	242.00	m2	-	Excluded	
A6A.02	Shelter - Steel framed and glazed canopy	60.00	m2	2,500.00	150,000.00	
A6A.03	Lift Building	1.00	No	100,000.00	100,000.00	
A6A.04	Bike Shelter (Tilley 2.5 x 6.2m)	1.00	No	100,000.00	100,000.00	
A6A.05	Rounding Adjustment	1.00	LS	0.00	0.00	
A7	**Pavements and Surfacing**					**103,000.00**
A7.01	Feature cobble pavement - Entrance to stair	54.00	m2	250.00	13,500.00	
A7.02	Feature cobble pavement - Plaza	328.00	m2	250.00	82,000.00	
A7.03	Optional - Architectural finishes to concrete pavement - Entrance to Stair (Exposed aggregate, coloured concrete, stencilling)	54.00	m2	85.00	Excluded	
A7.04	Optional - Architectural finishes to concrete pavement - Plaza (Exposed aggregate, coloured concrete, stencilling)	328.00	m2	85.00	Excluded	
A7.05	Asphalt concrete with painted decorative asphalt pattern	0.00	m2	150.00	Excluded	
A7.06	Allowance for tactile markers	20.00	m2	350.00	7,000.00	
A7.07	Rounding Adjustment	1.00	LS	500.00	500.00	
A8	**Kerb and Channels**					**9,000.00**
A8.01	Reinforced concrete kerb and channel - Service Lane	22.00	m	100.00	2,200.00	
A8.02	Reinforced concrete kerb	65.00	m	100.00	6,500.00	
A8.03	Rounding Adjustment	1.00	LS	300.00	300.00	
A9	**Drainage Services**					**68,000.00**
A9.01	New stormwater manhole	1.00	No.	8,000.00	8,000.00	
A9.02	New stormwater cesspit and leads	4.00	No.	3,000.00	12,000.00	
A9.03	Grated drains	71.00	m	350.00	24,850.00	
A9.04	Allowance for stormwater pipework connected to existing main	51.00	m	450.00	22,950.00	
A9.05	Rounding Adjustment	1.00	LS	200.00	200.00	
A10	**Electrical Services**					**172,000.00**
A10.01	Lighting - Assumed catenary, up lighting & pole mounted - Plaza Area	328.00	m2	250.00	82,000.00	
A10.02	Lighting - Assumed catenary, up lighting & pole mounted - Stairs and Pavement	108.00	m2	150.00	16,200.00	
A10.03	Lighting - Assumed catenary, up lighting & pole mounted - Landscaping Area	154.00	m2	150.00	23,100.00	
A10.04	Allowance for mains/transformer upgrade	1.00	LS	50,000.00	50,000.00	
A10.05	Rounding Adjustment	1.00	LS	700.00	700.00	
A11	**Vertical Transportation**					**150,000.00**

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Appendix A2 - Option 5 - Plaza & Elevator - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A11.01	Elevator including Lift Pit & Associated Services(excluding building)	1.00	No.	150,000.00	150,000.00	
A12	**Soft Landscaping & Artwork**					**407,000.00**
A12.01	Irrigation	154.00	m2	30.00	4,620.00	
A12.02	Topsoil to planter boxes (600mm deep)	92.40	m3	90.00	8,316.00	
A12.03	Mulching	154.00	m2	10.00	1,540.00	
A12.04	Sub-Tropical Planting	154.00	m2	80.00	12,320.00	
A12.05	400L native trees in tree pit	10.00	No.	8,000.00	80,000.00	
A12.06	150L native trees in tree pit	20.00	No.	5,000.00	100,000.00	
A12.07	Artwork	1.00	LS	200,000.00	200,000.00	
A12.08	Rounding Adjustment	1.00	LS	204.00	204.00	
A13	**Street Furniture & Signage**					**62,000.00**
A13.01	Seating - timber bench with back and arm rest	8.00	No.	3,500.00	28,000.00	
A13.02	Rubbish bins	4.00	No.	2,500.00	10,000.00	
A13.03	Signage	1.00	LS	3,000.00	3,000.00	
A13.04	Pavement Markings	1.00	LS	5,000.00	5,000.00	
A13.05	Stainless steel handrail	21.00	m	210.00	4,410.00	
A13.06	Stainless steel balustrade	15.00	m	720.00	10,800.00	
A13.07	Rounding Adjustment	1.00	LS	790.00	790.00	
A14	**Main Contractors Preliminary & General**					**324,000.00**
A14.01	Main Contractors Preliminary & General	2,155,000.00	LS	15.0%	324,000.00	
A14.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A15	**Main Contractors Off-Site Overheads & Profit**					**248,000.00**
A15.01	Main Contractors Off-Site Overheads & Profit	2,479,000.00	LS	10.0%	248,000.00	
A15.02	Rounding Adjustment	1.00	LS	0.00	0.00	
	Total Physical Works Estimate				**2,727,000.00**	**2,727,000.00**
B	**Project/Non-Construction Costs**					**602,000.00**
B1	Internal Management Costs	2,727,000.00	LS	4.0%	110,000.00	
B2	Land & Property Costs	-	LS	-	Excluded	
B3	Procurement	-	LS	-	Included in Professional Services	
B4	Consenting	-	LS	-	Included in Professional Services	
B5	Iwi Consultation	-	LS	-	Not Required	
B6	Pre-Construction Public Consultation	-	LS	-	Excluded	
B7	Site Investigations	-	LS	-	Included in Professional Services	
B8	Professional Services	2,727,000.00	LS	12.0%	328,000.00	
B9	Specialist Advisors	-	LS	-	Not Required	
B10	Contract Admin & Construction Monitoring	2,727,000.00	LS	6.0%	164,000.00	
B11	Insurances	-	LS	-	Excluded	

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Appendix A2 - Option 5 - Plaza & Elevator - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
B12	Commissioning	-	LS	-	Included in Professional Services	
B13	Sunk Costs to Date	-	LS	-	Excluded - TBC by TCC if Required	
	Total Base Estimate - P5				**3,329,000.00**	**3,329,000.00**
C	**Assessed Risk & Optimism Bias**					**999,000.00**
C1	Assessed Risk - Design/Scope Development	3,329,000.00	LS	20.0%	666,000.00	
C2	Assessed Risk - Construction Contingency	3,329,000.00	LS	10.0%	333,000.00	
C3	Optimism Bias - Procurement	-	LS	-	Excluded	
C4	Optimism Bias - Project Specific	-	LS	-	Excluded	
C5	Optimism Bias - Client Specific	-	LS	-	Excluded	
C6	Optimism Bias - Environment	-	LS	-	Excluded	
C7	Optimism Bias - External Influences	-	LS	-	Excluded	
	Total Expected Estimate - P50				**4,328,000.00**	**4,328,000.00**
D	**Contingency**					**1,299,000.00**
D1	Contingency/Funding Risk	4,328,000.00	LS	30.0%	1,299,000.00	
	Total 95th Percentile/Project Estimate - P95				**5,627,000.00**	**5,627,000.00**

A3

Appendix A3 - Building - Cost Estimate Detail

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

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Date: 21 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix A3 - Building - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A1	**New Community/University Building**					**1,600,000.00**
A1-1	Site preparation	242.00	m2	50.00	12,100.00	
A1-2	Ground improvement works	242.00	m2	250.00	60,500.00	
A1-3	Foundation enhancements	242.00	m2	500.00	121,000.00	
A1-4	Substructure	242.00	m2	350.00	84,700.00	
A1-5	Frame	242.00	m2	350.00	84,700.00	
A1-6	Structural walls	242.00	m2	150.00	36,300.00	
A1-7	Upper floors	-	-	-	Excluded Not Required	
A1-8	Roof	242.00	m2	350.00	84,700.00	
A1-9	External walls & finishes	242.00	m2	550.00	133,100.00	
A1-10	External windows & doors	242.00	m2	300.00	72,600.00	
A1-11	Stairs & balustrades	-	-	-	Excluded Not Required	
A1-12	Internal walls & partitions	242.00	m2	200.00	48,400.00	
A1-13	Internal doors	242.00	m2	100.00	24,200.00	
A1-14	Floor finishes	242.00	m2	200.00	48,400.00	
A1-15	Wall finishes	242.00	m2	250.00	60,500.00	
A1-16	Ceiling/soffit finishes	242.00	m2	200.00	48,400.00	
A1-17	Fixtures, fittings & equipment	242.00	m2	100.00	24,200.00	
A1-18	Sanitary plumbing	242.00	m2	300.00	72,600.00	
A1-19	Mechanical services	242.00	m2	350.00	84,700.00	
A1-20	Fire services - Sprinklers, valve set, smoke/heat detection, fire panel,	242.00	m2	150.00	36,300.00	
A1-21	Electrical services - Incoming power supply, MSB, power & lighting generally	242.00	m2	300.00	72,600.00	
A1-22	Lifts & escalators	-	-	-	Excluded Not Required	
A1-23	Special services - CCTV, access control, data	242.00	m2	100.00	24,200.00	
A1-24	Drainage - FW/SW drainage	242.00	m2	80.00	19,360.00	
A1-25	Sundries	242.00	m2	50.00	12,100.00	
A1-26	Main Contractors Preliminary & General	1,265,660.00	LS	15.0%	190,000.00	
A1-27	Main Contractors Off-Site Overheads & Profit	1,455,660.00	LS	10.0%	146,000.00	
A1-28	Rounding Adjustment	1.00	LS	(1,660.00)	(1,660.00)	
A1-29	Rate/Area	6,611.57	$/m2	-	-	
	Total Physical Works Estimate				**1,600,000.00**	**1,600,000.00**
B	**Project/Non-Construction Costs**					**352,000.00**
B1	Internal Management Costs	1,600,000.00	LS	4.0%	64,000.00	
B2	Land & Property Costs	-	LS	-	Excluded	
B3	Procurement	-	LS	-	Included in Professional Services	
B4	Consenting	-	LS	-	Included in Professional Services	
B5	Iwi Consultation	-	LS	-	Not Required	
B6	Pre-Construction Public Consultation	-	LS	-	Excluded	
B7	Site Investigations	-	LS	-	Included in Professional Services	
B8	Professional Services	1,600,000.00	LS	12.0%	192,000.00	
B9	Specialist Advisors	-	LS	-	Not Required	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 21 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix A3 - Building - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
B10	Contract Admin & Construction Monitoring	1,600,000.00	LS	6.0%	96,000.00	
B11	Insurances	-	LS	-	Excluded	
B12	Commissioning	-	LS	-	Included in Professional Services	
B13	Sunk Costs to Date	-	LS	-	Excluded - TBC by TCC if Required	
	Total Base Estimate - P5				**1,952,000.00**	**1,952,000.00**
C	**Assessed Risk & Optimism Bias**					**587,000.00**
C1	Assessed Risk - Design/Scope Development	1,952,000.00	LS	20.0%	391,000.00	
C2	Assessed Risk - Construction Contingency	1,952,000.00	LS	10.0%	196,000.00	
C3	Optimism Bias - Procurement	-	LS	-	Excluded	
C4	Optimism Bias - Project Specific	-	LS	-	Excluded	
C5	Optimism Bias - Client Specific	-	LS	-	Excluded	
C6	Optimism Bias - Environment	-	LS	-	Excluded	
C7	Optimism Bias - External Influences	-	LS	-	Excluded	
	Total Expected Estimate - P50				**2,539,000.00**	**2,539,000.00**
D	**Contingency**					**761,000.00**
D1	Contingency/Funding Risk	2,539,000.00	LS	30.0%	761,000.00	
	Total 95th Percentile/Project Estimate - P95				**3,300,000.00**	**3,300,000.00**

B

Appendix B - Option 6 - Cascade - Cost Estimate Detail

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 21 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix B - Option 6 - Cascade - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A0	**Key Metric Data**					
A0.01	New Seating Area	60.00	m2	-	-	
A0.02	New Plaza Area	250.00	m2	-	-	
A0.03	Stairs, Pavement, Ramps and Landscaping Area	522.00	m2	-	-	
A0.04	Total Area (22.5 x 37m)	832.00	m2	-	-	
A0.05	Cost/Area	3,475.96	$/m2	-	-	
A1	**Environmental Compliance**					**12,000.00**
A1.01	Prepare the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan	1.00	LS	2,000.00	2,000.00	
A1.02	Update, implement & maintain the Contractor's Environmental Management Plan & Erosion & Sediment Control Plan incl. all temporary works & removal on completion	1.00	LS	10,000.00	10,000.00	
A1.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A2	**Traffic Management & Temporary Works**					**12,000.00**
A2.01	Prepare Contractor's Temporary Traffic Management Plan	1.00	LS	2,000.00	2,000.00	
A2.02	Update, implement and maintain the Contractor's temporary traffic management plan including temporary works and removal on completion - Work completed outside road	1.00	LS	10,000.00	10,000.00	
A2.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A3	**Service Relocations**					**50,000.00**
A3.01	Allowance for service relocations, protection and isolation works (Minor work assumed - Extent not defined)	1.00	LS	50,000.00	50,000.00	
A3.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A4	**Demolition and Enabling**					**72,000.00**
A4.01	Allow for general site clearance	1.00	LS	0.00	0.00	
A4.02	Remove and dispose all soft landscaping	1.00	LS	2,070.00	2,070.00	
A4.03	Remove and dispose existing block retaining wall, metal fence, signage post and signage	1.00	LS	5,000.00	5,000.00	
A4.04	Remove and dispose existing building	200.00	m2	200.00	40,000.00	
A4.05	Remove and dispose hard landscaping - Asphalt concrete Durham Street end	200.00	m2	35.00	7,000.00	
A4.06	Remove and dispose hard landscaping - Reinforced concrete Durham Street end	200.00	m2	65.00	13,000.00	
A4.07	Remove and dispose hard landscaping - Asphalt concrete Service Lane end	140.00	m2	35.00	4,900.00	
A4.08	Rounding Adjustment	1.00	LS	30.00	30.00	
A5	**Earthworks**					**51,000.00**
A5.01	Cut to waste - Average 1.0m deep assumed	412.50	m3	45.00	18,562.50	
A5.02	Cut to waste - Average 0.3m deep assumed	123.75	m3	45.00	5,568.75	
A5.03	GAP65 imported engineering fill, compacted - 50% of excavated volume assumed	206.25	m3	100.00	20,625.00	
A5.04	GAP65 imported engineering fill, compacted - 50% - Average 0.3m deep assumed	61.88	m3	100.00	6,187.50	
A5.05	Rounding Adjustment	1.00	LS	56.25	56.25	
A6	**Structures**					**995,000.00**
A6.01	400 x 400mm, insitu reinforced concrete foundation to stairs & ramp	128.00	m	560.00	71,680.00	
A6.02	1,800 x 400mm, insitu reinforced concrete foundation (including 200 x 200mm toe) to retaining walls	186.00	m	2,660.00	494,760.00	
A6.03	400 x 400mm, insitu reinforced concrete foundation to planter box/seating	240.00	m	560.00	134,400.00	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 21 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix B - Option 6 - Cascade - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A6.04	200mm thick, insitu reinforced concrete retaining wall (average 2m high)	116.00	m2	670.00	77,720.00	
A6.05	600mm high x 200mm thick, insitu reinforced concrete planter box	157.80	m2	670.00	105,726.00	
A6.06	4,000mm x 100mm thick, precast reinforced concrete stairs & landings including prepared sub-base	4.00	m/rise	18,000.00	72,000.00	
A6.07	100mm thick, insitu reinforced concrete slab including prepared sub-base on Plaza area	250.00	m2	123.00	30,750.00	
A6.08	100mm thick, insitu reinforced concrete slab including prepared sub-base on Seating area	60.00	m2	123.00	7,380.00	
A6.09	Rounding Adjustment	1.00	LS	584.00	584.00	
A6A	**Canopy/Shelters, Buildings and Bike Shelters**					**180,000.00**
A6A.01	Shelter - Pergola/Steel framed and glazed canopy at Seating Area	16.00	m2	2,500.00	40,000.00	
A6A.02	Shelter - Steel framed and glazed canopy at Durham Street Area	16.00	m2	2,500.00	40,000.00	
A6A.03	Lift Building	1.00	No	100,000.00	Excluded	
A6A.04	Bike Shelter (Tilley 2.5 x 6.2m)	1.00	No	100,000.00	100,000.00	
A6A.05	Rounding Adjustment	1.00	LS	0.00	0.00	
A7	**Pavements and Surfacing**					**136,000.00**
A7.01	Feature cobble pavement - Entrance to Bike Shelter, Stairs and Stair Landings	108.00	m2	250.00	27,000.00	
A7.02	Feature cobble pavement - Ramps	97.00	m2	250.00	24,250.00	
A7.03	Feature cobble pavement - Plaza	250.00	m2	250.00	62,500.00	
A7.04	Feature cobble pavement - Seating Area	60.00	m2	250.00	15,000.00	
A7.05	Optional - Architectural finishes to concrete pavement - Entrance to Bike Shelter, Stairs and Stair Landings (Exposed aggregate, coloured concrete, stencilling)	108.00	m2	85.00	Excluded	
A7.06	Optional - Architectural finishes to concrete pavement - Ramps (Exposed aggregate, coloured concrete, stencilling)	97.00	m2	85.00	Excluded	
A7.07	Optional - Architectural finishes to concrete pavement - Plaza (Exposed aggregate, coloured concrete, stencilling)	250.00	m2	85.00	Excluded	
A7.08	Optional - Architectural finishes to concrete pavement - Plaza (Exposed aggregate, coloured concrete, stencilling)	250.00	m2	85.00	Excluded	
A7.09	Optional - Architectural finishes to concrete pavement - Seating Area (Exposed aggregate, coloured concrete, stencilling)	60.00	m2	85.00	Excluded	
A7.10	Asphalt concrete with painted decorative asphalt pattern	0.00	m2	150.00	Excluded	
A7.11	Allowance for tactile markers	20.00	m2	350.00	7,000.00	
A7.12	Rounding Adjustment	1.00	LS	250.00	250.00	
A8	**Kerb and Channels**					**26,000.00**
A8.01	Reinforced concrete kerb and channel - Service Lane	11.00	m	100.00	1,100.00	
A8.02	Reinforced concrete kerb	243.00	m	100.00	24,300.00	
A8.03	Rounding Adjustment	1.00	LS	600.00	600.00	
A9	**Drainage Services**					**62,000.00**
A9.01	New stormwater manhole	1.00	No.	8,000.00	8,000.00	
A9.02	New stormwater cesspit and leads	4.00	No.	3,000.00	12,000.00	
A9.03	Grated drains	53.00	m	350.00	18,550.00	
A9.04	Allowance for stormwater pipework connected to existing main	51.00	m	450.00	22,950.00	
A9.05	Rounding Adjustment	1.00	LS	500.00	500.00	
A10	**Electrical Services**					**192,000.00**
A10.01	Lighting - Assumed catenary, up lighting & pole mounted - Plaza Area	250.00	m2	250.00	62,500.00	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

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Appendix B - Option 6 - Cascade - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A10.02	Lighting - Assumed catenary, up lighting & pole mounted - Seating Area	60.00	m2	150.00	9,000.00	
A10.03	Lighting - Assumed catenary, up lighting & pole mounted - Entrance to Bike Shelters, Stairs, Stair Landings and Ramps	108.00	m2	150.00	16,200.00	
A10.04	Lighting - Assumed catenary, up lighting & pole mounted - Ramps	97.00	m2	150.00	14,550.00	
A10.05	Lighting - Assumed catenary, up lighting & pole mounted - Landscaping Area	263.00	m2	150.00	39,450.00	
A10.06	Allowance for mains/transformer upgrade	1.00	LS	50,000.00	50,000.00	
A10.07	Rounding Adjustment	1.00	LS	300.00	300.00	
A11	**Vertical Transportation**					**0.00**
A11.01	Elevator including Lift Pit & Associated Services(excluding building)	1.00	No.	150,000.00	Excluded	
A12	**Soft Landscaping & Artwork**					**426,000.00**
A12.01	Irrigation	263.00	m2	30.00	7,890.00	
A12.02	Topsoil to planter boxes (600mm deep)	157.80	m3	90.00	14,202.00	
A12.03	Mulching	263.00	m2	10.00	2,630.00	
A12.04	Sub-Tropical Planting	263.00	m2	80.00	21,040.00	
A12.05	400L native trees in tree pit	10.00	No.	8,000.00	80,000.00	
A12.06	150L native trees in tree pit	20.00	No.	5,000.00	100,000.00	
A12.07	Artwork	1.00	LS	200,000.00	200,000.00	
A12.08	Rounding Adjustment	1.00	LS	238.00	238.00	
A13	**Street Furniture & Signage**					**72,000.00**
A13.01	Seating - timber bench with back and arm rest	8.00	No.	3,500.00	28,000.00	
A13.02	Rubbish bins	4.00	No.	2,500.00	10,000.00	
A13.03	Signage	1.00	LS	3,000.00	3,000.00	
A13.04	Pavement Markings	1.00	LS	5,000.00	5,000.00	
A13.05	Stainless steel handrail	79.00	m	210.00	16,590.00	
A13.06	Stainless steel balustrade	13.00	m	720.00	9,360.00	
A13.07	Rounding Adjustment	1.00	LS	50.00	50.00	
A14	**Main Contractors Preliminary & General**					**343,000.00**
A14.01	Main Contractors Preliminary & General	2,286,000.00	LS	15.0%	343,000.00	
A14.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A15	**Main Contractors Off-Site Overheads & Profit**					**263,000.00**
A15.01	Main Contractors Off-Site Overheads & Profit	2,629,000.00	LS	10.0%	263,000.00	
A15.02	Rounding Adjustment	1.00	LS	0.00	0.00	
	Total Physical Works Estimate				**2,892,000.00**	**2,892,000.00**
B	**Project/Non-Construction Costs**					**638,000.00**
B1	Internal Management Costs	2,892,000.00	LS	4.0%	116,000.00	
B2	Land & Property Costs	-	LS	-	Excluded	
B3	Procurement	-	LS	-	Included in Professional Services	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

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Appendix B - Option 6 - Cascade - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
B4	Consenting	-	LS	-	Included in Professional Services	
B5	Iwi Consultation	-	LS	-	Not Required	
B6	Pre-Construction Public Consultation	-	LS	-	Excluded	
B7	Site Investigations	-	LS	-	Included in Professional Services	
B8	Professional Services	2,892,000.00	LS	12.0%	348,000.00	
B9	Specialist Advisors	-	LS	-	Not Required	
B10	Contract Admin & Construction Monitoring	2,892,000.00	LS	6.0%	174,000.00	
B11	Insurances	-	LS	-	Excluded	
B12	Commissioning	-	LS	-	Included in Professional Services	
B13	Sunk Costs to Date	-	LS	-	Excluded - TBC by TCC if Required	
	Total Base Estimate - P5				**3,530,000.00**	**3,530,000.00**
C	**Assessed Risk & Optimism Bias**					**1,059,000.00**
C1	Assessed Risk - Design/Scope Development	3,530,000.00	LS	20.0%	706,000.00	
C2	Assessed Risk - Construction Contingency	3,530,000.00	LS	10.0%	353,000.00	
C3	Optimism Bias - Procurement	-	LS	-	Excluded	
C4	Optimism Bias - Project Specific	-	LS	-	Excluded	
C5	Optimism Bias - Client Specific	-	LS	-	Excluded	
C6	Optimism Bias - Environment	-	LS	-	Excluded	
C7	Optimism Bias - External Influences	-	LS	-	Excluded	
	Total Expected Estimate - P50				**4,589,000.00**	**4,589,000.00**
D	**Contingency**					**1,377,000.00**
D1	Contingency/Funding Risk	4,589,000.00	LS	30.0%	1,377,000.00	
	Total 95th Percentile/Project Estimate - P95				**5,966,000.00**	**5,966,000.00**

C

Appendix C - Option 7 - Zig Zag - Cost Estimate Detail

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 11 July 2023

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Appendix C - Option 7 - Zig Zag - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A0	**Key Metric Data**					
A0.01	New Plaza/Shelter Area	288.00	m2	-	-	
A0.02	New Ramps	188.00	m2	-	-	
A0.03	Stairs, Pavement, Bike and Landscaping Area	356.00	m2	-	-	
A0.04	Total Area (22.5 x 37m)	832.00	m2	-	-	
A0.05	Cost/Area	2,884.62	$/m2	-	-	
A1	**Environmental Compliance**					**12,000.00**
A1.01	Prepare the Contractor's Environmental Management Plan (CEMP) & Erosion and Sediment Control Plan	1.00	LS	2,000.00	2,000.00	
A1.02	Update, implement & maintain the Contractor's Environmental Management Plan & Erosion & Sediment Control Plan incl. all temporary works & removal on completion	1.00	LS	10,000.00	10,000.00	
A1.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A2	**Traffic Management & Temporary Works**					**12,000.00**
A2.01	Prepare Contractor's Temporary Traffic Management Plan	1.00	LS	2,000.00	2,000.00	
A2.02	Update, implement and maintain the Contractor's temporary traffic management plan including temporary works and removal on completion - Work completed outside road	1.00	LS	10,000.00	10,000.00	
A2.03	Rounding Adjustment	1.00	LS	0.00	0.00	
A3	**Service Relocations**					**50,000.00**
A3.01	Allowance for service relocations, protection and isolation works (Minor work assumed - Extent not defined)	1.00	LS	50,000.00	50,000.00	
A3.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A4	**Demolition and Enabling**					**72,000.00**
A4.01	Allow for general site clearance	1.00	LS	0.00	0.00	
A4.02	Remove and dispose all soft landscaping	1.00	LS	2,070.00	2,070.00	
A4.03	Remove and dispose existing block retaining wall, metal fence, signage post and signage	1.00	LS	5,000.00	5,000.00	
A4.04	Remove and dispose existing building	200.00	m2	200.00	40,000.00	
A4.05	Remove and dispose hard landscaping - Asphalt concrete Durham Street end	200.00	m2	35.00	7,000.00	
A4.06	Remove and dispose hard landscaping - Reinforced concrete Durham Street end	200.00	m2	65.00	13,000.00	
A4.07	Remove and dispose hard landscaping - Asphalt concrete Service Lane end	140.00	m2	35.00	4,900.00	
A4.08	Rounding Adjustment	1.00	LS	30.00	30.00	
A5	**Earthworks**					**51,000.00**
A5.01	Cut to waste - Average 1.0m deep assumed	412.50	m3	45.00	18,562.50	
A5.02	Cut to waste - Average 0.3m deep assumed	123.75	m3	45.00	5,568.75	
A5.03	GAP65 imported engineering fill, compacted - 50% of excavated volume assumed	206.25	m3	100.00	20,625.00	
A5.04	GAP65 imported engineering fill, compacted - 50% - Average 0.3m deep assumed	61.88	m3	100.00	6,187.50	
A5.05	Rounding Adjustment	1.00	LS	56.25	56.25	
A6	**Structures**					**503,000.00**
A6.01	400 x 400mm, insitu reinforced concrete foundation to stairs & ramp	207.00	m	560.00	115,920.00	
A6.02	1,800 x 400mm, insitu reinforced concrete foundation (including 200 x 200mm toe) to retaining walls	77.00	m	2,660.00	204,820.00	
A6.03	400 x 400mm, insitu reinforced concrete foundation to planter box/seating	240.00	m	560.00	Excluded	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

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Appendix C - Option 7 - Zig Zag - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A6.04	200mm thick, insitu reinforced concrete retaining wall (average 2m high)	112.00	m2	670.00	75,040.00	
A6.05	600mm high x 200mm thick, insitu reinforced concrete planter box	157.80	m2	670.00	Excluded	
A6.06	4,000mm x 100mm thick, precast reinforced concrete stairs & landings including prepared sub-base	4.00	m/rise	18,000.00	72,000.00	
A6.07	100mm thick, insitu reinforced concrete slab including prepared sub-base on Plaza area	288.00	m2	123.00	35,424.00	
A6.08	100mm thick, insitu reinforced concrete slab including prepared sub-base on Seating area	60.00	m2	123.00	Excluded	
A6.09	Rounding Adjustment	1.00	LS	(204.00)	(204.00)	
A6A	**Canopy/Shelters, Buildings and Bike Shelters**					**280,000.00**
A6A.01	Shelter - Pergola/Steel framed and glazed canopy at Seating Area	16.00	m2	2,500.00	Excluded	
A6A.02	Shelter - Steel framed and glazed canopy at Durham Street Area	72.00	m2	2,500.00	180,000.00	
A6A.03	Lift Building	1.00	No	100,000.00	Excluded	
A6A.04	Bike Shelter (Tilley 2.5 x 6.2m)	1.00	No	100,000.00	100,000.00	
A6A.05	Rounding Adjustment	1.00	LS	0.00	0.00	
A7	**Pavements and Surfacing**					**155,000.00**
A7.01	Feature cobble pavement - Entrances, Stairs and Stair Landings	114.00	m2	250.00	28,500.00	
A7.02	Feature cobble pavement - Ramps	188.00	m2	250.00	47,000.00	
A7.03	Feature cobble pavement - Plaza and Shelter	288.00	m2	250.00	72,000.00	
A7.04	Optional - Architectural finishes to concrete pavement - Entrance, Stairs and Stair Landings (Exposed aggregate, coloured concrete, stencilling)	114.00	m2	85.00	Excluded	
A7.05	Optional - Architectural finishes to concrete pavement - Ramps (Exposed aggregate, coloured concrete, stencilling)	118.00	m2	85.00	Excluded	
A7.06	Optional - Architectural finishes to concrete pavement - Plaza (Exposed aggregate, coloured concrete, stencilling)	228.00	m2	85.00	Excluded	
A7.07	Asphalt concrete with painted decorative asphalt pattern	0.00	m2	150.00	Excluded	
A7.08	Allowance for tactile markers	20.00	m2	350.00	7,000.00	
A7.09	Rounding Adjustment	1.00	LS	500.00	500.00	
A8	**Kerb and Channels**					**24,000.00**
A8.01	Reinforced concrete kerb and channel - Service Lane	14.00	m	100.00	1,400.00	
A8.02	Reinforced concrete kerb	225.00	m	100.00	22,500.00	
A8.03	Rounding Adjustment	1.00	LS	100.00	100.00	
A9	**Drainage Services**					**62,000.00**
A9.01	New stormwater manhole	1.00	No.	8,000.00	8,000.00	
A9.02	New stormwater cesspit and leads	4.00	No.	3,000.00	12,000.00	
A9.03	Grated drains	53.00	m	350.00	18,550.00	
A9.04	Allowance for stormwater pipework connected to existing main	51.00	m	450.00	22,950.00	
A9.05	Rounding Adjustment	1.00	LS	500.00	500.00	
A10	**Electrical Services**					**203,000.00**
A10.01	Lighting - Assumed catenary, up lighting & pole mounted - Plaza and Shelter Area	288.00	m2	250.00	72,000.00	
A10.02	Lighting - Assumed catenary, up lighting & pole mounted - Seating Area	60.00	m2	150.00	Excluded	
A10.03	Lighting - Assumed catenary, up lighting & pole mounted - Entrances, Stairs and Stair Landings	114.00	m2	150.00	17,100.00	
A10.04	Lighting - Assumed catenary, up lighting & pole mounted - Ramps	188.00	m2	150.00	28,200.00	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 11 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix C - Option 7 - Zig Zag - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
A10.05	Lighting - Assumed catenary, up lighting & pole mounted - Landscaping Area	237.00	m2	150.00	35,550.00	
A10.06	Allowance for mains/transformer upgrade	1.00	LS	50,000.00	50,000.00	
A10.07	Rounding Adjustment	1.00	LS	150.00	150.00	
A11	**Vertical Transportation**					**0.00**
A11.01	Elevator including Lift Pit & Associated Services(excluding building)	1.00	No.	150,000.00	Excluded	
A12	**Soft Landscaping & Artwork**					**421,000.00**
A12.01	Irrigation	237.00	m2	30.00	7,110.00	
A12.02	Topsoil to planter boxes (600mm deep)	142.20	m3	90.00	12,798.00	
A12.03	Mulching	237.00	m2	10.00	2,370.00	
A12.04	Sub-Tropical Planting	237.00	m2	80.00	18,960.00	
A12.05	400L native trees in tree pit	10.00	No.	8,000.00	80,000.00	
A12.06	150L native trees in tree pit	20.00	No.	5,000.00	100,000.00	
A12.07	Artwork	1.00	LS	200,000.00	200,000.00	
A12.08	Rounding Adjustment	1.00	LS	(238.00)	(238.00)	
A13	**Street Furniture & Signage**					**51,000.00**
A13.01	Seating - timber bench with back and arm rest	8.00	No.	3,500.00	28,000.00	
A13.02	Rubbish bins	4.00	No.	2,500.00	10,000.00	
A13.03	Signage	1.00	LS	3,000.00	3,000.00	
A13.04	Pavement Markings	1.00	LS	5,000.00	5,000.00	
A13.05	Stainless steel handrail	20.00	m	210.00	4,200.00	
A13.06	Stainless steel balustrade	13.00	m	720.00	Excluded	
A13.07	Rounding Adjustment	1.00	LS	800.00	800.00	
A14	**Main Contractors Preliminary & General**					**285,000.00**
A14.01	Main Contractors Preliminary & General	1,896,000.00	LS	15.0%	285,000.00	
A14.02	Rounding Adjustment	1.00	LS	0.00	0.00	
A15	**Main Contractors Off-Site Overheads & Profit**					**219,000.00**
A15.01	Main Contractors Off-Site Overheads & Profit	2,181,000.00	LS	10.0%	219,000.00	
A15.02	Rounding Adjustment	1.00	LS	0.00	0.00	
	Total Physical Works Estimate				**2,400,000.00**	**2,400,000.00**
B	**Project/Non-Construction Costs**					**528,000.00**
B1	Internal Management Costs	2,400,000.00	LS	4.0%	96,000.00	
B2	Land & Property Costs	-	LS	-	Excluded	
B3	Procurement	-	LS	-	Included in Professional Services	
B4	Consenting	-	LS	-	Included in Professional Services	
B5	Iwi Consultation	-	LS	-	Not Required	
B6	Pre-Construction Public Consultation	-	LS	-	Excluded	

Project: **DURHAM STREET TO GREY STREET LANEWAY PROJECT**

Doc: **COST ESTIMATE REPORT OPTIONS 1, 5, 6 & 7**

Job No: 4700414

Date: 11 July 2023

Author: Sakkie Theron (Verified by Mark Wilson)

Appendix C - Option 7 - Zig Zag - Cost Estimate Detail

Ref	Item Description	Quantity	Unit	Rate (NZD $)	Sub-Total (NZD $)	Total (NZD $)
B7	Site Investigations	-	LS	-	Included in Professional Services	
B8	Professional Services	2,400,000.00	LS	12.0%	288,000.00	
B9	Specialist Advisors	-	LS	-	Not Required	
B10	Contract Admin & Construction Monitoring	2,400,000.00	LS	6.0%	144,000.00	
B11	Insurances	-	LS	-	Excluded	
B12	Commissioning	-	LS	-	Included in Professional Services	
B13	Sunk Costs to Date	-	LS	-	Excluded - TBC by TCC if Required	
	Total Base Estimate - P5				**2,928,000.00**	**2,928,000.00**
C	**Assessed Risk & Optimism Bias**					**879,000.00**
C1	Assessed Risk - Design/Scope Development	2,928,000.00	LS	20.0%	586,000.00	
C2	Assessed Risk - Construction Contingency	2,928,000.00	LS	10.0%	293,000.00	
C3	Optimism Bias - Procurement	-	LS	-	Excluded	
C4	Optimism Bias - Project Specific	-	LS	-	Excluded	
C5	Optimism Bias - Client Specific	-	LS	-	Excluded	
C6	Optimism Bias - Environment	-	LS	-	Excluded	
C7	Optimism Bias - External Influences	-	LS	-	Excluded	
	Total Expected Estimate - P50				**3,807,000.00**	**3,807,000.00**
D	**Contingency**					**1,143,000.00**
D1	Contingency/Funding Risk	3,807,000.00	LS	30.0%	1,143,000.00	
	Total 95th Percentile/Project Estimate - P95				**4,950,000.00**	**4,950,000.00**

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Alternative Options

Appendix D

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Option 3b - 1 in 12 Ramp and Stairs

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Workshop 2 highlighted that the elevation change of the laneway and the existing east-west road connections may result in cyclists preferring to use the road network to access between Durham Street and Grey Street rather than the laneway. This resulted in the ramp option focusing on providing disabled access rather than catering for all active modes. A variation for Option 3b at 1 in 14 was discussed and explored. This option resulted in a preferred grade for accessibility requirements however the extra ramp length constrained the laneway space and provided little flexibility to provide placemaking/spill out spaces along the length of section 1. Due to this, the 1 in 12 option has been put forward.

Features

- 8.0m laneway width (building to accommodate extra 1.0m)
- This option provides the minimum ramp requirements for accessibility under NZS 4121:2001. 1 in 12 grade, 1.8m wide ramps with 1.5-2.0m landings, 9.0m max ramp lengths. Handrail and balustrade design to be developed in concept phase
- Compared to other options, Option 3b responds to the proposed development layout however is more constrained. In comparison to Option 3b 1 in 14, access is retained to the proposed lower level retail space, however the spill out area from the retail space will be constrained due the width required for the ramps. If the proposed mid-level retail area didn't occur, a 1 in 14 ramp could be implemented however a 1 in 12 ramp would provide greater flexibility to the layout of section 1 than 1 in 14
- Due to the position of the stairs, these may conflict with the proposed lower level shower space at the rear of the building (see Pre-Concept Study, Evatt and Martin)
- A medium proportion of planting areas are provided along the edge of Trustpower building and ramp
- A medium proportion of building and laneway interface (based on current proposed building design)
- This option has been estimated to have the medium cost compared to Option 1 and Option 4 (refer Durham St to Grey St Laneway Optioneering Cost Estimate Report, Dec 2022)

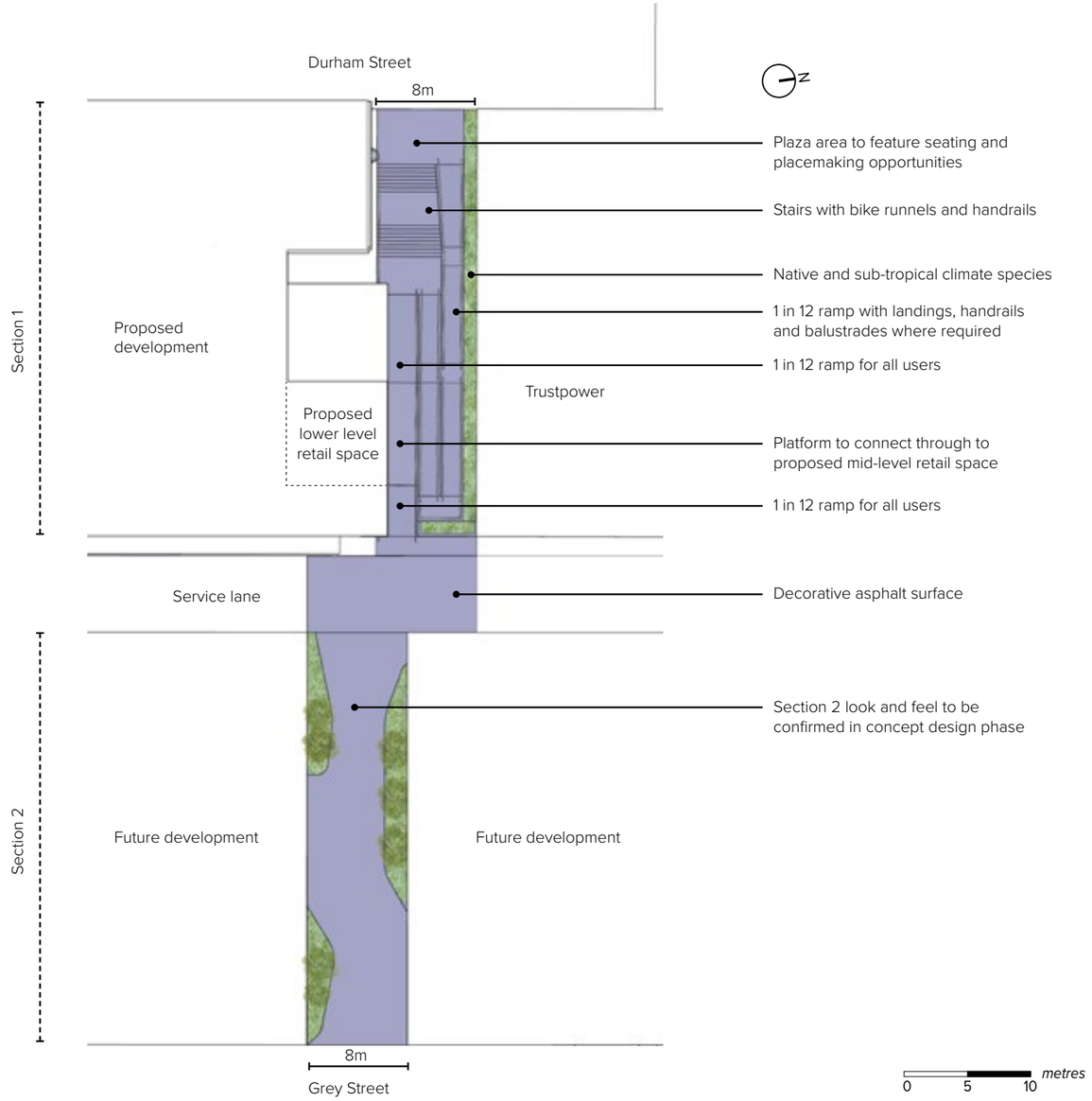

Figure 53 - Option 3b Concept Plan

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Option 3b render

Service lane looking west to Durham Street

Durham Street looking east to service lane

Option 3b section

Option 4 - Stairs only

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During workshop 1 and 2, it was discussed that a stair only option would be provided. This option utilises the stairs to create spaces along section 1, providing a comfortable step tread / rise between the two levels.

Features

- 7.0m laneway width (retain proposed laneway width (Pre-concept study, 134-142 Durham St, January 2022))
- Option 4 works best with the proposed development layout. Access and spill out space is provided to the lower level retail space and the stairs have flexibility to move east-west to best respond with the building
- Option does not meet accessibility requirements as it is a stair only option. Handrail and balustrade design to be developed in concept phase
- The stair option provides greater flexibility and larger areas of space for placemaking opportunities compared to Option 3b
- A high proportion of planting areas are provided compared to Option 3b. Planting widths vary and run along Trustpower and proposed building facades aswell as at service lane and Durham St entrances. Existing trees could be retained for this option however are not shown in this option
- A high proportion of building and laneway interface (based on current building design) is provided in this option
- This option has been estimated to have the lowest cost compared to Option 1 and Option 3b (refer Durham St to Grey St Laneway Optioneering Cost Estimate Report, Dec 2022)

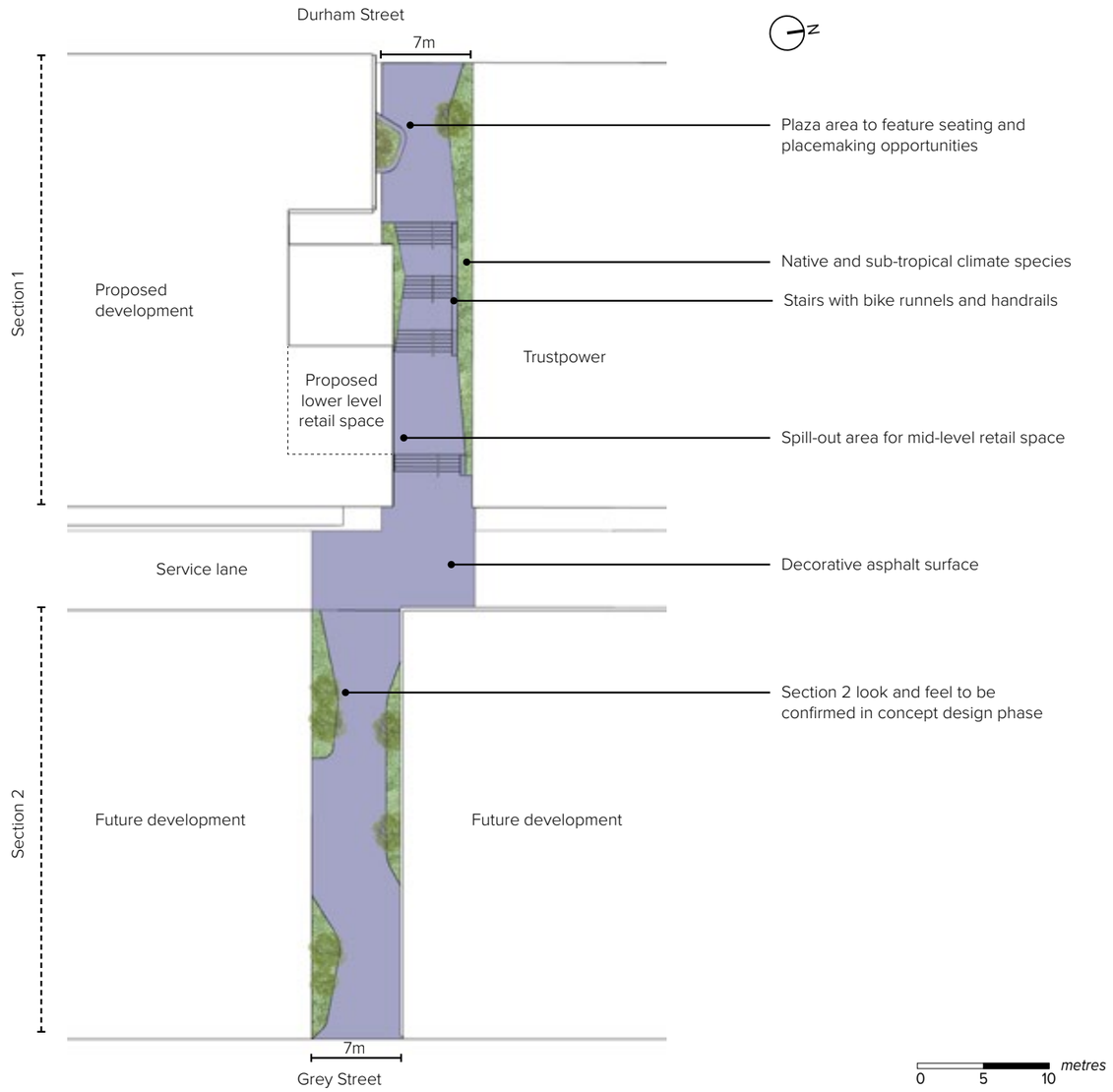

Figure 54 - Option 4 Concept Plan

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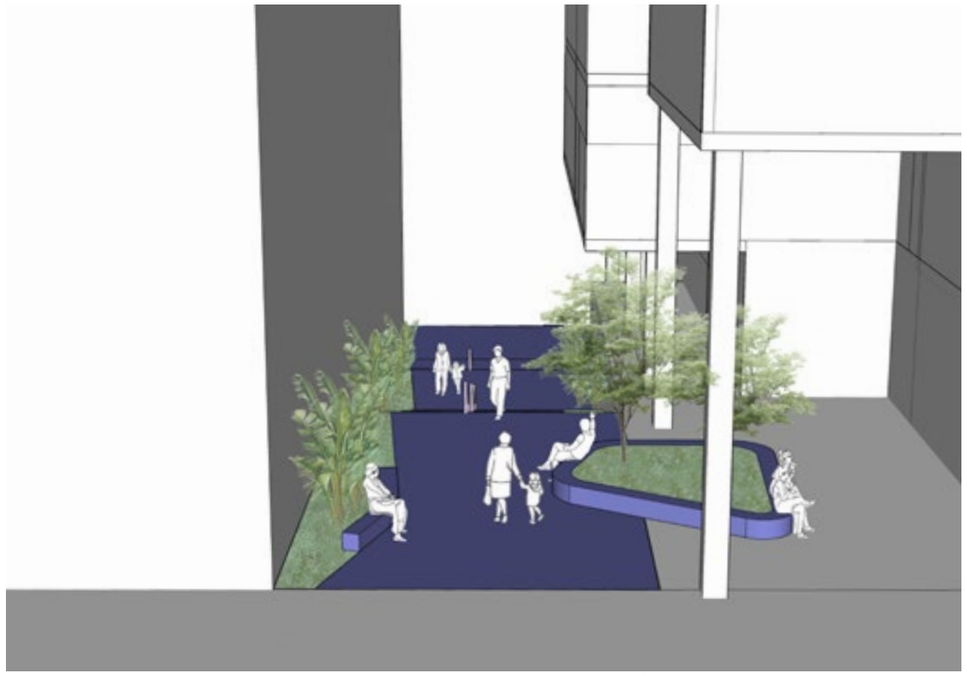
Option 4 render

Service lane looking west to Durham Street



Durham Street looking east to service lane

Option 4 section

79 Grey Street, Tauranga – Commercial Review

Tauranga City Council

Veros

79 Grey Street, Tauranga: Short Form Report

Project Name	**79 Grey Street, Tauranga**
Date	29 September 2023
Attn	Emily McLean – Programme Lead: City Development
Purpose	Commercial Review
From	Morgan Jones and Craig McCormick

Report Purpose

Tauranga City Council (TCC) purchased 79 Grey Street in late 2022 for purposes of securing a cross block linage (laneway) between Grey and Durham Streets. We understand that further discussions are taking place for a second purchase of the property fronting Durham Street to create full block access.

Initial bulk and location design work has been completed by ArchiStudio on design options for the cross-block linkage. Three options were prepared which delivered differing levels of access, public space and relating commercial space.

The objectives for this work are set out in the City Centre Action and Investment Plan, Te Paunga Oraki Te Papa. The cross-block connection between Grey and Durham Streets is one of the identified priority actions. The objectives are to enhance the retail and commercial precinct of the Tauranga City Centre, supporting a vibrant and permeable urban experience and enhanced connectivity.

The purposes of this report are to review design options completed to date and review an interim development step prior to the acquisition of the full block thoroughfare. The report will review the following.

- Identify utilisation / repositioning of the existing improvements for the short term whilst aligning with the objectives of the City Centre Action and Investment Plan
- Undertake preliminary feasibility options for both interim and long-term development options
- Outline delivery model options to provide the key outcomes outlined above
- Undertake preliminary offline market engagement as to development partnerships opportunities with the private sector
- Preliminary market engagement with commercial real estate agents

Documentation Received

Veros have received the following information relating to the project.

- Architectural floor layout plans – Archistudio
- Draft structural sketches and interim structural advice – SED Consultants Ltd

Option Review

Veros in conjunction with TCC have visited the site and inspected the existing improvements alongside a structural engineer (SED consultants). In addition to the development scenarios and drafty Archistudio designs, options were discussed with SED for an interim solution(s) and what structural works would be required to enable a NBS rating structure suitable for leasing (i.e., above 34%).

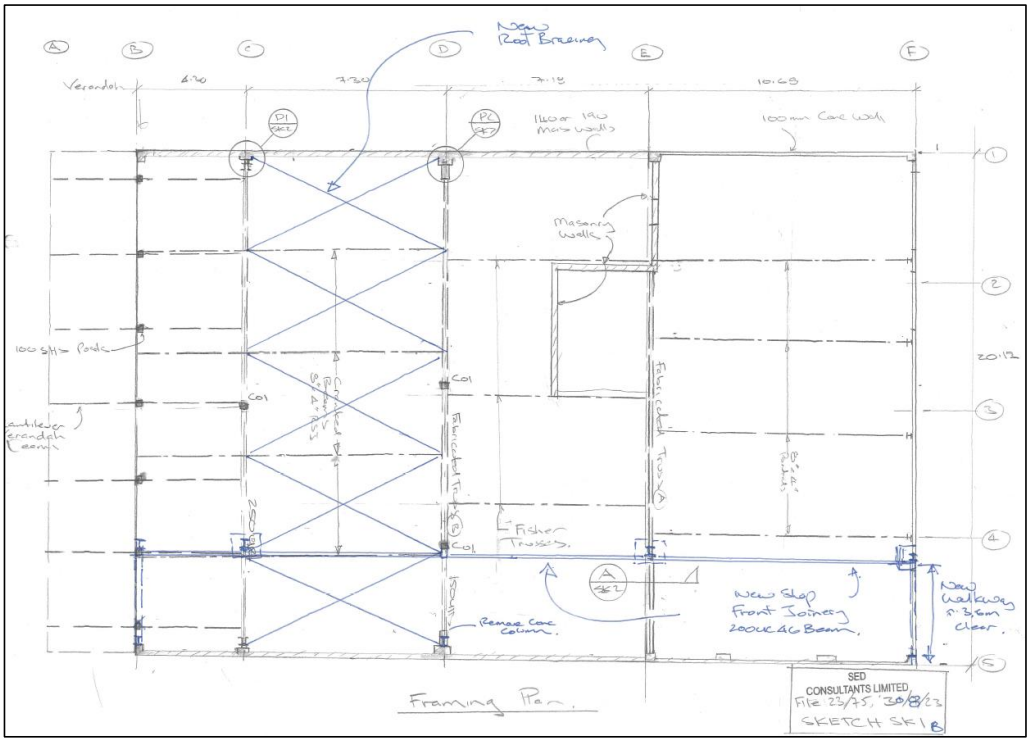
Structural Engineer Review

Structural advice received from SED consultants outlined the following:

Previous IEP reports detail the building at 15% IEP. Historic records show that this has varied over reporting periods and SED have stated that based on these reports and issues raised they would expect an IEP result of between 20% - 25% on an 'as is' basis.

SED have outlined interim works that would enable short term building options to reach a minimum 34% NBS rating. Works will be required to the existing structure and ideally the roof structure would remain with provision for laneway access to be provided to the northern site boundary. Internal laneway access is possible but would require significant structural works to enable a viable through access. This would be cost prohibitive.

Initial outlines sketches provided SED are shown below -



SED design sketch of required upgrade works to support an interim solution with provision for a northern laneway.

Preliminary fire advice has also been obtained from AS Fire Design based on short term reposition of retail space and provision for laneway access. Being a single storeyed building and would be deemed to be covered by the Acceptable Solutions. Type 2 fire requirements are most likely (two manual call points) but could require type 3 solution pending on final escape routes lengths.

AS Fire Design confirm that given the building is under one ownership, the potential tenancies and laneway will not require specific fire separation. A fire alarm system consistent through the building will be required. Laneway access and relating occupants will form part of the occupant calculation as this

will be considered 'circulation route/arcade'.
Initial estimates to undertake structural work for an interim option would be $60,000 + GST. This is a high level estimated provided by SED and recommendation is that further detailed design work is undertaken and taken to market for detail costing exercise. We would estimate wider project works costs relating to structural upgrades would be c. $100-120k.

SED have provided an outline of works that would enable the existing structure to be changed to get to or exceed 80% NBS. SED advice was that it would require significant works to the base structure and cost options would likely make this option unviable given likely return on cost.

TCC are to confirm what minimum NBS % requirements they need to meet to enable leasing on a short term / interim basis.

Given the above advice we have in conjunction with TCC outlined the following short-term options for the site.

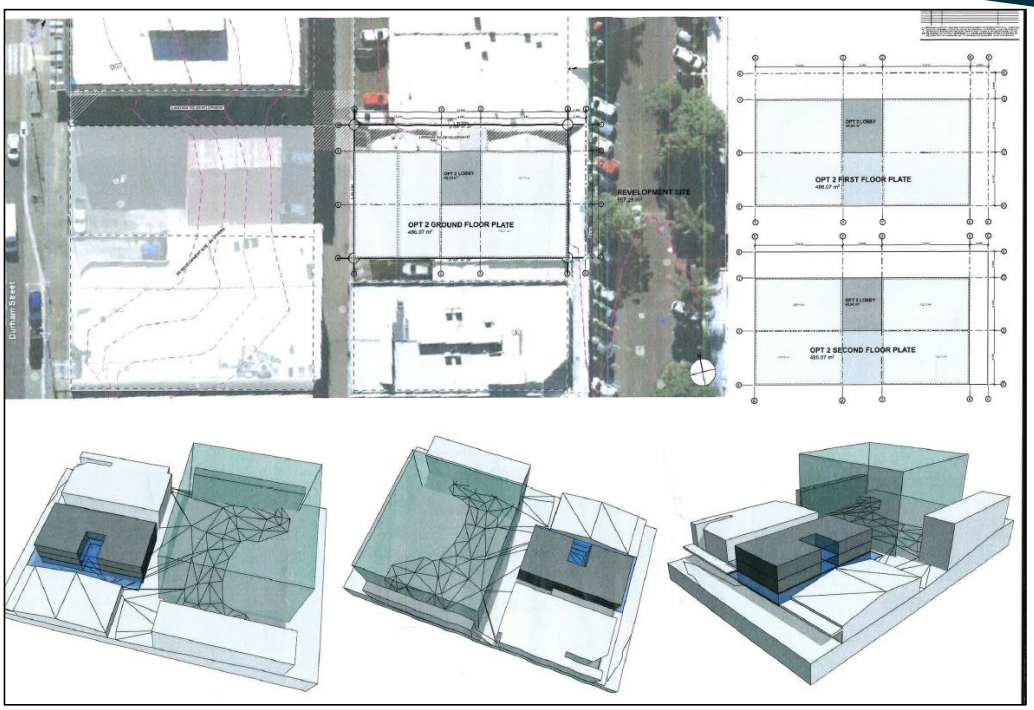
Interim Options

Interim Options			
Option 1 Status quo	Retain existing building. No works undertaken	No laneway provision	Now
Option 2 Pocket Park	Demolition of existing improvements. Pocket Park design and works	Open space to provide through site linkage	12-18 months
Option 3 Adjoining owner	Demolition of existing building & Engagement with adjoining owners to activate frontages to open plan area	Open space to provide through site linkage	12-18 months
Option 4 Repositioning of existing retail	Reconfiguration of existing retail. Structural strengthening works required	Provision for 5-6m wide laneway	12-18 months

Veros have reviewed the bulk and location design drawings provided for a long-term development of the site. An overview of full site redevelopment options is summarised as follows -

Site Redevelopment Options

Site Redevelopment Options			
Option 1 Ground Level Retail – Central Laneway	Demolition of existing improvements and new single retail built	Provision for central located laneway 5-6m wide	18 months
Option 2 Ground Level Retail & 2 Level Offices – External Laneway	Demolition of existing improvements and new two-level building	Provision for laneway 5-6m wide located on north boundary	2-3 years +
Option 3 Ground Level Retail & 1 Level Offices – External Laneway	Demolition of existing improvements and new three level building	Provision for laneway 5-6m wide located on north boundary	2-3 years



Archistudio Development Plan (Bulk & Location) – Option 2

City Centre Action Plan Outcomes

The objectives of the CCAP are to enhance the retail and commercial precinct of the Tauranga City Centre, supporting a vibrant and permeable urban experience and enhanced connectivity. Veros have review each of the options and outlined how each option meets the outlined objectives of the CCA plan.

Interim Options

Interim Option CCA Outcomes	
Option 1 Status quo	• NIL
Option 2 Pocket Park	• City connectivity • Enhanced pedestrian experience • City Centre Engagement
Option 3 Adjoining owner	• City connectivity • Enhanced pedestrian experience • City Centre Engagement
Option 4 Repositioning of existing retail	• Laneway activation • City connectivity • Enhanced pedestrian experience • City Centre Engagement

Site Redevelopment Options

Site Redevelopment CCA Outcomes	
Option 1 Ground Level Retail – Central Laneway	• Laneway activation • City connectivity • Enhanced pedestrian experience • City Centre Engagement
Option 2 Ground Level Retail & 2 Level Offices – External Laneway	• Laneway activation • City connectivity • Enhanced pedestrian experience • City Centre Engagement • Multi uses to support retail precinct
Option 3 Ground Level Retail & 1 Level Offices – External Laneway	• Laneway activation • City connectivity • Enhanced pedestrian experience • Multi uses to support retail precinct • City Centre Engagement

Market

Veros has reviewed each option and undertaken preliminary engagement with commercial agents as to likely demand and revenue outcomes. Key comments from these discussions are outlined below.

- Limited demand remains particularly in the retail sector of the Tauranga CBD.
- Vacancy levels remain high in core city centre ground level space at 50%-60% of retail tenancies.
- Low demand has created a stagnant rental market. Market rentals have not lifted to support recent uplifts in construction prices.
- Commercial office space demand is stronger than that of retail.
- High market expectations that land owners will contribution significantly via tenant inducements (rent free periods / contribution to fitout works cost).
- A strong focus is required on design, construction and fit out costs to support market rental.
- New benchmark rentals for both retail and office space are required within the Tauranga market to obtain project viability.
- The minimum lease term requirements for a project like this is 6-8 years +

Preliminary Feasibility Review

Veros have reviewed the viability of the opportunities based on information received and our wider understand of the market and other similar projects that we have bene closely involved with. Preliminary development feasibilities have been prepared for both interim solutions and long-term development outcomes.

The findings of the feasibilities are summarised in the table below, with more detailed summaries provided in **Appendix 2: Preliminary Development Feasibilities.**

Interim Options

Overall Preliminary Project Feasibility				
	Project Cost	**Revenue**	**Yield**	**Net Cost to Council (Including Land Purchase)**
Option 1 Status quo	$3.15m (land purchase)	c.$80-100,000 (Avg rental - $150/m²)	2.5-3.0%	Cost of land only $3.15m
Option 2 Pocket Park	$4.0m	NIL	NIL	$4.0m
Option 3 Adjoining owner	$4-4.5m	NIL	NIL	$4-$4.5m
Option 4 Repositioning of existing retail	$4.6m	$135,000	3.0%	$4.6m

The following key assumptions in the development feasibilities not otherwise outlined:

- Pocket Park and adjoining owner costs are based on indicative numbers provided by TCC
- Cold shell fitout to retail spaces (lighting to code, lined and open plan with kitchenette. No HVAC or ceiling etc.)
- Base build construction price for refurbished space is $1,250/m² - $1,500/m² Retail. This includes as allowance for structural work to get to a targeted 34% + NBS rating.
- 5.0% contractor contingency and escalation.
- 10% in client contingency
- 8.5% prime interest rate
- Retail rental rates adopted for repositioned retail are range from $150/m². This reflects a particular market window at the current time in the Tauranga city centre on Grey Street and Devonport Road which are experiencing retail flight, lower foot traffic and retail turnover volume, the impact of various construction projects throughout the city centre and arterial routes, and high vacancy.

Site Redevelopment Options

Overall Preliminary Project Feasibility				
	Project Cost	**Revenue**	**Yield**	**Net Cost to Council**
Option 1 Ground Level Retail – Central Laneway	$6,600,000	$229,320 (Avg rental - $425/m²)	3.47%	Presume sale of land, development by others $1m to $1.5m cost to TCC Laneway as a Transport Asset
Option 2 Ground Level Retail & 2 Level Offices – External Laneway	$13,120,000	$696,060 (Avg rental - $475/m²)	5.31%	As above
Option 3 Ground Level Retail & 1 Level Offices – External Laneway	$10,590,000	$473,580 (Avg rental - $450/m²)	4.47%	As above

The following key assumptions in the development feasibilities not otherwise outlined:

- Cold shell fitout to retail spaces (lighting to code, lined and open plan with kitchenette. No HVAC or ceiling etc.)
- Warm shell fitout to office spaces (ceilings, lighting, floor coverings and HVAC to open plan layout)
- Base build construction price $3,800/m² - Retail; $4,250 for office space
- 5.0% contractor contingency and escalation.
- 10% in client contingency
- 8.5% prime interest rate
- Retail rental rates adopted range from $400/m²-$450/m² on basis street front and rear units

Delivery Model

Veros have had initial 'off market' discussions with potential development partners within the private sector on basis of the outlined options. We have summarised an indicative position of likely engagement from the market on the interim and development options.

Interim Options

Interim Options		
	TCC Role	**Development Partner**
Option 1 Status quo	Owner	n/a
Option 2 Pocket Park	Owner	n/a
Option 3 Adjoining owner	Owner	No – collaboration work by TCC with adjoining owners
Option 4 Repositioning of existing retail	Owner	Unlikely engagement with Developer in short term given cost/return

Development Options

Overall Preliminary Project Feasibility		
	TCC Role	**Development Partner**
Option 1 Ground Level Retail – Central Laneway	Owner/sell -– contract preferred design outcomes	Unlikely engagement with Developer given cost/return
Option 2 Ground Level Retail & 2 Level Offices – External Laneway	Owner/sell -– contract preferred design outcomes	Yes – but expect market interest to require favorable terms for early engagement.
Option 3 Ground Level Retail & 1 Level Offices – External Laneway	Owner/sell -– contract preferred design outcomes	Yes – but expect market interest to require favorable terms for early engagement.

Key Observations

- Of the options considered, a site redevelopment for a low rise commercial building (new build, 2-3 level development option) is most viable development outcome on the site. However at the current time, the development returns are currently below what is generally accepted by the development industry.
- This development outcome best meets the CCAP outcomes.
- The preferred model for delivery is via a development partnership outcome with an experienced private sector developer. However the on basis existing market not viable in the short term, a 2–3-year view will be taken by the private sector, Council engagement with market on favourable terms (i.e., deferred settlement, milestone dates allowing for time to de-risk and deliver the project, etc.) may unlock early development of site.
- The development case and viability would be underpinned by Durham Street land purchase (unlock land access) which would increase foot traffic, profile, public transport access, and desirability of the site.
- Interim reposition of retail would create provision for laneway, through site access
- The site location can support commercial office & retail development and we believe this is the best long-term use of the site.
- Substantial tenant inducements likely to be required to hit proposed rentals (both retail and office) for any development option.
- New benchmark rentals would be required to support target market returns.
- Limited demand currently from retail and office tenants for new A-grade premises
- Obtaining min pre-commitment levels from tenants would be challenging in current market. Site redevelopment options would likely become viable in next 2-3+ years.
- Council will be able to accelerate the viability and delivery of this project, were Council to provide a level of tenant pre commitment.

Recommendation and Next Steps

Workstream One: Secure the Full Cross Block Connection

Continue work to secure a cross block connection between Grey Street and Durham Street. The overall project viability of redevelopment of the 79 Grey Street land will benefit from the cross block connection as it will increase connectivity, increase visibility (turn a mid block site into a corner site), and increase foot traffic. These metrics will improve the attractiveness of the tenancies within a developed site, and will increase the likelihood of near term redevelopment.

Workstream Two: Clear Existing Site

We recommend putting in place an interim use of the site. Subject to refinement of outcome and associated budgets, would include:

- Demolition of the existing building. Council to lead.
- Make good of the site for a combination of a) car parking b) cross block laneway between Grey Street and the mid block service lane and c) pedestrian buffer to Grey Street. Council to lead the mark good works.

Pathway to Market – Secure Developer / Development Partner

The redevelopment of this site for a 2-3 storey building with retail and hospitality at ground level, and commercial office above is in the order of $10m to $13.5m. This is the most realistic and viable development outcome on the property. Additional height will likely improve the return of the development, but reduce the likelihood of this occurring due to the increased costs and the increased levels of tenant pre-commitment.

This outcome can be delivered upon by the private sector development industry where project viability supports the outcome. Our feasibility analysis shows that at the current time, the viability is marginal. The viability however can be improved with a "developer friendly" sale structure. The key aspect of this is that it allows a developer time to structure and derisk a development project on site, without taking on significant costs, risk and exposure at the front end.

The fundamental factor that will drive this project forward is obtaining a development partner that is aligned to the key deliverable outcomes required by Council. As such we consider the best pathway forward is to engage directly with the market and focus on fully understanding key developer.

- Prepare an Information Memorandum and proactively engage with the market to understand demand and developer interest. We estimate there are in the order of 20 active parties in Tauranga and the wider region (potentially including the Waikato) who will have the capability and experience, and may be interested in this opportunity).
- Identify the key outcomes required by Council, keeping this as simple as possible. This may include purchase value and terms, a maximum timeline for redevelopment to occur, delivering the laneway, a minimum investment value or redevelopment scale (i.e. storeys or GFA), and the requirement for a minimum activation of Grey Street and the laneway.
- This engagement should be undertaken in a targeted and systematic fashion so that strong evidence around demand and alignment with Council is captured which will inform investment decisions.
- Typically we would recommend a two step market approach, however in this instance we would recommend a simple one stage process. This will have the benefit of speed, but can be undertaken due to the relatively small scale of the opportunity, and the simplicity of the outcomes sought by Council on the site.
- A key objective is to secure the right development partner and enter into an agreement with them which would establish minimum deliverables required by Council.
- This should include engaging directly with Durham Street landowner to understand wider land purchase scenarios.
- Indicative programme for market engagement as follows:

Market Engagement	
Market Engagement Approval TCC	• October 2023 – 2-4 weeks
Preparation of Information Memorandum / EOI	• October – 2 weeks (concurrent)
Market Engagement	• November – 4-6 weeks

Review and assessment of Expressions of Interest and Terms	• December 2023 / January 2024 – 2 weeks
Engagement with preferred Development Partner	• January 2024 – 4-8 weeks
Preparation and Completion of Conditional Sale and Purchase Agreement	• February – March 2024 – 4-6 weeks

Disclaimers

- This is only intended to be initial assessment into the viability of the project and further detailed assessment is required to confirm project viability.

79 Grey Street, Tauranga: Short Form Report

Option Analysis Summary

79 Grey Street, Tauranga: Short Form Report

Conceptual Feasibility – Interim Solutions

Conceptual Feasibility – Site Redevelopment Options

Hamilton
25 Ward Street, Hamilton 3204
PO Box 112, Hamilton 3240
07 838 2887

Tauranga
78 Second Avenue, Tauranga 3110
PO Box 324, Tauranga 3144
07 579 9747

Rotorua
1072 Haupapa Street, Rotorua 3010
PO Box 1027, Rotorua 3040

veros.co.nz
info@veros.co.nz

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DRAFT Key Indicative Parameters for EOI for 79 Grey Street

A. Project Overview

Purpose:
Tauranga City Council invites qualified developers to submit Expressions of Interest (EOI) for the purchase and development of 79 Grey Street. This central city site is to be developed with the provision of a pedestrian laneway that will connect Grey Street to Durham Street, enhancing urban connectivity, public space, and city centre revitalisation.

Background:
The council's Durham-Grey Street Laneway Project aims to create a safe, universally accessible, and vibrant pathway between Durham Street and Grey Street, aligning with Tauranga's City Centre Action and Investment Plan (CCAIP) and the City Centre Movement Framework. This project supports the city's vision for a walkable, connected city centre with activated public spaces and improved transport infrastructure.

Site Information:

- **Address:** 79 Grey Street, Tauranga
- **Site Size and Features:** Vacant, with direct access to Grey Street. Recent boundary and site adjustments have been completed to address accessibility and stormwater requirements.
- **Zoning and Usage:** [Insert zoning information]
- **Development Requirements:** Provision for a pedestrian laneway connecting through to 134 Durham Street, including specified design elements for accessibility and community activation.

B. Scope of Development

The council seeks a developer to:

1. **Purchase and Develop 79 Grey Street**: Develop the site with a high-quality, mixed-use design that complements the city centre's commercial and retail precincts.
2. **Deliver a Pedestrian Laneway**: Create a universally accessible laneway through the site, connecting Grey Street with Durham Street and integrating features that support safety, aesthetic value, and community use.
3. **Ensure Community and Cultural Alignment**: Work with local stakeholders, including mana whenua, to reflect cultural heritage and community values in the laneway's design and use.

Laneway Design Specifications:

- Minimum 3-4m pedestrian pathway, 2-3m planting zone, and 2m furniture zone where feasible.
- Accessibility standards, including ramps and/or switchbacks where required, due to grade challenges between Durham and Grey Streets.
- Attractive, safe, and durable design that fosters public use and integration with surrounding developments.

C. Strategic Alignment and Development Objectives

This project supports key council strategies, including:

- **Urban Connectivity:** The laneway will provide essential pedestrian access, linking the Knowledge Precinct with commercial and retail areas.
- **Public Transport and Accessibility:** Aligning with the public transport 'superstop' initiative on Durham Street, the laneway will ease foot traffic flow and support multi-modal connectivity.

- **Placemaking and Vibrancy:** The laneway is envisioned as a vibrant, engaging space that contributes to Tauranga's liveability and attractiveness, supporting a network of connected public areas.
- **Integrated Design Approach:** Ensure that the design of 79 Grey Street access and the laneway is sympathetic to and aligned with the urban open space designs planned for 134 Durham Street. The two sites should be connected visually and functionally, creating a cohesive and holistic experience.
- **Cultural Integration:** Proposals should incorporate elements that reflect Tauranga's Māori and Pākehā heritage and the council's Te Ao Māori approach. It should respond to the Tauranga Moana Design Guidelines.

D. Evaluation Criteria

Submissions will be assessed on the following criteria:

1. **Laneway Integration and Accessibility:**
    - Clear and feasible plans for a universally accessible laneway that meets council's design and safety standards and adequately integrates with the urban public space designs for 134 Durham Street.
    - Commitment to sustainable, accessible design that meets community needs.
2. **Developer Experience and Financial Capacity:**
    - Proven experience with similar development projects, especially in urban environments with public space components.
    - Demonstrated financial stability and ability to fund the proposed development.
3. **Community and Cultural Engagement:**
    - Evidence of a plan to engage with local stakeholders, including mana whenua, in the design and activation of the laneway.
    - Proposals that prioritise placemaking and contribute to the city's cultural heritage will be viewed favourably.
4. **Sustainability and Environmental Considerations:**
    - Innovative solutions for environmental outcomes, including green infrastructure such as stormwater management, green spaces, and use of sustainable materials.
5. **Timeline and Project Execution:**
    - Proposed timeline and project management plan that align with council's expected timeframe for completion.

E. Submission Requirements

Developers interested in this opportunity should submit an EOI containing the following information:

1. **Developer Profile and Experience**:
    - Overview of the developer's background, experience with similar projects, and financial standing.
2. **Development Vision for 79 Grey Street**:

- Conceptual designs, including renderings if available, for the overall development, with particular attention to the laneway integration.
- Proposed uses for the site (e.g., retail, commercial, hospitality) and any activation strategies for the laneway.

3. **Laneway Design and Accessibility Plan**:

   - Detailed description of how the laneway will meet accessibility standards, with design specifics that address gradient, stormwater management, and pedestrian safety.

4. **Community Engagement Plan**:

   - Outline of stakeholder engagement, particularly with local community groups, businesses, and mana whenua, to ensure the laneway meets local needs and cultural goals.

5. **Financial Proposal and Project Budget**:

   - Purchase offer for 79 Grey Street.
   - Investment projections, funding sources, and financial breakdown for the laneway's construction and activation.

6. **Project Timeline and Phases**:

   - Projected timeline, major milestones, and any anticipated challenges or dependencies.

Note: Tauranga City Council reserves the right to negotiate with any respondent and to seek further information or clarification as necessary.