Auckland Council

Te Hā Noa – Victoria Street linear park

Detailed Business Case

2021

Auckland Council
Te Kaunihera o Tāmaki Makaurau

Te Hā Noa - Victoria Street linear park

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Document sign-off and approvals

Role	Name	Signature	Sign-off Date
Project Manager			
Senior Responsible Owner			
Sponsor			
Business Owner			
Benefit Owner			

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Executive Summary

The Auckland city centre is undergoing a major transformation to become a more vibrant and better-connected place for residents, commuters and visitors. Within the midtown precinct, the Te Hā Noa - Victoria Street linear park project represents a key step forward in the revitalisation of the city centre. The redevelopment of Victoria Street provides an opportunity to improve connections between people, place, culture, environment, history, arts and the community within the corridor, within Tāmaki Makaurau and the wider region. The increasing urgency for investment in this area of the city centre is being driven by two major strategic drivers; strong community support for the City Centre Masterplan 2020 and the planned opening of the City Rail Link's Aotea Station in 2024.

The City Rail Link is a major public transport investment in Auckland, providing a new connection to the city centre. The Aotea Station, with two portals on Victoria Street, is expected to be the busiest station in New Zealand. The interface between the Te Hā Noa - Victoria Street linear park project and City Rail Link is critical. Without reallocating sufficient space to pedestrians and improving the facilities to enable a quality public realm, the benefits able to be realised by the City Rail Link project will be limited.

As part of the Green Link Transformational Move 6 in the City Centre Masterplan 2020, the linear park on Victoria Street will address the deficit of green public space in midtown. Providing recreational spaces on Victoria Street and increasing the amount and variety of planting will improve the quality of life for residents living in the city centre. The linear park on Victoria Street provides the opportunity to develop a green infrastructure network in the city centre that incorporates ecological and biodiversity corridor principles to enhance environmental sustainability.

The Indicative Business Case recommended a fundamental change to the function and form of Victoria Street to deliver on the vision in the City Centre Masterplan and respond to other city centre developments. By addressing the problems and opportunity identified in the Investment Logic Map shown in Figure 1-1, a number of positive outcomes will be achieved in relation to improved use of space, better pedestrian experience and a healthier, more sustainable city centre. This is reflected in the project purpose:

> *"We are transforming Victoria Street to create a thriving public space for movement, rest and recreation, in a way that reflects the unique identity of Tāmaki Makaurau, to enhance the wellbeing of our people, our city and our natural environment."*

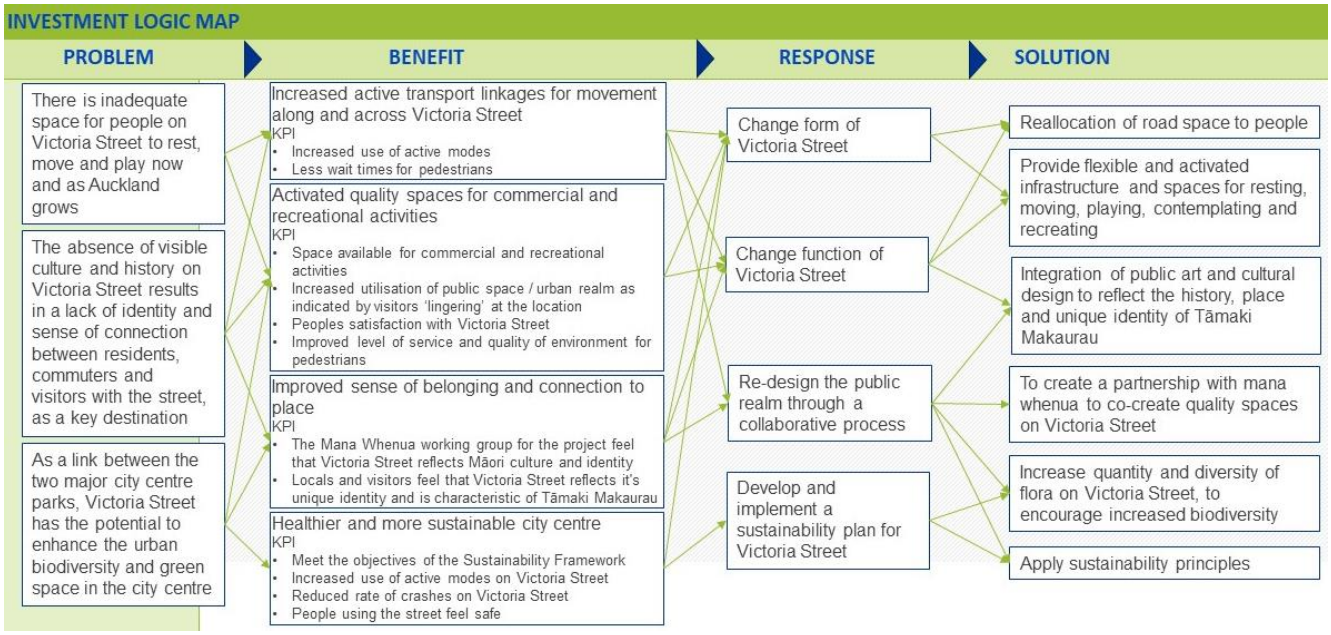

Figure 1-1: Investment Logic Map (larger image provided in Appendix B)

Based on the recommendations in the Indicative Business Case, the Detailed Business Case has focussed on the planning and design for transforming the eastern section of Victoria Street between Hobson Street and Kitchener Street. The case for change developed as part of the Indicative Business Case remains relevant but the interface with Aotea station means this is the most critical section of Victoria Street to address.

Figure 1-2: Detailed Business Case design process

The Preferred Way Forward identified through the Indicative Business Case proposed a layout, cross-section and materials palette for the Project. This Detailed Business Case has progressed the design with a particular emphasis on resolving a number of key technical design elements.

Throughout the Detailed Business Case meaningful engagement with stakeholders has informed the direction of the project and development of the Preferred Option. As project partners, Mana Whenua have played an important ongoing role in the development of the Detailed Business Case and the Preferred Option. The Mana Whenua working group developed cultural principles for the project to inform the design. Extensive consultation with Auckland Council through the Community of Practice informed the development of sustainability principles and resolution of specific design issues resulting in the Preferred Option.

Consultation on the key design issues was undertaken with stakeholders and design specialists. Workshops considered design issues related to public realm, pedestrians, cyclists, transport network and integration with City Rail Link. A number of design elements were resolved through these discussions, however a range of technical investigations were required to resolve outstanding design issues.

The design led process meant that decisions regarding each design element were evaluated on a sound basis of evidence and technical expertise. The outcome of this process was the development of two options. These options were assessed using Multi-criteria Analysis, a Safety in Design workshop and consultation with Mana Whenua. This assessment identified the preferred design elements expected to best achieve the desired benefits of the Project. These were combined to form the recommended Preferred Option endorsed by the Project Steering Group on 8 October 2020.

The Preferred Option balances the competing demands of traffic, cycling, pedestrian movement and amenity and combines them in a cohesive manner. As shown in Figure 1-3 and Figure 1-4, the general arrangement of the corridor is asymmetric including from north to south a 6.0m footpath, two 3.2m vehicle lanes, a 3.0m bidirectional cycle facility with 0.6m buffer and 12.0m zone for the City Rail Link station facilities, bus facilities, pedestrian movement and activity spaces.

The urban character is proposed to support pedestrian movement and the establishment of a series of unique activity zones. The layout of the urban realm features will support the integration of the City Rail Link station portals on the southern side of Victoria Street enabling safe egress to and from the station for a variety of users. Raised tables are intended at intersections to prioritise pedestrian movement and to reinforce the continuity of the park space. The distribution of trees along the corridor will be consistent whilst responding to the requirements of each block and the unique opportunities and constraints. Consistent with the central city, premium materials such as stone pavements and wall elements will be utilised to shape the way users engage with the space.

Figure 1-3: Preferred Option overall plan

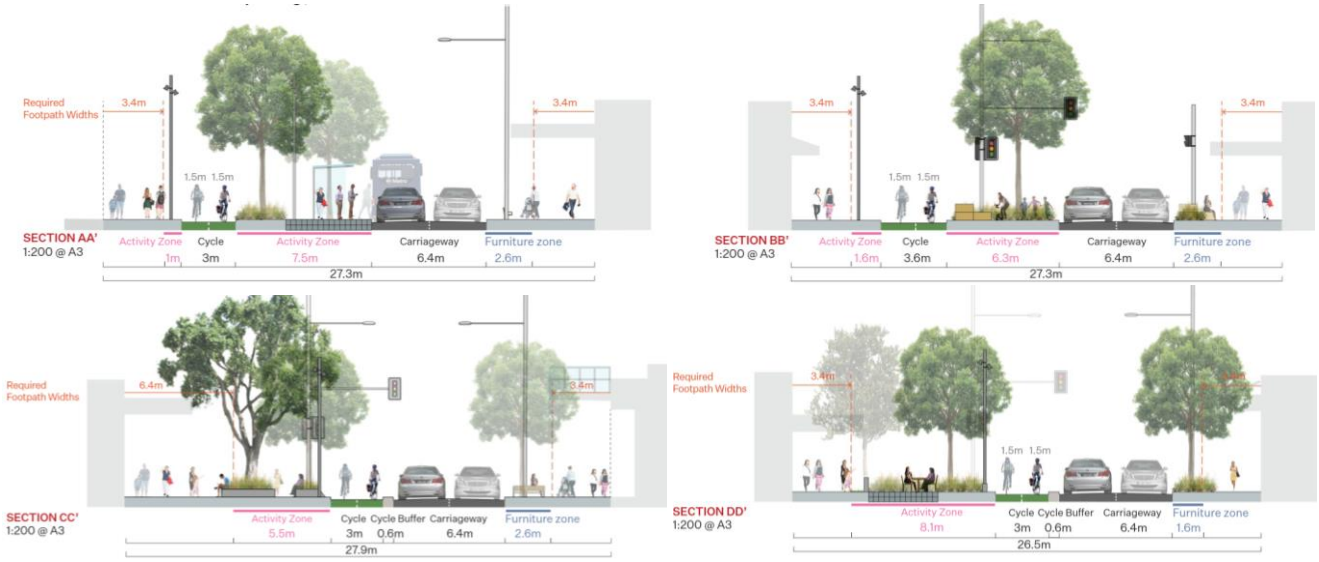

Figure 1-4: Preferred Option typical cross-sections

The Preferred Option is planned to progress in a staged approach, with Stage 1 being completed first followed by Stage 2A and 2B. The extent of each stage is shown in Figure 1-5.

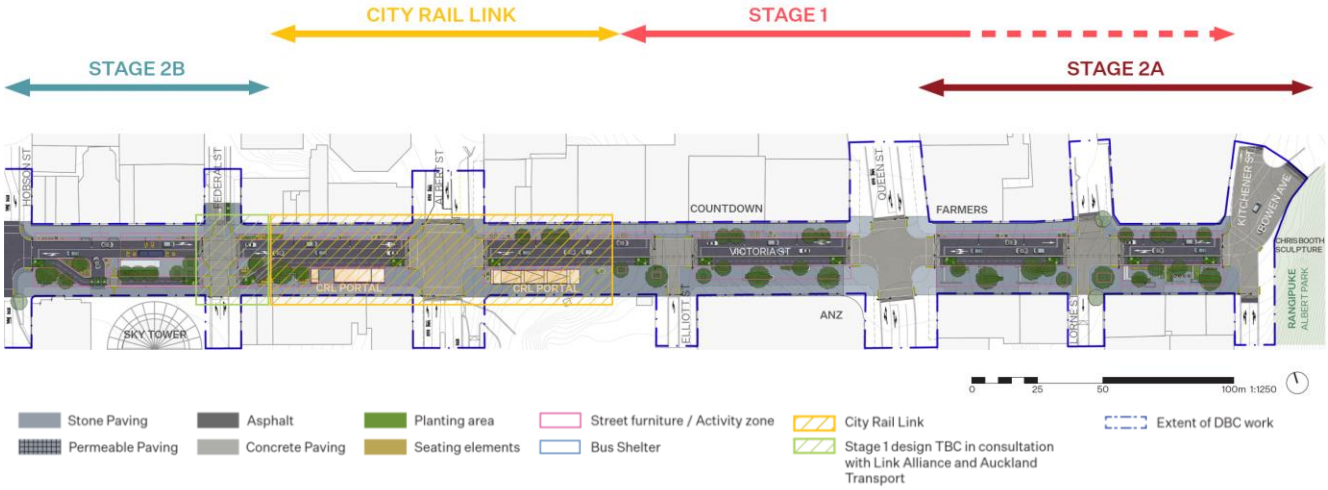

Figure 1-5: Extents of each stage

As shown in Figure 1-6, Stage 1 is proposed to coordinate with the City Rail Link development of the Aotea Station entrances on Victoria Street. It will include the implementation of the Preferred Option from Federal Street to Queen Street, with a lighter touch implementation from Queen Street to Kitchener Street.

Figure 1-6: Stage 1 – Preferred Option Federal Street and Queen Street, Light Intervention east of Queen Street

The Preferred Option is expected to contribute to achieving all four of the key benefits anticipated as part of Te Hā Noa - Victoria Street linear park project. The economic analysis undertaken shows that Auckland Council's investment in the Preferred Option will provide value for money. This is reflected in the project achieving a Benefit Cost Ratio (BCR) of **2.8** based on a Total Expected Cost Estimate of to construct the Preferred Option between Hobson Street and Kitchener Street of **$134,590,000**.

The economic analysis quantified a number of benefits that are expected to be generated by the project. The three most significant are:

- Productivity – Estimated benefit $ 220.25 million - Improved walkability in the city centre has been shown to contribute to increased productivity. This comes from 'agglomeration economies' whereby the enhanced city centre makes it easier for workers to interface with clients, colleagues and competitors.
- Urban realm – Estimated benefit $ 61.69 million - Users of infrastructure value the quality of the environment as well as the service it provides. Creating a linear park will significantly enhance the form and feel of the urban environment for the enjoyment of users.
- Pedestrian travel times – Estimated benefit $ 21.50 million - Linked to the improved walkability mentioned above, the project reallocates priority to pedestrian movements, including the crossing of Victoria Street. This is expected to reduce pedestrian delay time that they currently experience when waiting for pedestrian signal phases.

While there are strong strategic and economic reasons to invest in implementing the Preferred Option for Te Hā Noa - Victoria Street linear park between Hobson Street and Kitchener Street, the funding allocation in the Long-term Plan is insufficient to implement the recommended scope. An assessment of the funding requirements shows that Stage 1 of the Preferred Option is expected to cost $45.7 million (including escalation). However, the current allocated funding for the project in the Long-term Plan 2018-2028 is insufficient and therefore an additional funding of **$15.7 million is required**.

This Detailed Business Case has explored the potential for a lower specification implementation of Stage 1 within budget. However, progressing with that approach is not recommended as it would require significant compromise on quality and would not deliver on the benefits desired from the project. Furthermore, there are still other potential avenues of funding that can be explored, such as the appetite of private sector contributions.

The funding gap must be addressed in order to proceed with implementing Stage 1 of the Te Hā Noa - Victoria Street linear park. If the project is not implemented in coordination with the programme for City Rail Link, the integration of the Aotea Station with Victoria Street will be affected. If the funding for Stage 1 is not secured within the time period required to coordinate with the City Rail Link programme, then Auckland Council will need to investigate alternative options to support the pedestrian space requirements for the Aotea Station as part of a separate streetscape project. The Preferred Option to deliver a linear park could however be implemented at a later date as future funding becomes available.

In either case, agreeing the procurement approach requires further investigation by Auckland Council to determine the preferred approach. There are broadly two potential options for procurement of the Te Hā Noa - Victoria Street linear park project:

- Option i - Delivery managed through City Rail Link via Link Alliance; or
- Option ii - Delivery undertaken by a separate contractor procured directly and managed by Auckland Council.

The selection of the preferred procurement approach will depend on the willingness of the Link Alliance as well as other considerations for Auckland Council around competitiveness and efficiencies. Option i to deliver Te Hā Noa - Victoria Street linear park through Link Alliance is intuitively attractive as it is the most effective approach to addressing the major risks facing the project. However, should Auckland Council choose Option ii to procure a separate contractor to undertake the work then a Traditional Construct only contract is recommended.

Delivery of Stage 1 is proposed to be coordinated with the programme for City Rail Link. Stage 1 is planned begin with initial site investigations in early 2021, followed by the preliminary / developed design in April 2021 and submission of the resource consent in February 2022. Detailed design phase is currently shown as five months duration completing in May 2022. Allowance has been made for a four month procurement phase with construction programmed to start September 2022.

The key next steps to progress Stage 1 include the following:

- Investigate potential funding options to address shortfall and confirm funding for construction of Stage 1.
- Agreement with City Rail Link on procurement approach, scope and extent of work.
- Progress with the steps outlined in the Project Execution Plan to proceed with Preliminary Design of Stage 1 including:
  - Site investigations to address risks pertaining to unknown underground conditions including utilities, pavement structure and soil conditions.
  - Consultation with Auckland Council on the Consenting Strategy regarding the packaging of consents and potential for a longer lapse period.
- Collect baseline data for Victoria Street prior to closure for City Rail Link works for Benefits Realisation Plan.

The Detailed Business Case recommends that investment in Te Hā Noa - Victoria Street linear park project proceed and seeks approval for Auckland Council to progress with development of the Stage 1 design, providing that the additional funding required can be secured. This timing is vital to ensure that the benefits of investment in the City Rail Link can be maximised and that the street can safely accommodate the anticipated growth in the number of people using Victoria Street.

Important note about your report

The sole purpose of this report and the associated services performed by Jacobs is to develop the Detailed Business Case for the Victoria Street linear park along Victoria Street within the Auckland city centre in accordance with the scope of services set out in the contract between Jacobs and Auckland Council ('the Client'). That scope of services, as described in this report, was developed with the Client.

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Glossary of Terms

Word	Description
Access for Everyone	Concept included as part of the City Centre Masterplan 2020 to reallocate street space from cars to people and restrict vehicle access within the Queen Street Valley. The Access for Everyone concept is still being developed and so this Detailed Business Case does not make any assumptions on the expected scope and delivery, but rather it is noted as being in alignment with the principles.
Agglomeration Economies	Economies of scale and productivity benefits realised from firms clustering together, as measured by effective job density.
Amenity	Is a positive element or elements that contribute to the overall character and enjoyment of an area. Includes the perceived quality of the urban environment such as the pleasantness or attractiveness of a place.
Benefit Cost Ratio (BCR)	Ratio of discounted benefits to discounted costs. A ratio greater than one means that the benefits outweigh the costs.
C40 declaration	Combined commitment to climate action by mayors of C40 cities through the C40 Fossil Fuel Free Streets Declaration and Global Green New Deal.
City Rail Link (CRL)	Transport infrastructure project to increase the rail network capacity in Auckland through construction of an underground rail link through the city centre.
Community of Practice	A group comprising of key internal stakeholders, subject matter experts and project partners. See Section 3.1.2 for more detail on Community of Practice.
Biodiversity	A measure of the number and relative abundance of different species. High biodiversity is usually desirable.
Ecology	Interconnection between organisms, species and the environment they live in.
Ecosystem	A community of living organisms in conjunction with the non-living components of their environment, interacting as a system.
Ecotopes	Are distinct habitats and ecological areas as they would have been prior to human habitation based on landform, environmental conditions and geologies.
Effective Job Density (EJD)	A measure of the density and connectivity of jobs in an area.
Episodic	Consisting of a series of separate parts.
Escalation	Increase in prices over time due to inflation.
Green Infrastructure	A strategically planned network of natural and semi-natural areas with other environmental features designed and managed to deliver a wide range of ecosystem services in both rural and urban settings.
Green space	Areas of grass, trees, or other vegetation within an urban setting that provide recreational, environmental and/or aesthetic benefits.
Gross Domestic Product (GDP)	Official measure of economic growth. Measure of the value added created through the production of goods and services.
Habitat	An environment where a species can live and reproduce.
Linear parks	Typically, in an urban environment long narrow parks that can be in many forms to provide a range of services (ecological, recreational, transport). Sometimes referred to as a 'greenway' when used as a part of a trail or transport network.
Link Alliance	Consortium of seven companies, which are delivering the main stations and tunnels for the City Rail Link project.
Manaakitanga	The ethic of holistic hospitality whereby Mana Whenua have inherited obligations to be the best host they can be.
Mana Whenua	Hapū and iwi with ancestral relationships to certain areas in Tāmaki Makaurau where they exercise customary authority.

Word	Description
Mass Rapid Transit (MRT)	High-capacity bus or rail based public transport.
Multi-criteria Analysis (MCA)	Assessment framework tool used to assess options against a set of criteria.
Nominal cost	Unadjusted cost including escalation.
Net Present Value (NPV)	The difference between the discounted (present value) benefits and costs.
Optimising	To solve problems (e.g. designs) so resources are used (e.g. investment funds) in the most effective way.
Present value	Also known as discounted value, this is a financial calculation that measures the worth of future cash flows in today's dollars, based on an assumed discount rate (hurdle rate of return).
Productivity	Measure of how efficiently production inputs (capital and labour) are used within the economy to produce output.
Public realm	Space that is accessible to the public and comprises of streets, squares, parks, green space and outdoor places.
Public space	A place that is generally open and accessible to people.
Rangipuke	Refers to Albert Park.
Real cost	Cost in constant dollars, i.e. excluding escalation.
Remnant Natural Areas	Are areas of vegetation (native trees, shrubs and grasses) that has not been cleared by humans.
Sustainability	Sustainability defined by the world commission on the environment and development – "Development that meets the needs of the present generation without compromising the ability of future generations meet their needs."
Tāmaki Makaurau	The Māori name for Auckland. Translates to Tāmaki desired by many.
Te Hā Noa	The name gifted to the Victoria Street linear park project. See Section 3.1.1.
Te Waihorotiu	Stream that previously existed within the Queen Street Valley.
Urban Ngahere	A Ngahere in the Māori language translates to forest. Urban Ngahere (forests) strategy is a strategic plan created by the Auckland Council.
Wai Kōkota	Meaning 'the place where cockles could be harvested' referring to area which forms the eastern end of Freemans Bay basin and Victoria Park.
Vision Zero	Safety approach that no death or serious injury is acceptable adopted by Auckland Council and Auckland Transport.

1. Introduction

The purpose of this report is to present the Detailed Business Case for Te Hā Noa - Victoria Street linear park project Stage 1 and 2. This section of the report introduces the project and provides an overview of work previously completed.

Te Hā Noa - Victoria Street linear park forms part of the Green Link proposed in the City Centre Masterplan 2020. The project is proposed by Auckland Council to improve the urban environment and amenity for the public within the city centre. Victoria Street is currently defined by a six lane cross-section and dominated by motorised vehicles. Transforming it into a greener and cleaner space will prioritise pedestrians and cyclists while also providing opportunities for rest, recreation and increased commercial activity.

The Indicative Business Case recommended a preferred future layout for the full length of Victoria Street to deliver on the vision in the City Centre Masterplan and respond to other city centre developments. Based on the recommendations in the Indicative Business Case, the development of the eastern section of Victoria Street between Hobson Street and Kitchener Street has been progressed as part of this Detailed Business Case.

The Detailed Business Case has applied the Better Business Case 'Five Case model' to enable Auckland Council to make informed decisions for public value regarding a linear park on Victoria Street. This report documents the detailed investigation and development of the Preferred Option for the section of Victoria Street between Hobson Street and Kitchener Street.

1.1 Project Overview

Victoria Street is a significant central city corridor connecting Wai Kōkota (Freemans Bay / Victoria Park) with the city centre and Rangipuke (Albert Park). The street is home to residential, commercial and retail development with a diverse range of uses and demands. The development of major city shaping public transport infrastructure in the midtown area is expected to have a significant impact on the area. In particular the opening of the City Rail Link (CRL) will provide a new connection to the city centre with pedestrian entrances on Victoria Street to Aotea Station which is expected to be the busiest station in New Zealand.

Auckland's city centre is typical of many large cities in that it is made up of streets and buildings with limited sense of identity, visible reference to history, or sense of connection to culture. The redevelopment of Victoria Street provides an opportunity to improve connections between people, place, culture, environment, history, arts and the community within the corridor, within Tāmaki Makaurau and the wider region.

The Victoria Street linear park concept (shown in Figure 1-1) has been proposed by Auckland Council to improve the urban environment and amenity for the public within the city centre. The project will fundamentally change the function of Victoria Street from its current environment that is dominated by motorised vehicles by transforming the street into a greener and cleaner space that prioritises pedestrians and cyclists and provides opportunities for rest, recreation and increased commercial activity. The project is supported by the following purpose statement which recognises and reflects the future of Victoria Street when considering its potential with regards to its location and the presenting opportunity for enhancement:

> *"We are transforming Victoria Street to create a thriving public space for movement, rest and recreation, in a way that reflects the unique identity of Tāmaki Makaurau, to enhance the wellbeing of our people, our city and our natural environment."*

During the Indicative Business Case the project was privileged to have been gifted a name from the Mana Whenua project working group: Te Hā Noa (See Section 3.1.1). "Te Hā Noa refers to the range of inputs that any person will experience whilst journeying within the city centre and the link between Wai Kōkota (Freemans Bay / Victoria Park) and Rangipuke (Albert Park)."

Figure 1-1: Te Hā Noa - Victoria Street linear park

1.2 Background

1.2.1 Work Completed to Date

The Victoria Street linear park was first identified in the City Centre Masterplan. Originally developed in 2012, the City Centre Masterplan sets the aspirational blueprint for transformation of the city centre. This high-level visionary document explored potential opportunities within the city centre and identified eight transformational moves designed to *"transform the city and deliver a competitive and exhilarating place."*

Of specific relevance to the Te Hā Noa – Victoria Street linear park, Transformational Move 6 – The Green Link, proposes an open space network connecting the eastern waterfront, Auckland Domain, Albert Park, Victoria Park, Wynyard Quarter and the western waterfront. Referred to as the Green Link, this network aims to improve walking and cycling connections, pedestrian space, public realm and urban amenity. The Victoria Street linear park is identified as one segment of the Green Link network that will provide a midtown link across the city centre between Victoria Park and Albert Park. The City Centre Masterplan highlights that the Victoria Street linear park will provide much needed quality public realm and open space by significantly increasing the amount of green public space through some of the densest and busiest neighbourhoods in New Zealand. The City Centre Masterplan was refreshed in 2020 to incorporate updates and to align it with the latest version of the Auckland Plan. This is further discussed in Section 2.2.2.

Since 2012, investigation and design has been undertaken to examine and rationalise how the Victoria Street linear park concept fits into the wider city centre context. The following provides background of past work undertaken to bring this project to the Business Case phase.

Building on the City Centre Masterplan, the Victoria Street linear park concept was further refined in 2016. The Green Link report outlined potential key objectives, explored design drivers for the linear park including the key characteristics, landmarks and views along the corridor that need to be considered and retained. It looked at the opportunities to demonstrate the cultural and historic elements along Victoria Street and suggested the future opportunities for the space. The hierarchy of movement presented in the Green Link report considered how the Victoria Street linear park can support pedestrian activity whilst creating a safe environment for all anticipated modes to work together. A number of design ideas for the project were also explored.

The development of the Aotea Station and subsequent reinstatement of Victoria Street presented an opportunity to envisage what a section of Te Hā Noa - Victoria Street linear park project adjacent to the station may look like as part of the City Rail Link. This led to the investigation and development of a reference design for the section between Hobson Street to Queen Street, prepared in 2018. It was identified during this investigation that designing a section in isolation removed the contextual framework of the wider project and risked delivering a sub-standard outcome that did not integrate with the wider long-term plans for the linear park.

The work completed to date on Te Hā Noa - Victoria Street linear park project is summarised in Figure 1-2. These investigations have explored the opportunity for the Green Link, current road typology, urban context and reference design option between Hobson Street and Queen Street in detail.

The Strategic Assessment for the Victoria Street linear park project signed off by Auckland Council in December 2018 confirmed that investment in a linear park along Victoria Street aligns with and supports the strategic outcomes sought in the Auckland Plan 2050. It outlines that there is a need for investment and that the project be progressed to Indicative Business Case.

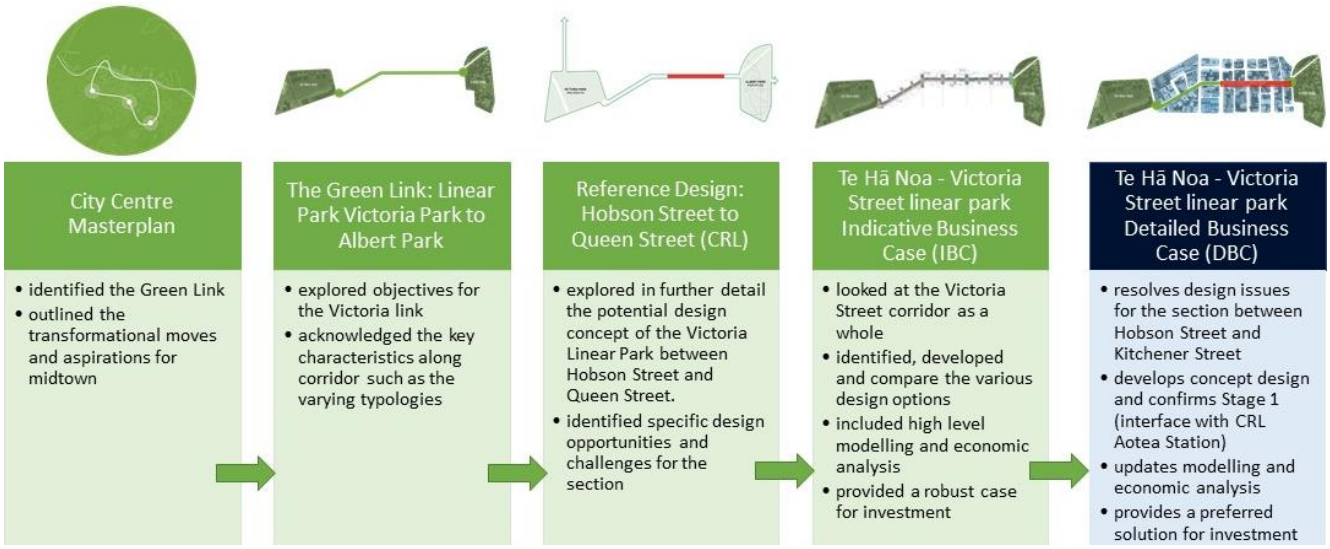

Figure 1-2: Victoria Street linear park Concept Development

1.2.2 Indicative Business Case

An Indicative Business Case was developed for the full length of Victoria Street, between Victoria Park and Albert Park (Halsey Street and Kitchener Street). An options selection process was undertaken to identify and develop a value for money solution which would address the key themes and issues affecting Victoria Street.

Short List Option 1 (shown in Figure 1-3) was recommended as the Preferred Way Forward to the Project Steering Group, who endorsed this on 31 October 2019. The option provides park and placemaking space and a dedicated cycle facility on the southern side of the street. It maintains two lanes for traffic along the entire length of the corridor. The Indicative Business Case recommended that investment in Te Hā Noa - Victoria Street linear park project proceed with further investigation into Short List Option 1.

Auckland Transport and Auckland Council have endorsed the reduction of traffic lanes on Victoria Street between Federal Street and Queen Street to two lanes, following the reopening of the Victoria Street intersection upon the construction of Aotea Station being completed[1]. The parties agreed in principle that the Detailed Business Case for the project can progress based on a two-lane layout in the central core and in the longer term between Hobson Street and Kitchener Street.

Initial assessment of potential construction staging identified that to tie in with the implementation of other projects within the midtown area (including City Rail Link) the sections of Victoria Street between Hobson Street and Kitchener Street be progressed earlier than the sections between Halsey Street and Hobson Street.

The Indicative Business Case for the Te Hā Noa - Victoria Street linear park project was accepted by Auckland Council in September 2020.

[1] Victoria Street lane reduction, Auckland Council Memo - 26 February 2020

To reflect the proposed construction staging, the development of the project Detailed Business Case is to be undertaken in two separate Detailed Business Cases. The first includes Stage 1 and 2 between Hobson Street and Kitchener Street (this report). Additional Detailed Business Case(s) for the sections between Halsey Street and Hobson Street (Stage 3 and 4) are likely to be progressed in the future in coordination with the development programme for the city centre. The physical extent of each stage is illustrated in Figure 1-3.

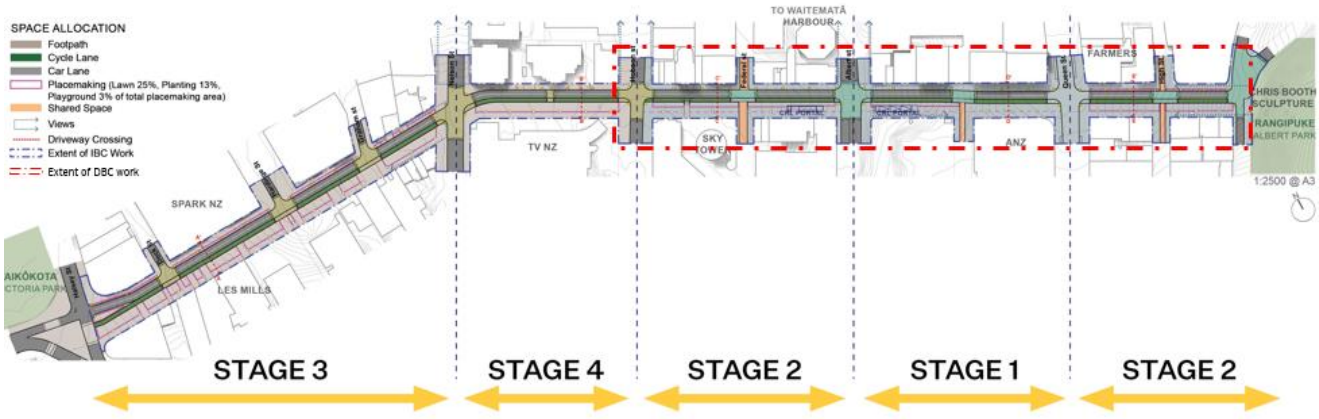

Figure 1-3: Short List 1 overall layout and staging

1.3 Business Case Approach

The Better Business Case 'Five Case model'[2] has been adopted to provide a framework for objective and robust analysis and consistent information, to enable Auckland Council decision makers to make informed decisions for public value regarding investment in Te Hā Noa - Victoria Street linear park. The Better Business Case Framework is the Treasury standard for investment of public money and is being used across all transport projects in New Zealand. The Better Business Case framework aims to mitigate potential reasons for project failure through strong stakeholder engagement and clearly defined and supported project objectives.

The Business Case process also provides assurance to Auckland Transport, as the Road Controlling Authority, that the project has followed a rigorous and transparent process. This transparent and repeatable process provides further benefit later during the consenting phase if a Resource Management Act (RMA) process is required.

The Detailed Business Case is the second business case stage under the Better Business Case Framework, following on from the Indicative Business Case. This Detailed Business Case and the design of the Preferred Option have been independently peer reviewed.

1.4 Purpose of this Report

The purpose of this report is to present the Detailed Business Case for Te Hā Noa - Victoria Street linear park project Stage 1 and 2. This report documents the detailed investigation and development of the Preferred Option for the section of Victoria Street between Hobson Street and Kitchener Street. The Detailed Business Case has been prepared by applying the five-case model with the report structure devoting a section to each case as follows:

- **Section 2: The Case for Change** recaps the case for change demonstrated in the Indicative Business Case and presents the key points supporting the Strategic Case for a linear park on Victoria Street and in particular why the section of Victoria Street between Hobson Street and Kitchener Street is a priority.

[2] For more information refer to the New Zealand Treasury webpage: Better Business Cases (BBC), https://treasury.govt.nz/information-and-services/state-sector-leadership/investment-management/better-business-cases-bbc

- **Section 3: Consultation and Engagement** summarises the stakeholder consultation undertaken as part of project development during the Detailed Business Case.
- **Section 4: Optimising Value** presents the Economic Case which provides an overview of the process undertaken to determine the Preferred Option. The economic value for money of the Preferred Option is demonstrated by drawing on the tools developed and applied during the Indicative Business Case including the cost-benefit analysis and multi-criteria assessment framework.
- **Section 6: Our Procurement Approach** presents the Commercial Case which recommends the staging to implement the Preferred Option and consenting strategy. It also outlines potential procurement approaches to coordinate the construction of Stage 1 with City Rail Link.
- **Section 5: An Affordable Investment** presents the Financial Case which outlines the financial viability of the project and outlines funding requirements.
- **Section 7: Delivering Te Hā Noa** presents the Management Case which outlines the initial plans for successful delivery of the project.
- **Section 7 - Recommendations and Next Steps** provides a summary of what is required to proceed and complete the next phases of the project.

2. The Case for Change

The case for change developed as part of the Indicative Business Case remains relevant for this Detailed Busines Case. By addressing the problems and opportunity identified in the Investment Logic Map, a number of positive outcomes will be achieved in relation to improved use of space, better pedestrian experience and a healthier, more sustainable city centre.

The project continues to align strongly with strategic documents, in particular Auckland Plan 2050 and the City Centre Masterplan 2020. Investment in Victoria Street, east of Hobson Street, is driven by the need to respond to the opening of the City Rail Link Aotea station, which is scheduled to occur in 2024.

The interface between the Te Hā Noa - Victoria Street linear park project and City Rail Link is critical. Without reallocating sufficient space to pedestrians and improving the facilities to enable a quality public realm the benefits able to be realised by the City Rail Link project will be limited. As part of the Green Link Transformational Move 6, the linear park on Victoria Street can address the deficit of green public space in midtown. Providing recreational spaces on Victoria Street and increasing the amount and variety of planting will improve the quality of life of residents living in the city centre. The linear park on Victoria Street provides the opportunity to develop a green infrastructure network, incorporating ecological and biodiversity corridor principles to enhance environmental sustainability.

Strategically Victoria Street will no longer be required as a key vehicle corridor providing the opportunity to reduce the priority given to vehicles and increase the proportion of space allocated to pedestrians and cyclists. Complementing the Access for Everyone concept there is considerable opportunity to contribute to the desired city centre environmental outcomes such as the Mayoral C40 declaration zero emissions area (ZEA).

In line with increased focus on Māori Outcomes in the City Centre Masterplan 2020 the Te Hā Noa - Victoria Street linear park project seeks to address the lack of identity felt and absence of visible culture and history on Victoria Street. Working closely with Mana Whenua provides the projects with a deep understanding of Mana Whenua histories, associations and aspirations within the city centre.

As a key component to delivering the outcomes desired for the city centre there is a strong Strategic Case for investment in Te Hā Noa - Victoria Street linear park project.

2.1 Recapping the Case for Change

The Indicative Business Case for the Te Hā Noa - Victoria Street linear park detailed the Strategic Case for the project as responding to three problems / opportunities. These are:

- **Problem 1** – There is inadequate space for people on Victoria Street to rest, move and play now and as Auckland grows
- **Problem 2** – The absence of visible culture and history on Victoria Street results in a lack of identity and sense of connection between residents, commuters and visitors with the street as a key destination
- **Opportunity 1** – As a link between the two major city centre parks, Victoria Street has the potential to enhance the urban biodiversity and green space in the city centre.

The need for investment in Victoria Street was summarised in the Investment Logic Map shown in Figure 2-1. This identified that by addressing these problems and opportunity, a number of positive outcomes would be achieved in relation to improved use of space, better pedestrian experience and a healthier, more sustainable city centre. An extensive analysis of evidence was presented to demonstrate a strong case for change on Victoria Street for the full extent of the project from Victoria Park to Albert Park (Halsey Street and Kitchener Street). The evidence specifically relevant to this Detailed Business Case is included as Appendix C.

The strategic context and the case for change remains relevant for this Detailed Business Case which has a concentrated focus on Victoria Street from Hobson Street to Kitchener Street. The project continues to align strongly with strategic documents, in particular Auckland Plan 2050 and the City Centre Masterplan 2020, including the Access for Everyone concept. Appendix A provides a summary of how Te Hā Noa - Victoria Street linear park aligns with Auckland Council's existing business strategies and plans, existing and future operational needs, related projects and government priorities.

The investment case for this section of Victoria Street is driven by the need to respond to the opening of the City Rail Link Aotea station, which is scheduled to occur in 2024. The pedestrian demand associated with station access and egress exacerbates the identified problems and means that this section of Victoria Street is a priority to address.

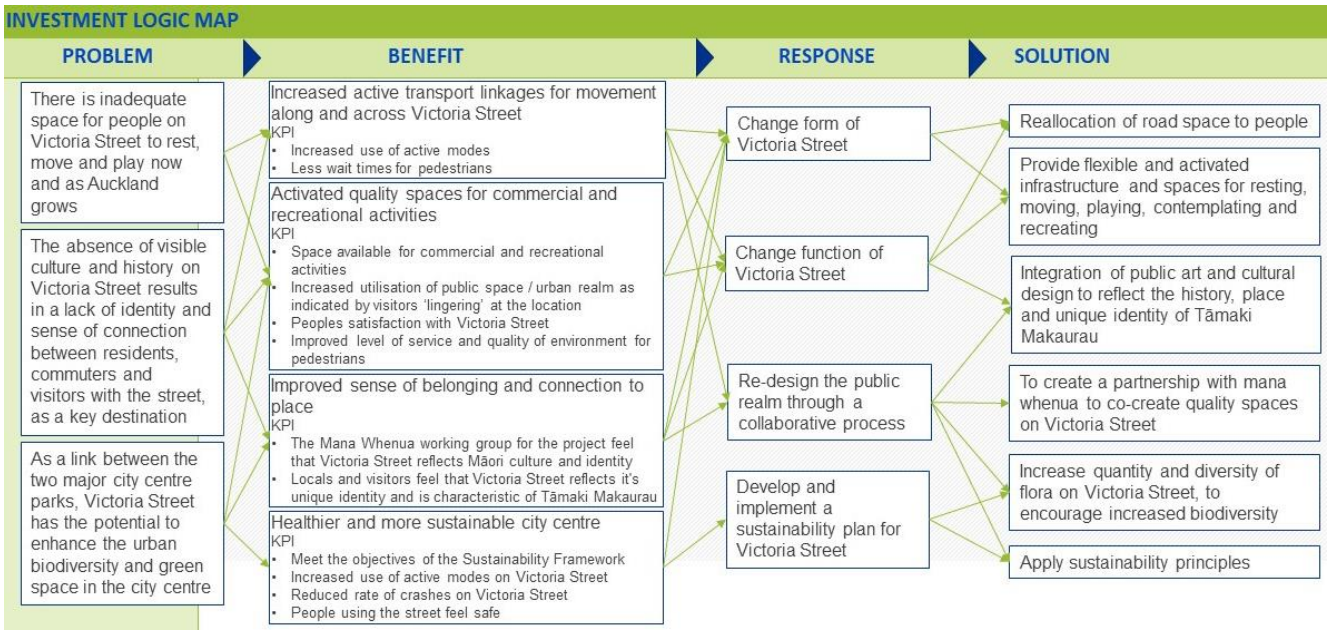

Figure 2-1: Investment Logic Map (larger image provided in Appendix B)

2.2 Prioritising Hobson Street to Kitchener Street

Te Hā Noa - Victoria Street linear park project is a key component in the revitalisation of the midtown precinct within the city centre. As mentioned above, there are two key strategic drivers for the timing of this project; strong support for the City Centre Masterplan 2020 and the planned opening of the City Rail Link's Aotea Station in 2024.

The City Centre Masterplan proposes the implementation of a linear park on Victoria Street with the intention of providing an enhanced pedestrian space linking Victoria Park and Albert Park to improve the urban environment and amenity for the public within the city centre.

The City Rail Link is a major public transport investment in Auckland, providing a new connection to the city centre. The Aotea Station is expected to be the busiest station in New Zealand with two portals on Victoria Street. The anticipated number of pedestrians cannot be accommodated within the existing cross-section, a problem that investment in Victoria Street can resolve. The programme of the City Rail Link project is a key driver to improve Victoria Street now.

This section presents the key points supporting the Strategic Case for a linear park on Victoria Street and in particular why the section of Victoria Street between Hobson Street and Kitchener Street is a priority.

2.2.1 City Rail Link and Aotea Station

The City Rail Link is a city shaping public transport project for Auckland and the largest transport infrastructure project ever to be undertaken in New Zealand. The City Rail Link will improve travel options and journey times and double the number of Aucklanders that live within 30 minutes travel time of the city centre. By 2035, it is expected that City Rail Link stations will need to accommodate 54,000 passengers an hour at peak travel times[3]. Estimates based on 6-car train passenger capacity suggest that approximately 13,000 pedestrians per hour will alight at the Aotea Station during morning peak travel time (and approximately 2,250 boarding). This could result in a potential increase in pedestrians on Victoria Street at peak times from 3,100 in 2019 to over 16,000 by 2026. The project is now under construction and is due for completion in 2024.

Aotea Station is expected to be New Zealand's busiest train station once it opens, with station entrances on Victoria Street and Wellesley Street as shown in Figure 2-2. The entrances on Victoria Street will be located on the eastern and western sides of Albert Street and will provide access to important city centre employment, retail and visitor attractions.

Figure 2-2: Aotea Station location[4]

The City Rail Link surface designation for the Aotea Station extends along Victoria Street from Federal Street to approximately midway between Albert Street and Elliot Street. The interface between the Te Hā Noa - Victoria Street linear park project and City Rail Link is critical. The section of Victoria Street east of the Aotea Station portal down to Queen Street is not being redeveloped as part of the City Rail Links works. Without reallocating sufficient space to pedestrians and cyclists and improving the facilities to enable a quality public realm, not only will there be wider impacts on other city centre projects, but in particular it will limit the benefits able to be realised by the City Rail Link project. Providing additional space outside the Aotea Station portals can mitigate potential safety risks of overcrowding and improve the user experience of customers choosing to use public transport.

[3] Key Facts – City Rail Link, https://www.cityraillink.co.nz/key-facts
[4] Aotea Train Station – City Rail Link, https://www.cityraillink.co.nz/crl-stations-aotea

As it is, there is not sufficient public space available in the city centre for current and growing numbers of residents, employees and visitors. An increasing number of people are choosing to live in the Auckland city centre which is driving a rate of growth that is faster than the rest of New Zealand. The residential population in the city centre has increased by more than 30% since 2009. Recent estimates from 2019 suggest that around 35,800[5] people now live in this part of Auckland. The opening of Aotea Station will increase the need for pedestrian space. Pedestrian modelling analysis undertaken by Link Alliance recommends that a total footpath width of 8.4 metres be provided with 5.4 metres clear way to allow for the expected increases in pedestrian movements.[6] Without the linear park there will be a lack of pedestrian space outside of the Aotea Station portals, particularly to the east towards Queen Street. The level of service for pedestrians entering and exiting the station portals will decrease as Victoria Street lacks the capacity for the expected growth. The constrained environment will result in a poor user experience that may discourage pedestrians from using Victoria Street.

The city centre is the 'engine room' of New Zealand's economy and home to highly productive jobs. While it only represents 0.08% of the overall land area of Auckland, the city centre accounts for 14% of the region's employment and 17% of the region's Gross Domestic Product (GDP). In 2018, there were an estimated 117,900 employees and 11,547 businesses in city centre with 25% of Auckland's future employment growth expected to occur in this area over the next 30 years.[7] The growing population and increasing number of employment opportunities within the city centre is putting pressure on the existing infrastructure and is driving the need for investment.

Central Business Districts have developed and thrived through their ability to realise agglomeration economies. Simply put, the more firms that are located in close proximity, the more productive they are due to access to clients, competitors and knowledge. Investigation into the economic value of walking in the Auckland city centre has shown that improving walkability can lead to higher effective job density (improving the proximity of firms) which in turn increases economic productivity.[8] Improving walkability on Victoria Street is likely to make a positive contribution to economic productivity of the Auckland city centre.

The Business Case for Walking[9] looked at measuring pedestrian congestion in the city centre. The study showed that there is a positive and statistically significant association between walking effective job density (the time taken to walk between employment centres) and estimated labour productivity within the Auckland city centre.[10] The pedestrian delays at the intersection of Victoria Street and Queen Street were considered as part of this study.[11] It was found that during the peak hour over 7,700 pedestrians (compared with 1,200 vehicles) moved through the intersection experiencing 27 seconds delay on average, totalling 161,115 hours of annual delay. Monetising the delays experienced by pedestrians results in estimated annual delay "costs" of $2.2 million, illustrating the importance of reducing delays for pedestrians on Victoria Street. The study also found that a 1% increase in walking effective job density is associated with an increase in the value of the city centre economy of the 0.53% or $42 million (based on a GDP of $8.01 billion). The increased effective job density due to reduced pedestrian delay would have a measurable positive productivity impact on the city centre economy.

The current layout of Victoria Street between Hobson Street and Kitchener Street prioritises vehicles over people. Footpaths are 4-5 metres from building frontage to kerb and include street furniture such as bus stops that further limit the through route for pedestrians. The limited space provided for pedestrians is resulting in congestion and a poor user experience. Providing more space for pedestrians by shifting street space to active transport modes will create healthy, vibrant and equitable public spaces.

[5] Auckland City Centre is an aggregation of 16 Stats NZ 'SA2' areas, Stats NZ 2019 estimate, Auckland Council Response to City Centre Population Estimates, Jacques Victor, 7 November 2019

[6] Aotea Precinct Pedestrian Modelling Analysis Technical Memo v3, Link Alliance, 14 April 2020

[7] Newcombe, D., Fitzpatrick, T., & Weeks, G. (2019). Reshaping Auckland City Centre. Transportation Group 2019 Conference, (p. 2). Retrieved from https://az659834.vo.msecnd.net/eventsairaueprod/production-harding-public/739a8ce438624af69aa1bee8d7250def

[8] The Relationship between Pedestrian Connectivity and Economic Productivity in Auckland's City Centre, Auckland Council, March 2017 [online] https://knowledgeauckland.org.nz/media/1133/tr2017-007-pedestrian-connectivity-economic-productivity-auckland-city-centre.pdf

[9] Business Case for Walking, Auckland Council, 2017. [online] https://infocouncil.aucklandcouncil.govt.nz/Open/2017/08/CEN_20170823_AGN_7016_AT_files/CEN_20170823_AGN_7016_AT_Attachment_55166_1.PDF

[10] The Relationship between Pedestrian Connectivity and Economic Productivity in Auckland's City Centre, Auckland Council, March 2017, http://www.knowledgeauckland.org.nz/assets/publications/TR2017-007-Pedestrian-connectivity-economic-productivity-Auckland-city-centre.pdf

[11] Measuring Pedestrian Delay, MRCagney Pty Ltd, September 2017

Facilitating safe and easy pedestrian access along the Victoria Street corridor and across the city centre will improve pedestrian connection to public transport, particularly future Mass Rapid Transit including City Rail Link. One of the key objectives of City Rail Link is to improve the accessibility in and around the city centre and to future-proof for expected growth. This will be further supported by other city centre projects that are currently progressing such as Wellesley Street Bus Improvements project, which will become the main east-west bus corridor through midtown. In addition, the completed Victoria Street Cycleway project east of Nelson Street provides for a safe, separated, single directional cycleway that links the city centre, Victoria Park and other key destinations. The Victoria Street cycleway connects with the wider cycle network including Nelson Street and Franklin Road cycle facilities.

Walking access to and across the station area will be supported by the Te Hā Noa - Victoria Street linear park project as part of the City Centre Master Plan's vision. The project will provide adequate pedestrian and cycling amenity to service the City Rail Link Aotea Station and interface with Victoria Street Cycleway. Figure 2-3 shows an artist's impression of the new station entrances on Victoria Street and the street itself with wider footpaths and cycle lanes. The inclusion of elements of cultural identity in the linear park will complement actions already being taken in the city centre, such as the Māori design elements being incorporated into the architecture of the City Rail Link Aotea Station, enabling a cultural story to be woven throughout the city centre. The timing and delivery programme of City Rail Link will have an influence on the timing and delivery of Te Hā Noa - Victoria Street linear park to coordinate with construction. Consequently, the City Rail Link project and opening of the Aotea Station is a strong driver for completing Te Hā Noa - Victoria Street linear park project.

Figure 2-3 Artist's impression of Victoria Street with Aotea Station entrances in place once it opens in 2024[12]

The spatial extent for this Detailed Business Case includes the section of Victoria Street that interfaces with the City Rail Link Aotea Station portals. This section will support the movement of people into and out of the station. The alignment and resolution of the two designs are therefore critical in ensuring that this project will interface with the City Rail Link project timing and scope.

2.2.2 City Centre Master Plan

The City Centre Masterplan 2020 was adopted by Auckland Council Planning Committee in March 2020. This was an update to the existing City Centre Masterplan 2012 to provide alignment with the refreshed Auckland Plan (2050).

The Green Link

The City Centre Masterplan 2020 builds on the earlier plans by reconfirming the strategic direction for the city centre, including Victoria Street. As a key concept identified in the City Centre Masterplan, it is important that aspirations for the redevelopment of Victoria Street are progressed in coordination with the adjacent and

[12] Aotea Train Station – City Rail Link, https://www.cityraillink.co.nz/crl-stations-aotea

complementary projects set out in the plan. If the linear park does not eventuate, there is a risk that Victoria Street will look neglected and out of context with the rest of the city centre.

As part of the Green Link Transformational Move 6, Victoria Street linear park is still considered the most significant street greening project identified in the City Centre Masterplan. The Green Link concept shows the potential to increase the presence of green spaces in city centres and enrich the local biodiversity. There is a significant deficit in open space provision in midtown, which is one of the most densely populated and busiest neighbourhoods in New Zealand. The Green Link is a way of increasing the amount of green public space through midtown. Along Victoria Street a series of spaces and places could be included to promote rest and recreation opportunities and increase the general liveability of the city centre.

Spending time with nature is particularly beneficial for people's mental health. Increasing the urban biodiversity and flora will contribute to improved mental health for the over 26,000 pedestrians that walk along Victoria Street each day. If commuters spent 10 minutes in nature walking along a linear park on Victoria Street on their way to and from work, the project could allow them to get the weekly recommended 100-120 minutes of exposure to nature which would contribute to their health and wellbeing.[13]

The linear park on Victoria Street provides the opportunity to develop a green infrastructure network, incorporating ecological and biodiversity corridor principles to enhance environmental sustainability. Trees and vegetation can assist in providing a range of services required for Auckland to function and thrive. This includes enhanced stormwater management, reduction of air pollutants, improved water quality, reducing the urban heat island effect, and ecological corridors to connect habitats and improve biodiversity.

Typical of city centre streets Victoria Street has limited vegetation. As shown in Figure 2-4, the majority of tree species on Victoria Street are exotic species with 35% of trees being native. There is less than 5% canopy cover and negligible understory or vertical planting along the corridor. This shows the opportunity to increase the number and diversity of both trees and vegetation on Victoria Street which will also contribute to success indicator objectives of the Auckland Urban Ngahere (Forest) Strategy[14].

Providing recreational spaces on Victoria Street and increasing the amount and variety of planting will improve the quality of life for residents living in the city centre and contribute to a more sustainable city centre. By reprioritising road space for people and incorporating park features, the Victoria Street linear park will provide new natural environments for local communities to enjoy.

[13] White, M.P., Alcock, I., Grellier, J. et al. Spending at least 120 minutes a week in nature is associated with good health and wellbeing. Sci Rep 9, 7730 (2019). https://doi.org/10.1038/s41598-019-44097-3

[14] Auckland's Urban Ngahere (Forest) Strategy, Prepared by Auckland Council, March 2019

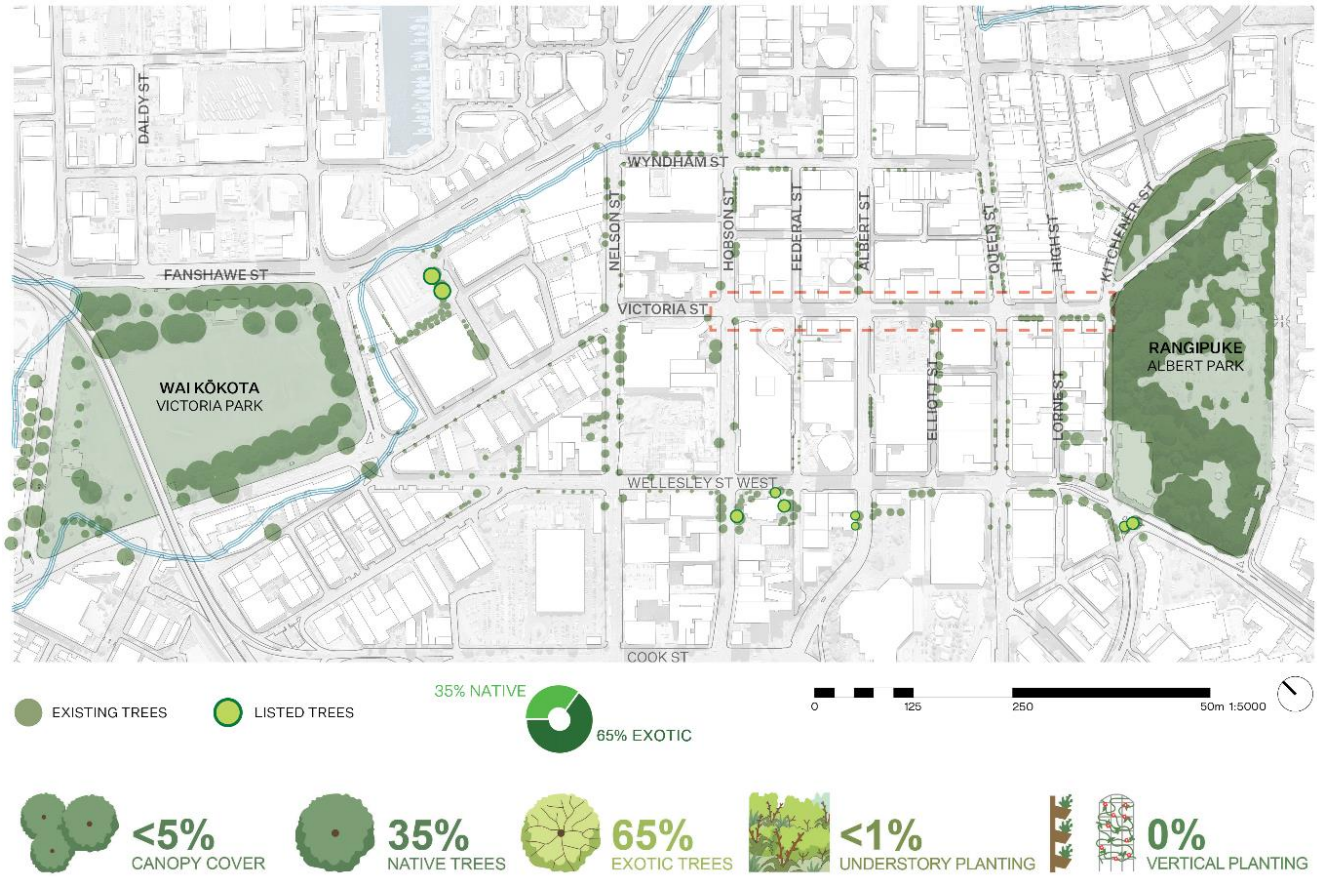

Figure 2-4: Existing trees around Victoria Street corridor

Community Feedback

Public engagement was held during September and October 2019 to inform Aucklanders about the progress to refresh the City Centre Masterplan and provide an opportunity to contribute their views on its development. From the feedback received on the general direction of the City Centre Masterplan 2020, a great proportion of respondents wanted a see improved pedestrian facilities and amenity in the city centre. They felt that the current environment was too focused on cars, and they supported moves to prioritise pedestrian and people focused environments. Other reasons for support included the proposed improvement in green and public spaces as well as the cultural and Māori heritage focus. Te Hā Noa - Victoria Street linear park project consists all of these elements.

Transformational Move 6: Green link was supported by 86% of respondents. Figure 2-5 presents a selection of the positive comments received on the proposal under the following key themes:

- the most common theme around the green link proposal was that it would greatly enhance the appeal, liveability and desirability of the city centre
- the city centre would benefit from (and is in need of) more greenery, more planting, more green spaces and trees, and that this would not only beautify the area but be good for environmental outcomes and people's mental health

Participants wanted to ensure any new paths and links were smooth, accessible and safe to use with some calling for separate paths/lanes for cyclists and pedestrians.

Figure 2-5: Public feedback for the Green Link concept[15]

Access for Everyone

The City Centre Masterplan 2020 also highlights an initiative called Access for Everyone that will fundamentally change the operations of the city centre road network. It introduces a new traffic circulation system where private vehicles would access city centre zones from the city's edge. The Access for Everyone concept proposes to organise the city centre into nine low-traffic neighbourhoods with Te Hā Noa - Victoria Street linear park dissecting many of these zones providing key pedestrian and cycling linkage between zones.

There are critical interfaces between Te Hā Noa - Victoria Street linear park and the Access for Everyone concept. Access for Everyone will prioritise walking, cycling and public transport through a series of interventions. These include expanding the pedestrian-priority laneway circuit (Federal Street and High Street being the immediate priority). The concept complements ongoing and planned streetscape improvements across the valley including Albert Street, Quay Street, Te Hā Noa - Victoria Street linear park and the Lower Queen Street Civic Space. The concept includes a central pedestrian-priority zone in the Waihorotiu Queen Street Valley as shown in Figure 2-6. The linear park within this zone supports an integral part of the Access for Everyone concept which forms the Mayoral C40 declaration zero emissions area (ZEA), a flagship action of the Auckland Climate Action framework. Through implementing the linear park there is considerable opportunity to contribute to the desired Auckland city centre environmental outcomes of the Low Carbon Strategic Action Plan, Auckland Climate Action Framework and Auckland Growing Greener.

[15] City Centre Masterplan 2020 – Public feedback on the outcomes, transformational moves and supporting material, Prepared for Auckland Council by Buzz Channel Ltd, November 2019

Figure 2-6: Nine low-traffic neighbourhoods and central pedestrian priority zone, Access for Everyone concept[16]

Reducing the capacity for and volume of traffic will reduce carbon emissions on Victoria Street and is likely to improve the air quality. This includes the potential for reductions in concentrations of air pollutants NO_2 and CO on Victoria Street. Reducing emissions on Victoria Street will contribute in part to achieving the emissions targets set by Auckland Council for the Auckland region and the New Zealand Government for the country.

Out of all the east-west connections and streets in the city centre, Victoria Street has the opportunity and potential to form part of the Green Link. The City Centre Masterplan identifies Victoria Street as a "structuring element" of the city centre. Figure 2-7 shows that Victoria Street is one of five east-west connections across the city centre. It connects Victoria Park with Albert Park and intersects with key north-south street connections including with Queen Street.

A complementary city centre project is the Wellesley Street Bus Improvements project which will make Wellesley Street the main east-west bus corridor through midtown. The future 2028 bus network proposes to re-route bus services currently on Victoria Street to Wellesley Street. Reducing the number of buses on Victoria Street will provide an opportunity to make Victoria Street a key pedestrian corridor. Strategically through the Access for Everyone concept, Victoria Street will no longer be required as a key vehicle corridor. This will provide the opportunity to reduce the priority given to vehicles and increase the proportion of space allocated to pedestrians and cyclists and also improve active mode facilities. Wellesley Street bus corridor and Victoria Street linear park would be developed with enhanced public realm and access to public transport, remaining strategically important in achieving the vision of the plan.

[16] City Centre Masterplan 2020 Consultation, Access for Everyone – September 2019

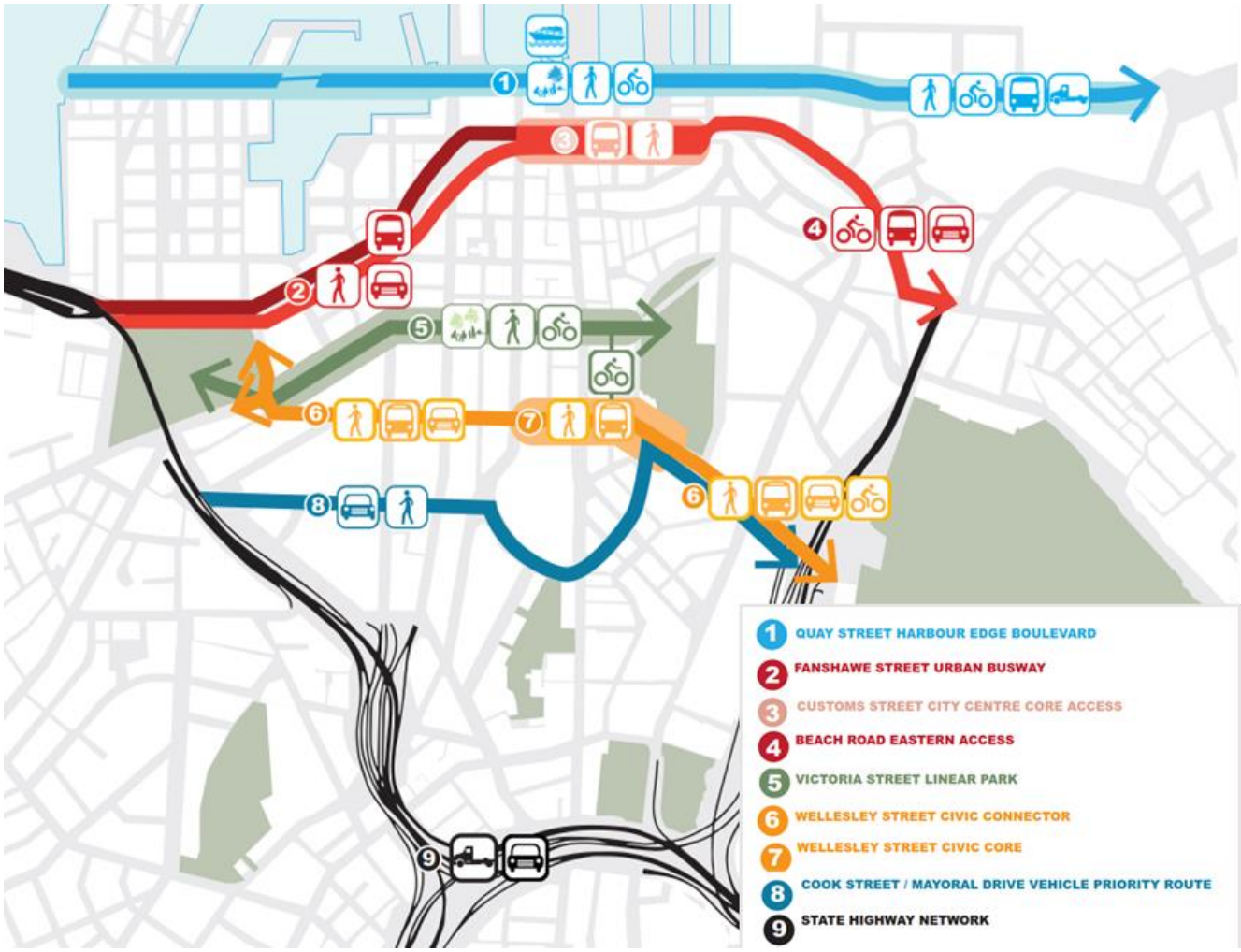

Figure 2-7: Functions of east-west connections across the city centre[17]

Cultural Identity

Tāmaki Makaurau and Mana Whenua identity is a unique point of difference for the city however this is not reflected in the current built environment of the city centre. One of the priorities identified to be advanced by the Mana Whenua Kaitiaki Forum (a collective of the 19 hapū and iwi authorities) is the strengthening of Mana Whenua and Māori identity in Auckland.[18] The Auckland Plan 2050 and the City Centre Masterplan 2020 have been updated to reflect the importance that cultural identity can play for our city.

The City Centre Masterplan 2020 indicates an increased focus on Māori Outcomes through Outcome 1: Tāmaki Makaurau - Our place in the world. This outcome will contribute to a city centre with a sense of place informed by the past and looking to the future. A thriving and authentic tangata whenua identity and culture that is genuinely visible throughout the city centre. A collaborative partnership with Mana Whenua is proposed to develop and deliver a thriving Māori culture and identity for the area, from which Aucklanders and visitors will benefit.

The Auckland Plan acknowledges that "placemaking plays an important role in creating high quality urban environments". It also supports our culture and identity, such as Auckland's unique Māori cultural identity, in our public places. Our unique local character can be reflected and embedded in the built environment by incorporating and integrating built heritage and public art into existing and new spaces.

[17] City East West Transport Study, Prepared for Auckland Transport by Aurecon and Boffa Miskell, March 2014

[18] The Auckland Plan, Focus area 5 - Advance mana whenua rangatiratanga in leadership and decision-making and provide for customary rights, Auckland Council [online] https://www.aucklandcouncil.govt.nz/plans-projects-policies-reports-bylaws/our-plans-strategies/auckland-plan/maori-identity-wellbeing/Pages/focus-area-advance-mana-whenua-rangatira-leadership-decision-making.aspx

The Auckland Plan states that "a thriving Māori identity is Auckland's point of difference in the world that advances prosperity for Māori and benefits all Aucklanders." Therefore, the Auckland Plan now includes Māori Identity and Wellbeing as one of the six key outcomes, particularly through Direction 4 to showcase Auckland's Māori identity and vibrant Māori culture.

The absence of visible culture and history on Victoria Street resulting in a lack of identity and sense of connection was a common concern voiced by the Community of Practice during Workshop 1 of the Indicative Business Case process. Mana Whenua representatives raised the concern that Mana Whenua including Rangatahi (younger generation) are unable to see themselves or the rich history of the area in the place. Tāmaki and the area between the reclaimed bay of Wai Kōkota (Freemans Bay / Victoria Park), meaning "the place where cockles could be harvested," to the elevated settlement and Pā of Rangipuke (Albert Park) does in fact have a rich cultural history and significance that is not visible on Victoria Street today.

To date Mana Whenua have provided valuable input into Te Hā Noa – Victoria Street linear park project through the established Mana Whenua working group (Section 3.1.1) and will continue to be involved throughout the development of this project. The Mana Whenua working group have developed cultural principles (Appendix G) for the project that can be utilised to inform the design and reflect the cultural history within the area that is not currently seen or represented on Victoria Street.

2.2.3 Confirming the Need for Investment

The need for investment in Victoria Street established through the Indicative Business Case is relevant to the Detailed Business Case study area. The Investment Logic Map identified key problems, opportunities and benefits during the Indicative Business Case for Te Hā Noa – Victoria Street linear park. These have been reviewed based on the scope and constraints of the Detailed Business Case study area and have been confirmed the same as the Indicative Business Case as shown in Table 2-1 as they are very relevant to the portion of Victoria Street between Hobson Street and Kitchener Street. Further evidence and explanation for each key problem and opportunity specifically focused on the Detailed Business Case study area is detailed in Appendix C.

Table 2-1: Key Problems and Opportunities

Key Problems / Opportunities		Relevance
Problem 1	There is inadequate space for people on Victoria Street to rest, move and play now and as Auckland grows.	As explained in Section 2.2.1, the opening of the Aotea City Rail Link Station (set to surpass Britomart as Auckland's busiest station) scheduled for 2024, is expected to result in a large increase in daily pedestrian users. This will require at least an additional 3.5m of pedestrian walking space on Victoria Street to adequately accommodate pedestrians exiting the Aotea Station portal.[19] As shown in Section 2.2.2, the linear park on Victoria Street is a way of increasing the amount of green public space through the midtown areas that are the densest and busiest neighbourhoods in New Zealand, where a significant deficit in open space provision exists. Feedback received on the general direction of the City Centre Masterplan 2020, showed a great proportion of the participants wanted a see a move toward greater pedestrian friendliness in the city centre.
Problem 2	The absence of visible culture and history on Victoria Street results in a lack of identity and sense of connection between residents, commuters and visitors with the street, as a key destination.	As shown in Section 2.2.2, the City Centre Masterplan 2020 indicates an increased focus on Māori Outcomes. "Our place in the world" is a new outcome included in the City Centre Masterplan 2020. In line with this the project seeks to address the lack of identity felt and absence of visible culture and history on Victoria Street by working closely with Mana Whenua to provide a deeper understanding of Mana Whenua histories, associations and aspirations within the city centre.
Opportunity 1	As a link between the two major city centre parks, Victoria Street has the potential to enhance the urban biodiversity and green space in the city centre.	As shown in Section 2.2.2, the linear park on Victoria Street provides the opportunity to develop a green infrastructure network, incorporating ecological and biodiversity corridor principles to enhance environmental sustainability. This includes enhanced stormwater management, reduction of air pollutants, improved water quality, reducing the urban heat island effect, and ecological corridors to connect habitats and improve biodiversity. There is considerable opportunity to contribute to the desired city centre and Auckland environmental outcomes such as the Mayoral C40 declaration zero emissions area (ZEA).

[19] For the pedestrian space requirements see the Pedestrian and Cycle Demand memo attached to Appendix F.

Four potential key benefits have been confirmed for the Detailed Business Case as likely outcomes of investing to address the key problems and realise the opportunities along Victoria Street as shown in Table 2-2.

It is expected that addressing the problems will result in a number of other benefits that are not captured explicitly in the benefit statements. Some of these are quantifiable and others are described qualitatively. The main benefits identified are captured in both the economic appraisal of the project (Section 4.7) as well as the Benefits Realisation Plan (Section 7.4).

Table 2-2: Key Benefits

Key Benefits		Relevance
Benefit 1	Increased pedestrian and cycling linkages for movement along and across Victoria Street	By focusing on and prioritising the movement of people, higher priority will be given to active modes which will increase the efficiency of the inner-city transport network and provide safer opportunities for people to walk and cycle. The increased effective job density due to improved walkability would have a measurable positive impact on productivity and the city centre economy.
Benefit 2	Activated quality spaces for commercial and recreational activities	Transforming Victoria Street into a place to rest, move and play and enhancing the urban biodiversity through increasing the amount of green space will make it a place where people choose to visit.
Benefit 3	Improved sense of belonging and connection to place	There is the potential for the project to enhance the street in a way that Mana Whenua considers a true reflection of Māori culture and identity. Enhancing Victoria Street will make it a place that the people of Auckland and New Zealand will feel a sense of public pride, improve people's sense of belonging and connection
Benefit 4	Healthier and more sustainable city centre	Providing recreational spaces on Victoria Street and increasing the amount and variety of planting will improve the quality of life of residents living in the city centre and contribute to a more sustainable city centre.

2.3 Investment Considerations

2.3.1 Potential Scope and Key Project Requirements

Te Hā Noa – Victoria Street linear park project seeks to enhance Victoria Street through improving the urban environment in a way that transforms the existing streetscape into a linear park. The project seeks to respond to residential and commuter growth and the changes in public transport system by integrating 'movement' (transport) and 'place' (aesthetics, amenity, social and economic exchange) into a 'green link'. The scope of the project is limited to the design and delivery of a linear park on Victoria Street.

The extent of Te Hā Noa – Victoria Street linear park project considered in this Detailed Business Case is shown in the dashed red box in Figure 2-8, and is approximately 0.5km in length across the midtown area of the city centre. Auckland Council has indicated a current committed budget of $30 million funding available to deliver Stage 1 construction work, beginning in 2022. The spatial extent of Stage 1 construction is the section of Victoria Street that interfaces with the City Rail Link Aotea Station portals to support the movement of people into and out of the station.

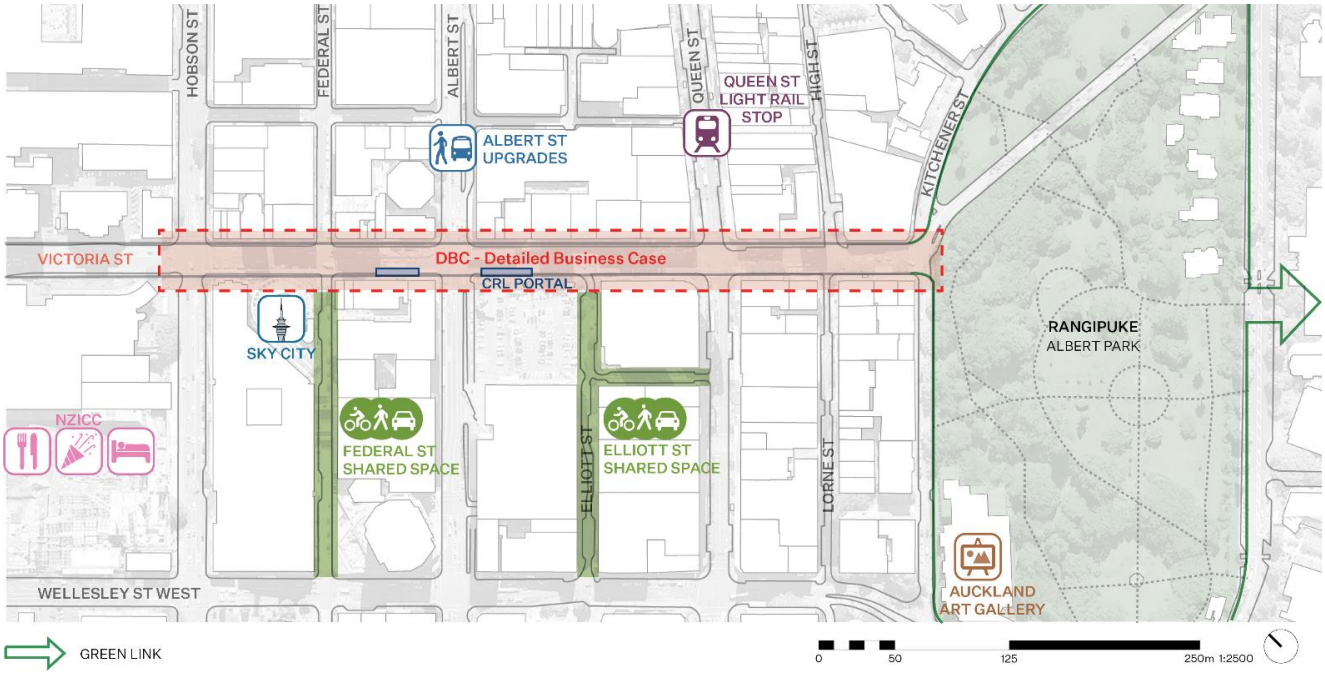

Figure 2-8: Extent of Victoria Street considered in this Detailed Business Case

2.3.2 Dependencies

As mentioned above, there are a number of future projects that directly influence the Detailed Business Case study area. These projects are shown in Figure 2-9 and include: City Rail Link and Aotea Station; Wellesley Street Bus Improvements Project; Albert Street; Federal Street: Stage 2 & Stage 3; Hobson and Nelson Street; Light Rail and Queen Street Pedestrianisation; NDG Tower Hotel SkyCity Developments: New Zealand International Convention Centre; and Access for Everyone Programme Business Case.

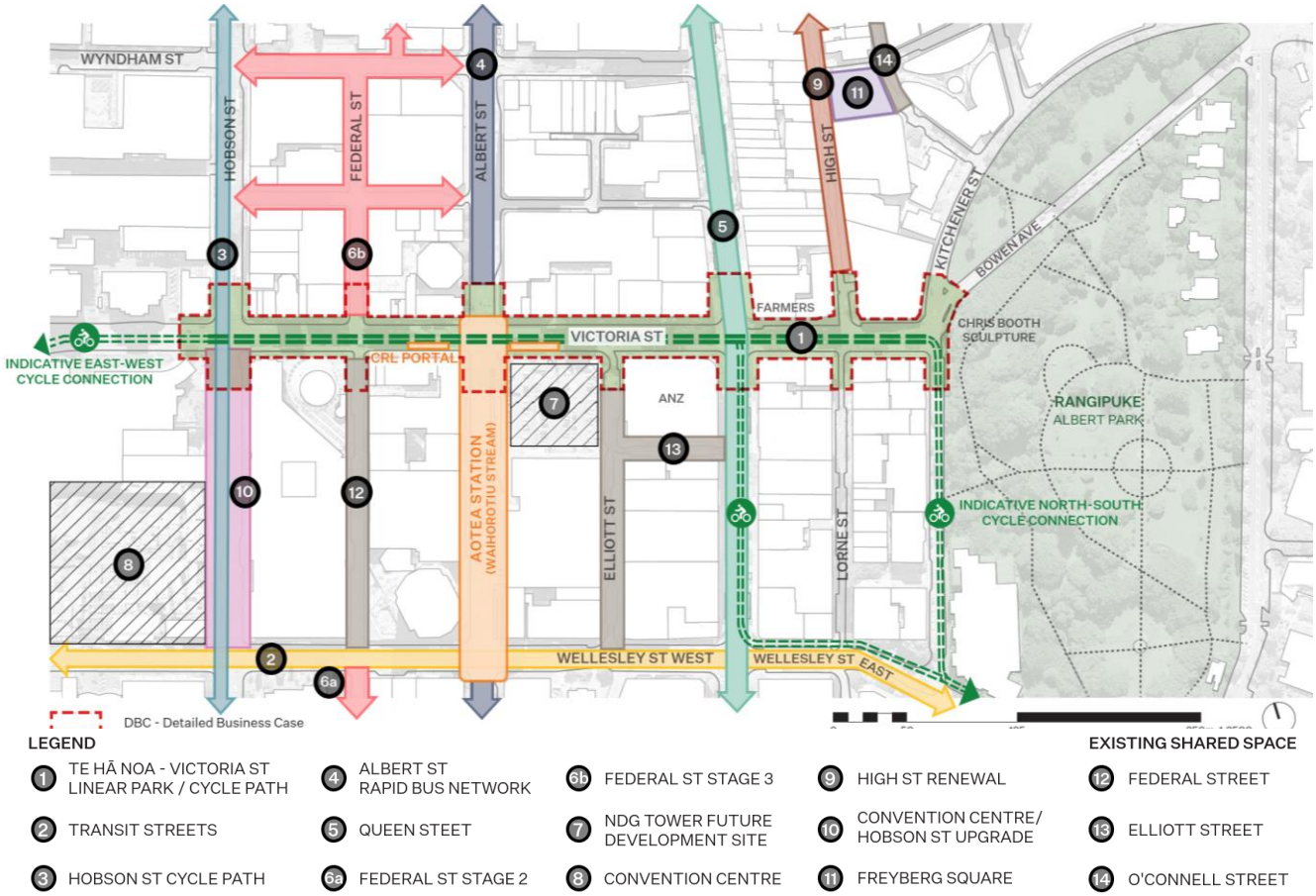

Figure 2-9: Midtown programme of works

2.3.3 Constraints

There is significant change occurring in Auckland's city centre now and further changes are proposed for the future. As such the development of Te Hā Noa – Victoria Street linear park is constrained by a number of factors relating to political/policy, operational, funding and development considerations. Some of the key constraints known and unknown at this stage affecting the Detailed Business Case are identified below:

- City Rail Link:

- There is limited information available at this stage on the City Rail Link project with regards to the public realm space requirements around the Aotea Station, intersection arrangements, latest pedestrian forecasts and choice of surface material. Significant interaction will be required between the teams to understand interrelationships between the two projects, design and programme implications and cultural narrative.
- One of the main purposes of the project is to develop options which facilitate access to Aotea Station. As the station portals are places of high pedestrian concentrations, the amount of space required to accommodate pedestrian movements may limit the design and what can be achieved in this section of the corridor.
- As the City Rail Link construction programme is developing, its impact on Victoria Street and how this may impact on the construction of the Detailed Business Case Preferred Option is unknown (e.g. will City Rail Link include the closure key intersections and/or access roads). There is an opportunity here to showcase the potential future use of the space not under construction zone.
- Stage 1 will need to include appropriate treatment at the interface between two and four lanes where the projects interface.

- Transport modes:

- As a key east-west movement corridor, the development of Te Hā Noa - Victoria Street linear park will need to maintain a relative level of transport function for a variety of transport modes. Pedestrian and cyclist movements will be prioritised along Victoria Street with the general traffic through function along the corridor reduced. The development of the Victoria Street linear park will still need to allow for some level of east-west vehicle movement including emergency access, servicing, property access and loading. It is assumed that a minimum of two traffic lanes (one in each direction), will be required to maintain network connectivity and local access to properties. Bus operations will likely be reduced along Victoria Street, however supporting bus infrastructure such as bus stops, signage and shelters will need to be accommodated at some locations on the street.

- Budget:

- The current budget allocation to construct Stage 1 is $30 million. Without additional funding the delivery of the Preferred Option for Stage 1 will be constrained.

- Programme:

- As the section of the linear park outside the Aotea Station portal supports the space requirements for pedestrians, the Te Hā Noa – Victoria Street linear park project will need to be coordinated with the construction programme for City Rail Link. This places increased pressure on the option development process so that the Preferred Option can be constructed by using the most appropriate contracting arrangement to suit the environment.

- The construction programme will need to be coordinated with other concurrent midtown projects in a way that maintains an operational transport network including general traffic and bus public transport.

3. Consultation and Engagement

Throughout the Detailed Business Case meaningful engagement with stakeholders has informed the direction of the project and development of the Preferred Option.

As project partners, Mana Whenua have provided valuable input into Te Hā Noa - Victoria Street linear park project through the established Mana Whenua working group and will continue to be involved throughout the development of this project.

Extensive consultation with Auckland Council and Auckland Transport through the Community of Practice has informed the key requirements, design preferences and potential options for design development resulting in the Preferred Option.

Throughout the development of this Detailed Business Case the Project Steering Group have provided strategic direction for the project and monitored its alignment with Auckland Council and Auckland Transport organisational goals.

The work undertaken as part of this Detailed Business Case has involved a range of stakeholders and applied a collaborative approach in the development of the Preferred Option. This section outlines the consultation and engagement that has been undertaken as part of the project development and the Detailed Business Case process. Section 7.3 considers engagement for the next phases of the project.

3.1 Partners and Internal Stakeholders

Engagement has included targeted stakeholder workshops as well as consultation with the broader 'Community of Practice' (Section 3.1.2). This aided the consideration and resolution of design matters that were identified in the Indicative Business Case as key issues for the Detailed Business Case to address. The workshop process and preferences for design considerations are documented in the Workshop Summary report (Appendix E). The outcomes of the workshops have informed the design preferences, development of the options considered and the Preferred Option, documented in the Design report provided in Appendix F.

Internal engagement with the Waitematā Local Board, elected members and the Auckland City Centre Advisory Board has also taken place.

3.1.1 Mana Whenua Working Group

The strong partnership established with Mana Whenua during the Indicative Business Case phase has continued throughout the Detailed Business Case. As project partners Mana Whenua have continued to provide guidance to inform the development of the Project. The Mana Whenua working group members who have participated and provided input into Te Hā Noa - Victoria Street linear park included representatives from: Ngāti Maru; Ngaati Whanaunga; Ngāi Tai ki Tāmaki; Te Ākitai Waiohua; Te Patukirikiri; Ngāti Whātua Ōrākei; Te Rūnanga o Ngāti Whātua. It is important to note that the Mana Whenua working group consulted for the project does not speak for or on behalf of other Mana Whenua who have not participated in this project.

Te Hā Noa is the name that has been gifted by the Mana Whenua working group to the Project. This name encompasses the project process and the concept for the street, although it is not proposed that Victoria Street be renamed. The meaning of this name expresses the intent and sets the overall tone of the Project:

> *"Te Hā Noa is to freely experience ones surroundings, to breathe and acknowledge the sights and sounds whilst journeying within the city centre and the link between Waikōkota and Rangipuke.*
>
> *Te Hā – The breath in Māori terms is the essence of life itself, encompassing all the senses and*
> *Noa – is to be free within the journey to experience.*

Journeying from the middle ridges that form through ways of breathing, create a pulse and rhythm of 'Hā' (breath) within the city centre and to the lower part of the city between Karangahape and the Waitematā. Through this movement the 'Hā' is the hub, or nucleus, that brings into existence pockets of vitality and breathing life into the city; coming alive.

Through design, we inspire and create the opportunity for positive behaviour and change. An attitude for innovation and creativity helps to welcome and celebrate the movement and/or interchange between people and design within the space."

The Mana Whenua working group regularly attended hui with key members from the project team to discuss the Project. A summary of hui held during the Detailed Business Case is presented in Table 3-1 with more detail included in Appendix F.[20] During this phase of the project the Mana Whenua working group have developed project principles and a design framework that have provided guidance to direct and shape the development of the Project.

Table 3-1: Detailed Business Case hui

Date	Key Activities / Outcomes
Tuesday 5 May 2020 3.00pm – 5.00pm	▪ Discussed scope of the Detailed Business Case and Mana Whenua collaboration throughout the process.
Wednesday 3 June 2020 3.00pm – 4.00pm	▪ Presented to Mana Whenua outcomes of the recent workshops. Discussion on potential for design principles started.
Tuesday 23 June 2020 3.30pm – 5.00pm	▪ Discussed and agreed approach for developing design framework for the project. As a result the Mana Whenua Working group met in caucus on 7 July to develop the design principles.
Tuesday 21 July 2020 3.30pm – 5.00pm	▪ Mana Whenua presented the design principles developed for the project.
Wednesday 29 July 2020 1.00pm – 4.00pm	▪ Working session to develop Cultural Framework.
Tuesday 18 August 2020 3.30pm – 5.00pm	▪ Feedback provided on draft Cultural Framework document.
Tuesday 29 September 2020 3.30pm – 5.00pm	▪ Feedback provided on the two options developed. Assessment of options. The Mana Whenua Working group expressed preference for Option 2 .
Tuesday 2 February 2021 3.00pm – 4.00pm	▪ Plan approach for preliminary design

Guiding principles have been developed by the Mana Whenua working group expanding on the meaning of Te Hā Noa. These project principles, shown in Figure 3-1, underpin the cultural framework that informs design decisions. The principles and cultural framework formed the basis for which the Mana Whenua Working group assessed and provided feedback on the options. An example of this was the feedback between Option 1 and Option 2 in the shortlist options. The differences between these options sort to identify a preference between natural and environmental improvements where Option 1 had the most softscape areas, and placemaking and activation where Option 2 provided the most amenity where people can dwell and engage with the space. The feedback provided by Mana Whenua in this instance demonstrated a preference for a design that created Manaakitanga where visitors felt welcome and could dwell in the space. This feedback informed the shortlist options assessment and the development of the Preferred Option. For further details regarding the project principles and cultural framework refer to the document Te Hā Noa Cultural Framework[21]. This document, attached as Appendix G, is the intellectual property of the Mana Whenua working group.

[20] See minutes of each hui, prepared by ATCL.

[21] Te Hā Noa (Victoria Street linear park) Detailed Business Case – Cultural Framework, September 2020, Prepared by Jasmax for Mana Whenua on behalf of Auckland Council

Figure 3-1: Mana Whenua Guiding Principles

Mana Whenua have an in-depth knowledge of the contextual setting of Te Hā Noa - Victoria Street linear park within the Auckland city centre. Many of the Mana Whenua representatives are also working on projects that interface with Te Hā Noa - Victoria Street linear park (such as Wellesley Street Bus Improvements Project and City Rail Link) and governance forums (such as the Mana Whenua Kaitiaki Forum) so have a current knowledge of the plans and projects related to Te Hā Noa - Victoria Street linear park. This input was valuable to align the development of the Preferred Option with current thinking and project interfaces. Mana Whenua value deeply an authentic partnering process where they can work alongside the client group and project delivery team through all stages of the project. This partnering enables Mana Whenua to maintain custodianship of the knowledge they collectively share and how it manifests in the built environment.

It is anticipated that the guidance of the Mana Whenua working group will continue to be invaluable in the next phases of the project. The design of Te Hā Noa - Victoria Street linear park will be developed collaboratively with Mana Whenua representatives as partners embedded in the design process.

3.1.2 Community of Practice

A Community of Practice was established during the Indicative Business Case to challenge and inform the Te Hā Noa - Victoria Street linear park project team. The group comprises key internal stakeholders, subject matter experts and project partners (including representatives from the Auckland Council family, Auckland Transport and Mana Whenua). A summary of the workshops that have included the Community of Practice during the Detailed Business Case is provided in Table 3-2 with the outcomes of each workshop detailed in Appendix E.

Table 3-2: Detailed Business Case Community of Practice workshops

Date	Key Activities / Outcomes
Thursday 02 July 2020 1:00pm-4:00pm	▪ Update to Community of Practice on the Detailed Business Case. ▪ Discussed and prioritised sustainability principles. ▪ Feedback provided on design solutions to help identify any gaps that relate to sustainability. ▪ Refer to Sustainability Workshop Report for more details.
Tuesday 22 September 2020 12:00pm – 1:30pm	▪ Progress update on the Detailed Business Case and outcomes of the previous workshop. ▪ Presentation by Mana Whenua ▪ Presentations by industry leaders to help inspire and stimulate innovative ideas and thinking
Wednesday 17 February 2021 2:00pm-4:00pm	▪ Outcomes of the Detailed Business Case process presented.

In addition to consultation with Auckland Council through the Community of Practice, targeted consultation has been undertaken to inform the resolution of specific design issues with subject matter experts as per Table 3-3 (noting that in many cases representatives are required to sign-off on certain design decisions)

Table 3-3: Consultation regarding design considerations

			Community of Practice	Public Realm	Pedestrians and cyclists	Transport Network	Sustainability	CRL integration
AUCKLAND COUNCIL	Auckland Design Office		✓	✓			✓	
	Community Facilities		✓				✓	
	Development Programme Office		✓	✓	✓	✓	✓	✓
	Parks Services		✓	✓			✓	
	Plans and Places		✓	✓			✓	
	Urban Forest		✓	✓			✓	
COUNCIL CONTROLLED ORGANISATION	Healthy Waters		✓				✓	
	Panuku Development Auckland		✓				✓	
	Auckland Transport	Healthy Streets and Active Modes	✓		✓	✓		
		Major Capital Projects	✓					
		Metro Services / Infrastructure Specifications	✓			✓		
		Network Management	✓		✓	✓		
		Parking Services	✓			✓		
		Public Transport Network Development	✓			✓		
		Road Safety Engineering	✓		✓	✓		
		Strategic Projects: Central, North & West Planning & Investment Group	✓		✓	✓		
		Safe Systems	✓			✓		
		Traffic Operations	✓		✓	✓		
		Urban Design	✓	✓				

		Community of Practice	Public Realm	Pedestrians and cyclists	Transport Network	Sustainability	CRL integration
	Walking and Cycling	✓		✓	✓		
OTHER	City Rail Link & Link Alliance		✓				✓
	Wellesley Street Bus Improvements project			✓	✓		
	Bike Auckland			✓			
	Walk Auckland			✓			

3.1.3 Project Governance

The Project Steering Group is the principal project governance authority for Te Hā Noa – Victoria Street linear park project. Throughout the development of this Detailed Business Case the Project Steering Group have provided strategic direction for the project and monitored its alignment with Auckland Council and Auckland Transport organisational goals. They have also provided management oversight, made decisions and provided the gateway approvals required to make sure the Detailed Business Case was completed in compliance with organisational process and procedures.

Project Steering Group members were selected for their relevant technical skills and experience to the project, including:

- Jenny Larking - Project Sponsor (Auckland Council Development Programme Office)
- Lisa Dunshea - Specialist for Urban Design (Auckland Council Plans and Places)
- Daniel Newcombe - Specialist for Transport Strategy & Planning (Auckland Transport)
- Luke Donald - Specialist for Transport Investigation & Design (Auckland Transport)
- Liz Nicholls - Te Hā Noa Project Lead and Business Case Specialist (Auckland Council Development Programme Office).

Further details regarding the role of the Project Steering Group in the next phases of the project are provided in Section 7.1.

4. Optimising Value

The Economic Case outlines process undertaken to determine a Preferred Option that will provide economic value for money. The Preferred Option is expected to contribute to achieving all four of the key benefits anticipated as part of Te Hā Noa - Victoria Street linear park project. The economic analysis undertaken shows the three most significant benefits are productivity, urban realm and pedestrian travel time savings. The project achieves a Benefit Cost Ratio (BCR) of **2.8** based on a Total Expected Cost Estimate of **$134,590,000** (nominal) to construct the Preferred Option. Auckland Councils investment in the Preferred Option will provide value for money.

The Preferred Way Forward identified through the Indicative Business Case proposed a layout, cross-section and materials palette for the Project. The Detailed Business Case followed a design led process to resolve a number of key design and technical elements. This defined the Preferred Option specific for Te Hā Noa - Victoria Street linear park between Hobson Street and Kitchener Street.

Through a series of workshops, stakeholders and design specialists were consulted on the key design issues related to public realm, pedestrians, cyclists, transport network, sustainability and integration with City Rail Link. This design led process resulted in the development of two options. These options were assessed using the assessment framework, a Safety in Design workshop and consultation with Mana Whenua. This assessment identified the preferred design elements expected to best achieve the desired benefits of the Project. These were combined to form the recommended Preferred Option which was endorsed by the Project Steering Group on 8 October 2020.

As a public investment, it is important that Te Hā Noa - Victoria Street linear park provides value for money. A structured design led process, complemented by rigorous assessment techniques, was used to develop a Preferred Option that will address the need for investment on Victoria Street and deliver the desired benefits.

The design development process has identified a number of design refinements and features that will contribute to the project delivering the anticipated benefits. This section provides an overview of the process undertaken as part of the Detailed Business Case for Te Hā Noa - Victoria Street linear park to determine the Preferred Option. For more detailed information regarding the work and thinking undertaken behind the development, assessment of potential design solutions and selection of a Preferred Option, refer to the Design Report attached in Appendix F.

4.1 Design Development

The Indicative Business Case (See Section 1.2.2) included a robust options development and assessment process to determine the Preferred Way Forward for the Te Hā Noa - Victoria Street linear park. As outlined in Figure 4-1, the Do Minimum and 18 Long List Options were developed for the full length of Victoria Street. These were scored and ranked by project team subject matter experts using a Multi-Criteria Analysis approach. The Long List Options assessment resulted in three options (in addition to the 'Do Minimum') being taken forward for further investigation, development and refinement as part of a Short List. Economic cost-benefit analysis of the Short List Options was then undertaken to provide a comparative assessment of the viability of each option. Potential benefits that were not able to be captured in the cost-benefit analysis were assessed in a refined Multi-Criteria Analysis assessment of the Short List Options. As a result Short List Option 1 (shown in Figure 4-2) was recommended as the Preferred Way Forward in the Indicative Business Case.

Figure 4-1: Indicative Business Case options selection process

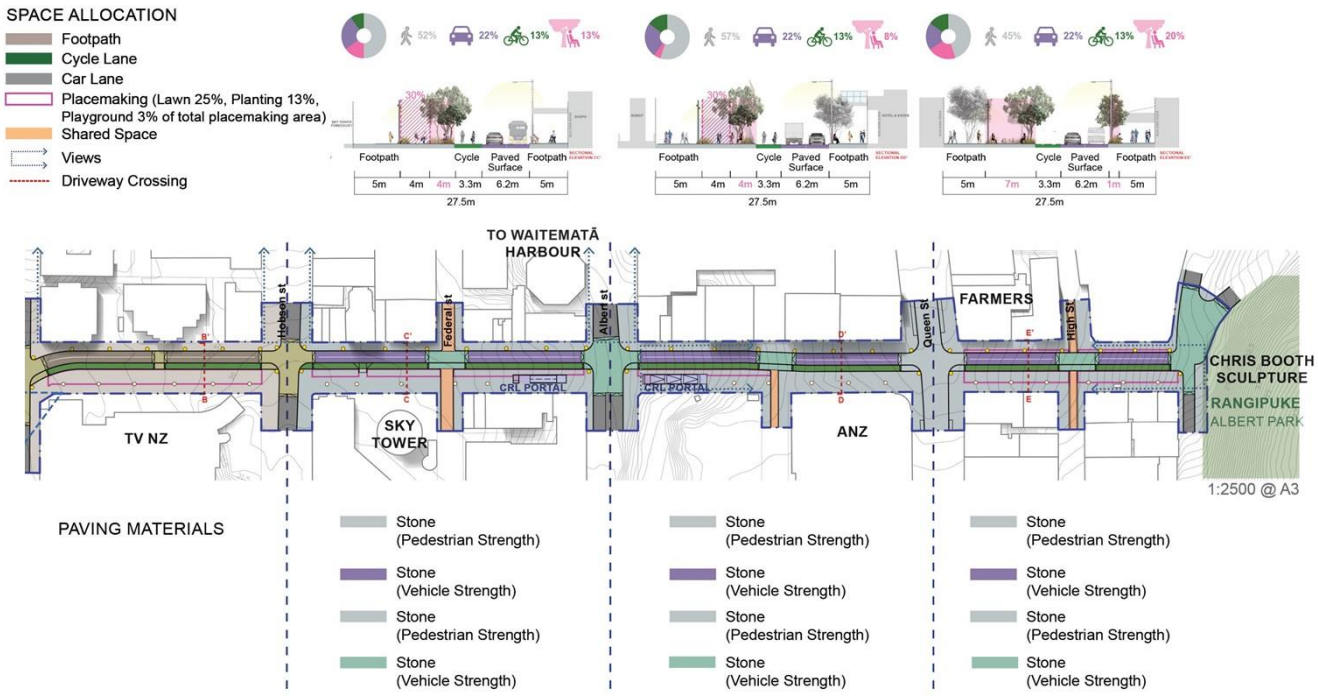

Figure 4-2: Indicative Business Case Preferred Way Forward (Hobson Street to Kitchener Street)

The Preferred Way Forward identified through the Indicative Business Case determined the form and function of Victoria Street, proposing a layout, cross-section and materials palette for the Project. The Indicative Business Case also identified key risks related to interfacing with City Rail Link Aotea Station and the extent of stage 1 construction (see Figure 1-6). To address these risks, design issues specific to the section of the linear park surrounding the Aotea Station portal required further investigation. A better understanding of the complex design issues will allow for informed discussions during the preliminary design phase so that the achieves the outcomes desired for both projects.

Building on the options assessment process undertaken in the Indicative Business Case, the design for the extent of the Detailed Business Case between Hobson Street and Kitchener Street was developed to a greater level of detail. The process from the Preferred Way Forward to the Preferred Option developed through this Detailed Business Case is illustrated in Figure 4-3 and summarised as follows.

Through a series of workshops, stakeholders and design specialists were consulted on key design issues related to public realm, pedestrians, cyclists, transport network and integration with City Rail Link. A number of design elements were resolved through these discussions, while others required further investigation. An interactive design process resolved many of the technical aspects of the design. This process also identified potential options for design elements which were included as variations between the two options developed. Assessing the options using Multi-Criteria Analysis identified the elements of each option that scored more positively and were more likely to achieve the desired benefits of the Project. The combination and refinement of these design elements resulted in the development of the recommended Preferred Option.

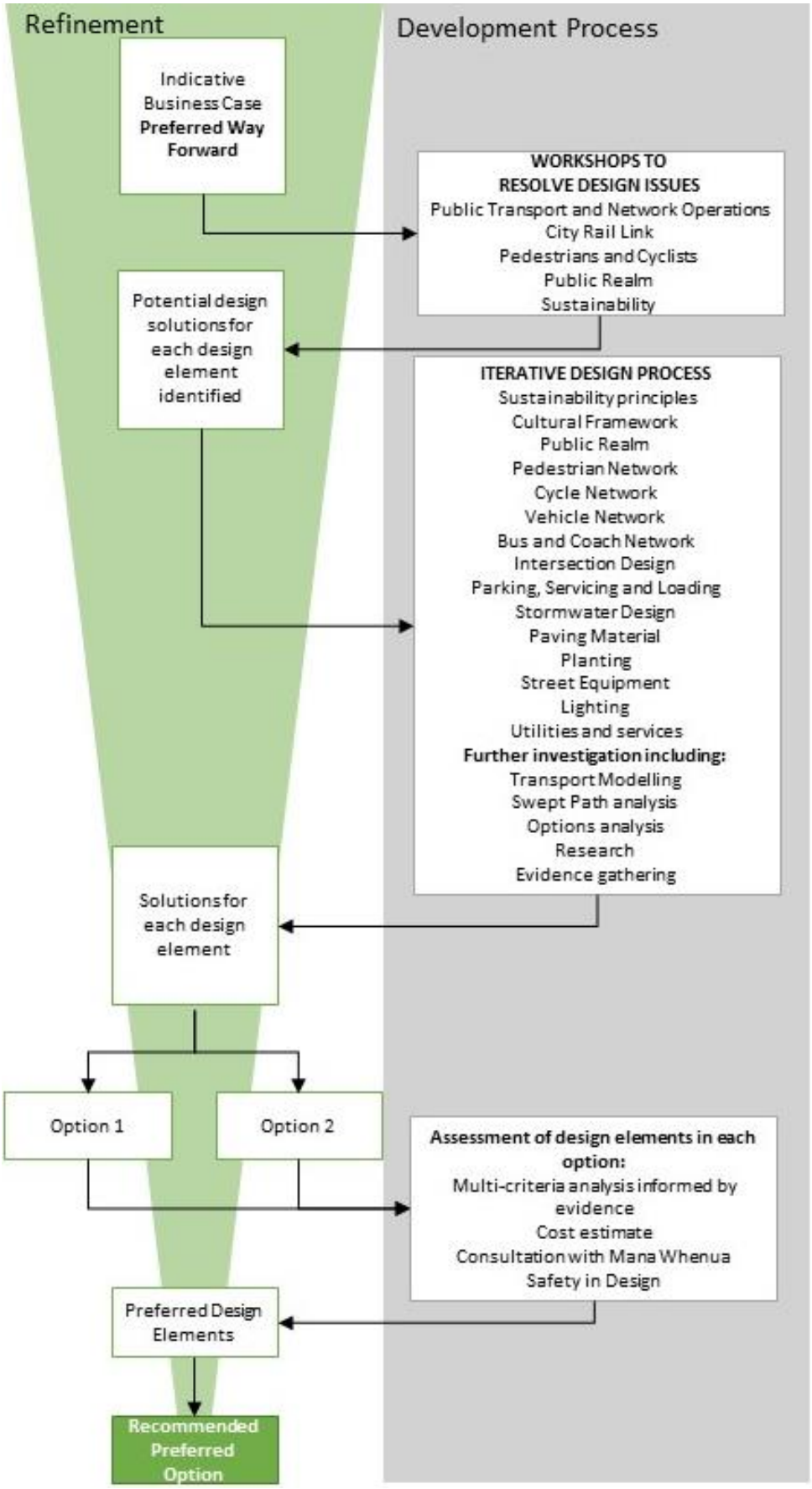

Figure 4-3: Design development process

4.2 Key Design Issues

Following-on from the Indicative Business Case, the Detailed Business Case had to resolve key design issues regarding public realm, pedestrians, cyclists, transport network, sustainability and integration with City Rail Link. Through the series of workshops shown in Table 4-1, stakeholders, design specialists and Mana Whenua were consulted on these design issues. The discussions informed the key requirements, design preferences and potential options for design development of the Preferred Way Forward. Table 4-2 to Table 4-6 show the range of design elements that were discussed at each workshop and the key outcomes for the design elements. Further detail on the outcomes of these workshops are documented in the Workshop Summary Report attached in Appendix E. The workshops uncovered how complex and (in some cases) conflicting the project requirements were. Therefore, while a number of design issues were resolved through the workshop process, further investigation was still required. This was particularly the case where preferences regarding one design issue had the potential to negatively impact another design issue. Following the design workshops an iterative design development process was undertaken.

Table 4-1: Workshop schedule

Workshop	Date	Participants
Public Transport and Network Operations	1:00 – 3:00PM, 14 May 2020	Auckland Council Project Team Members Auckland Transport
City Rail Link	2:00 – 1:00PM, 20 May 2020 1:00 – 3:00PM, 11 August 2020	Link Alliance Project Team Members
Pedestrians and Cyclists	1:00 – 3:00PM, 28 May 2020	Auckland Council Project Team Members Auckland Transport Wellesley Street Bus Improvements Bike Auckland Walk Auckland
Public Realm	1:00 – 3:00PM, 11 June 2020	Auckland Council Project Team Members Auckland Transport Mana Whenua City Rail Link / Link Alliance
Sustainability	1:00 – 4:00pm, 2 July 2020	Auckland Council Project Team Members Auckland Transport Mana Whenua

Table 4-2: Public Transport and Network Operations workshop

Design Elements Discussed	Preferences	Further investigation required
Vision Zero	Raised platforms at intersections.	Assess suitability of raised intersections considering 30km/hr speed environment, gradients and bus routes.
Bus services - Auckland Transport Metro services	Design to accommodate (tracking and clearances) double decker, 12.6 and 13.5m buses. Inline bus stops for Inner Link eastbound services and Inner Link & 106 westbound services.	Swept path analysis.
Bus services - Coach/Tourist	Alternative location to Victoria Street.	Locations and number of tourist/ coaches stops that need to be provided.
Emergency vehicles	3.2 lane widths and radii to accommodate emergency vehicles.	Swept path analysis.

Design Elements Discussed	Preferences	Further investigation required
Network circulation	Two traffic lanes (One in each direction between Federal Street and Queen Street). Allow for traffic patterns so that vehicles leave the city centre area via Hobson Street.	Traffic modelling to understand the traffic demand requirement for: ▪ additional left turn bay stacking capacity at Hobson Street. ▪ Intersection arrangements and potential for banning right hand turns.
Access, loading and servicing	Property access and driveways be retained.	Plan for potential removal and relocation of loading, servicing, parking, accessibility spaces.
Transport Design Manual	Apply Engineering Design Code standards and Transport Design Manual	
Maintenance	Select durable materials. Asphalt is carriageway appropriate.	

Table 4-3: City Rail Link workshop

Design Elements Discussed	Preferences	Further investigation required
Space allocation for each mode (widths of footpaths, cycle lanes, traffic lanes)	Linear Park – 5m plus (maximising usable area including clearance to cycleway) Footpath - Southern – 5m, Northern – between 5m - 6m Cycle Lanes – 600mm buffer zone on north side, cycle lanes between 3m - 4m Vehicle Lanes – 2 x 3.2m minimum (6.4m total)	Space allocation for each mode (widths of footpaths, cycle lanes, traffic lanes)
CRL design requirements	Cycle storage Pedestrian movements	Portal vehicle protection proposed including the use and potential location of bollards.

Table 4-4: Pedestrians and Cyclists workshop

Design Elements Discussed	Preferences	Further investigation required
Cycleway width	Minimum of 3.0m.	Assess the predicted number of cyclists, safety and consider in context of how much area is provided for activity space.
Cycleway height	Cycleway to be at a different level to the footpath.	Assess final level of cycleway which may be determined by other factors such as cost or constraints.
Raised buffer	Minimum of 0.6m.	Assess the benefits and trade-offs of wider raised buffer between cyclists and traffic lanes
Bus stop integration with cycleway	Full island standard design for westbound bus stops with dedicated crossing points for pedestrians across the cycleway.	Transition of cycle facility behind the bus stop near Federal Street.
Provision for cyclists between Albert Street and Queen Street	Dedicated bidirectional cycle facility the full length of the Detailed Business Case scope.	
Hand rails for cyclists	Not include handrails in design.	
Surface treatments	Asphalt and cement are suitable surface treatments for cyclists.	Suitability of pavement materials. Surface treatments to be determine based on design framework and will need to be assessed for smoothness and skid resistance.
Signal Phasing	Greater pedestrian and cycle priority at signals.	Consider turning movements for vehicle and the potential to remove some of these to reflect the change in mode priority.
Raised intersections	Raised intersections to prioritise pedestrians.	Assess suitability of raised intersections considering 30km/hr speed environment, gradients and bus routes.

Design Elements Discussed	Preferences	Further investigation required
Kerbs	Typical kerb detail K01 65mm height 1:3, No lip at cycle surface for cycleway and typical kerb detail K02 150mm height, vertical along traffic lane kerbside.	Opportunities for kerb re-use.

Table 4-5: Public Realm workshop

Design Elements Discussed	Preferences	Further investigation required
Traffic lanes, cycleway and bus stops outside the SkyCity plaza.	Maximise the amount of space for pedestrians and linear park activity.	Arrangement and number of westbound lanes at Hobson Street to understand the trade-off between traffic lanes and pedestrian/activity space available.
Alignment of Victoria Street	Alignment that maximises the potential opportunities for activity space.	Project team to assess impact on underground services based on carriageway realignment.
Street Trees - arrangement	Informal and more natural planting arrangement for trees that reflect a more natural environment.	
Street Trees - selection	Preference for native species and apply transect approach, companion planting succession to reflect nature.	
Street Trees - planting	Both raised and inground tree planting approaches.	Consideration of activity, pedestrian circulation, topography and underground utilities.
Lighting	Preference for lighting to be 'place like' with some bespoke light features.	Light Levels to be analysed including street lighting and amenity lighting and consider the trade-offs from a sustainability perspective.
Street furniture / equipment	Existing CBD furniture suite with considered bespoke feature elements.	Perch seating to be considered in parallel with tree planting strategy.
Materials selection	Prioritise functionality over aesthetic while still choosing materials that suit the city centre environment.	Investigate and assess materials at detailed design based on design framework.

Table 4-6: Sustainability workshop

Design Elements Discussed	Preferences	Further investigation required
Sustainability guiding principles	Prioritise the four sustainability guiding principles: 1) Governance 2) Whole of life assessments 3) Biodiversity 4) Resilient Infrastructure	Develop sustainability framework based on guiding principles to underpin the Projects design decisions.
The end user to be a key focus	Sustainable design solutions can be linked back to: ▪ User experience, perception and creating a learning opportunity. ▪ Using the design outcome once built, as a tool to educate the end user about sustainability. Ideas included creating visible education such as transparency of water flowing through the stormwater network or highlighting the biodiversity network through story-telling/ interpretative signage. ▪ Design to focus on human health and wellbeing.	
Biodiversity	Improving the biodiversity of the street was important to the success of the Project. Including the consideration of all aspect of the natural ecosystem not just trees and birds but also pests, insects, people and plants.	

Design Elements Discussed	Preferences	Further investigation required
Plant Type	Species type to respond and adapt to climate change, plants to capture stormwater, xeriscaping, start growing early and grow with growers, local suppliers for horticulture.	
Water	Capture stormwater from nearby streets / buildings, capture water and reuse for irrigation, plants to capture stormwater to reduce flooding, aim to improve the water quality that is going back into the network.	Consult with Healthy Waters and Mana Whenua to consider treatment strategy for Victoria Street and associated treatment options.
Materials	Material selection is important for response to climate change, resilience, end user, education, whole of life costing, functionality, safety, maintenance, art and procurement (promoting local sourcing).	Consult Auckland Councils existing stock of reusable materials.
Construction	Collaborate with mid-town projects to optimise resource/ waste requirements. Take best practice examples from neighbouring projects to achieve sustainability wins, such as work already undertaken by City Rail Link.	
Whole of Life considerations	Design for implications such as climate change impacts which result in increased operational costs for the Project (water, plants).	Consult with maintenance and operations teams at Auckland Transport and Auckland Council
Procurement	Utilise Auckland Council Sustainable Social Procurement framework.	

4.3 Technical Investigations

Technical investigations were undertaken to resolve outstanding design issues related to the public realm, pedestrian network, cycle network, vehicle network, bus and coach network, intersection design, parking, servicing, loading, stormwater design, paving materials, planting, street equipment, lighting, utilities and services. As there were many potential options to address each design element and many were not mutually exclusive each of these elements were first considered individually. This became an iterative design process to coordinate the solutions for each design element. Transport modelling was undertaken to inform decisions related to the transport network operation (Refer to modelling report provided in Appendix G).

This design process meant that decisions regarding each design element were based on a sound basis of evidence and technical expertise. The outcomes for each design element, documented in Section 4.1 of the Design Report (Appendix F), informed the development of the options. Design elements where there was a clear technical design solution were consistently included in both options developed. Where there were potential options for specific design elements these were included as variations in the options developed (See Section 4.4), in order to understand the potential benefits of design solutions over others. The solutions for each design element are summarised in Table 4-7. The outcome of this work lead to the development of Option 1 and Option 2.

Table 4-7: Solutions for each design element

	Technical design solutions common to both options	Design differences considered in the options
Key Design Elements		
Public Realm	Design strategy applied including: ▪ Park as a place ▪ A variety of spaces ▪ An character that supports movement ▪ Premium materials	Seating clusters and arrangement of spaces Built elements such as terracing and stairs
Pedestrian Network	2.4m wide pedestrian through routes Additional through route width around CRL portals	Pedestrian permeability
Cycle Network	0.6m buffer	Width of cycleway

	Technical design solutions common to both options	Design differences considered in the options
	Level of cycleway same as road carriageway	
Vehicle Network	Two 3.2m traffic lanes Asphalt carriageway Principles for intersection phasing	Left turn capacity onto Hobson Street
Bus and Coach Network	Two westbound and one eastbound in line bus stops Reuse bus shelter outside SkyCity	Coach parking outside SkyCity
Intersection Design	Swept path analysis informing kerb design accommodating buses and emergency vehicles Turning movements and lane arrangements at intersections	Raised Tables
Other Design Elements		
Parking, Servicing and Loading	Strategy: ▪ No parking providing on Victoria Street ▪ Loading and servicing provided on side streets.	
Stormwater Design	Coordinated approach with existing stormwater network Treatment including secondary catchpits and terra traps Structural Soil System for trees	
Paving Materials	Stone pavement on southside. Yellow tactiles Kassel kerbs for bus stops. Repurposed stone kerbs where possible. New and concrete kerbing as required	Quality of pavement material Insitu concrete pavement on northside Permeable pavement
Planting	Drip irrigation. Range of 1000L and 2000L native trees	Levels and types of planting
Street Equipment	CDB furniture suite Cycle racks, bins, seating and bollards	Bespoke furniture elements
Lighting	Multi-function pole design Spotlights for activity zones and pedestrian areas	
Utilities and Services	Avoid clashes with utilities (ie. consider locations of tree pits)	

4.4 Options

The discussion and thinking during the workshops documented in the Workshop Summary Report and outcomes of the technical investigation summarised in the Design Report were used as a basis for developing two project options. Option 1 included variations of lower cost and quality than Option 2 to test if the desired outcomes and benefits could still be delivered. As a result, options considered and assessed as part of the Detailed Business Case included:

- Do Minimum: Base case – existing street layout including current projects (Figure 4-4)
- Option 1 – Standard quality with dedicated left turn lane at Hobson Street (Figure 4-5)
- Option 2 – High quality without dedicated left turn lane at Hobson Street (Figure 4-6).

The Do Minimum scenario represents the expected function and form of Victoria Street without the Te Hā Noa – Victoria Street linear park project. This involves the existing street layout as well as changes that will occur as a result of planned and approved projects. The main change from the existing layout is the addition of the Aotea Station portals which is expected to reduce the number of traffic lanes on Victoria Street between Federal Street to Elliot Street. It is assumed that the Link Alliance would reinstate the area within their designation to standards that reflect existing quality. This Do Minimum option provides a baseline against which the options are assessed.

The two options, referred to as Option 1 and Option 2, are shown in Figure 4-5 and Figure 4-6. Option 1 and Option 2 both have two lanes of traffic with a bi-direction cycle facility and majority of park space along the

southern side. However, there are differences in the layouts and selection of materials between the options. Table 4-8 presents key similarities and differences between the two options. Detailed descriptions and concept drawings of the options (including the Do Minimum) are provided in Appendix F.

Table 4-8: Features of Option 1 and Option 2

	Do minimum	Option 1	Option 2
Traffic lanes	Varying number of lanes of various widths 2.9-3.4m lanes, asphalt carriageway	2x 3.2m lanes, asphalt carriageway	2x 3.2m lanes, asphalt carriageway
Left turn onto Hobson Street	Dedicated left turn lane in addition to shared through and left lane.	Dedicated left turn lane in addition to shared through and left lane.	Shared through and left.
Bus stops	Inline bus stops two westbound, one eastbound.	Inline bus stops two westbound, one eastbound.	Inline bus stops two westbound, one eastbound.
Coach/Tour bus stops	Unresolved.	Westbound stop outside SkyCity.	None on Victoria Street.
Raised tables	None	None	All intersections
Cycleway	None	3.2m cycle way with 0.6m buffer (3.0m adjacent western CRL portal)	3.0m cycle way with 0.6m buffer
Pavement treatment	As per existing. Combination of concrete, asphalt, paving, bricks.	Stone pavement with insitu concrete and permeable pavement for selected areas.	Predominately stone pavement with permeable pavement for selected areas.
Street Furniture / Equipment	As per existing including bus stops, rubbish bin and limited seating (benches).	CBD furniture suite with bespoke seating element clusters.	CBD furniture suite with a range of bespoke seating elements integrated with planting.
Planting	As per existing limited planting including ~13 trees	Planting areas at grade with localised mounding Including 42 trees	Varied in form and integrated into the retaining, terracing, stairs, and bespoke seating configurations including 47 trees

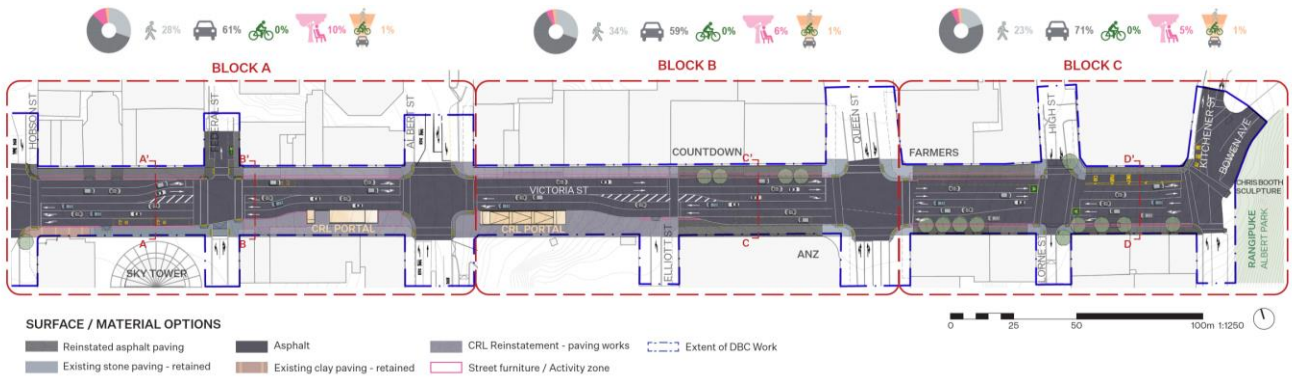

Figure 4-4: Do Minimum

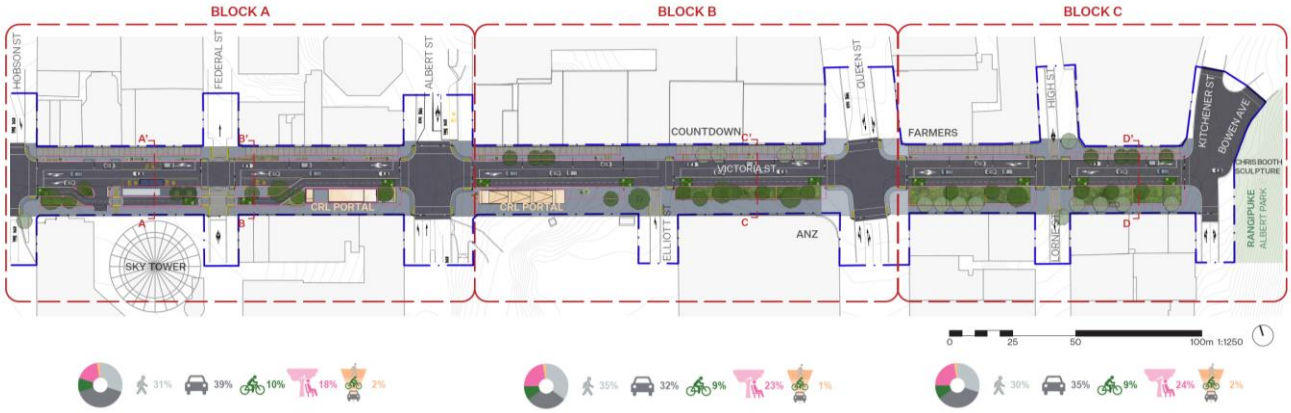

Figure 4-5: Option 1

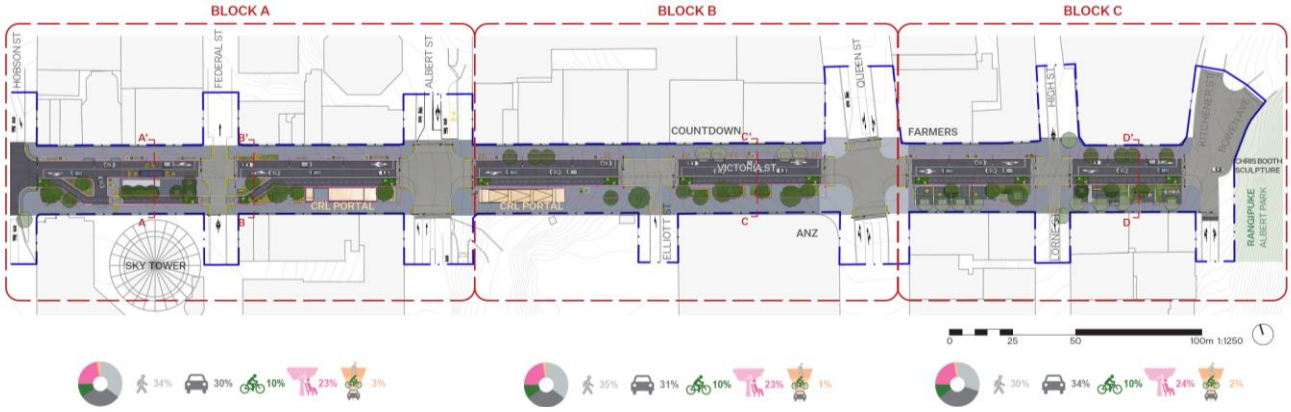

Figure 4-6: Option 2

4.5 Options Assessment

Option 1 and Option 2 were assessed using the assessment framework (Section 4.5.1), a Safety in Design workshop and consultation with Mana Whenua. This assessment process identified the preferred design elements expected to deliver the desired project benefits (See Table 4-11). The options were not evaluated using economics analysis as the main factors influencing the benefit cost ratio were consistent across both options. The preferred design elements were combined to form the recommended Preferred Option (Section 4.6).

4.5.1 Multi-Criteria Analysis

Multi-Criteria Analysis frameworks (assessment framework) are a key tool that allow options to be assessed against different and competing criteria. As the level of design detail has increased in the Detailed Business Case, the assessment framework developed as part of the Indicative Business Case has also been refined. The assessment framework criteria are presented in Table 4-9. The scoring of the options was used to understand which variations in the design will best deliver on the desired benefits of the Project.

Option 1 and Option 2 were assessed against the Do Minimum using the Multi-Criteria Analysis assessment framework. To confirm the scoring approach, provide consistency and challenge the assumptions used as the basis for the scores, the subject matter experts discussed and validated the assessments for each criterion through a validation workshop held on 15 September 2020. Following the discussion, subject matter experts further refined and then finalised their scoring. A summary of the results of the scoring for the two options is presented in Table 4-9.

Both Option 1 and Option 2 are expected to positively contribute to **achieving benefits** of the project. Option 2 scores more positively against performance measures 1.1, 1.2 and 2.1 related to *Provision of dedicated spaces that create 'destinations' on Victoria Street and Reduced opportunity for conflicts between modes*.

Both Option 1 and Option 2 score positively against *consistency with local government plans and strategies*.

With regards to the **wider impacts** of the project the options score adversely against the *transport network performance* criteria for buses and goods and services. Both options score positively for the interface with proposed projects and environmental impact criteria. Option 1 scores higher than Option 2 for *Opportunities for the quantity and diversity of flora*.

Table 4-9: Multi Criteria Analysis (MCA) Framework and scores

	Criteria		DBC Indicator		Option	
					1	2
ACHIEVING BENEFITS	1	Provision of dedicated spaces that create destinations on Victoria Street	1.1	Size and quantity of 'destination spaces' made available for recreational activities to be undertaken on Victoria Street.	+	+++
			1.2	Created spaces that provide a safe and comfortable environment through incorporating CPTED principles. Should include provision of appropriate seating and shelter (universal design), street and amenity lighting and CCTV, separation from traffic.	+++	+++
	2	Reduced opportunity for conflicts between modes	2.1	Provision of dedicated crossing points between key destinations. Reduction of demand on a persons attention (i.e. less lanes to cross places less demand on a pedestrian's decision making process to cross). Management of conflicts between people on all modes on desire lines.	++	+++
	4	Dedicated infrastructure and connections for active modes	4.1	Ability to safely accommodate the predicted increase in the numbers of pedestrians, cyclists and other active transport modes.	++	++
DELIVERING THE PROJECT	6	Consistency with local government plans and strategies	6.1	Option supports the realisation of Auckland Council's City Centre Masterplan 2012, and relevant Plans and Strategies.	+	++
WIDER IMPACTS	8	Transport network performance	8.0	Ability to support future intent for vehicle transport:		
			8.1	▪ Buses	-	--
			8.2	▪ Property access	0	0
			8.3	▪ Goods and services	-	-
			8.4	▪ Emergency services	0	0
			8.5	▪ Private vehicles	-	-
	9	Interface with proposed projects	9.1	Option supports the benefits realisation of other planned investments such as City Rail Link and Auckland Light Rail through minimisation of rework, lane / corridor configuration.	+	+
	10	Environmental impact	10.1	Considers sustainable design options that reduce the environmental footprint of Victoria Street through improvements to stormwater discharge, air quality improvements and selection of materials and treatments.	++	+++
			10.2	Opportunities for the quantity and diversity of flora to be introduced to Victoria Street with regard to the fauna it will likely attract.	+++	++

4.5.2 Option Cost Estimates

The cost estimates for Option 1 and Option 2[22] developed by Rider Levett Bucknall (RLB) are presented by block in Table 4-10. These cost estimates were prepared to provide an indication of the relative cost difference between Option 1 and Option 2. Following the selection of the Preferred Option the level of design, cost assumptions and risk allowance were refined. This is reflected in the cost estimate prepared for the Preferred

[22] Excluding stormwater, risk adjustment and refined assumptions as per the cost estimates developed for Section 4.7.1.

Option (See Section 4.7.1). There is an approximate cost difference of $10 million between the options. The cost estimates including a more detailed breakdown of the items and the assumptions informing the estimates is provided in Appendix J.

Table 4-10: Capital Cost estimates for options (nominal $)[23]

Blocks	Option 1	Option 2
Block A – Hobson Street to Albert Street (including Albert Street intersection)	39,660,000	42,390,000
Block B – Albert Street to Queen Street (including Queen Street intersection)	29,920,000	32,490,000
Block C – Queen Street to Kitchener Street	27,260,000	32,770,000
Total	**96,840,000**	**107,650,000**

4.5.3 Recommended Preferred Option

To further understand the potential benefits of design solutions relative to others, options for design elements (identified in the technical investigation documented in the Design Report) were included as design variations in Option 1 and Option 2. These options have been assessed using the assessment framework (Section 4.5.1), Safety in Design and presented to Mana Whenua.

The two options were presented to the Mana Whenua working group during the hui held on Tuesday 29 September 2020. During the hui Mana Whenua expressed their preference for Option 2 as it aligns more closely with the Project aspirations and better responds to the Cultural Framework.

The analysis and assessment of the options has identified which design elements score more positively. Many of these design features are included in Option 2, which scored more positively overall in the assessment framework. However there were also design features of Option 1 scored that more positively. The analysis and assessment of the options has identified that elements identified in Table 5-1 score more positively. As these design solutions are likely to achieve the desired benefits of the Project, it was recommended they be included as part of the Preferred Option to be taken forward.

The combination and refinement of the design elements resulted in the development of the recommended Preferred Option. The recommended Preferred Option was presented to the Project Steering Group and endorsed as the Preferred Option on 8 October 2020.

Table 4-11: Recommended Design Elements

Design Item	Recommendation	Reasoning & Evidence
Arrangement westbound lanes at Hobson Street	Shared left and through lane.	The results of the modelling show that the Option 2 arrangement (without a dedicated left turn lane from Victoria Street to Hobson Street) has adequate capacity to accommodate the anticipated traffic volumes. Greater park and activity space contributes the most to achieving the desired benefits and outcomes for the project therefore as the intersection can operate with reduced traffic capacity in Block A more space can be allocated to activity space.
Coach stops	None provided on Victoria Street. Consider alternative location.	Greater activity space in Block A scored more positively in the MCA assessment. As maximising the park and activity space is important to the project, it is recommended that alternative stop options for coach/ sightseeing tour busses be considered.
Bi-directional cycleway width	3.0m width	As noted in the MCA assessment a width of 3.0m achieves the desired benefits for cycling while maximising the available area for activity space.
Cycleway buffer	0.6m wide buffer	A 0.6m provides adequate separation from traffic lanes in a 30km/her speed environment while maximising the available activity space.
Height/level of cycleway	Road carriageway level	The road carriageway level provides a grade difference between the footpath and cycleway which delineates the space for cyclists.

[23] Capital cost estimates excluding stormwater and risk adjustment

Widths of pedestrian movement areas	Minimum width required.	While providing more than the minimum recommended width would give greater Level of Service for pedestrians it would also reduce the area available for linear park activity space and so the proposed widths have been assessed to optimise the balance of these functions.
Raised vs. flush intersections	Raised intersections.	The use of raised tables establishes pedestrian priority, provides a consistent experience for pedestrians and continuity by tying the park spaces together throughout the corridor. Queen Street is expected to be rehabilitated as part of a future programme of works. Therefore, it is recommended that this future Queen Street project be responsible for the design solution for the Queen Street intersection so that the intersection design coordinates the needs of both street corridors and opportunities for Queen Street are not precluded. As Queen Street is also a key pedestrian corridor the final design solution for this intersection should give high priority to pedestrians.
Pavement finishes	High quality pavement materials.	Premium pavement allows greater flexibility in developing design expression through variation in pavement patterns, unit sizes, finishes and colour. Premium materials generally maintain their quality, are more robust and perform better over time.
Pedestrian permeability	Increased pedestrian permeability in Blocks B and C.	Increased pedestrian permeability in Blocks B and C would have positively increased the scoring of both options in the MCA assessment. In the Preferred Option the way that the park space is broken up can be further refined so it offers more space for well-crafted and meaningful destination spaces.
Safety improvements	Address safety in design hazards.	A few hazards identified in the Safety in Design can be addressed with minor changes to the design so are recommended to be addressed in the Preferred Option.

4.6 Preferred Option

The Preferred Option includes the components of Option 1 and Option 2 that are expected to maximise the desired project benefits, with refinements to improve the permeability allowing greater pedestrian movement through the park space. Refinements throughout the corridor have been included to address some of the hazards raised in the Safety in Design workshop.

The Preferred Option balances the competing demands of traffic, cycling, pedestrian movement and amenity and assembling them in a cohesive manner. As shown in Figure 4-7 and Figure 4-8, the general arrangement of the corridor is asymmetric including (north to south) a 6.0m footpath, two 3.2m vehicle lanes, a 3.0m bidirectional cycle facility with 0.6m buffer and 12.0m zone for the City Rail Link station facilities, bus facilities, pedestrian movement and activity spaces.

The urban character is proposed to support pedestrian movement and the establishment of a series of unique activity zones. The layout of the urban realm features will support the integration of the City Rail Link station portals on the southern side of Victoria Street enabling safe egress to and from the station for a variety of users. Raised tables are intended at intersections to prioritise pedestrian movement and to reinforce the continuity of the park space. The distribution of trees along the corridor will be consistent whilst responding to the requirements of each block and the unique opportunities and constraints. Consistent with the central city, premium materials such as stone pavements and wall elements will be utilised to shape the way users engage with the space.

Figure 4-7: Preferred Option overall plan

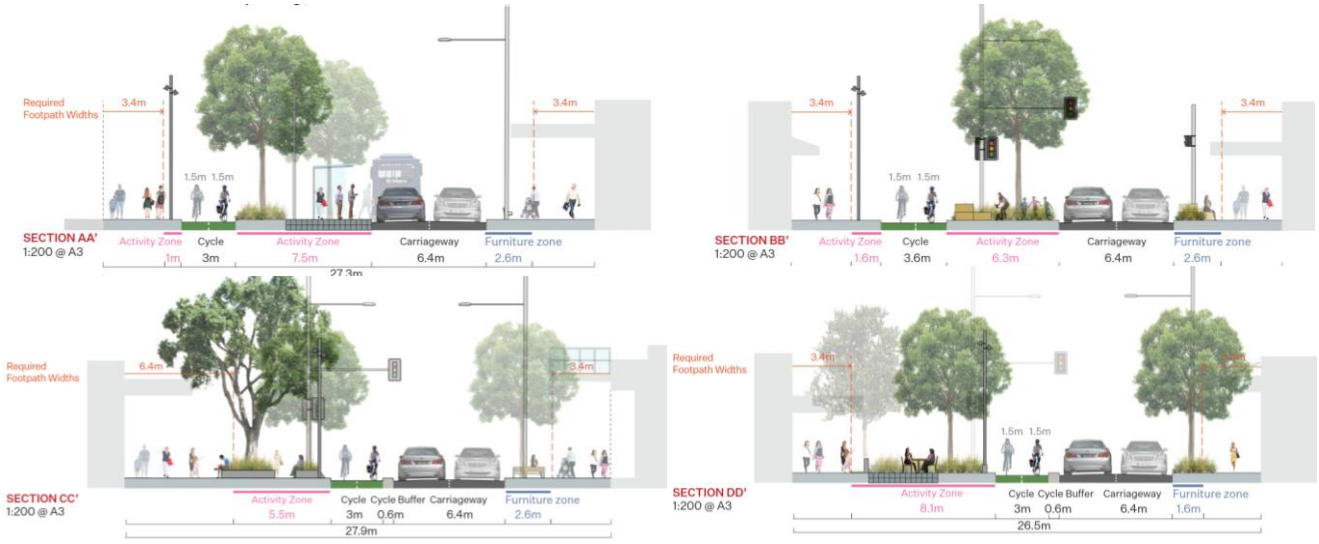

Figure 4-8: Preferred Option typical cross-sections

As shown in Figure 4-9, Block A maximises park space by providing two lanes for traffic. Inline bus stops accommodate the future public transport bus services. Potential conflicts between cyclists and bus passengers are managed by sending cyclists behind the bus stop with dedicated pedestrian crossing points. The space between the traffic lanes and cycleway provide opportunities for planting and street furniture.

While the Preferred Option accommodates public transport bus services it does not accommodate coaches or site-seeing services. To implement this requirement an alternative location will need to be found. The Preferred option includes a shared left turn and through lane at Hobson Street requiring the implementation of this block to be coordinated with reductions in traffic volumes expected as part of a city wide traffic circulation strategy.

Figure 4-9: Preferred Option - Block A Hobson Street to Albert Street

As shown in Figure 4-10, Block B provides space for the potential volumes of pedestrians egressing the City Rail Link portal. Planting and seating elements between Elliot Street and Queen Street are arranged to increase permeability through the space.

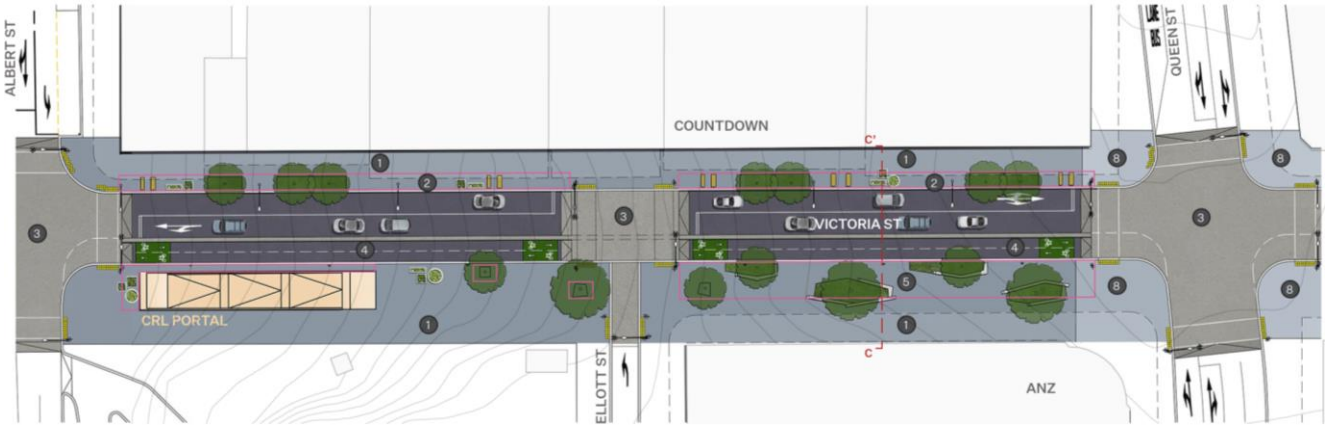

Figure 4-10: Preferred Option - Block B Albert Street to Queen Street

As shown in Figure 4-11, the layout and arrangement of Block C is balanced to allow for movement between the levels while still providing space to rest with areas of planting.

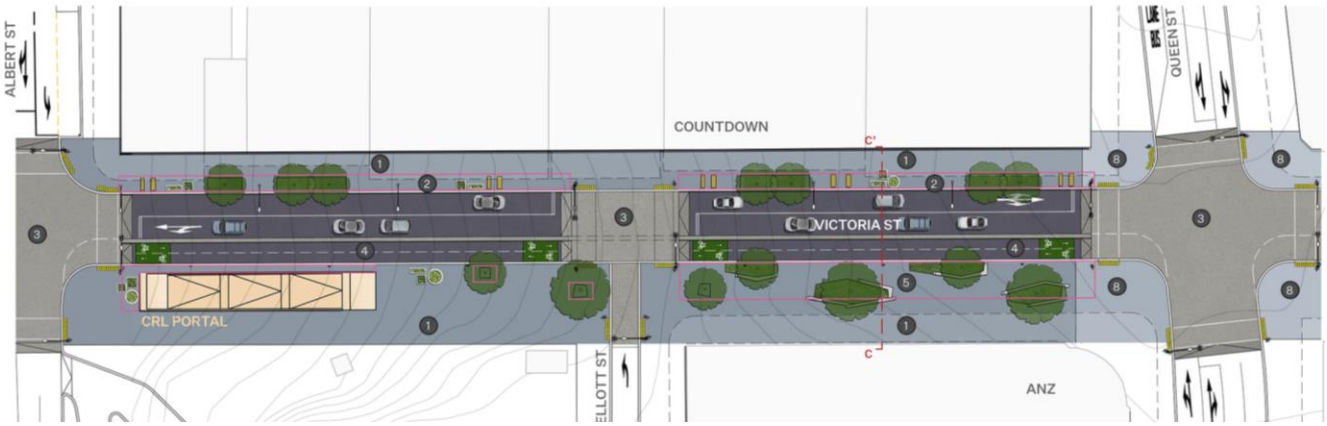

Figure 4-11: Preferred Option - Block C Queen Street to Kitchener Street

The Preferred Option will be developed in more detail during Preliminary Design. For more information on the design assumptions and a detailed description of the key design attributes for the Preferred Option refer to the Design Report attached in Appendix F.

The cost estimate for the Preferred Option is presented by block in Table 4-10 including escalation. The cost estimate presented is based on the staging and timing assumed in Section 5.1. The cost estimates including a more detailed breakdown of the items and the assumptions informing the estimates is provided in Appendix J.

Table 4-12: Capital Cost estimates for options (nominal $)[24]

Blocks	Preferred Option
Block A – Hobson Street to Albert Street (including Albert Street intersection)	45,770,000
Block B – Albert Street to Queen Street (including Queen Street intersection)	54,120,000
Block C – Queen Street to Kitchener Street	34,700,000
Total	**134,590,000**

[24] Capital cost estimates excluding stormwater and risk adjustment

4.7 Value for Money Assessment

The value for money assessment of the Preferred Option was undertaken using a cost-benefit analysis framework, consistent with New Zealand Treasury and Waka Kotahi NZ Transport Agency requirements.

The purpose of the cost-benefit analysis is to assess whether the recommended option will deliver a net benefit to the community. This is done by monetising all impacts where possible – including the financial, economic, social and environmental costs and benefits. Costs and benefits are all quantified relative to the Do Minimum Option (i.e. base case) and are therefore incremental impacts.

The key metrics used to aid this assessment include:

- **Net present value (NPV)** - the difference between the discounted (present value) benefits and costs. A positive net present value indicates that the project delivers net benefits to the community relative to the base case and is therefore 'economically viable'
- **Benefit cost ratio (BCR)** – this is the ratio of discounted benefits to discounted costs. A ratio greater than one means that the benefits outweigh the costs.

The following sections provide a summary of the economic analysis documented in Appendix G.

4.7.1 Capital Cost Estimate

Capital cost estimates were developed by Rider Levett Bucknall (RLB). Costs were estimated by Stage (Stage 1, Stage 2A and Stage 2B) and broken down by block (Block A, B and C) and zones (Zone 1-7) as outlined in Figure 4-12.

Figure 4-12: Allocation of blocks and zones across project area (larger image provided in Appendix J)

The cost estimate was prepared utilising a combination of measured bulk quantities, elemental rates and analysis from similar projects and priced at rates which are considered to represent the current market.

All assumptions and limitations relevant to the cost estimate are captured in the Cost Plan (Appendix J). Some of the key assumptions include the following:

- Cost is spread over an 11 year period commencing in 2021 (Stage 1) and completed in December 2030 (Stage 2B). Actual construction is estimated to commence in 2022-23.
- Works for Te Hā Noa – Victoria Street linear park and City Rail Link projects will be designed so that the coordinated implementation of both projects is delivered seamlessly and logically. While allowance has been made to integrate both projects throughout design phases through consultation between the design teams, the cost estimate does not make allowance for mitigation if the projects are misaligned at construction.
- Works in the City Rail Link designation only includes those that are assumed to be outside the scope of the City Rail Link project, which include works over and above standard Central Business District street design - e.g. - basalt kerbs; mature trees; cultural markers; raised platform; Stockholm tree pits; and additional

seating over and above standard street furniture. Although it was assumed that City Rail Link will cover utility and stormwater relocations, additional allowances have been made where new tree pits require integration.

- Full tree replacement has been assumed.

The estimated cost to construct the Preferred Option between Hobson Street and Kitchener Street is $134.6 million including escalation of $18.40 million and $116.2 million real cost. Discounting the real cost calculates the present value of the capital cost to be $94.9 million. For the purposes of the economics analysis present values are used to understand the value of the project in today's dollars. The present value is calculated based on the real cost (excluding escalation) with a discount rate applied.

The cost by Stage is provided in Table 4-13 and indicative cost estimate by year is provided in Table 4-14. The estimate allows for an 11-year timeline based on the staging and timing assumed in Section 5.1. In Table 4-13 and Table 4-14, real dollars exclude escalation and nominal values include escalation. For the indicative cashflow including escalation see Table 6-1 and Table 6-2 in the Financial Case in Section 6.1. Figure 4-13 illustrates the indicative distribution of costs by year, including the split between fees and project costs and construction costs.

Table 4-13: Cost estimate by Stage for Preferred Option (RLB, 2020)

Stage	Total (real $m)	Escalation ($m)	Total (nominal $m)
Stage 1	$ 42.4 m	$ 3.40	$ 45.8
Stage 2A	$ 46.6 m	$ 7.50	$ 54.1
Stage 2B	$ 27.2 m	$ 7.50	$ 34.7
Total	$ 116.2 m	$ 18.40	$ 134.6

Table 4-14: Indicative cost estimate by year (year ending 30 June, real $m - RLB, 2020)

Stage	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
1	$ 1.6	$ 2.2	$ 10.7	$ 27.8	-	-	-	-	-	-	-	$ 42.4
2A	-	-	-	$ 0.8	$ 3.2	$ 12.1	$ 30.6	-	-	-	-	$ 46.6
2B	-	-	-	-	-	-	-	$ 1.2	$ 2.0	$ 14.7	$ 9.3	$ 27.2
Total	**$ 1.6**	**$ 2.2**	**$ 10.7**	**$ 28.6**	**$ 3.2**	**$ 12.1**	**$ 30.6**	**$ 1.2**	**$ 2.0**	**$ 14.7**	**$ 9.3**	**$ 116.2**

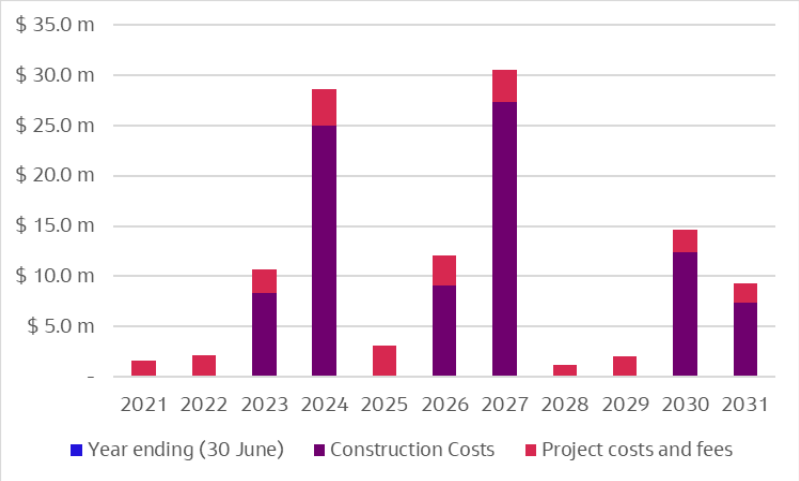

Figure 4-13: Capital cost distribution

4.7.2 Operating and Maintenance Costs

Maintenance costs are based on the estimates already included in the Cost Plan for:

- Planting maintenance – costs captured in the Cost Plan for the first three years after commissioning have been assumed to continue annually across the assessment period
- Tree Maintenance – maintenance costs captured in the Cost Plan for the first years following commissioning have been assumed to continue annually across the assessment period.

An allowance for general operating costs above what is needed in the base case has also been included. All other operating and maintenance costs are assumed to not materially differ from the base case and are therefore excluded from the analysis.

Replacement costs to account for assets that have a shorter useful life (approximately 15 years) than the assessment period have been allowed for. This includes replacement of street furniture and the green wall.

Key assumptions are summarised in Table 4-15.

Table 4-15: Summary of operational cost estimates

Cost component	Cost	Key assumptions
Street furniture	$492,030 + 15 % landscaping contingency	▪ Expenditure across the three stages - $123,720 in Stage 1, $229,050 in Stage 2A, and $139,260 in Stage 2B - replaced every 15 years. ▪ An additional 15% contingency has been allowed for any landscaping requirements
Green Wall	$500,000	▪ Part of Stage 2A expenditure (2027) and replaced every 15 years
Planting maintenance	▪ $5,500/annum for Stage 1 works ▪ $5,500/ annum for end of Stage 2A works ▪ $11,167/ annum at end of Stage 2B .	▪ The first three years of maintenance are captured in the capital cost estimate (i.e. in cost plan). Costs relevant to each stage are only captured four years after construction works are completed.
Tree maintenance	▪ $68,800/annum for Stage 1 works ▪ $101,000/ annum for end of Stage 2A works ▪ $118,000/ annum at end of Stage 2B.	▪ The first five years of maintenance are captured in the capital cost estimate (i.e. in cost plan). Costs relevant to each stage are only captured six years after construction works are completed.
Footpath, cycle facility, road replacement and shared space	Excluded	▪ Asset life is approximately 40 years ▪ Replacement is not needed within the 40-year assessment period
General operating costs	$10,0000 per additional Stage	▪ This is an indicative allowance – noting that most costs will likely not differ to the base case.

The following tables summarise capital and operation costs over the 40-year assessment period. The costs are discounted to show the present value of the Preferred Option.

Table 4-16: Cost summary – $m (discounted)

Cost component	Cost (discounted)
Capital cost	$9 4.9 m
Asset replacement	$ 0.67 m
Operation and maintenance	$ 1.85 m
Total Cost	$ 97.4 m

4.7.3 Benefits

Benefits and disbenefits quantified in the cost benefit analysis include:

- **Benefit 1: Pedestrian travel time saving.** Reducing the number of lanes on Victoria Street (and associated lower traffic volumes), will allow a greater proportion of the cycle times at pedestrian crossings to be allocated to pedestrians which will result in deceased wait time and therefore enable people to reach their destinations faster.
- **Benefit 2: Urban realm benefits**. Te Hā Noa - Victoria Street linear park will improve the pedestrian experience for those moving through the street, making it safer, easier to navigate, more accessible and more enjoyable. It will also provide more opportunities to relax and enjoy the space provided.
- **Benefit 3**: **Productivity benefits.** Reduced pedestrian travel time along and across Victoria Street will lead to increased access and connectivity between places of employment in that part of the city centre. This supports a higher density of economic activity in the area and increases productivity of affected businesses (this is known as agglomeration economies). Productivity benefits are reflected by an increase of the area's contribution to Gross Domestic Product.
- **Benefit 4: Cycling benefits.** The eventual linear park along the full length of Victoria Street will make Victoria Street a safer and more enjoyable option for existing cyclists and will encourage more commuters to cycle. These benefits extend to safety, health and road traffic reduction. The proposed Te Hā Noa - Victoria Street linear park between Federal Street and Kitchener Street will set the foundation for these future benefits but will only be a portion of the full benefits. As a conservative approach, this benefit has been excluded from the analysis given the uncertainty associated the extent of this benefit.
- **Benefit 5**: **Environmental benefits.** Increased plantings and permeable area along Victoria Street will deliver a range of benefits, including reduced stormwater runoff, cooling benefits, improved air quality and carbon emissions abatement benefits.
- **Benefit 6: Vehicle disbenefits.** Reduced traffic access along Victoria Street may lead to some people choosing active transport or public transport as an alternative mode. However, many drivers will choose to change their route which may also lead to longer travel time. The implementation of Access for Everyone may reduce traffic volumes on Victoria Street as it applies a city wide strategy for traffic circulation and vehicle access. If implemented before Te Hā Noa – Victoria Street linear park, Access for Everyone may reduce the potential vehicle disbenefits.

4.7.4 Cost-Benefit Analysis

The cost-benefit analysis results are presented in Table 4-17 and Figure 4-14 below.

Table 4-17: Cost-benefit analysis results

Te Hā Noa - Victoria Street linear park	
Capex	$ 94.87 m
Operation and maintenance	$ 2.52 m
Total Cost (C)	$ 97.38 m
Pedestrian travel time benefits	$ 21.50 m
Productivity benefits	$ 220.25 m
Urban Realm Benefits	$ 61.69 m
Environmental benefits	$ 0.10 m
Vehicle disbenefit	-$ 33.25 m
Total Benefit (B)	$ 270.28 m
Net present value (B-C)	$ 172.90 m
Benefit cost ratio (B/C)	2.8

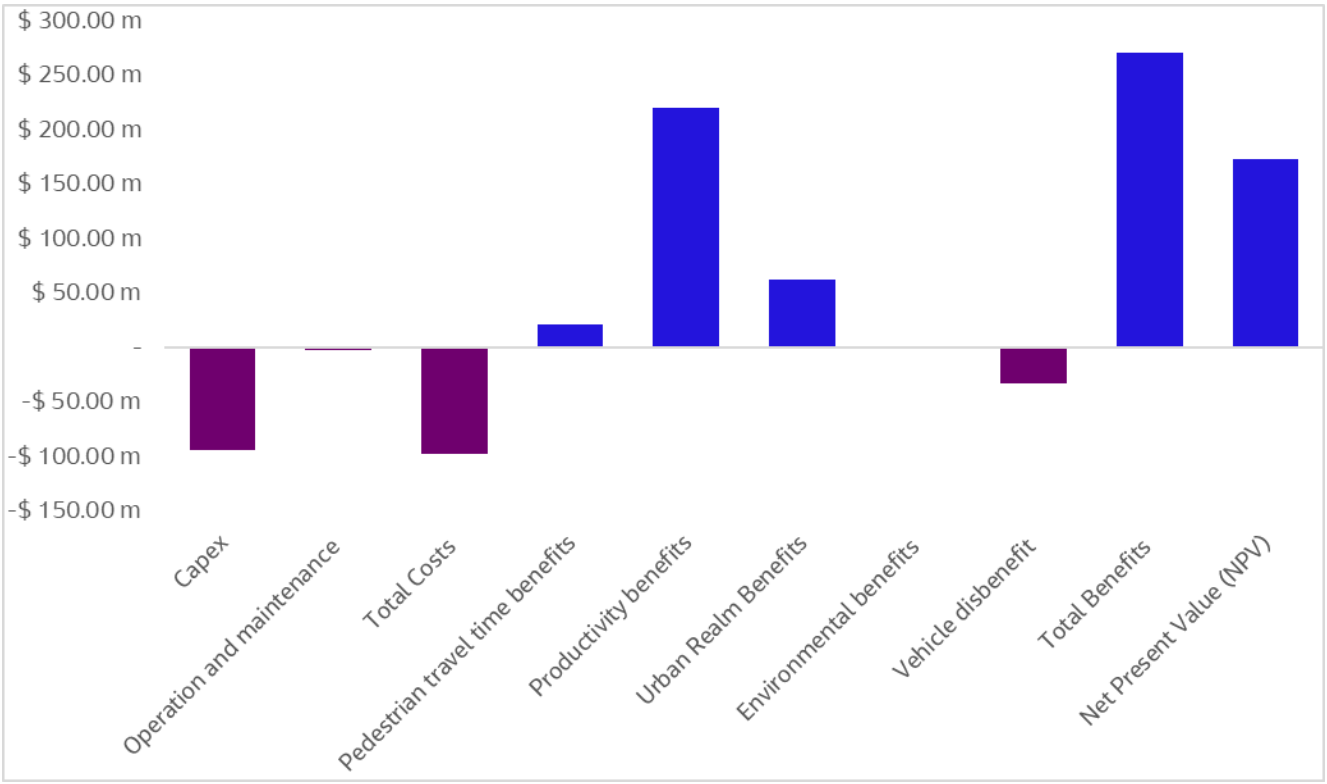

Figure 4-14: Cost-benefit analysis results ($m, present value)

Based on the costs and benefits that could be quantified, the project benefits outweigh costs. The most significant benefits include productivity improvements ($220.3 million), urban realm benefits ($61.7 million) and pedestrian travel time ($21.5 million). These benefits capture the value from delivering a safer and more accessible environment along Victoria Street, with increased opportunities for activity, connectivity and recreation. The net benefit is estimated at $172.9 million across the 40 year assessment period, with a benefit cost ratio of 2.8.

A sensitivity analysis was conducted to assess the possible impact of the cost-benefit analysis results when testing key uncertainties. The following sensitivity tests were conducted:

- Change in discount rate from 4% to a low of 3% and a high of 6%
- Change in cost estimate (CAPEX and OPEX) – including a change of +/- 20%
- Change in benefits– including a change of +/- 20%
- Change in value of time assigned to pedestrian travel time savings – from $13.24/hr to $16.89/hr (i.e. in line with the higher value of time assigned to vehicle occupants)
- Delay savings at crossings is halved – to test the impact on productivity improvements and pedestrian travel time.

As shown in Table 4-18, the NPV remains positive across all tests but is most sensitive to a reduction in delay time savings. This demonstrates the importance in pursuing a reduction in pedestrian cycle time in the detailed design. Consultation with Auckland Transport indicates that the reduction in pedestrian delay assumed in the economics is a realistic change that can be implemented.

Table 4-18: Sensitivity results: Scenario 1 (net benefit, $ million, present value)

Sensitivity test	NPV	BCR
Base results	$ 172.9 m	**2.8**
Test 1: discount rate of 3%	$ 222.2 m	**3.2**
Test 2: discount rate of 6%	$ 104.8 m	**2.2**
Test 3: Costs decrease by 20%	$ 192.4 m	**3.5**
Test 4: Costs increase by 20%	$ 153.4 m	**2.3**
Test 5: Benefits decrease by 20%	$ 118.8 m	**2.2**
Test 6: Benefits increase by 20%	$ 227.0 m	**3.3**
Test 7: 50% reduction in time savings at pedestrian crossings	$ 49.7 m	**1.5**

4.8 Sustainability Principles

Sustainability is at the very core of Te Hā Noa - Victoria Street linear park. The project will reprioritise people over vehicles, helping to support sustainable transport options for the city centre. The linear park on Victoria Street will allow for the development of a green infrastructure network, incorporating ecological and biodiversity corridor principles to enhance environmental sustainability. The project is supported by the following co-created purpose statement: *"We are transforming Victoria Street to create a thriving public space for movement, rest and recreation, in a way that reflects the unique identity of Tāmaki Makaurau, to enhance the wellbeing of our people, our city and our natural environment"*.

Through the Indicative Business Case the collective thinking of the project team and Community of Practice aspired to decrease the footprint (negative impact) and increase the handprint (positive impact) for Te Hā Noa - Victoria Street linear park project. Sustainable design outcomes were explored and discussed such as green innovations, technologies, materials and the incorporation of sustainable practices into the construction process such as the use of low-impact sustainable materials and the minimisation of waste, energy and water consumption. Additionally, during this phase the criteria that reflected support for and consistency with the relevant sustainability plans and policies were included in the Critical Success Factors developed as part of the Multi-Criteria Analysis assessment framework.

At the commencement of the Detailed Business Case the project team evaluated the suitability of a third party verification for the planning phase which resulted in the decision that ISCA[25] Planning Version 2 or the pilot programme ISCA 'lite' would not be suitable at this point in the project. It was recommended that a sustainability strategy for Te Hā Noa - Victoria Street linear park be created which would provide the opportunity to select relevant guiding principles such as legacy, resilience, governance, ecology and urban design. It was decided that a cost-effective approach be progressed to develop a sustainability framework focused on principles, objectives and targets.

Sustainability was the key focus of the Community of Practice workshop held Thursday 02 July 2020.[26] A long list of potential sustainability principles and contributing factors were created from commonly applied sustainability outcomes within the industry. The Community of Practice ranked the sustainability principles they felt were most important to the project. This informed the selection and development of the four sustainability guiding principles for Te Hā Noa - Victoria Street linear park. Through the interactive workshop the Community of Practice discussed sustainable design solutions related to: 1) local government plans and strategies; 2) construction and ongoing management; 3) environmental footprint; and 4) flora and fauna. The outcomes of this discussion informed the development of the sustainability objectives. Following the workshop further feedback was sought from the Community of Practice to refine the proposed framework. The sustainability principles and objectives presented in Table 4-19 form the sustainability framework for Te Hā Noa - Victoria Street linear park.

[25] Infrastructure Sustainability Council of Australia

[26] A summary of the workshop is documented in the Sustainability Workshop Summary report provided as part of Appendix E Workshop Summary Report.

Table 4-19: Summary of sustainability principles and objectives

Sustainability Guiding Principles	Objective
RESILIENT INFRASTRUCTURE	The functionality of the asset is resilient to risks associated with climate change.
GOVERNANCE Effective decision making process to deliver sustainable outcomes	To report on sustainability performance throughout the project
	To promote sustainability knowledge sharing
	To establish kaitiakitanga / guardianship initiatives throughout lifecycle
WHOLE OF LIFE THINKING	To minimise energy use through the operational lifecycle
	To minimise potable water use across the operational lifecycle
	To minimise discharges to water
	To minimise discharges to air
	To reduce lifecycle environmental impacts of materials
	To promote waste minimisation and adopt circular economy principles
BIODIVERSITY	To enhance ecological diversity and ecological value of the street

The continuation of the sustainability journey for Te Hā Noa - Victoria Street linear park included developing the sustainability framework which set out the sustainability guiding principles, objectives and targets for the project. The sustainability principles and cultural framework have been mapped against the Multi-Criteria Analysis critical success factors in Table 4-20 showing the alignment between them. The sustainability principles have been incorporated into the key design considerations and guided design decisions. Measures and targets have been developed for each objective to track the implementation of sustainability throughout the lifecycle of project (Section 7.4.1).

Table 4-20: Cultural Framework and sustainability principles mapped against MCA criteria

		Cultural Framework						Sustainability Principles			
Multi-Criteria Analysis: Critical Success Factors		**Hononga**	**Manaaki**	**Wānanga**	**Rawa**	**Oranga Ngākau**	**Whakapapa**	**Resilient Infrastructure**	**Governance**	**Whole of life Thinking**	**Biodiversity**
ACHIEVING BENEFITS	Provision of dedicated spaces that create 'destinations' on Victoria Street	●	●		●	●		●			
	Reduced opportunity for conflicts between modes		●			●			●	●	
	Integrate cultural identity on Victoria Street	●	●	●	●	●	●		●		●
	Dedicated infrastructure and connections for active modes		●			●		●		●	
DELIVERING THE ROJECT	Affordability				●				●		
	Consistency with local government plans and strategies	●	●	●	●			●	●	●	●
	Disruption during construction				●				●	●	
WIDER IMPACTS	Transport network performance. Ability to support future intent for vehicle transport.	●			●	●		●	●		
	Interface with proposed projects		●	●	●				●		●
	Environmental impact			●			●	●	●	●	●

It is critical that the development of the Preferred Option as part of Preliminary Design is based on the sustainability objectives. This will require collaboration between Auckland Council, Auckland Transport, designers and contractors so that design choices incorporate sustainable practices. It is imperative that elements such as green innovations and low-impact sustainable materials be woven in during preliminary design as these are core to the structure and the layout of the park. This will enable Te Hā Noa - Victoria Street linear park to contribute to achieving Auckland Council's commitment to the wellbeing of our community and climate action as set out in Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan.[27]

[27] Te Tāruke-ā-Tāwhiri: Auckland's Climate Plan, Auckland Council, December 2020

5. Our Procurement Approach

The procurement and delivery options for Stage 1 are still being explored by Auckland Council to determine the preferred approach.

It is proposed that the Preferred Option be implemented in stages, with Stage 1 being completed first followed by Stage 2A and 2B.

- Stage 1 permanently implements the Preferred Option from Federal Street to Queen Street, with a lighter implementation east of Queen Street.
- Stage 2A permanently implements the Preferred Option between Queen Street and Kitchener Street.
- Stage 2B will be coordinated with a city wide traffic circulation strategy and include the permanent implementation the Preferred Option between Hobson Street and Federal Street.

The interface with the City Rail Link works being undertaken by Link Alliance is a key consideration for the delivery of Stage 1. The interface with the Aotea Station portals presents a risk to Te Hā Noa - Victoria Street linear park project delivery. The choice of procurement contract will impact the ability to mitigate this risk at the detailed design and delivery phases.

Discussions are ongoing to identify a preferred procurement approach. Auckland Council are currently exploring opportunities for City Rail Link /Link Alliance to take an active involvement in the delivery of Stage 1. The selection of the preferred procurement approach will depend on the willingness of the Link Alliance as well as other considerations for Auckland Council around competitiveness and efficiencies.

The Commercial Case outlines the preliminary programming, consenting and procurement considerations for the Te Hā Noa – Victoria Street linear park project. The procurement and delivery options for Stage 1 are still being explored by Auckland Council to determine the preferred approach. Consultation with the Link Alliance to inform the procurement approach is ongoing.

5.1 Programming

In order to tie in with the implementation of other projects within the midtown area, spread the funding requirements and reduce construction effects of the Te Hā Noa - Victoria Street linear park project, it is proposed that the project be implemented in stages.

5.1.1 Staging

The Preferred Option will progress in a staged approach, with Stage 1 being completed first followed by Stage 2A and 2B. The extent of each stage is shown in Figure 5-1.

Stage 1 is proposed to coordinate with the development of the City Rail Link Aotea Station portal on Victoria Street. This will support the movement of people into and out of the station when the station opens in 2024. In line with funding availability, Stage 2A will implement the Preferred Option between Queen Street and Kitchener Street. There may be an opportunity to coordinate the implementation of Stage 2A with the redevelopment of High Street to reduce construction impacts in the area.

The Preferred Option cannot be fully implemented until other changes have taken place in the city centre, such as the relocation of coach parking and bus stops and reduction in traffic volumes to facilitate the elimination of a dedicated left turn lane at the Hobson Street intersection. As implementing the Preferred Option between Hobson Street and Federal Street will reduce the left turn lane capacity it is proposed that Stage 2B be implemented to coordinate with a city wide traffic circulation strategy. There may also be an opportunity to

coordinate the implementation of Stage 2B with the redevelopment of Federal Street to reduce construction impacts in the area.

Options were developed for Stage 1 exploring variations in the way the transitions east of Queen Street are delivered and the quality of the works implemented between Federal Street and Queen Street. One option considered implementing a lower cost version of the Preferred Option between Federal Street and Queen Street by excluding some of the elements and implementing lower quality materials. This option was not recommended and discounted by the Project Steering Group as delivering a lower specification would compromise the desired outcomes for the project. Compromising on quality would require significant rework, have potential reputational risks and not deliver value for money over the whole project. A detailed description and comparison of each Stage 1 option considered is provided in Appendix K.

As a result of this investigation it was determined that Stage 1 include the implementation of the Preferred Option from Federal Street to Queen Street, with a lighter implementation east of Queen Street. The light implementation approach between Queen Street and Kitchener Street is proposed to establish the desired cross section and spatial configuration of the linear park, using a mixture of permanent and temporary features. For the purpose of this Detailed Business Case, to inform the cost estimates and funding requirements an indicative level of quality was assumed for the light implementation. The specifics of the light implementation will be determined during the Preliminary Design of Stage 1.

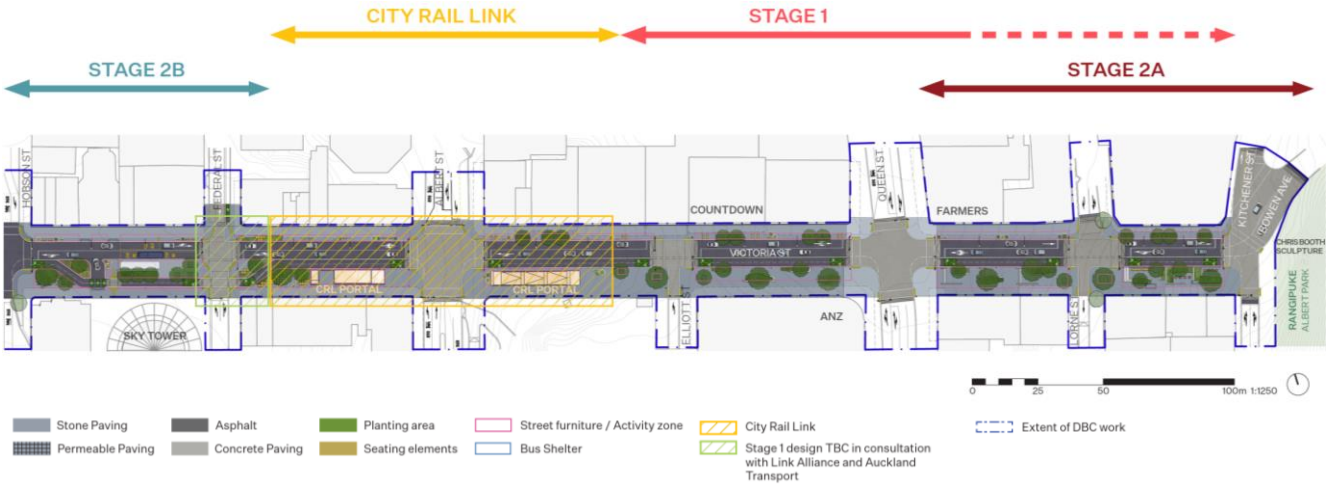

Figure 5-1: Extents of each stage

The following sections outline each of the three stages proposed as follows:

- Stage 1
  - A transition is required between Hobson Street to Federal Street
  - Permanent implementation between Federal Street to Queen Street
  - Light implementation between Queen Street to Kitchener Street
- Stage 2A
  - Permanent implementation between Federal Street to Queen Street
- Stage 2B
  - Permanent implementation between Hobson Street to Federal Street

Larger images of the concept drawings showing each stage are provided in Appendix K.

Stage 1

Stage 1, as shown in Figure 5-2, permanently implements the Preferred Option from Federal Street to Queen Street, with a lighter implementation east of Queen Street.

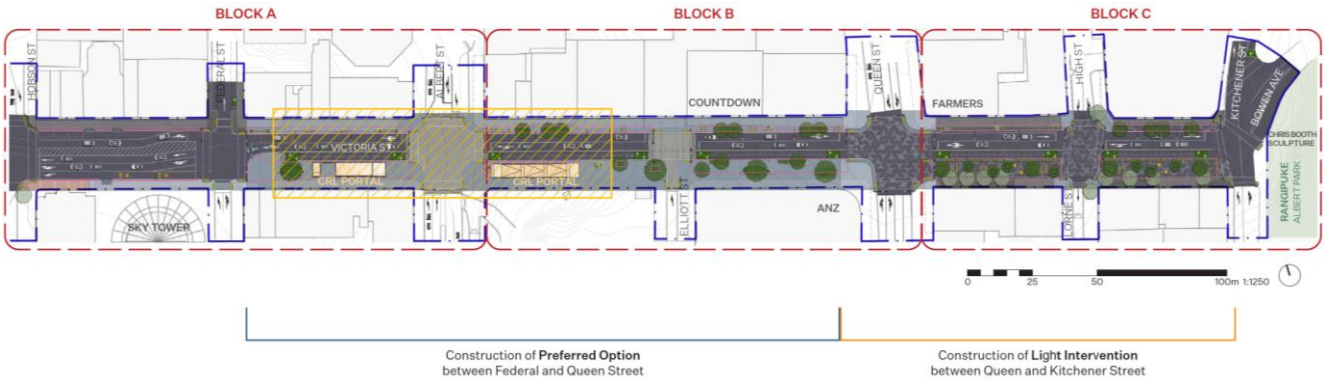

Figure 5-2: Stage 1 – Preferred Option Federal Street and Queen Street, Light Intervention east of Queen Street

From Hobson Street to Federal Street, as shown in Figure 5-3, Stage 1 physical works will include a light implementation to provide transition between the existing corridor cross section to the proposed linear park cross section. The existing footpaths, kerbing, lighting, and street equipment will be retained throughout the block. Changes are proposed to the line marking to enable the transition from four to two movement lanes in the eastbound direction. Some adjustments to the signalling may be required to integrate these works.

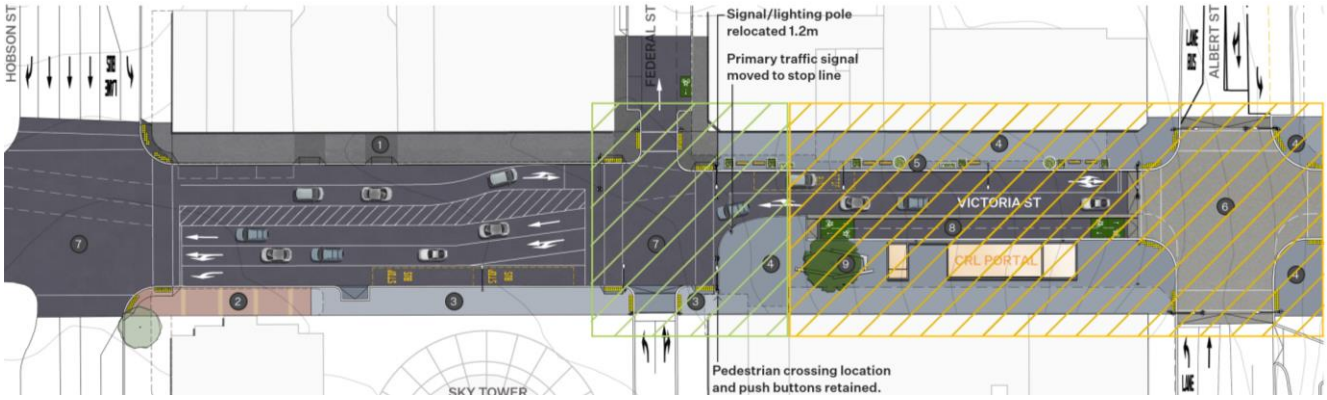

Figure 5-3: Stage 1 - Hobson to Federal Street

From Federal Street to Queen Street, as shown in Figure 5-4, the Preferred Option is proposed to be implemented as a permanent design solution in a coordinated manner with City Rail Link and the Link Alliance. The City Rail Link extent of works extends to approximately twenty meters to the west of Elliot Street. The remainder of the blocks will be implemented as part of the Te Hā Noa - Victoria Street linear park project. Some minor interim measures such as the termination of the bi-directional cycle lane to the east of the Federal Street intersection are required to safely integrate the permanent works with the existing street condition to the west.

Figure 5-4: Stage 1 - Federal Street to Queen Street

From Queen Street to Kitchener Street, as shown in Figure 5-5, light intervention is proposed to implement the desired layout and cross section of the Preferred Option using a combination of temporary and permanent measures. Temporary planters and kerbs are proposed to define the reallocation of road space to pedestrian space. Within the pedestrian space seating and planters are proposed to create a more people friendly environment. The use of paint and patterning on the asphalt can be used to define pedestrian spaces. Changes to line marking and temporary kerbs are proposed to define the cycleway and two 3.2m traffic lanes. Adjustments to intersection signals and timing are required due to the reduction in traffic lanes. Existing levels and stormwater infrastructure will be retained. To limit rework as part of future stages, the concept developed for light implementation has considered Stage 2A and mostly includes above surface treatments.

Figure 5-5: Stage 1 - Queen Street to Kitchener Street

Stage 2A

Stage 2A proposes to implement the Preferred Option as a permanent design solution between Queen Street and Kitchener Street as shown in Figure 5-6. Changes to the intersection with Queen Street are proposed to permanently reduce lanes along Victoria Street to two. However the final design solution for the Queen Street intersection is recommended to be implemented as part of future rehabilitation of Queen Street. This is so that the intersection design coordinates the needs of both street corridors and opportunities for Queen Street are not precluded.

Figure 5-6: Stage 2A – Queen Street to Kitchener Street

Stage 2B

Stage 2B proposes to implement the Preferred Option as a permanent design solution between Hobson Street and Federal Street as shown in Figure 5-7. Prior to the implementation of Stage 2B the relocation of coach / tour bus parking will need to be resolved and traffic implications of reducing to two lanes at the Hobson Street intersection is confirmed as acceptable to Auckland Transport. Some minor interim measures at the Hobson Street intersection are required to safely integrate the works with the existing street condition to the west.

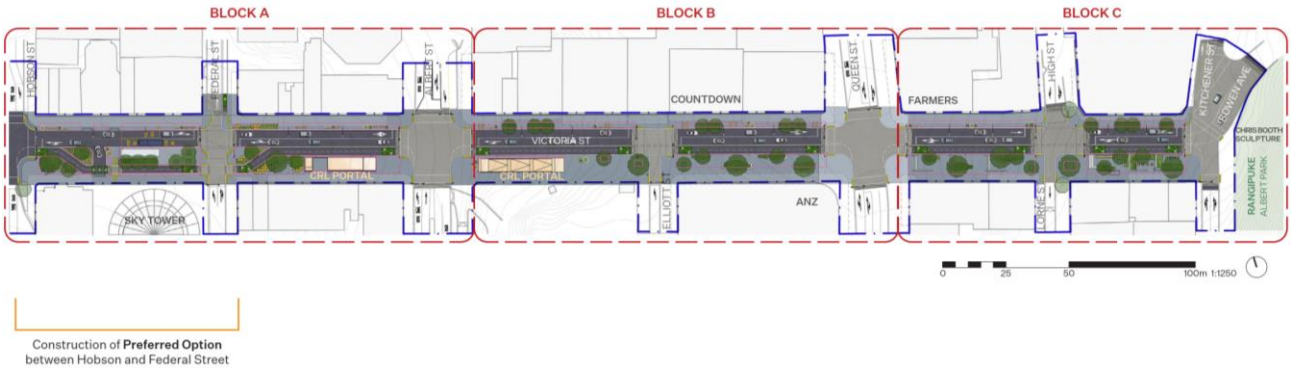

Figure 5-7: Stage 2B – Hobson Street to Federal Street

5.1.2 Timing

The expected timing of the various project phases for each stage of delivery is shown in Figure 5-8. Stage 1 is planned to be completed in coordination with construction of Wellesley Street Bus Improvements project and prior to the opening of City Rail Link Aotea Station in late 2024. It is expected that both Stage 2A and 2B will be constructed post the opening of City Rail Link. The timing for construction of Stage 2B will depend on the traffic demand for left turn capacity on to Hobson Street and negotiations regarding relocation of tour / coach buses.

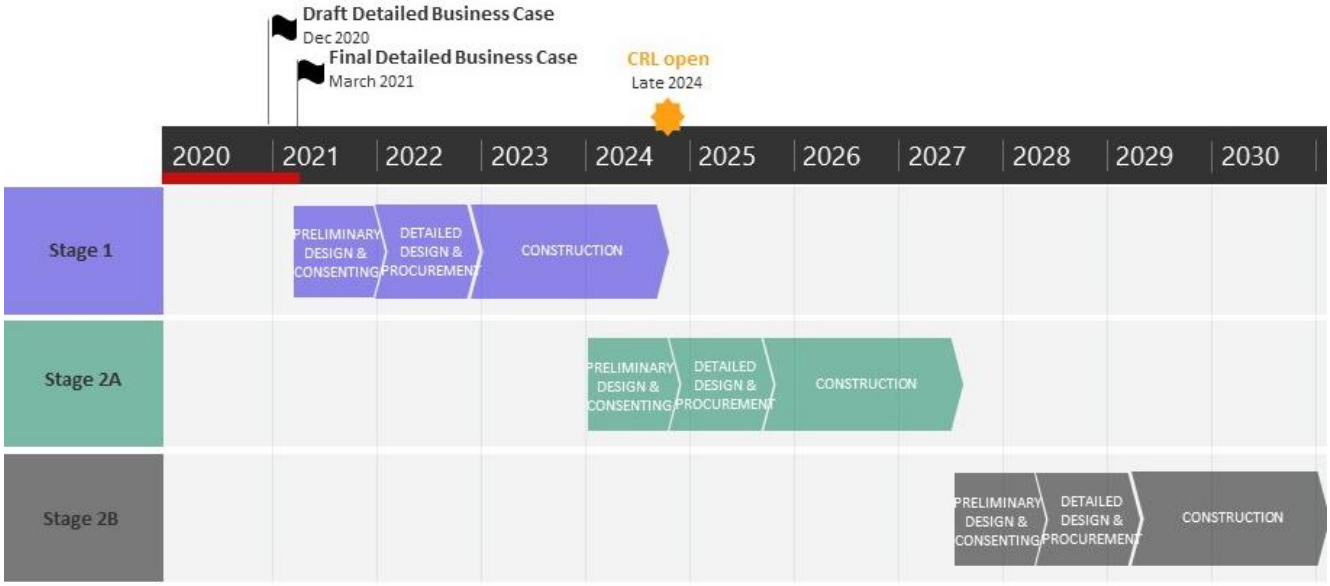

Figure 5-8: Programme of staging

5.2 Contract Procurement

The Commercial Case requires the consideration of procurement and delivery options for Stage 1 of the Te Hā Noa - Victoria Street linear park project. This must take account of emerging trends and market appetite, key project risks as well as organisational procurement practices. In order to consider appropriate procurement approach the section has been broken down into the following three components:

1) Consideration of the two preferred delivery options either through City Rail Link via Link Alliance, or delivery undertaken by a separate contractor managed by Auckland Council.

2) Comparison of the four contract options: procurement through City Rail Link, Early Contractor Involvement, Design and Build or Traditional separate design and build contracts

3) Implementation of the contract whether this be by approaching the market and understanding market conditions or by coordination through City Rail Link via Link Alliance.

5.2.1 Procurement Options

The Indicative Business Case recommended that Stage 1 be delivered as a single contract on the basis that the extent of works and construction value mean it is unnecessary and potentially inefficient to split the capital works into smaller construction packages. Furthermore, introducing multiple contracts and contractors would likely create more interface risk for the project and increase management overhead. This recommendation remains valid for the Stage 1 works.

A key consideration for the delivery of Stage 1 however is the interface with the City Rail Link works being undertaken by Link Alliance, particularly the construction of the Aotea Station portals. This interface presents a risk to Te Hā Noa - Victoria Street linear park project delivery, and the choice of procurement contract will impact the ability to mitigate this risk at the detailed design and delivery phases. The Detailed Business Case considers two high level procurement options being:

- Option i - Delivery managed through City Rail Link via Link Alliance; or
- Option ii - Delivery undertaken by a separate contractor procured directly and managed by Auckland Council.

Option i has obvious advantages with respect to managing and mitigating the interface risk with Link Alliance. This option would allow Link Alliance to either provide construct only or design and construct delivery solutions. Option ii will require a detailed mitigation strategy to manage the interface risk as it relates to both contracts.

Jacobs are not privy to the commercial arrangements between City Rail Link and Link Alliance and cannot comment on the feasibility or risks around Option i. Auckland Council are a party in the Special Purpose Vehicle for City Rail Link and will be able to assess this option in detail as to the feasibility and commercial risk profile. Discussions have commenced between Auckland Council and City Rail Link with respect to options for City Rail Link (and their alliance partner Link Alliance) to take an active involvement in the delivery of the Te Hā Noa - Victoria Street linear park project.

Should Auckland Council choose to procure a separate contractor to undertake the work it is necessary to consider the most appropriate contracting mechanism that responds to the needs and risk profile of the project. Options would include models such as Early Contractor Involvement, Design and Build or Traditional separate design and build contracts (see Section 5.2.2).

Assessment of procurement approaches must also consider the Auckland Council Procurement Strategy which provides a framework to guide decision making. It contains six Procurement Strategy Principles which are briefly listed in Table 5-1 together with the implications for Te Hā Noa - Victoria Street linear park.

Table 5-1: Auckland Council Procurement Strategy Principles

Procurement Strategy Principal	Application to Procurement Strategy
Work together	This principal provides corporate support to investigating delivery options through City Rail Link, even if that means a competitive tender process is not required (e.g. works delivered through a variation of scope to the alliance contract).
Value te Ao Māori	The Te Hā Noa - Victoria Street linear park project has benefited from Mana Whenua involvement through the busines case development process. This engagement will continue through delivery and their involvement and feedback is also captured in the Benefit Management Plan.
Be Sustainable	The development of the project scope has responded to a project specific sustainability framework that will continue to guide the project through procurement and construction. Furthermore social, economic, environmental and cultural interests are all reflected in the benefit management plan and will need to be acknowledged in the procurement contracts.
Act fairly	Council procurement will be ethical and lawful, and consider the needs of all groups in the community.
Make the best use of every dollar	The Detailed Business Case has taken a robust look at the best value that can be delivered from the available funding.
Be affordable	The chosen procurement methodology must deliver the right balance of risk mitigation (and therefore cost control) with effectiveness of delivering on project objectives.

5.2.2 Contract Options

Four contracting methods have been identified as feasible options for Stage 1 of Te Hā Noa - Victoria Street linear park. These are discussed in Table 5-2.

Table 5-2: Procurement options

Contract Method	Suitability for Te Hā Noa - Victoria Street linear park
Variation to Link Alliance Contract Procured through City Rail Link	**Link Alliance are contracted to perform the work as a variation to their existing contract.** By incorporating the Stage 1 scope of the Te Hā Noa - Victoria Street linear park project into the Link Alliance contract, this option directly addresses the major interface and programme risks facing Stage 1. A funding agreement between City Rail Link and Auckland Council will be required. The variation could be for design and construction, or just construction. As the contractor will be reporting to City Rail Link, it is more likely that Auckland Council will lose some control over the outcome. However if a suitable commercial arrangement and price for the works can be agreed this option may offer the least risk to Auckland Council.

Contract Method	Suitability for Te Hā Noa - Victoria Street linear park
Traditional – construct only Procured by Auckland Council	**Contractors submit bids to undertake the construction work, based on the detailed design prepared by Auckland Council.** Generally considered to be the most appropriate delivery model to use for routine and uncomplicated works of small to medium size and duration. Auckland Council as the client would retain full control of the design but in doing so, they also retain design risk which could manifest as significant variations during the construction phase. Specific risks associated with the contractor interfacing with City Rail Link design and construction would need to be considered and addressed. Specifically, a detailed staging schedule would need to be agreed with Link Alliance to be confirmed through the tender process.
Design and Build Procured by Auckland Council	**The contractor takes on the responsibility for the detailed design as well as the construction. Auckland Council will produce a reference design but the contractor (with a design sub-consultant) is responsible for the detailed design. A stipend is normally paid for tender design to cover the tender design costs.** Design and build offers the opportunity to transfer some risks to the contractor around programme and design deliverable dates. It is important to understand that clients lose some control over the design; however, this can be manged to a degree though the reference design and specification. Specific risks associated with the contractor interfacing with City Rail Link design and construction would need to be considered and addressed as this delivery solution would not mitigate these. Specifically, a detailed staging schedule would need to be agreed with Link Alliance to be confirmed through the tender process for both Design and Build and Traditional solutions.
Early Contractor Involvement Procured by Auckland Council	**Early Contractor Involvement can be used to gain early advice and involvement from a contractor into the buildability and optimisation of designs.** Early Contractor Involvement is suited to large, complex or high-risk projects because it affords an integrated team time to gain an early understanding of requirements, enabling robust risk management, innovation and public value. The contractors is selected early typically on limited physical works pricing and non price attributes. The contractor works closely with the designer who is then novated to the contractor to deliver via a Design and Build arrangement.

Delivery of Te Hā Noa - Victoria Street linear park through Link Alliance is intuitively attractive as it is the most effective approach to addressing the major risks facing the project. However, without knowledge of the specifics of the Link Alliance contract, it is not possible to comment further on the feasibility and implications of that approach. The remainder of this section therefore considers the best contracting approach assuming the procurement is undertaken by Auckland Council, separately from Link Alliance.

Design and Build is commonly adopted where the client is seeking to transfer design risk to the contractor. In doing so the client pays a risk premium and also loses some control over the final design outcomes. For this project however, the major risks are not design related, rather they relate to programme and interface risks concerning coordination with City Rail Link. From a risk management perspective therefore, there is less call for a Design and Build approach. There is an additional cost to administer and manage a Design and Build procurement and contractors typically expect a stipend to cover their tender design costs. This can be a significant proportion of the physical works costs and this is not currently allowed for in cost estimates. In addition, the process can add time to an overall project delivery programme. This option is also normally only selected if there are opportunities for the contractor to innovate with construction methodologies or refine designs. This is not the case on the Te Hā Noa - Victoria Street linear park project.

There are limited or no advantages to this option as it does not mitigate the specific risks associated with the contractor interfacing with City Rail Link works and adds costs and time with little opportunity to add innovation or refinement. Furthermore, a Design and Build contractor and consultant team may recognise the programme and interface risks facing the project and reflect that in their pricing. In summary a Design and Build option is not preferred. It is more prudent that Auckland Council consider options that reduce costs to tender and provide more certainty to tendering contractors.

A Traditional Construct only approach will enable Auckland Council to maintain full control over the detailed design of the project. The designer will need to work with Link Alliance to understand the programme and interface risks. This requirement will be most effective and efficient when undertaken under control of Auckland Council, rather than a contractor.

Following a Traditional Construct only approach will require Auckland Council to first procure the services of a design consultant to develop the detailed design and tender documentation. The design team will be required to understand the construction interfaces and provide constructability advice. It should also be recognised that construction will be undertaken in a constrained and live operating environment.

There are two options for addressing the need for constructability advice during the detailed design phase:

1) In procuring the design team, the tender documents can specify the requirement for a constructability advisor; or
2) Auckland Council follow an Early Contractor Involvement approach. Whilst not a large project, there may be benefits in including Early Contractor Involvement with the chosen delivery model for the Te Hā Noa – Victoria Street linear park project to address issues of constructability in a constrained and live operating environment.

Early Contractor Involvement would require a contractor to be engaged early and this often limits the ability to drive competitive pricing. This option is usually adopted when there is a need to actively involve the contractor to resolve programme or buildability issues.

Some support for adopting Early Contractor Involvement is provided by considering the recent construction industry trends. In the 2020 Construction Review[28] it is noted that 2020 saw a shift towards more collaborative contracting models.

> *Covid-19 has highlighted the need for collaboration – we are all in this together. While New Zealand's construction industry has not responded through large-scale shifts to collaborative risk sharing contracts (e.g. alliances) as the norm, a focus on collaboration is finding its way into pre-tender and tendering activities, pre-contractual processes (in the form of a renewed trend toward Early Contractor Involvement /Preconstruction contacts and co-design) and collaborative contracting principles.*

Ultimately however the current level or risk relating to coordination and interface with City Rail Link is assessed to be too high for a contractor to bear. The cost effective approach is to resolve these issues prior to a construction tender going to market. On that basis it is recommended that Auckland Council procure the services of a design consultant (with constructability advisor) to undertake the detailed design and then contract the construction work through a Traditional Construct only contract.

5.2.3 Implementation

There are a number of considerations for Auckland Council in progressing with the Traditional Construct only approach:

1) The form of contract
2) Approach to market
3) Coordination with City Rail Link.

Form of contract

The NZS 3910:2013 is the New Zealand Standard conditions of contract for building and civil engineering construction. Whilst this provides an industry accepted and well understood contract instrument, it is recommended that the clauses around the implications of delays are reviewed to reasonably reflect the programme risk associated with the delivery of this project.

[28] https://api.minterellison.production.beingbui.lt/wp-content/uploads/MinterEllisonRuddWatts-Construction-Review.pdf

Approach to market

Due to high levels of construction activity in Auckland and current border restrictions associated with Covid-19, resource availability is limited. In procuring a contractor for the Te Hā Noa - Victoria Street linear park project consideration needs to be given to how desirable a bespoke project of this size may be in the current construction market. It is therefore recommended that a market sounding exercise be undertaken to inform the market of the project, the outcomes required and known delivery risks and seek feedback with respect to appetite for involvement.

There are a number of Tier 2 contractors who are available in the market who would have the capacity and capability to deliver the Te Hā Noa - Victoria Street linear park project. While the market remains busy the smaller contractors who have supplied services to clients such as Auckland Transport generally have less work when compared to the Tier 1 suppliers.

An alternative approach for consideration could be to direct appoint a Link Alliance partner e.g. Downer to construct Stage 1. Whilst a direct appointment would be unusual for a contract value of this size, the ability to mitigate residual interface risks is worthy of assessment. It would also be an option if timing became critical.

Finally Auckland Council may consider accessing Auckland Transport preferred suppliers list for potential contractors.

Coordination with City Rail Link

In the event that Te Hā Noa - Victoria Street linear park is not procured as a variation to the Link Alliance contract, there is still a requirement for Auckland Council to coordinate with City Rail Link. Accordingly discussions have commenced to understand coordination options and early design coordination workshops have been held between the two project teams. A memorandum[29] has been prepared that summarises three approaches to coordination between City Rail Link, Link Alliance and Auckland Council. They are:

- Perform. Link Alliance are contracted to perform the work (identified as procurement Option i above)
- Manage. Link Alliance and Auckland Council work together to manage separate contractor(s) contracted by Auckland Council
- Coordinate. Link Alliance coordinate the interface of separate contracts.

A detailed description of these options and their associated considerations for the procurement decision are presented in Table 5-3.

Table 5-3: Options for delivery managed through City Rail Link

Procurement Option	Description	Considerations
Perform. Link Alliance are contracted to perform the work	▪ Either as a variation to the existing CRL C3 contract, with a funding agreement between CRLL and Auckland Council, or ▪ As a separate contract or separate alliance negotiated between Link Alliance and Auckland Council, with no risk sharing or involvement by CRLL (similar approach to the shared path in Waterview for Auckland Transport) ▪ Could be for design and construction, or just construction ▪ Construction H&S: Link Alliance are PCBU for Stage 1	▪ Most effective option for mitigating interface risk ▪ More likely that Auckland Council lose some control over final outcomes ▪ Time efficient ▪ Sole source so may not be price competitive

[29] Refer to memorandum: Te Hā Noa – Victoria Street Linear Park / Aotea Station Construction Interface - summary of possible procurement options for discussion between City Rail Link, Link Alliance and Auckland Council, dated 28 September 2020

Procurement Option	Description	Considerations
Manage. Link Alliance manage separate contractor(s) contracted by Auckland Council	▪ Auckland Council appoint separate contractor(s) through a competitive tender process to carry out construction. ▪ Link Alliance are contracted to manage the separate contractor(s) (manage health & safety, provide site facilities, manage the coordination of programmes and interfaces, provide traffic management, etc). ▪ Construction H&S: Link Alliance are PCBU for Stage 1	▪ Allows for price competition ▪ Further work required to set-up and run tender process ▪ Does not mitigate all interface risks
Coordinate. Link Alliance coordinate the interface.	▪ Auckland Council appoint separate contractor(s) through a competitive tender process to carry out Stage 1 Construction. ▪ No formal appointment of Link Alliance to manage or perform the work, but opportunities for efficient cooperation and coordination are sought (e.g. coordinate works interfaces and programmes, coordinate traffic management). ▪ Construction H&S: Link Alliance are PCBU for their own designation, Auckland Council are PCBU for Stage 1.	▪ Least effective at managing interface risk ▪ Allows for price competition ▪ Auckland Council retain control over outcomes

Discussions are ongoing to identify a preferred approach.

5.3 Resource Consents and Approvals

The consenting strategy prepared for the project (attached in Appendix L) outlines that the preferred approach to obtaining the approvals under the Resource Management Act (RMA) 1991 is to deliver a combined land use/regional resource consent application package.

It is noted that the Auckland Unitary Plan (Operative in Part) currently provides an enabling regulatory environment for investment in and the delivery of infrastructure and supports improvements to Auckland's public realm. The acquisition of private land is not required to enable delivery of the project, therefore the need for a Notice of Requirement or to designate land is avoided. Resource consents will be required for construction activities and ancillary changes to buildings and vehicle accessways. Given the presence of designations, heritage overlays and planning precincts along the route, the success of the project's resource consent applications will be reliant on effective stakeholder engagement.

As discussed in Section 5.1, it is assumed that the project will be delivered in three separate stages across a 10-year timeframe. Given that resource consents lapse if not given effect to within 5 years of approval, and the potential for delays to the commencement of the later stages of the project, the consent strategy recommends that the consents for Te Hā Noa – Victoria Street linear park are broken into two discrete packages (Stage 1 and Stage 2A/B in alignment with the proposed programme). This will reduce the potential for consents to lapse, allow for detailed plans to be available for inclusion with the applications and mean that consent conditions remain fit for purpose. Alternatively, early engagement with Auckland Council – Regulatory Department regarding a longer lapse period could be explored.

Given the proposed strategy and the current planning framework for Central Auckland, Table 4-3 presents the top planning risks have been identified and the mitigation that will be required to minimise their impact on delivery.

Table 5-4: Key consenting/approval risks

Risk / Approval	Mitigation	Owner
Resource consents are notified	Early engagement with Auckland Council Regulatory Department to determine what (if any) notification triggers there are. This will give the opportunity to "design out" potential notification triggers. Also, seek to minimise consents required and obtain early approval from any affected parties.	Auckland Council (Development Programme Office) and Consultant
Auckland Transport does not give approvals to works in road reserve	Early engagement with Auckland Transport to discuss design and operational parameters for inclusion in the project. Seek to develop a construction methodology which minimises disruption to the road network. In addition, discussions around the light touch interventions within the road reserve should also be held early with Auckland Transport so that they are on board with these temporary works.	Auckland Council (Development Programme Office) and Consultant
Auckland Transport does not give approvals to remove street trees	Early engagement with Auckland Transport to discuss design and operational parameters for inclusion in the project. Commission an arboricultural assessment to assess tree health. Following this assessment seek to develop a construction methodology which minimises disruption on the street trees if tree health is adequate.	Auckland Council (Development Programme Office) and Consultant
Significant stormwater improvements are required. This requires consultation with key parties including Mana Whenua and/or Council	Commence early engagement with both Auckland Council (Healthy Waters, Watercare and resource consents team) and Mana Whenua to determine what their stormwater design requirements are and what can be practicably provided for by the Project. Engagement with Auckland Council will also help identify improvements that are already planned and how the Project could benefit from them.	Auckland Council (Community Facilities) and Consultant
Delays in obtaining RMA s176 approval from Requiring Authorities	Early engagement with Requiring Authorities to determine what issues (if any) exist for obtaining approval. Especially critical for interaction with CRL designation (CRL Limited) and Victoria Street car park building (Auckland Transport).	Auckland Council (Development Programme Office)
Delays in obtaining an Archaeological Authority	Early engagement with Heritage New Zealand and Mana Whenua so that information is provided early to obtain the authority and not delay the construction programme.	Auckland Council (Development Programme Office) and Consultant
Issues with reinstatement or altering vehicle crossings and vehicle access during construction	Early engagement with affected landowners including agreeing management of vehicle access during construction.	Auckland Council (Development Programme Office)
Temporary removal of verandas for construction	An inspection of the verandas required to be removed for construction access should be undertaken prior to a construction methodology being prepared. This will enable any risks to construction and additional costs to Development Programme Office to be recognised prior to works commencing, to enable an alternative solution if possible.	Auckland Council (Development Programme Office) and Consultant
Illegal signage attached to verandas	An inspection and audit of the signage should be undertaken prior to construction to understand whether the signage complies with the Bylaw and can be re-attached by Development Programme Office following construction. If signage is illegal the landowner should be notified and agreement should be reached that Development Programme Office will not reinstate this post works.	Auckland Council (Development Programme Office)

6. An Affordable Investment

The funding allocation in the long-term plan is insufficient to implement the recommended scope. The design and construction of Stage 1 is estimated to cost $45.7 million (including escalation). An additional funding of $16.07 million is required over and above what is currently included in the Long-term Plan 2018-2028.

It is not recommended that a lower specification (but within budget) Stage 1 be implemented as such would require significant compromise on quality and would not deliver on the benefits desired from the project.

The funding gap must be addressed within the time period required to coordinate with City Rail Link. If the funding for Stage 1 is not secured, Auckland Council will need to investigate alternative options to support the space requirements for pedestrians accessing the Aotea Station.

The affordability and funding requirements of Te Hā Noa - Victoria Street linear park project are based on delivery of the Preferred Option as per the programme outlined in Section 5.1 and Auckland Council's current funding allocation.

6.1 Project Delivery Costs

Project costs and timings for the project based on the Preferred Option by stage and cost type are presented in Table 6-1 and Table 6-2 respectively. Project costs and fees include estimated internal costs[30] provided by Auckland Council. Escalation is included in order to inform the future funding requirements for the Project assuming the construction programme as follows:

- Stage 1 delivered January 2023 to June 2024
- Stage 2A delivered January 2026 to July 2027
- Stage 2B delivered July 2029 to December 2030.

Table 6-1: Indicative cashflow for each stage (year ending 30 June, nominal $m - RLB)

Stage	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Stage 1	$ 1.6	$ 2.3	$ 11.5	$ 30.3	-	-	-	-	-	-	-	$ 45.8
Stage 2A	-	-	-	$ 0.9	$ 3.5	$ 14.0	$ 35.8	-	-	-	-	$ 54.1
Stage 2B	-	-	-	-	-	-	-	$ 1.4	$ 2.4	$ 18.8	$ 12.0	$ 34.7
Total	**$ 1.6**	**$ 2.3**	**$ 11.5**	**$ 31.2**	**$ 3.5**	**$ 14.0**	**$ 35.8**	**$ 1.4**	**$ 2.4**	**$ 18.8**	**$ 12.0**	**$ 134.6**

Table 6-2: Indicative cashflow by cost type (year ending 30 June, nominal $m - RLB)

Stage		2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Construction costs	Stage 1	-	-	$ 8.3	$ 25.0	-	-	-	-	-	-	-	$ 33.3
	Stage 2A	-	-	-	-	-	$ 9.1	$ 27.3	-	-	-	-	$ 36.4
	Stage 2B	-	-	-	-	-	-	-	-	-	$ 12.4	$ 7.4	$ 19.8
Project costs and fees		$ 1.6 m	$ 2.2	$ 2.4	$ 3.6	$ 3.2	$ 3.0	$ 3.3	$ 1.2	$ 2.0	$ 2.3	$ 1.9	$ 26.7
Escalation		$ 0.0 m	$ 0.1	$ 0.9	$ 2.5	$ 0.3	$ 1.9	$ 5.3	$ 0.2	$ 0.4	$ 4.2	$ 2.7	$ 18.4
Total		**$ 1.6 m**	**$ 2.3**	**$ 11.5**	**$ 31.2**	**$ 3.5**	**$ 14.0**	**$ 35.8**	**$ 1.4**	**$ 2.4**	**$ 18.8**	**$ 12.0**	**$ 134.6**

[30] Auckland Council internal costs include budget for: Management, Leadership & Governance; Legal / Procurement; Auckland Transport allowance; Mana Whenua consultation; Development Response; and, Communications and Engagement.

6.2 Maintenance and Operations Costs

It is assumed that as the road controlling authority, Auckland Transport will continue to care for the maintenance of Victoria Street. In addition to Auckland Transport's existing allowance for maintenance it is expected that some additional maintenance will be required for park elements. A focus session was held on 27 October 2020 with representatives from both Auckland Council and Auckland Transport to discuss various maintenance and operational considerations. The outcomes of this discussion informed the estimates for operating and maintenance costs and captured operational considerations that can be addressed through further refinement during preliminary design. Details of the expected operating and maintenance costs for Te Hā Noa – Victoria Street linear park are provided in Section 4.7.2.

6.3 Funding

The Auckland Council 10-year budget (long-term plan) 2018-2028 currently allocates $33 million of funding for the investigation and construction of Te Hā Noa – Victoria Street linear park from existing operating budgets. The development of the Indicative Business Case, Detailed Business Case and associated investigations cost $3 million, resulting in a remaining budget of $30 million available for the implementation of Stage 1. As part of the City Rail Link contract, the City Rail Link Alliance has budget allocated for the reinstatement of Victoria Street in the vicinity of the Aotea station portals. As noted in the cost estimate in Section 4.7.1, it is assumed that scope within the City Rail Link designation that is over and above the standard Central Business District street design standard, will be the responsibility of the Te Hā Noa - Victoria Street linear park project. Based on this it is estimated that the design and construction of Stage 1 will cost $45.7 million (including escalation).

The allocation of funding from the long-term plan, estimated cost of Stage 1 (including escalation) and the funding variance by year is presented in Table 6-3. This results in an estimated funding deficit of $15.7 million by the end of the 2025 financial year. Based on the funding currently available for the Te Hā Noa – Victoria Street linear park there are insufficient funds to deliver Stage 1. Investigation into potential options to implement a Stage 1 within the $30 million funding available showed that significant compromise on quality would be required and not deliver on the benefits desired as part of the project (See Section 5.1.1 and Appendix K). Therefore it is not recommended that an option be pursued that delivers Stage 1 within $30 million.

As shown in Table 6-4, to complete the Preferred Option from Hobson Street to Kitchener Street as part of the next long-term plan 2021-2031, additional funding of $104.5 million is required.

Table 6-3: Indicative funding and variance for Stage 1 ($m, nominal)

	Pre 2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Long-term funding budget	-	-	7.6	4.75	6.65	14.0	-	-	-	-	-	-	33.0
IBC / DBC	3.00	-	-	-	-	-	-	-	-	-	-	-	3.00
Stage 1 costs	-	1.6	2.3	11.5	30.3	-	-	-	-	-	-	-	45.7
Variance	-3.00	-1.60	5.30	-6.75	-23.65	14.00	-	-	-	-	-	-	-15.70
Cumulative variance	-3.00	-4.60	0.70	-6.05	-29.70	-15.70	-15.70	-15.70	-15.70	-15.70	-15.70	-15.70	-15.70

Table 6-4: Indicative funding and variance for Preferred Option ($m, nominal)

	Pre 2021	2021	2022	2023	2024	2025	2026	2027	2028	2029	2030	2031	Total
Long-term funding budget	-	-	7.60	4.75	6.65	14.00	-	-	-	-	-	-	33.00
Total Preferred Option costs	3.00	1.60	2.30	11.50	31.20	3.50	14.00	35.80	1.40	2.40	18.80	12.00	137.50
Variance	-3.37	-1.60	5.30	-6.75	-24.55	10.50	-14.00	-35.80	-1.40	-2.40	-18.80	-12.00	-104.50
Cumulative variance	-3.00	-4.60	0.70	-6.05	-30.60	-20.10	-34.10	-69.90	-71.30	-73.70	-92.50	-104.50	-104.50

Options for addressing the funding shortfall include re-phasing the project spend, re-allocating funding from the current planned CAPEX programme, allocating funding in the long-term plan 2021-2031 (for 2029, 2030 and 2031 financial years) and identifying alternative funding mechanisms. Opportunities include cost recovery from budgets for proposed renewals along the corridor. Other potential funding options that are being investigated include:

- Auckland Council – Reallocation of existing budgets and Development Programme Office funding. The long-term plan 2021-2031 is expected to be confirmed in 2021.
- Auckland Transport – Budgets for walking, cycling, public transport may be able to contribute to the delivery of specific transport elements.
- Waka Kotahi NZ Transport Agency – Funding may be applied for various transport elements. In addition funds such as the Innovating Streets Fund for specific innovations such as the light intervention treatment proposed between Queen Street and Kitchener Street.
- The City Centre Target Rate – The Auckland Advisory Board advises the council on how to spend the city centre targeted rate.
- Sponsorship of sustainable elements – There may be interest from government (local and national) departments wanting to trial or companies wanting to sponsor the implementation of innovations in environmental or green infrastructure such as the green wall or water treatment.

In order to fund the Preferred Option, further investigation into possible other funding streams (e.g. project revenues) will be undertaken. Potential project revenues could include private sector development contributions, targeted rates, fees and charges or other sources.[31] For example, there are potential opportunities for outdoor dining licenses on Victoria Street that allow businesses to lease public space.[32]

As the project has the potential to deliver outcomes that are attractive to current businesses located on Victoria Street there could be the opportunity for private sector funding contributions. However, no detailed analysis of potential project revenues has been undertaken. Consultation with affected business and land owners is planned as part of the following project phases which may include discussion to understand the appetite for such contributions.

[31] Revenue and Financing Policy, 2019, Auckland Council

[32] Apply for an outdoor dining licence, Auckland Council, https://www.aucklandcouncil.govt.nz/licences-regulations/business-licences/outdoor-dining-licenses/apply-outdoor-dining-licence/Pages/check-need-outdoor-dining-licence.aspx

6.4 Potential Consequences of the Funding Gap

The funding gap must be addressed in order to proceed with implementing Stage 1 of the Te Hā Noa - Victoria Street linear park. If the project is not implemented in coordination with the programme for City Rail Link, the integration of the Aotea Station with Victoria Street will be affected and will require action by Auckland Council.

The Do Minimum used as the basis of this Detailed Business Case assumed that in line with the Link Alliance contractual obligations, the implementation of the Aotea Station would reinstate four lanes of the traffic on Victoria Street. In addition it is assumed that streetscape works within their designation will be completed to deliver urban realm outcomes consistent with a Central Business District street design standard.

To coordinate the design and realise the desired outcomes for both the City Rail Link and Te Hā Noa - Victoria Street linear park projects, City Rail Link, Auckland Council and Auckland Transport agreed in principle to reduce the number of lanes reinstated between Federal Street and Queen Street down to two lanes.[33] The endorsement of this agreement inherently assumed that Stage 1 of Te Hā Noa - Victoria Street linear park would proceed in coordination with the programme for City Rail Link.

Since February 2020 the City Rail Link design has continued assuming two lanes be reinstated on Victoria Street and that the design and implementation of Stage 1 of the linear park interfacing with City Rail link would have addressed any delivery gaps. By not implementing Stage 1 of Te Hā Noa – Victoria Street linear park there is a gap in the integration of the City Rail Link Aotea Station design with the rest of Victoria Street. There will be a delivery gap between what City Rail Link are committed to deliver and the agreement between City Rail Link, Auckland Council and Auckland Transport regarding two lanes.

In the event that additional funding cannot be sourced in time to coordinate the delivery of Stage 1 with the construction of the City Rail Link Aotea Station, Auckland Council will need to investigate alternative options to support the streetscape and space requirements for the City Rail Link Aotea Station. This will particularly need to address the space requirement for the volume of pedestrians expected to enter and exit the Aotea Station portals on Victoria Street. It is not recommended that such a project be undertaken as part of the Te Hā Noa - Victoria Street linear park project as it would not deliver on the desired project benefits.

It is recommended that the Preferred Option to deliver a linear park be implemented at a later date as funding becomes available. This will require that the development of projects within the midtown area, particularly interfacing projects on Queen Street, High Street or Federal Street, future proof for the implementation of the Preferred Option for the linear park on Victoria Street. However, there is a possibility that the $30 million funding available for the Te Hā Noa – Victoria Street linear park will be reallocated to address the integration of the City Rail Link project on Victoria Street further delaying the implementation of the Te Hā Noa – Victoria Street linear park.

Not progressing the redevelopment of Victoria Street through the implementation of the linear park will likely have additional consequences. The problems that Te Hā Noa – Victoria Street linear park seeks to address will remain and likely grow as demand on Victoria Street increases. Quality and level of service will further decline as infrastructure does not meet customer expectations and lacks capacity for growth. As adjacent projects within the midtown area proceed the lack of investment in Victoria Street will become more apparent.

Therefore, it is recommended that Auckland Council give high priority to resolving the funding gap so that Stage 1 of Te Hā Noa - Victoria Street linear park can be progressed in coordination with the programme for City Rail Link.

[33] Memorandum: Victoria Street lane reduction, Auckland Council, 26 February 2020

7. Delivering Te Hā Noa

The Management Case has considered the arrangements needed to successfully deliver Stage 1 of Te Hā Noa - Victoria Street linear park including the following:

- The Project Execution Plan provides the strategy for project delivery.
- The project Risk Register will continue to identify and mitigate potential project risks. A number of risks continue to be associated with the integration and coordination between Te Hā Noa - Victoria Street linear park and City Rail Link.
- A Stakeholder Management and Communications Plan needs to be developed for the next phases of the project to build on the strong stakeholder engagement to date.
- The Benefits Realisation Plan outlines the monitoring and evaluation plans for each Key Performance Indicator that will measure the success of the project.
- At the completion of the project Auckland Transport will become responsible for the majority of assets delivered within the road corridor.

Based on the project plans the key next steps to progress Stage 1 include the following:

- Investigate potential funding options to address shortfall and confirm funding for construction of Stage 1.
- Agreement with City Rail Link on procurement approach, scope and extent of work.
- Progress with the steps outlined in the Project Execution Plan to proceed with Preliminary Design of Stage 1 including:
- - Site investigations to address risks pertaining to unknown underground conditions including utilities, pavement structure and soil conditions.
- - Consultation with Auckland Council on the Consenting Strategy regarding the packaging of consents and potential for a longer lapse period.
- Collect baseline data for Victoria Street prior to closure for City Rail Link works for Benefits Realisation Plan.

The following section outlines the initial planning of the arrangements needed to successfully deliver Te Hā Noa - Victoria Street linear park. The details of how the project will be managed will be further developed and refined once there is more certainty around funding and coordination with City Rail Link.

7.1 Project Execution Plan

The draft Project Execution Plan (attached in Appendix M) prepared for the Te Hā Noa - Victoria Street linear park outlines the strategy for successful project delivery.

7.1.1 Project Governance

The project's governance has been developed to include an overarching Project Steering Group so that there is adequate representation at a senior level throughout the delivery of the professional services contract and the deliverance of the main components required during the statutory approvals process. As shown in Figure 7-1, the Project Steering Group includes representatives from both Auckland Council and Auckland Transport and reports to Project Directors from both Auckland Council and Auckland Transport.

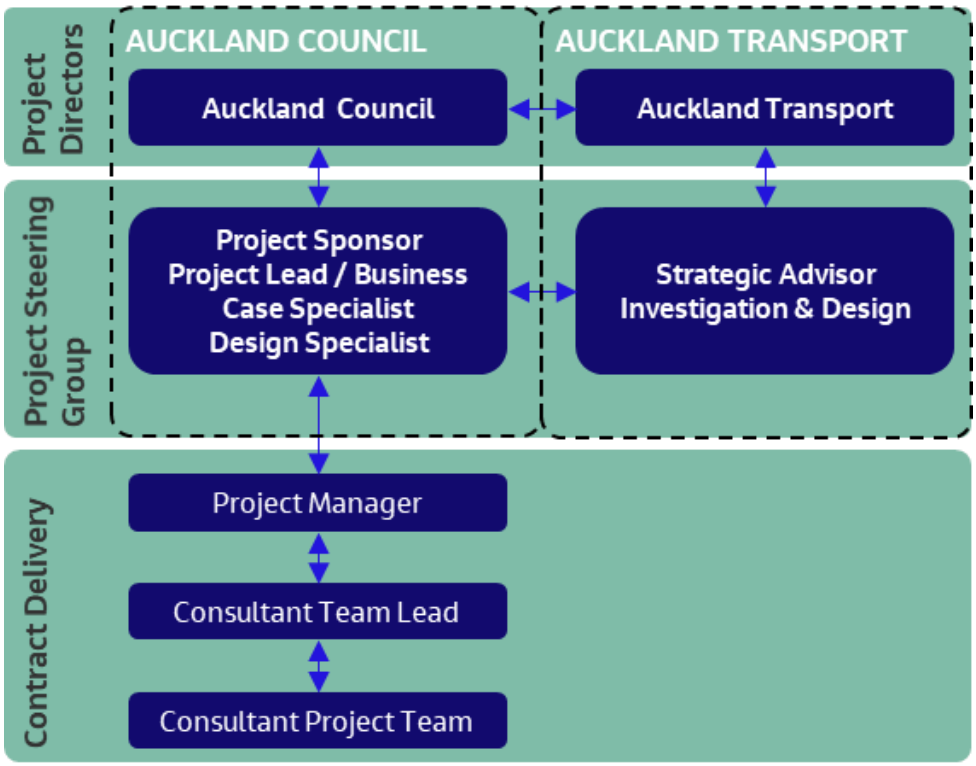

Figure 7-1: Project governance for Te Hā Noa - Victoria Street linear park

7.1.2 Programme

Delivery of Stage 1 is proposed to be coordinated with the programme for City Rail Link as illustrated by the programme outlined in Figure 7-2. Stage 1 is planned to begin with initial site investigations in February 2021, followed by the Preliminary / Developed Design in April 2021 and submission of the Resource Consent in February 2022. The Detailed Design phase is currently shown as five months duration finalising May 2022. Allowance has been made for a four month procurement phase dependant on the outcome of the City Rail Link / Link Alliance negotiations.

To achieve completion of Stage 1 by October 2024 it is expected that:

- Initial site investigations are initiated early 2021
- Preliminary design begins April 2021 and the designer combines preliminary with developed design. It is recommended the preliminary / developed design drawings are used for the Assessment of Effects / Resource Consent submission
- Preliminary / Developed Design is completed September 2021
- Consent collation and application is planned from September 2021 to February 2022
- It is proposed that Detailed Design is completed May 2022. Depending on the initial feedback from the Auckland Council planning pre-lodgement meeting and other variable factors arising from site investigations and resolution of City Rail Link / Link Alliance arrangement, detailed design may be able to be progressed earlier than shown in Figure 7-2.
- Allowance has been made for procurement to be four months in duration. Whilst the preferred procurement approach is to collaborate with City Rail Link / Link Alliance, a traditional procurement approach may be required.
- Construction is programmed to start September 2022 and it is recommended that early works are progressed to ensure alignment with the City Rail Link / Link Alliance programme.

Consultation and engagement activities are planned to run in parallel with the Preliminary Design, beginning with a coordinated information session with City Rail Link in April 2021. Ongoing hui with Iwi representatives is proposed to occur regularly throughout the design and construction stages.

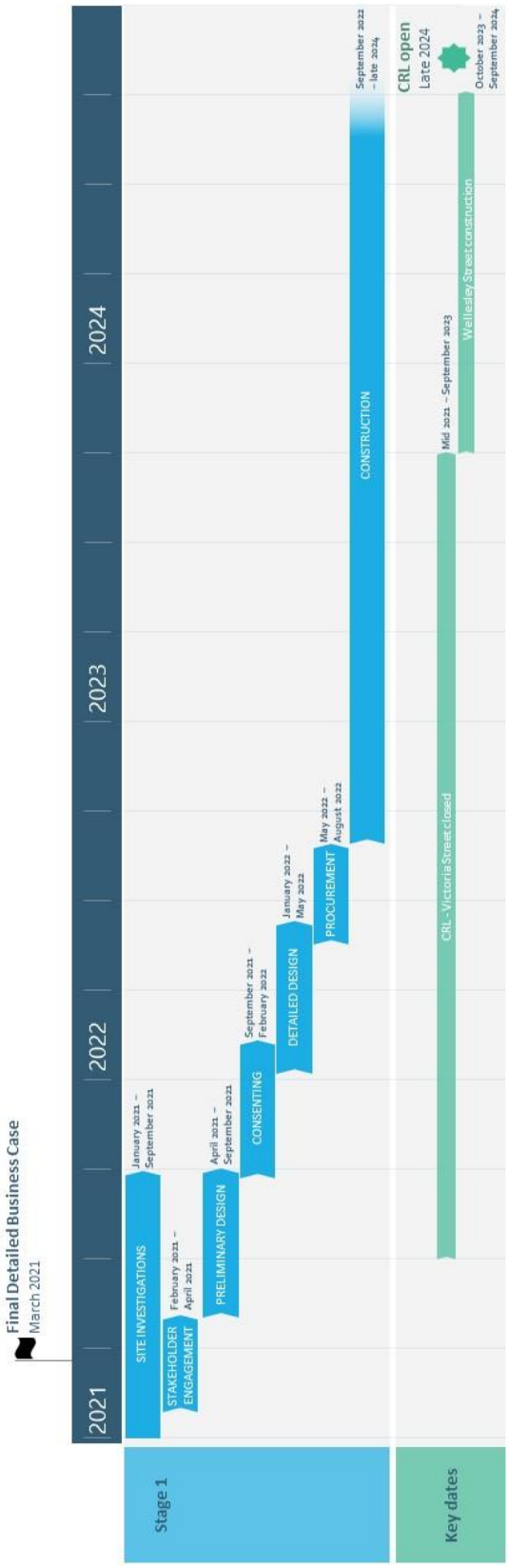

Figure 7-2: Stage 1 programme

7.2 Risk Management Plan

A risk register has been maintained during the development of the Detailed Business Case and is included in Appendix N. A number of risks are associated with the integration and coordination between Te Hā Noa - Victoria Street linear park and City Rail Link. Table 7-1 provides an overview of the current top risks and opportunities. Project risks were last reviewed as part of a risk workshop held on 8 December 2020. The project risks will continue to be monitored and the risk register regularly updated as Te Hā Noa – Victoria Street linear park progresses.

A general approach to managing risk is through regular team meetings and risk register workshops. The Auckland Council Project Manager is responsible for managing risk. Risk register workshops are managed and led by a risk specialist.

Table 7-1: Key risks and opportunities

Category	Risk / Opportunity	Cause	Impact (Narrative)	Mitigations & Actions
Construction	There is a risk that construction activities have adverse effect on adjacent property owners and businesses	Construction works would affect both vehicles and pedestrian traffic during construction. Example of CRL works impact on local businesses.	Potential impacts to property owners may include: loss of business, noise, vibration and restricted access (i.e. loading, parking).	▪ Early contractor input. ▪ Construction methodologies seek to mitigate impact. ▪ Draft Construction Environmental Management Plan prepare for consent and tendering. ▪ Development response plan which could include business mentors. Establish project liaison manager (as part of construction contract). Allow budget for mitigation strategies.
	There is a risk that design interface and construction staging is not coordinated between adjacent projects (CRL, Wellesley Street and private developments)	Several large infrastructure projects taking place within the city centre.	Interface between projects may not being integrated requiring in redesign and rework. Uncoordinated programmes may lead to significant road closures.	▪ Spatial dashboard showing all forward works programmes, Progress Auckland (requires buy in from Auckland Transport, Auckland Council, Watercare, CRL etc) ▪ Possible programme approach: Communication and project coordination meetings i.e. at project, design, management and governance levels (develop a strategy that encompasses all three projects) ▪ Contingency: Allow budget for mitigation strategies
	There is a risk that existing utilities services are impacted by the design	Unknown services. Changes to tree pit locations and/ or stormwater infrastructure. Changes created by CRL works and services move.	Relocation of utilities may be greater than assumed resulting in costs exceeding cost estimate. More utilities information known about area surrounding CRL than the east end of the corridor.	▪ Design Co-ordination - Work with the most up to date survey / services information from CRL ▪ Design Co-ordination Workshop - with utility companies ▪ Best practice – design solutions for tree pit locations and/ or stormwater infrastructure ▪ Contingency – Risk assessed contingency allowance ▪ Develop design around known information on underground services locations and diversions provided by CRL
Environment	There is an opportunity to enhance environmental outcomes: ▪ Storm water treatment and ability to capture / filter out gross pollutants ▪ Material selection ▪ Waste minimalisation	Sustainability is a key objective of the project and wider targets for the Auckland city centre.	A project that has a positive impact on the city. An industry leading project would also have a positive reputational impact with the potential for articles in industry publications, presentations at conferences and award applications. Successful	▪ Sustainable framework to be implemented ▪ Work with Healthy Waters to develop preferred approach prior to pre-liminary design (April).

Category	Risk / Opportunity	Cause	Impact (Narrative)	Mitigations & Actions
	during construction ▪ Heritage and story telling		implementation of innovations on the project could be used as a case studies for industry.	
Finance	There is a risk that collaboration with CRL in regards to procurement cannot be resolved or Auckland Council cannot maintain a sense of oversight of the Link Alliance (CRL).	Link Alliance and Auckland Council not having a documented agreement which leads to misunderstandings.	CRL / Link Alliance do not work to the identified guiding principles and desired project outcomes. Two project teams working on projects that have differing project outcomes could mean that the preferred implementation of project may not align with CRL.	▪ Mitigate through negotiating a formal agreement around mechanism for co-ordination of the projects. ▪ Auckland Council to develop a strategy, develop options for alternative approach if CRL / Link Alliance negotiations do not eventuate. ▪ Baseline against cost estimate to inform the MOU / strategic approach. ▪ Negotiator required on behalf of Auckland Council.
	There is an opportunity for more funding and increased future budget to deliver more of the project.	Next window for Long-Term Plan funding/budget.	Funding received to deliver more of the project.	▪ Auckland Council: Development Programme Office funding, existing funds, reallocation of funding. Long-Term Plan budget to be confirmed next year. ▪ Waka Kotahi / Auckland Transport: Budgets for walking, cycling, public transport, innovating streets. ▪ Auckland City Centre Advisory Board – targeted rate.
	There is a risk that design development aspirations and innovations (including assumptions) results in increased scope & cost	High level assumptions have been made to inform cost estimates which may not be of sufficient detail to be accurate. Specifically, utilities investigations at early stage only, assumptions regarding surface material selection.	Estimates exceed funding so project cannot proceed.	▪ Early investigation - e.g. utility services, topographical survey ▪ Consultation with other projects and renewals programme (i.e. Auckland Transport maintenance) ▪ Contingency – risk assessed, allowance for this specific project ▪ Process - Quantity Surveyor (QS) involvement through design
Stakeholder	There is a risk that the expectations of specific property owners not met.	Differences of opinion/financial/lifestyle affects. Especially in the wake of Covid-19	Lack of support for the project to be constructed.	▪ Communication to set the scene and effective stakeholder engagement, develop the detail of how to do this through the updated Engagement Plan. ▪ Change management.
	There is a risk that servicing and loading does not meet resident / business requirements.	Risk that servicing may inconvenience business owners.	Local businesses/land owners may not support the project.	▪ Mid-town servicing and loading strategy needs to be developed by Council and Auckland Transport, factoring in Te Hā Noa, CRL Aotea Station, Wellesley Street bus improvements, Access for Everyone Queen St Pilot.
	There is a risk that by not doing public consultation as part of the Detailed Business Case key stakeholder expectations are not understood.	Stakeholders expectations are not set due to insufficient public consultation. The Business Case to date has mainly consulted with internal stakeholders (Auckland Council, Auckland Transport, CRL, Link Alliance and CoP members).	This could result in key stakeholders not agreeing to the design and therefore not agreeing to the project which would result in project delays	▪ Public Consultation to follow Detailed Business Case, prior to design stages. ▪ Focused meetings with key stakeholders during preliminary design phase. ▪ Implement strategy around how we feedback to all the people we have talked to.

7.3 Stakeholder Management Plan

The intent of a Stakeholder Management and Communications Plan is to provide the proposed approach for consultation and engagement with stakeholders. Meaningful stakeholder engagement has the potential to positively influence the outcomes of the project and build support for it.

As discussed in Section 3, throughout the Detailed Business Case process strong engagement has been undertaken with key stakeholders at Auckland Council and Auckland Transport. Targeted stakeholder engagement and consultation with the 'Community of Practice' has been undertaken as well as establishing a strong partnership with Mana Whenua. Engagement with the Waitematā Local Board, elected members and the Auckland City Centre Advisory Board has also taken place.

To build on the engagement to date, a Stakeholder Management and Communications Plan needs to be specifically developed for the next phases of the project. It is expected that the plan will outline the communications and engagement approach for the following stakeholders:

- Mana Whenua – As project partners Mana Whenua will continue to guide project development. The cultural framework developed by the Mana Whenua working group specifically for Te Hā Noa - Victoria Street linear park, will be utilised to inform the design. The spaces on Victoria Street will be designed so that the valuable ideas contributed to the project design are clearly visible and reflect the rich cultural history. During preliminary and detailed design the project team will need guidance on the application of the cultural framework. The design of Te Hā Noa - Victoria Street linear park will be developed collaboratively with Mana Whenua representatives as partners embedded in the design process. The Mana Whenua working group will be key to establishing kaitiakitanga / guardianship initiatives throughout the project lifecycle, particularly beyond implementation. The engagement plan will need to acknowledge and consider the existing commitments of Mana Whenua representatives.
- Internal – Throughout the development of the business cases for Te Hā Noa - Victoria Street linear park, engagement with internal stakeholders within council-controlled organisations has largely been through the Community of Practice. The stakeholder plan will need to review the teams represented, particularly within Auckland Transport and Auckland Council, to draw together the needed collective expertise, knowledge and understanding of key internal stakeholders.
- External – While the Victoria Street linear park has been included in Auckland Council strategic and planning documents and there is clear public support, no focused public consultation has been undertaken. A broader range of consultation is proposed to take place as the project progresses. This will include public consultation with the local city centre community to consider how specific stages of Te Hā Noa – Victoria Street linear park could be delivered. Whilst coordinated public communications are planned with City Rail Link mid 2021, the exact scope of public consultation will be determined in the next phase of the project.

7.4 Benefits Realisation Plan

The Benefits Realisation Plan (attached in Appendix N) prepared for the Te Hā Noa - Victoria Street linear park contains information to guide the activities required to monitor progress with respect to achieving the Te Hā Noa - Victoria Street linear park project benefits.

It is important that the expected benefits of investment are able to be measured to demonstrate successful delivery of the project. The Investment Logic Map was originally developed by internal stakeholders following consultation undertaken with the Community of Practice during the Indicative Business Case. The measures for each Key Performance Indicator were refined in the Detailed Business Case to show how the benefits can be realised. These measures support progress towards achieving the benefits in two main ways: (1) to evaluate the potential of each option explored in the Detailed Business Case; and, (2) measure the success and performance of the project. Consultation was undertaken with future benefit owners in each of the benefits to assist in developing realistic targets. Table 7-2 presents a summary of the measure, baseline and target for each Key Performance Indicator. The monitoring and evaluation plans for each are provided in Section 6 of the Benefits

Realisation Plan. Baseline data will need to be collected prior to the closure Victoria Street for City Rail Link works.

Table 7-2: Summary of baseline and targets for each measure

Benefit	Key Performance Indicators	Measures	Baseline	Target	Benefit Owner	Accountable for Delivery
1	Increased use of active modes	Number of cyclists on Victoria Street	Total of 8 weekday cycle trips counted between Elliot to Queen (Victoria Street survey data May 2019)	Increase to 4x (quadruple) the number of cyclists by 2028.	Auckland Transport: Healthy Streets and Active Modes	Auckland Council: Development Programme Office (DPO)
	Less wait times for pedestrians	Average delay time for pedestrians within the corridor	Average of 42 second delay per person	Reduction in average delay for pedestrians of 10-20%		Auckland Council: DPO Auckland Transport: Network Operations
2	Space available for commercial and recreational activities	Street equipment / activity zone area available	Approximately 978m^2 in base case	Greater than 2500m^2 of activity area along Victoria Street. (Targets for each block see Benefits Realisation Plan)	Auckland Council: Plans and Places	Auckland Council: Development Programme Office (DPO)
	Increased utilisation of public space / urban realm as indicated by visitors 'lingering' at the location	Average utilisation across all blocks on Victoria Street across a year	Baseline survey required in 2021.	More than 50% of public space is utilised across the lunch hours (11am-2pm)		
	Peoples satisfaction with Victoria Street	Survey of satisfaction of people using the space	Baseline survey required in 2021.	80% of people surveyed have a positive view of the space.		
	Improved level of service and quality of environment for pedestrians	PERS scores for each parameter/ attribute	September 2019 PERS assessment	An improvement in at least 12 of the 17 PERS parameters/ attributes for each block. And no deterioration in the other 5.		
3	The Mana Whenua working group for the project feel that Victoria Street reflects Māori culture and identity	Survey of Mana Whenua Working Group	Hui with the Mana Whenua working group reflect the feelings that Victoria Street currently does not reflect Māori culture and identity	Mana Whenua working group feel that the absence of Māori culture and identity on Victoria Street has been addressed.	Auckland Council: Plans and Places	Auckland Council: Development Programme Office (DPO) Mana Whenua
	Locals and visitors feel that Victoria Street reflects it's unique identity and is characteristic of Tāmaki Makaurau.	Survey of opinion of people using the space (survey to be undertaken)	Baseline survey required in 2021	80% of survey respondents feel that Victoria Street reflects tit's unique identity and is characteristic of Tāmaki Makaurau.		Auckland Council: Development Programme Office (DPO)

Benefit	Key Performance Indicators	Measures	Baseline	Target	Benefit Owner	Accountable for Delivery
4	Meet the objectives of the Sustainability Framework (see Section 7.4.1)		Refer to the objectives & targets outlined in the Sustainability Framework		Various	Various
	Increased use of active modes (pedestrians and cyclists) on Victoria Street	Mode share of cyclists on Victoria Street	Total of 8 weekday cycle trips counted between Elliot to Queen (Victoria Street survey data May 2019)	Increase to 4x (quadruple) the number of cyclists by 2028.	Auckland Transport: Healthy Streets and Active Modes	Auckland Council: Development Programme Office (DPO)
	Reduced rate of crashes on Victoria Street (between Hobson Street and Kitchener Street)	5 year rolling average of injury crashes	5.6 injury cashes per year (2015 – 2019)	Zero harm (0 injury crashes)	Auckland Transport: Safety	Auckland Council: Development Programme Office (DPO)
	People using the street feel safe	Survey of opinion of people using the Street (survey to be undertaken)	Baseline survey required in 2021	80% of survey respondents feel safe on Victoria Street.	Auckland Council: Plans and Places	Auckland Council: Development Programme Office (DPO)

7.4.1 Sustainability Targets

Sustainability is of core importance to the Te Hā Noa - Victoria Street linear park project. In line with the desired outcomes for the Project, a sustainability development framework has been developed to embed sustainability principles within the Project (Appendix P). Table 7-3 shows the indicative measures and draft targets developed for each of the sustainability objectives. For further information on the development of the sustainability principles refer to Section 2.2 of the Workshop Summary report (Appendix E). As part of the Benefits Realisation Plan (Section 7.4) specific measures are being developed to monitor the project against each objective.

Table 7-3: Sustainability measures and draft targets

Sustainability Guiding Principles	Objective	Measures	Draft Targets
RESILIENT INFRASTRUCTURE	The functionality of the asset is resilient to risks associated with climate change.	Volume of stormwater attenuation to mitigate flooding	Volume of attenuation to be set at preliminary design stage, block by block, in consultation with Healthy Waters.
		Area of canopy cover to provide shade and shelter (reduce urban heat island effect, outdoor thermal comfort for users).	Area of canopy cover: draft target: 30% of street (excluding intersections) to have tree canopy cover within 30 years of construction completion (stage by stage).
		Survival rate of planting	Target 90% survival rate of all plants (current city average is ~80%).
GOVERNANCE Effective decision making process to deliver sustainable outcomes	To report on sustainability performance throughout the project	Sustainability targets to be reported to the Project Steering Group at the end of each phase.	Reporting at key milestones
	To promote sustainability knowledge sharing	Sustainability knowledge is shared with key stakeholders. Environmental sustainability initiatives are legible to the public - educational.	Reporting on sustainability targets published to key stakeholders and potentially the public.

Sustainability Guiding Principles	Objective	Measures	Draft Targets
	To establish kaitiakitanga / guardianship initiatives throughout lifecycle	Establish a group that continues to have kaitiakitanga / guardianship over the project post-completion with longevity & legacy through ongoing use, operation and maintenance.	Establish a group that continues to have kaitiakitanga / guardianship over the project post-completion.
WHOLE OF LIFE THINKING	To minimise energy use through the operational lifecycle	Energy use for the operation of the asset minimised.	Target for energy use and energy generation to be set at prelim design stage.
	To minimise potable water use across the operational lifecycle	Potable water used for irrigation minimised.	Target for water use to be set at preliminary design stage, block by block, in consultation with Healthy Waters.
	To minimise discharges to water	Quality of stormwater entering the public system from the street	Set target for 'first pass' filtration at prelim design stage, in consultation with Healthy Waters.
	To minimise discharges to air	Air quality in the local environment by reduction of traffic volumes on the street.	If measured, set target once baseline data collected.
	To reduce lifecycle environmental impacts of materials	Locally sourced materials. Toxic chemicals in the materials. Quantity of embodied carbon / carbon footprint of materials.	Set targets prior to start preliminary design.
	To promote waste minimisation and adopt circular economy principles	Reuse of existing materials.	Set based on survey of existing materials prior to preliminary design stage
BIODIVERSITY	To enhance ecological diversity and ecological value of the street	Diversity of floral species. Plant species selection to survive climatic extremes (heat, drought, storm hardy / tolerant).	Biodiversity - apply 30:20:10 rule: No more than 30% of one genus No more than 20% of one family No more than 10% of one species

7.5 Asset Management and Ownership

Once the project is complete various council-controlled organisations will be responsible for the ownership and management of assets delivered as part of the project.

Through the Detailed Business Case the Preferred Option for linear park has been developed to a concept level, as presented in Section 4.6. Many details will be worked through in the next phases of design. While it is not yet known exactly what some of the assets will be, work to date has considered at a high level, who is likely to be responsible for assets delivered as part of Te Hā Noa - Victoria Street linear park. It is assumed that the completed works delivered as part of the Te Hā Noa - Victoria Street linear park will be part of the road reserve not a park reserve.

Following the current guidelines for asset management, at the completion of the Te Hā Noa - Victoria Street linear park Auckland Transport will become responsible for the majority of assets delivered within the road corridor. Auckland Council will remain responsible for assets which will likely include artworks, street trees, specific green infrastructure and bespoke elements. The general responsibilities for each asset type are outlined in Table 7-4. For further information on who is likely to be responsible for assets delivered as part of Te Hā Noa - Victoria Street linear park refer to the memorandum attached as Appendix P. To ensure that the assets are able to be accepted and maintained, it is recommended that the project team continue to work closely with the asset owners and ensure that maintenance is built into the next Long-term Plan considerations.

Table 7-4: Likely asset ownership and service delivery responsibilities

Asset	Ownership	Service Delivery
Road land	Auckland Transport	Auckland Transport – Incident clean up Auckland Council – Special event cleaning
Pavements and carriageway	Auckland Transport	Auckland Transport – Road and channel sweeping, maintenance of permeable pavement
Artwork (Sculptures, memorials, plaques)	Auckland Council	Auckland Council – Artworks and water fountain cleaning, graffiti and poster removal
Drainage	Auckland Transport (note: stormwater treatment devices may be owned by Auckland Council)	Auckland Transport – Kerb and channel cleaning, catch-pit cleaning. Auckland Council – stormwater systems, maintenance and renewals.
Green assets (street gardens, berms)	Auckland Transport (exception of green wall proposed on Victoria Street car park building which is the responsibility of the building owner).	Auckland Council – Maintenance of gardens, berm mowing, weed control.
Green assets (street trees)	Auckland Council	Auckland Council – Maintenance of street trees, new tree planting.
Street lighting	Auckland Transport	Auckland Transport – Lighting.
Minor structures (retaining walls, railings), walls and fences (bollards, walls, fences, handrails)	Auckland Transport. Except walls associated with parks which are owned by Auckland Council.	Auckland Transport – Maintenance and renewals.
Footpath and cycleway	Auckland Transport	Auckland Transport – Footpath wash and sweeping, cycleway sweeping.
Traffic Signals and traffic control equipment	Auckland Transport	
Street Furniture (Litterbins, Seats, Monuments, Toilets, Pay & Display Machines, CCTV cameras, seats, benches, bike stands, drinking fountains etc.)	Auckland Transport (if within road corridor)	Auckland Council – installing litter bins and recycling bins, loose litter, refuse collection, public toilet cleaning, installation of non-transport related street furniture.
Public Transport (ie. bus shelters, Bus Stations, Rail Stations)	Auckland Transport	Auckland Transport – bus shelter cleaning.
Parking	Auckland Transport	Auckland Transport – parking enforcement.

8. Recommendations and Next Steps

The Detailed Business Case recommends that investment in Te Hā Noa - Victoria Street linear park project proceed and seeks approval for Auckland Council to progress with development of the Stage 1 design, providing that the additional funding required can be secured. This timing is vital to support the outcomes desired in the City Centre Masterplan and maximise the benefits of investment in the City Rail Link.

On the basis that the required additional funding can be secured, it is recommended that investment in Te Hā Noa - Victoria Street linear park project proceed with implementation of Stage 1 of the Preferred Option.

There is a strong Strategic Case for investment in Stage 1 of the linear park. The project is a key component in the delivery of the City Centre Masterplan. As a key structuring element of the city centre, along with Queen Street, Te Hā Noa - Victoria Street linear park will provide strong pedestrian connectivity, which is of particular importance after the opening of the City Rail Link Aotea Station in 2024.

The Economic Case shows that the Preferred Option developed for the section between Hobson Street and Kitchener Street is expected to deliver value for money. This is reflected in the project **Benefit Cost Ratio of 2.8** meaning for every dollar invested, $2.80 of economic benefit is generated. The three most significant economic benefits quantified in the analysis are economic productivity uplift, increased valuation of the urban realm and pedestrian travel times.

While there are strong strategic and economic reasons to invest in implementing the Preferred Option for Te Hā Noa - Victoria Street linear park between Hobson Street and Kitchener Street, the funding allocation in the long-term plan is insufficient to implement the recommended scope. An assessment of the funding requirements shows that to complete the Stage 1 of the Preferred Option, additional funding of $16.07 million is required over and above what is currently included in the Long-term Plan 2018-2028. It should be noted that there are still avenues of funding to be explored, such as the appetite of private sector contributions. This Detailed Business Case does not recommend that a lower specification (but within budget) Stage 1 be implemented as such would require significant compromise on quality and would not deliver on the benefits desired from the project.

In the event that additional funding cannot be sourced in time to coordinate the delivery of Stage 1 with the construction of the City Rail Link Aotea Station, Auckland Council will need to investigate alternative options to support the streetscape and space requirements for the City Rail Link Aotea Station. It is not recommended that such a project be undertaken as part of the Te Hā Noa - Victoria Street linear park project as the scope and extents would not deliver on the desired project benefits. The Preferred Option to deliver a linear park could however be implemented at a later date as future funding becomes available. The work undertaken as part of this Detailed Business Case to develop a Preferred Option should also inform the development of interfacing projects.

Assuming that the required funding becomes available, the Preferred Option is planned to progress in a staged approach, with Stage 1 being completed first followed by Stage 2A and 2B. Stage 1 is proposed to coordinate with the City Rail Link development of the Aotea Station portal on Victoria Street.

As a result of the investigation undertaken for Te Hā Noa - Victoria Street linear park, this Detailed Business Case makes the following recommendations to Auckland Council:

1) Give approval to proceed with the development of Stage 1 design of Te Hā Noa - Victoria Street linear park based on this Detailed Business Case noting the following:
    a) The overall Benefit Cost Ratio for the project is estimated to be 2.8. This is based on a Total Expected Cost Estimate of $134.59 million (including escalation) to construct the Preferred Option between Hobson Street and Kitchener Street.

b) It is estimated that the design and construction of Stage 1 will cost $45.77 million (including escalation).

c) The Preferred Option will deliver the outcomes desired as part of Green Link Transformational Move 6 in the City Centre Masterplan.

d) As project partners, Mana Whenua have had an important role in the development of this Detailed Business Case and the Preferred Option.

2) Prioritise addressing the funding deficit of $16.07 million so that Stage 1 of Te Hā Noa - Victoria Street linear park can be progressed in coordination with the programme for City Rail Link.

3) If the funding for Stage 1 is not secured within the time period required to coordinate with the City Rail Link programme, then it is not recommended that a reduced scope be delivered. Auckland Council will need to investigate alternative options to support the pedestrian space requirements for the City Rail Link Aotea Station as part of a separate streetscape project.

4) The Preferred Option progress in a staged approach, with Stage 1 being completed first followed by Stage 2A and 2B.

a) Stage 1 include the permanent implementation of the Preferred Option from Federal Street to Queen Street, with a lighter implementation east of Queen Street.

b) Stage 2A include the permanent implementation the Preferred Option between Queen Street and Kitchener Street.

c) Stage 2B be coordinated with a city wide traffic circulation strategy and include the permanent implementation the Preferred Option between Hobson Street and Federal Street.

5) Agree the preferred approach for procurement and project delivery with City Rail Link / Link Alliance.

6) Prepare Stakeholder Management and Communications Plan for the next phases of the project that builds on the engagement to date and outlines how as project partners Mana Whenua will continue to guide project development.

7) Mitigate potential construction risks due to unknown site conditions prior to preliminary design through site investigations.

8) Advance the preliminary design for Stage 1 of the Preferred Option in coordination with the programme for City Rail Link.

9) Progress the development of the resource consent application package for Stage 1 of the Preferred Option, starting with early engagement consultation with Auckland Council to confirm consenting approach, packaging of consents and potential for a longer lapse period.

10) Coordinate development of interfacing projects with the Preferred Option so that they integrate with the linear park. Projects on intersecting streets such as Federal Street, Queen Street and High Street will also need to consider the implementation of Stage 2A and 2B so as not to preclude the future plans for the linear park.

11) Measure the success of the project through implementing the monitoring and evaluation plans for each KPI provided in the Benefits Realisation Plan.

The key next steps to progress Stage 1 include the following:

- Investigate potential funding options to address shortfall and confirm funding for construction of Stage 1.
- Agreement with City Rail Link on procurement approach, scope and extent of work.
- Progress with the steps outlined in the Project Execution Plan to proceed with Preliminary Design of Stage 1 including:
- Site investigations to address risks pertaining to unknown underground conditions including utilities, pavement structure and soil conditions.

- Consultation with Auckland Council on the Consenting Strategy regarding the packaging of consents and potential for a longer lapse period.
- Collect baseline data for Victoria Street prior to closure for City Rail Link works for Benefits Realisation Plan.

Reflecting the planned programming, this Detailed Business Case seeks approval for Auckland Council to proceed with development the Stage 1 design providing that the additional funding required can be secured.

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Te Kaunihera o Tāmaki Makaurau