Appendix E. Appraisal Summary Tables

Appraisal Summary Table Template

Date:	3/03/2021	Evaluation Period: (baseline and forecast year) e.g 2020 - 2060	2031-2070	Option Name:	Southern Alternate Option
Problem/opportunity statement:		**Investment objectives:**		**How project gives effect to GPS:**	**How project gives effect to local community outcomes:**

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Click to insert new row

Transport Outcomes		Non-Monetised Impact: (description in numerical or narrative terms)				Monetised Impact: (description in dollar terms in real terms, non-discounted)	
Name of Benefit	**Name of Measure:**	**Baseline:**	**Do Minimum Impact:**	**Preferred Option Impact:**		**Do Minimum Impact:**	**Option Impact:**
Healthy and safe people *(add or delete rows as appropriate)*							
1.1 Impact on social cost and incidents of crashes	1.1.2 Crashes by severity		Benefit to network safety in line with SP11 for Batch 1 -	Incremental benefit from Southern Alternate Option		$2,647,000	$2,882,000
2.1 Impact on perceptions of safety and security	2.1.1 Access - perception						
3.1 Impact of mode on physical and mental health	3.1.1 Physical health benefits from active modes		Composite Health & Environmental benefit from	Incremental benefit from Southern Alternate Option		$42,891,000	$48,406,000
3.2 Impact of air emissions on health	3.2.1 Ambient air quality - NO2		No change over baseline	No change over baseline			
3.2 Impact of air emissions on health	3.2.2 Ambient air quality - PM10		No change over baseline	No change over baseline			
Resilience and security *(add or delete rows as appropriate)*							
Economic prosperity *(add or delete rows as appropriate)*							
5.2 Impact on network productivity and utilisation	5.2.6 Access to key economic destinations (all modes)						
6.4 Wider economic benefit (regional economic development)	Tourism - Change in Producer Surplus		No change over baseline	No change over baseline		$0	$0
Environmental sustainability *(add or delete rows as appropriate)*							
8.1 Impact on greenhouse gas emissions	8.1.1 CO2 emissions		No change over baseline	No change over baseline		$0	$0
8.1 Impact on greenhouse gas emissions	8.1.2 Mode shift from single occupancy private vehicle		No change over baseline	No change over baseline		$0	$0
Inclusive access *(add or delete rows as appropriate)*							
12.1 Impact on Te Ao Māori	12.1.1 Te Ao Māori						
10.1 Impact on user experience of the transport system	10.1.4 Network condition - cycling						
10.2 Impact on mode choice	10.2.3 Spatial coverage - cycle lanes and paths		Increasing spatial coverage increases the catchment of	Increasing spatial coverage increases the catchment of		$9,471,000	$10,169,000
10.2 Impact on mode choice	10.2.4 Spatial coverage - cycling facilities						
10.3 Impact on access to opportunities	10.3.1 Access to key social destinations (all modes)						
10.4 Impact on community cohesion	10.4.3 Severance						
11.1 Impact on heritage and cultural values	11.1.1 Amenity value - natural and built environment						
11.1 Impact on heritage and cultural values	11.1.2 Heritage and cultural values						

1. Summary of Non-Monetised Impacts (Description)	2. Summary of Financial Impacts		3. Summary of Monetised Option Impacts (discounted)	
Summary description of non-monetised measures and impacts	Capital Costs	$17,507,000	Total Monetised Benefits, excluding Wider Economic Benefits (WEBs)	$1,962,000
			Total Monetised Benefits, including Wider Economic Benefits (WEBs)	$1,962,000
	Operating Costs	$2,532,000	Total Monetised Costs	$0
			BCR (excluding WEBs)	0.2
	Total Financial Costs	$20,039,000	BCR (including WEBs)	0.2

Rationale for selecting preferred option

Appraisal Summary Table Template

Date:	3/03/2021	Evaluation Period: (baseline and forecast year) e.g 2020 - 2060	2031-2070	Option Name:	Tunnels Trail Option
Problem/opportunity statement:		Investment objectives:		How project gives effect to GPS:	How project gives effect to local community outcomes:

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To insert a row select the row above then click on the button below.

Click to insert new row

Transport Outcomes		Non-Monetised Impact: (description in numerical or narrative terms)				Monetised Impact: (description in dollar terms in real terms, non-discounted)	
Name of Benefit	**Name of Measure:**	**Baseline:**	**Do Minimum Impact:**	**Preferred Option Impact:**		**Do Minimum Impact:**	**Option Impact:**
Healthy and safe people *(add or delete rows as appropriate)*							
1.1 Impact on social cost and incidents of crashes	1.1.2 Crashes by severity		No change over baseline	Benefit to network safety in line with SP11		$2,647,000	$2,977,000
2.1 Impact on perceptions of safety and security	2.1.1 Access - perception						
3.1 Impact of mode on physical and mental health	3.1.1 Physical health benefits from active modes		No change over baseline	Composite Health & Environmental benefit from		$42,891,000	$68,233,000
3.2 Impact of air emissions on health	3.2.1 Ambient air quality - NO2		No change over baseline	Reduction in peak hour trips due to JTW mode shift -			
3.2 Impact of air emissions on health	3.2.2 Ambient air quality - PM10		No change over baseline	Reduction in peak hour trips due to JTW mode shift -			
Resilience and security *(add or delete rows as appropriate)*							
Economic prosperity *(add or delete rows as appropriate)*							
5.2 Impact on network productivity and utilisation	5.2.6 Access to key economic destinations (all modes)						
6.4 Wider economic benefit (regional economic development)	Tourism - Change in Producer Surplus		No change over baseline	Increase in producer surplus due to new international and		$0	$45,511,000
Environmental sustainability *(add or delete rows as appropriate)*							
8.1 Impact on greenhouse gas emissions	8.1.1 CO2 emissions		No change over baseline	Reduction of ~7,200 tonnes CO2. Reduction in severance		$0	$477,000
8.1 Impact on greenhouse gas emissions	8.1.2 Mode shift from single occupancy private vehicle		No change over baseline	Reduction in severance increasing active mode JTW		$0	$8,567,000
Inclusive access *(add or delete rows as appropriate)*							
12.1 Impact on Te Ao Māori	12.1.1 Te Ao Māori						
10.1 Impact on user experience of the transport system	10.1.4 Network condition - cycling						
10.2 Impact on mode choice	10.2.3 Spatial coverage - cycle lanes and paths		No change over baseline	Increasing spatial coverage increases the catchment of		$9,471,000	$10,486,000
10.2 Impact on mode choice	10.2.4 Spatial coverage - cycling facilities						
10.3 Impact on access to opportunities	10.3.1 Access to key social destinations (all modes)						
10.4 Impact on community cohesion	10.4.3 Severance						
11.1 Impact on heritage and cultural values	11.1.1 Amenity value - natural and built environment						
11.1 Impact on heritage and cultural values	11.1.2 Heritage and cultural values						

1. Summary of Non-Monetised Impacts (Description)	2. Summary of Financial Impacts		3. Summary of Monetised Option Impacts (discounted)	
Summary description of non-monetised measures and impacts	Capital Costs	$27,107,000	Total Monetised Benefits, excluding Wider Economic Benefits (WEBs)	$10,714,000
			Total Monetised Benefits, including Wider Economic Benefits (WEBs)	$24,254,639
	Operating Costs	$2,597,000	Total Monetised Costs	$0
			BCR (excluding WEBs)	0.6
	Total Financial Costs	$29,704,000	BCR (including WEBs)	1.3

Rationale for selecting preferred option

Appendix F. Shortlist reassessment

Investment objectives

The do-minimum route and southern route investment objectives scores did not change (overall score of 4 and 6 respectively), however, the tunnels trail route was reduced by 1 point acknowledging that the distance of the route may limit the potential increase in mode share. Although it was discussed that the rapid uptake of e-bikes may reduce the disincentive of the distance and encourage more people to cycle. The overall score for the tunnels route was 18, demonstrating a much higher alignment with the investment objectives that the other options.

It was noted that the sections of the southern route that utilise existing cycle facilities are not up to the standard that would be provided by the tunnels route.

Table 1 Assessment of investment objectives

		Option					
		1: Do minimum	Final agreed score	2: Upgrade existing route	Final agreed score	4: New route using Chain Hills and Caversham Tunnels and rail corridor	Final agreed score
Investment objectives	1) To reduce deaths and serious injuries of active modes crashes between Mosgiel and Dunedin by 100% by 2035	1	1	2	2	4	4
	2)To improve perceptions about the safety of active modes between Mosgiel and Dunedin by 15% by 2030	1	1	2	2	5	5
	3)To improve the level of service for active mode network between Mosgiel and Dunedin to enable community cohesion and participation in social, commercial and employment opportunities by 50% by 2030	1	1	1	1	5	5
	4)To increase active mode share for journeys between Mosgiel and Dunedin by 3% by 2035	1	1	1	1	5	4
	Higher score the better achievement of objectives	4	4	6	6	19	18

Practical feasibility

As more information was available following concept design an additional criterion was added to assess the property impacts as shown in Table 2. The technical recommendation assessed the southern route and tunnels route as a 5. However, the property advisor at the workshop (Paula Dickel) advised that she foresaw no particular issues about these acquisitions compared to other property impacting projects, so it was agreed to reduce the score to 3 for both routes.

The score of the do-min was significantly reduced noting that there may have been an error in the original scoring. The four criteria were assessed as 1 for a total score of 4 where originally it was scored as 10 with a high technical feasibility score.

The southern route score also significantly increased in the reassessment from 4.5 to 12.5, with the technical difficulty and consentability criteria being scored higher due to the significant retaining that is required along Morris Road to provide separation from traffic.

The tunnels trail route score increased from 11 to 16, with increases in the safety in design assessment due to maintaining the tunnels and the consentability as there are contaminated land, archaeological sites, earthworks, bridging over and working alongside waterways, building consent for underpass, and KiwiRail consent issues to address.

It was clarified in the workshop that safety in design relates to the operation and maintenance of the asset rather than the safe design of the asset itself.

Table 2 Assessment of practical feasibility

		Option					
		1: Do minimum	Final agreed score	2: Upgrade existing route	Final agreed score	4: New route using Chain Hills and Caversham Tunnels and rail corridor	Final agreed score
Practical feasibility	Technical - technical or practical ease/difficulties when implementing	5	1	1.5	4.5	4	4
	Property impacts	Not assessed	1	Not assessed	3	Not assessed	3
	Safety & design - level of potential hazards posing H&S risk in design, operation or maintenance	3	1	2	2	3	4
	Consentability - level of consenting complexity/ difficulty and risk on implementability	2	1	1	3	4	5
	Higher score has more feasibility issues	10	4	4.5	12.5	11	16

Timing, costs, risks

Table 3 shows the scoring assessment for the timing, cost and risk criteria. It should be noted that the updated technical assessment also included cost – operational/maintenance and value for money (based on benefit-cost assessments) which was not originally assessed due to the technical detail that was required at the time of workshop 2.

No changes were made to the do minimum option assessment.

While the cost of the southern route was reduced, the funding and timing risk score was increased as the BCR is below 1 meaning the option is going to struggle to attract funding. This also resulted in a 5 for value for money.

The tunnels trail route funding and timing risk slightly reduced as it is possible to achieve a BCR above 1 and is therefore potentially fundable.

Table 3 Assessment of timing, costs, risks

		Option					
		1: Do minimum	Final agreed score	2: Upgrade existing route	Final agreed score	4: New route using Chain Hills and Caversham Tunnels and rail corridor	Final agreed score
Timing, cost, risks	Scheduling - when could it be delivered?	0-2 years	0-2 years	0-2 years	2-5 years	2-5 years	2-5 years
	Cost - likely range: upfront capital cost	1	1	5	4	5	5
		$0	$0	$28m	$21.8m	$28.7m	$27.6m
	Cost - operational/maintenance	Not assessed	1	Not assessed	3	Not assessed	4
	Value for money	Not assessed	1	Not assessed	5	Not assessed	3
	Funding and timing risks	1	1	3	4	4	3
	Higher score has higher cost and funding risk (no score for scheduling)	2	4	8	16	9	15

Climate, Te Ao Maori

The project team have engaged with local iwi, but been advised that they there are no issues of particular concerns from a Te Ao Maori perspective, as such no score was given to this criterion see Table 4.

It was identified that the tunnels route will likely have a bigger impact on reducing vehicle travel demand than other options. No climate change risks were identified.

Table 4 Assessment of climate, Te Ao Maori

		Option					
		1: Do minimum	Final agreed score	2: Upgrade existing route	Final agreed score	4: New route using Chain Hills and Caversham Tunnels and rail corridor	Final agreed score
Climate, Te Ao Maori	Mitigation - expected impact on demand for travel by car	1	1	Neutral	2	Reduce	3
	Adaptation - exposure to climate change risk or natural hazards over time	None identified	None identified	Maybe	None identified	Maybe	None identified
	Te Ao Maori - what, if any, impact on Te Ao Maori	None identified	None identified	None identified	None identified	None identified	None identified
	High score more positive impact (only mitigation scored)	1	1		2		3

Environment and social

Table 5 details the social or cultural effects assessment and no changes were made following the technical assessment. While it was noted that there is an issue related to wastewater pipes in the tunnels potentially overflowing, which would be addressed by the tunnel improvements, this is not as a direct consequence of the tunnels project – it is a pre-existing issue that is not attributable to the project and predominantly out of scope for the project.

Table 5 Assessment of Environmental and social

		Option					
		1: Do minimum	Final agreed score	2: Upgrade existing route	Final agreed score	4: New route using Chain Hills and Caversham Tunnels and rail corridor	Final agreed score
Environmental / social	Identify - any significant environment, social or cultural effects	Nothing to mitigate	Nothing to mitigate	Nothing significant	Nothing significant	Significant. Due to utilities and services within the tunnels i.e., gas and waste water, in an area experiencing flooding.	Significant gas and waste water issues can be mitigated by the project
	Mitigation - avoid, remedy or mitigate	Nothing to mitigate	Possible to avoid, remedy or mitigate depending on final solution selected e.g., rerouting of waste water pipes.	Nothing to mitigate	Possible to avoid, remedy or mitigate depending on final solution selected e.g., rerouting of waste water pipes.	Possible to avoid, remedy or mitigate depending on final solution selected e.g., rerouting of waste water pipes.	Possible to avoid, remedy or mitigate depending on final solution selected e.g., rerouting of waste water pipes.
	Higher score has higher environmental/social negative impact	0	4	4	6	8	8

Fatal flaw

The concept design identified that the do minimum and southern route would not be compliant with a safe system (Table 6), primarily due to the level of separation that is able to be achieved from traffic which in places is either high volume or high speed (up to 80km/hr speed limit). The tunnels route can achieve minimum standard or better.

Table 6 Assessment of fatal flaws

		Option					
		1: Do minimum	Final agreed score	2: Upgrade existing route	Final agreed score	4: New route using Chain Hills and Caversham Tunnels and rail corridor	Final agreed score
Fatal flaw		Non compliant with Safe system	Non compliant with Safe system	None identified	Non compliant with safe system	None identified	None identified
	Score of 5 is fatally flawed	5	5	1	5	1	1

Appendix G. Stakeholder engagement report

DUNEDIN TUNNELS TRAIL

ENGAGEMENT REPORT

NOVEMBER 2021

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

Tabley

Boffa Miskell

bonisch consultants

DOCUMENT QUALITY ASSURANCE

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PREPARED BY:	Kurt Cole Senior Urban Designer / Landscape Architect Boffa Miskell Ltd	
REVIEWED BY:	Rachael Eaton Senior Principal, Urban Designer Boffa Miskell Ltd	
STATUS: FINAL	Revision / version: A	Issue date: 12 November, 2021

File ref: BM200344_Dunedin_Tunnels_Trail_Engagement_Report_ACTIVE

Cover photograph: Caversham Tunnel, Boffa Miskell, 2020

CONTENTS

EXECUTIVE SUMMARY

THIS ENGAGEMENT REPORT FORMS PART OF THE SUITE OF INFORMATION PRODUCED TO HELP IDENTIFY THE PREFERRED ROUTE FOR THE DUNEDIN TUNNELS TRAIL PROJECT.

It summarises the feedback and ideas captured throughout the engagement process.

PROJECT BACKGROUND

The Dunedin Tunnels Trail Trust (DTTT) have been working on the Dunedin Tunnels Trail Project for several years and have a Memorandum of Understanding (MoU) with Dunedin City Council (DCC) to progress the project.

Strategically, the project is part of the Dunedin Urban Cycleways Programme. In 2018/2019 The Dunedin Urban Cycleways Update and Programme Business Case was developed to help guide investment in the programme.

In May 2019, work began on the single stage business case for the Dunedin Tunnels Trail project. The purpose of the business case was to help identify a preferred route for the trail in partnership with the DTTT.

ENGAGEMENT WORKSHOPS

The engagement was guided by a project engagement plan which set out how the DCC and DTTT would engage with key stakeholders, the local community and the wider public.

Engagement activities included five stakeholder workshops held throughout Oct 2020 - May 2021.

These workshops were supplemented with one-on-one meetings at key points in the project with key stakeholders and partners, including the DTTT.

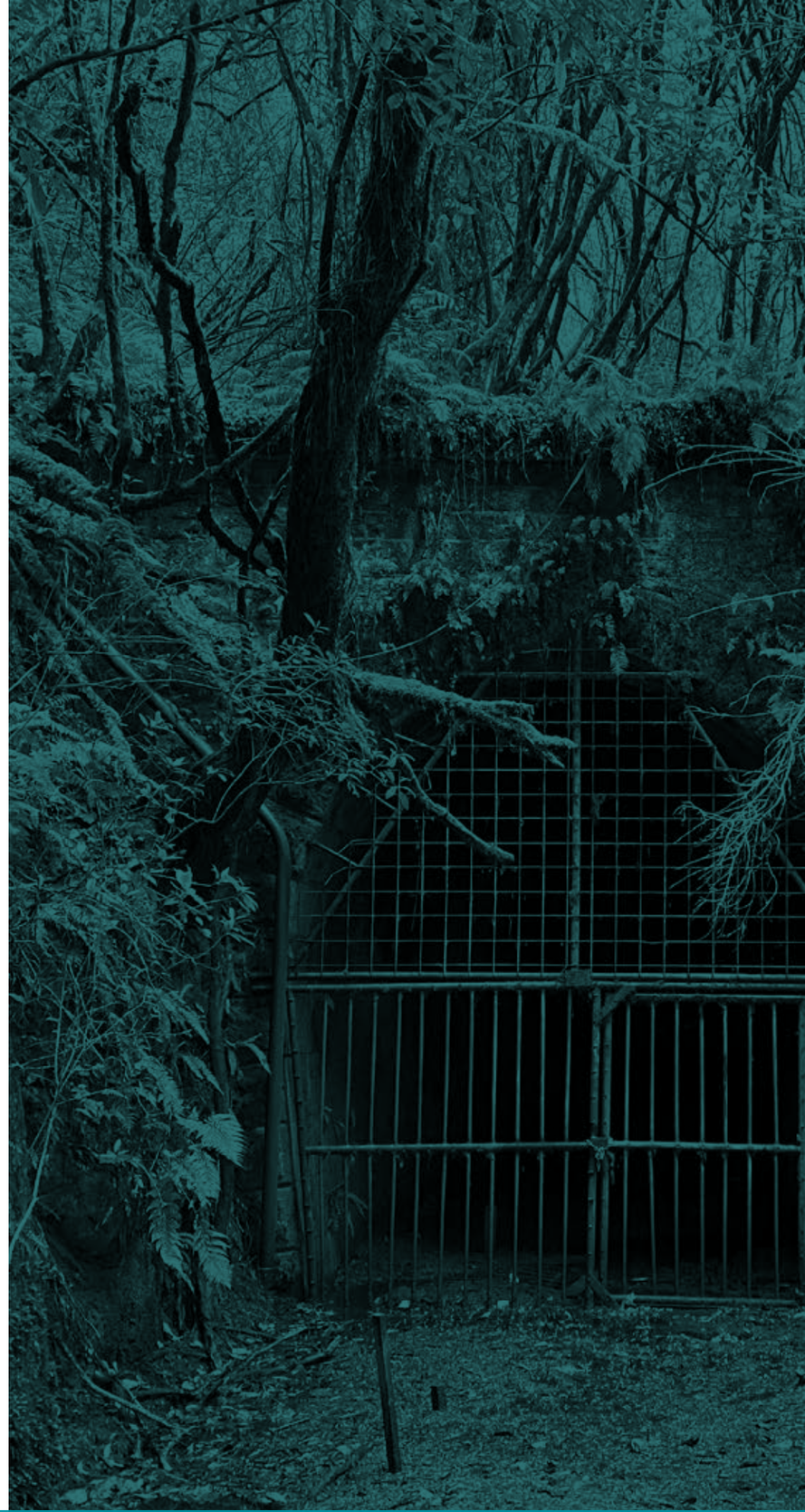
The purpose of these workshops was to work with stakeholders to explore route options and help define the preferred route to progress to preliminary design. Attendees at the workshops included internal DCC staff, members of the DTTT and representatives of various local organisations and national agencies, including KiwiRail and Waka Kotahi.

A key part of the engagement process, included a stakeholder workshop in May 2021, with a wide cross section of stakeholders. The purpose of this workshop was to gain feedback on the preferred route, prior to approval and to help to generate buy-in and interest in the project and its wider benefits.

ENGAGEMENT OUTCOMES

The engagement highlighted strong support for the project and the preferred route; which followed a similar alignment to the original route defined by the DTTT. Key engagement themes which have been used to finalise the preferred route include:

- KEEPING THE ROUTE OFF ROAD
- CONNECTING THE ROUTE TO LOCAL NEIGHBOURHOODS
- CREATING A COMMUNITY ASSET FOR EVERYONE TO ENJOY



ABOUT THE PROJECT

The Dunedin Tunnels Trail is a project initiated by the DTTT to build a 15km cycle and walking trail between Dunedin and Mosgiel. The trail route, as proposed by the DTTT, is primarily off road and follows the railway corridor from Wingatui to Caversham (Figure 1). It passes through Fairfield, Abbotsford and Green Island suburbs, across private and publicly owned land and through two decommissioned Victorian rail tunnels (Chain Hills Tunnel and Caversham Tunnel). It connects to the wider Dunedin city cycle network at Caversham.

PROJECT AIMS

The project aims to achieve a range of environmental, social (including safety) and economic objectives. These include:

- Improve the safety of cyclists (and pedestrians) travelling between Dunedin and Mosgiel
- Encourage more people to use the trail to travel to work and school by bicycle or other active modes, contributing to a low carbon transport system
- Increase the number of people cycling and walking for recreation and tourism, providing supporting tourism and recreation opportunities, and associated economic development
- Work towards connecting Dunedin to cycle trails and routes beyond the city e.g. to the Taieri Plains, the Clutha Gold Trail, Otago Central Rail Trail
- Improve community outcomes, including health, neighbourhood connectedness and quality of local environment

Figure 1: Dunedin Tunnels Trail route, June 2020 (Source: Dunedin Tunnels Trail Trust website)





HOW WE ENGAGED

PURPOSE OF ENGAGEMENT

MEANINGFUL AND COORDINATED ENGAGEMENT IS AN IMPORTANT PART OF THE DUNEDIN TUNNELS TRAIL BUSINESS CASE PROCESS.

We sought feedback from stakeholders, adjacent landowners and the local community to gain an understanding of the degree of support or opposition to the project, build effective relationships with the Council and get buy-in to the project from the wider public.

This report summarises the feedback received which will help us understand what is important to the people who will use the trail on a regular basis. This feedback will also be used to inform decisions made on the project moving forward.

OUR APPROACH

The Dunedin Tunnels Trail project team set out to engage with the DTTT and key stakeholders to find out their thoughts and suggestions for the project, including feedback on the routes as they developed. Feedback was also sought on the routes meeting the project objectives and how people would feel using the current route.

The Dunedin Tunnels Trail project team used a series of meetings and facilitated workshops to engage with project stakeholders. They also encouraged stakeholder organisations to provide their views.

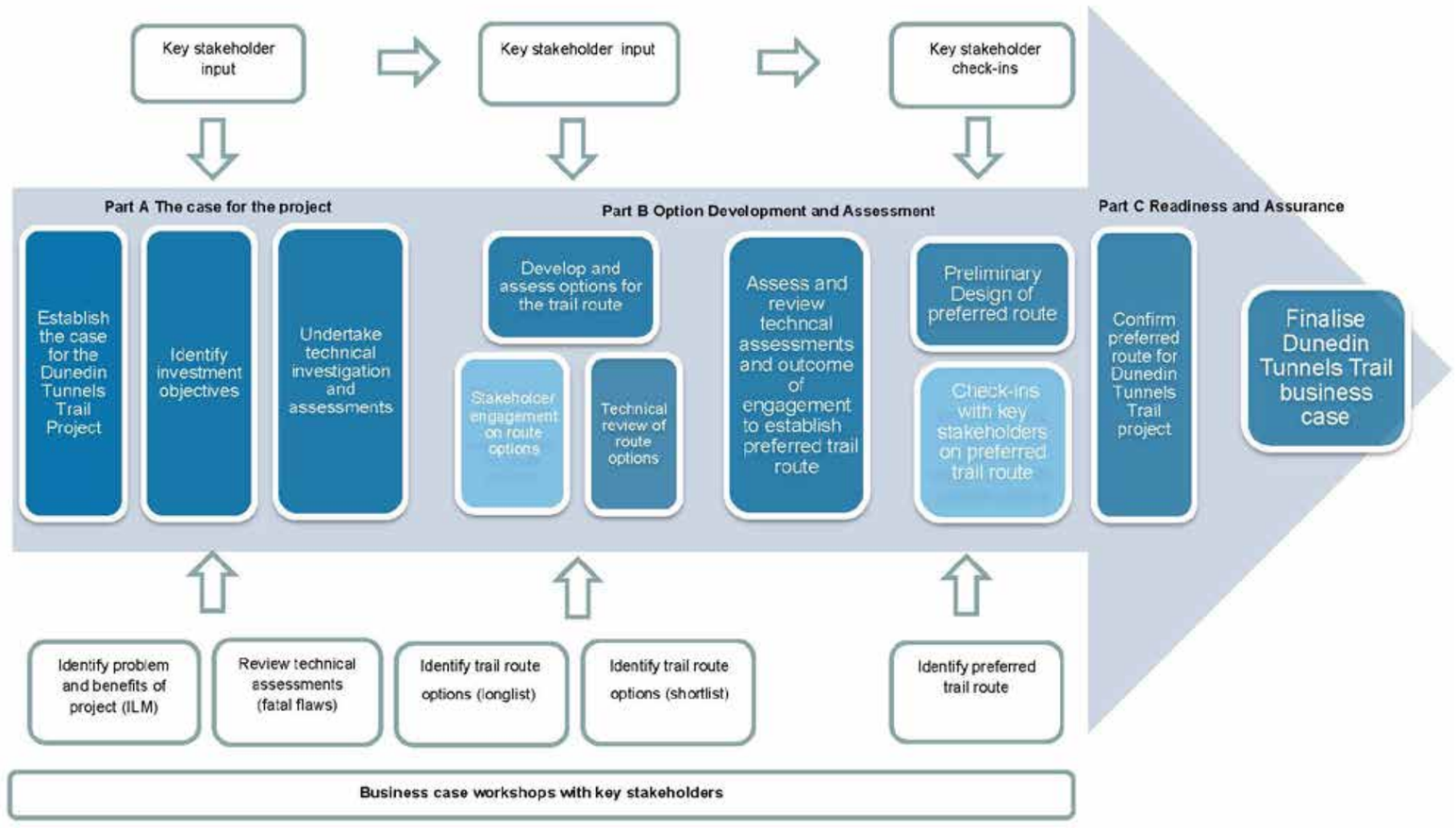


Figure 2: Overview of business case and engagement process

HOW WE ENGAGED

PRINCIPLES WE FOLLOWED

To uphold and demonstrate behaviours that support Council's core values and in accordance with Dunedin City Council's Significance and Engagement Policy, the engagement approach and activities will be based on International Association of Public Participation (IAP2) principles and values. The policy commits the Council to a principle-based approach to community engagement activities. These include:

- **Genuine:** We will engage honestly, and we will respect and listen to the views provided by the community with an open mind and will give due consideration to them when making decisions.
- **Timely:** We will engage with the community as early as appropriate and ensure that engagement processes are an integral part of project planning. We will allow enough time for participants to contribute and for them to be able to raise unexpected issues.
- **Purposeful**: We will be clear about the purpose of engagement and the ability and scope of the engagement to influence decisions.
- **Inclusive and accessible:** We will engage in a way which encourages participation of all who are likely to be affected by, or are interested in, a decision.
- **Recognition of diversity:** We will use engagement methods which are appropriate to the issue and those we are seeking to engage, having regard to their culture, age, ability and time availability.
- **Informed:** We will provide clear, easy to understand and objective information relating to the engagement and ensure it is readily available so that participants can make informed contributions.
- **Responsive:** We will be transparent about how we record, consider and respond to participants' contributions, and provide clear information on how the community's feedback has been taken into account in decision making.
- **Engagement with Māori:** We will acknowledge the unique perspectives of Māori in the city.
- **Cost-effective:** We will engage in a cost-effective manner, and resource engagement in proportion to the significance of the decision. We will ensure the least possible cost to all involved in the engagement (including the costs to the communities / affected parties

BUSINESS CASE ENGAGEMENT

DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

WORKSHOP 1: INVESTMENT LOGIC MAPPING

The investment logic mapping (ILM) workshop was the first workshop held on 09 September 2020 at the DCC offices. The objective was to review two problem statements that were developed in the Dunedin Cycleways Strategic Update and Programme Business Case from 2019. The two problem statements for cycling in Dunedin were:

- Road Safety – allocation of road space and road design in favour of vehicles has resulted in a transport system that looks and feels unsafe and imposes an actual road safety risk on cyclists. As a consequence, people are either being deterred from cycling, or if they do, are exposed to a high risk
- Access – cycleways have been built where they were easy to implement, which resulted in a fragmented and inconsistent network. The lack of directness and coherence has a consequence of cycling being an unattractive and non-viable mode choice for many residents

Workshop participants identified the following key problem themes, that were then developed into statements, that were relevant to the project moving forward:

- **Problem 1:** The perceived safety issues between Mosgiel and Dunedin suppresses active modes uptake (15%)
- **Problem 2:** The disconnected active mode network creates a severance between south west Dunedin communities constraining commercial, social and employment opportunities (20%)
- **Problem 3:** A lack of accessible and attractive active mode options between Mosgiel and Dunedin results in high car dependency (45%)
- **Problem 4:** Low active mode usage does not support a low carbon transport system or realise healthy lifestyles in south-west Dunedin (20%)

Following the same process, statements that summarise the key benefit themes for the project were developed and given a percentage weighting, split between each of the themes. The themes are:

- Attractive and safe active mode alternatives 40%
- Healthy people, connected community 30%
- Strong and thriving economy 10%
- Low carbon transport system 20%

The purpose of these statements related back to the purpose of the business case process; to ensure a rigorous assessment of the issues and problems is completed first before any solutions are identified and the decision to invest in these solutions is made.

The development of the problems and benefit statements by the stakeholders attending the workshop resulted in the production of the investment logic map (Figure 2).

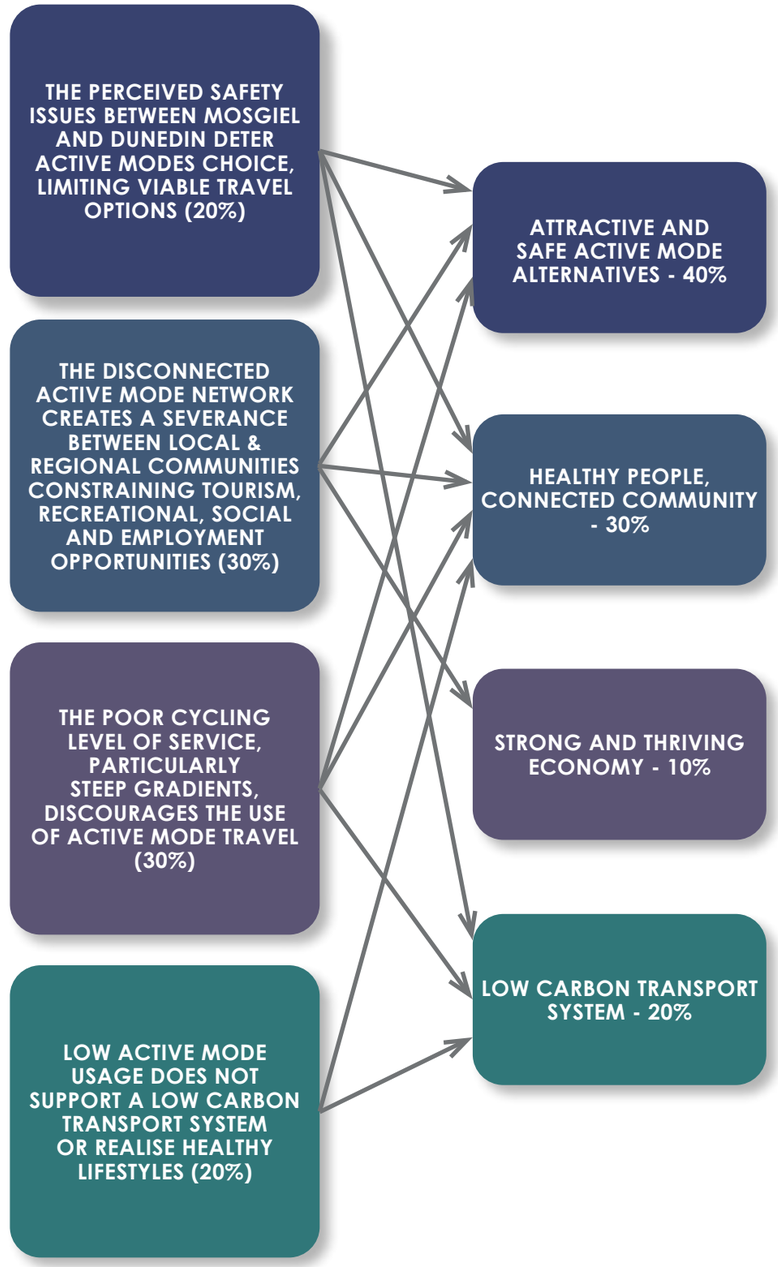


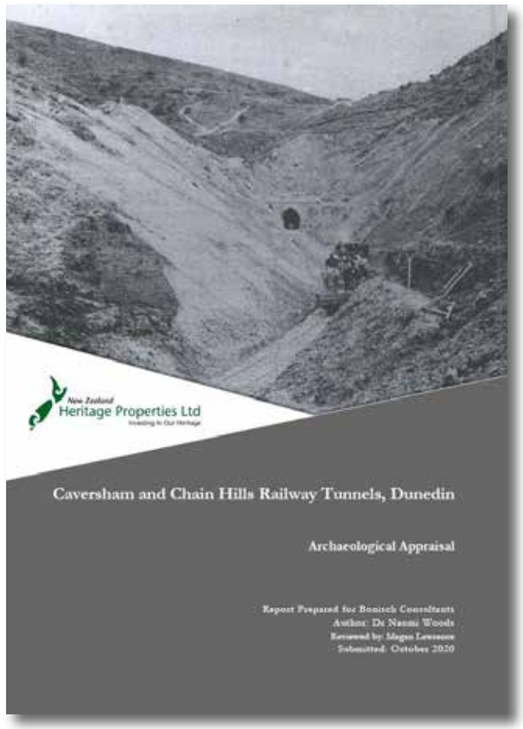
Figure 3: Investment Logic Map (Source: Dunedin Tunnels Cycle Trail; Single Stage Business Case. Abley Limited, Bonisch Consultants Limited (Right)

WORKSHOP 2: FATAL FLAWS

The fatal flaws workshop was the second stakeholder workshop, held on 15 October 2020 at the DCC offices. The intention of this workshop was to identify any fatal flaws of the project that would result in it not proceeding further along the business case process. There were a number of feedback themes which emerged from the workshop, they are summarised in the following:

- Concerns over safety of the tunnels within the route, suggestion to close tunnels at night
- Recreation use would be equally as important as commuter use for the trail - there is potential to connect the trail into the Otago Rail Trail and beyond
- Lighting within the tunnel needs to be explored as an option for safety
- The trail should be constructed to a high quality standard to ensure it feels safe, is looked after and is well used

There were no fatal flaws identified by the attendees of the workshop, this resulted in the project moving forward into the next phase and more developed route options would be put forward for consideration at the next workshop, the longlist workshop.




GEOSOLVE

GeoSolve Ref: 200296
29 September 2020

Bonisch Consultants Ltd
PO Box 1262
Invercargill 8940

Attention: Glenn O'Connor

Preliminary Geotechnical and Structural Dilapidation Assessments Tunnels and Bridges, DCC Tunnels Trail Project

Dear Glenn,

Introduction

In accordance with our agreement dated 11 August 2020 we have undertaken preliminary dilapidation surveys of two tunnels and two bridge structures in conjunction with DCL Consulting Ltd who have provided structural and materials engineering inputs. A Dunedin City Council representative also attended the tunnel inspections.

We note that the objective of the Tunnels Trail Project is to connect Dunedin's urban cycle network with Mosgiel, utilising the decommissioned Chain Hills and Caversham Railway Tunnels as well as part of the existing Kiwirail corridor and various other properties between Wingatui and Caversham, including the two bridges at McLeods Road and Boomer Street.

We have completed site inspections and desktop review of existing information. Our tunnel entry investigations were carried out on 25/09/2020 and the bridge inspections were carried out earlier by DCL Consulting Ltd.

The primary objective of the work was to provide a preliminary condition assessment of the relevant tunnels and bridges to cover the following points:

- Advise the current condition of each tunnel from the structural, materials and geotechnical perspective.
- Advise the current condition of each bridge from the structural and materials perspective.
- Advise whether the tunnels/bridges are fatally flawed in terms of their condition i.e. are they unsafe for human entry?
- Advise conceptually on any works that would be necessary to make these tunnels/bridges safe for short term / long term use as a cycle trail (e.g. falling debris, running water from the roof – any other geotechnical or structural considerations).

DUNEDIN
CROMWELL
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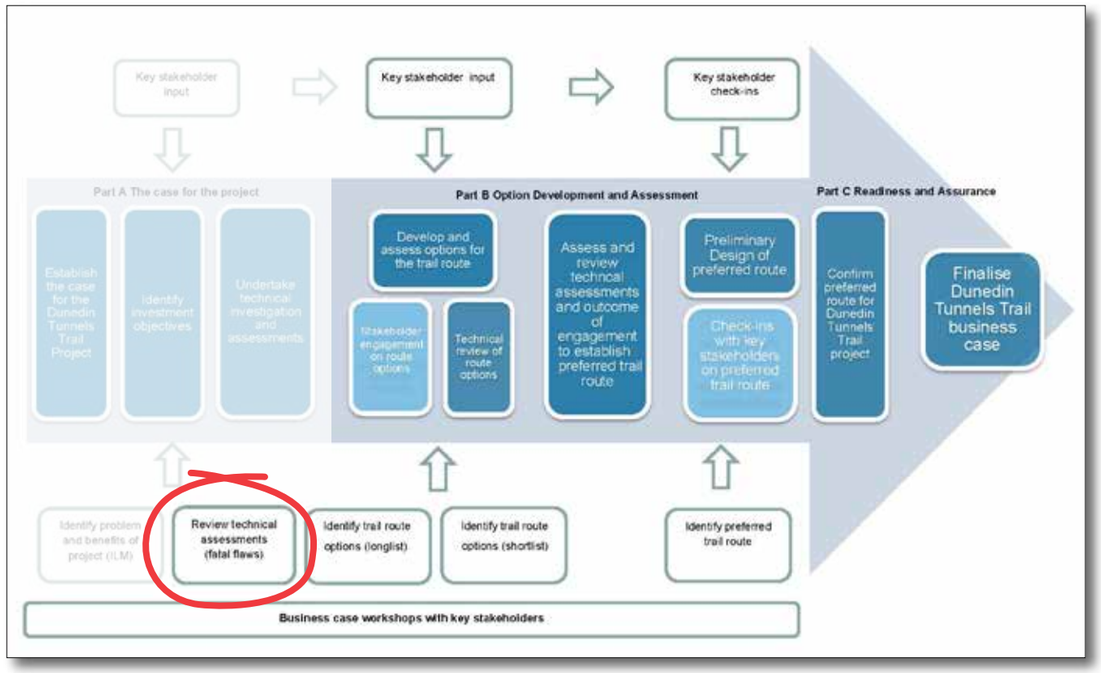


Figure 4: (Top left) Caversham and Chain Hills Railway Tunnels Archaeological Appraisal
Figure 5: (Top Right) Preliminary Geotechnical and Structural Dilapidation Assessments Tunnels and Bridges
Figure 6: (Bottom) Overview of business case and engagement process diagram

WORKSHOP 3: LONGLIST OF OPTIONS

The third workshop with key stakeholders was the longlist workshop, held on 03 November 2020 at DCC offices. The intention of this workshop was to consider a list of all potential routes developed for the project to date against the assessment criteria for the project as set out in the first ILM workshop.

Problem statements developed in the ILM workshop were confirmed and developed in the longlist workshop, the revised statements are:

- **Problem 1:** The perceived safety issues between Mosgiel and Dunedin deter active modes choice, limiting viable travel options (20%)
- **Problem 2:** The disconnected active mode network creates a severance between local & regional communities constraining tourism, recreational, social and employment opportunities (30%)
- **Problem 3:** The poor cycling level of service, particularly steep gradients, discourages the use of active mode travel (30%)
- **Problem 4:** Low active mode usage does not support a low carbon transport system or realise healthy lifestyles (20%)

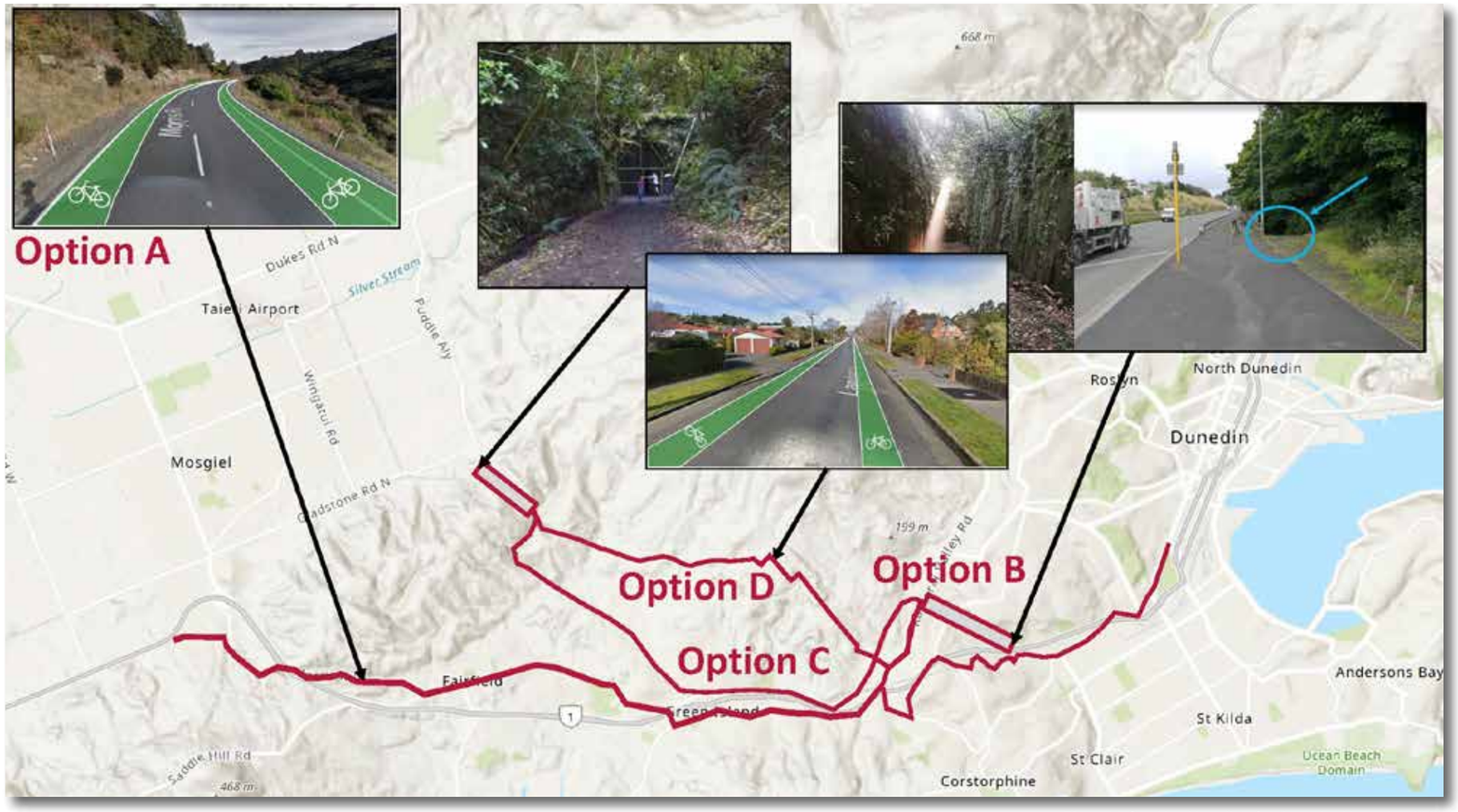


Figure 7: Combined long list of options plan November 2020

The workshop then worked through the long list of options developed for the project and assessed each one against their suitability to meet the problem statements and investment objectives.

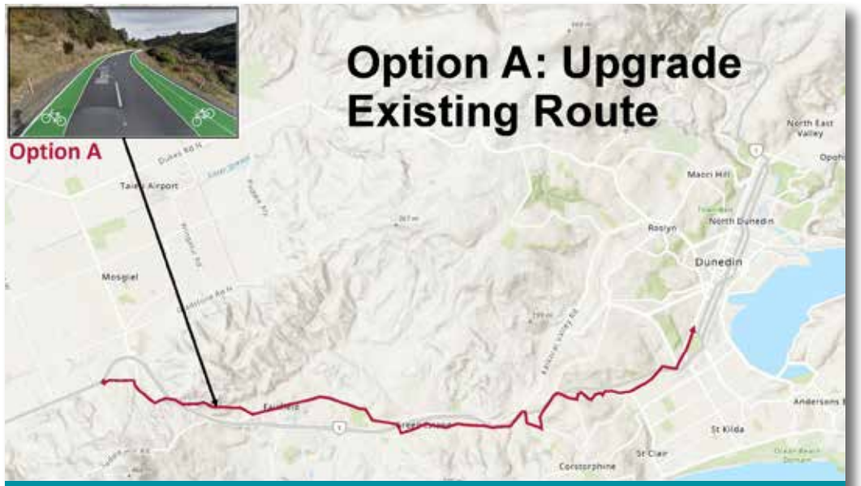
The outcome resulted in two routes being carried forward; the two tunnels route (option C) and upgrade the existing route (do minimum option).

The long list of options considered at the workshop are as displayed on the following page.

LONGLIST ROUTE OPTIONS

Do Minimum Option: Retain existing route along Main South Road through Green Island and Fairfield to Mosgiel without significant changes.

A.



Upgrade existing route to marked cycle lanes from Caversham to Mosgiel with safety improvements.

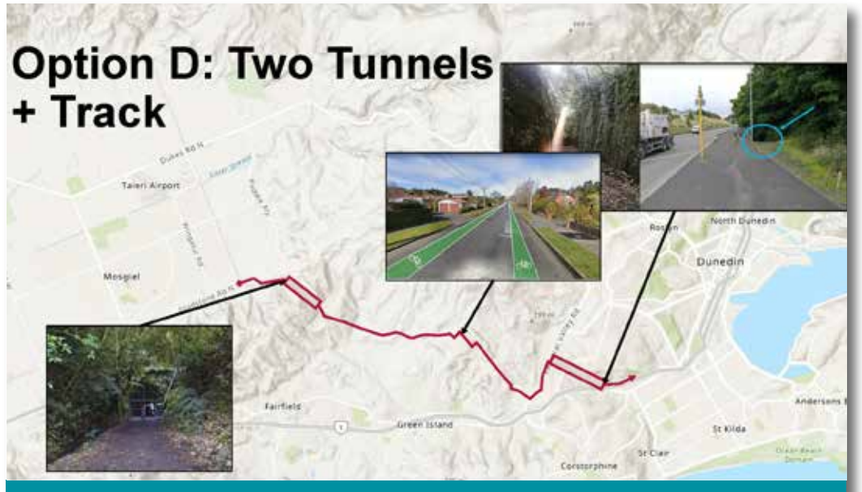
B.

Reopen Caversham tunnel to address gradient issues before continuing on upgraded cycle lanes through Green Island to Mosgiel.

C.

Reopen Caversham and Chain Hills tunnels and connect them by an off road cycleway to Mosgiel north of SH1 along the existing railway alignment.

D.



Reopen the Caversham and Chain Hills tunnels, using marked on road cycle lanes on secondary or side streets north of SH1 through Abbotsford.

WORKSHOP 4: SHORTLIST OF OPTIONS

The shortlist workshop was the fourth workshop, held on 24 March 2021 at DCC offices with key stakeholders of the project in attendance. The workshop recapped on the previous workshops and a summary of the outcomes were discussed.

The current route was then presented to the workshop and assessed by the attendees against the shortlist MCA. This MCA process had been completed previously in the longlist workshop, however the design had now progressed and could therefore be assessed in more detail for its suitability in meeting the criteria.

In the workshop, attendees discussed the original scoring and the new scoring, based on the technical recommendation from the concept design, to agree a final score for each criterion.

Based on the process that had been carried out through workshops 1,2 and 3 the tunnels trail route was confirmed as the preferred route and will be carried forward into preliminary design.

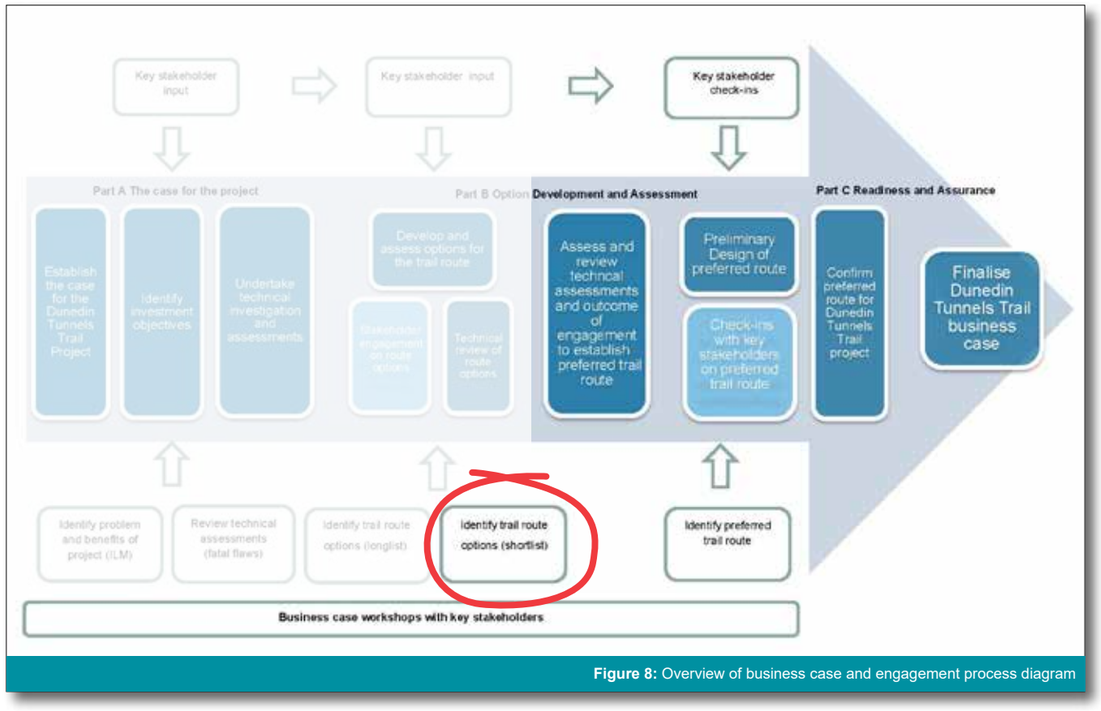


Figure 8: Overview of business case and engagement process diagram

Figure 9: Tunnels trail route concept, section 1 February 2021

Figure 10: Tunnels trail route concept, section 2 February 2021

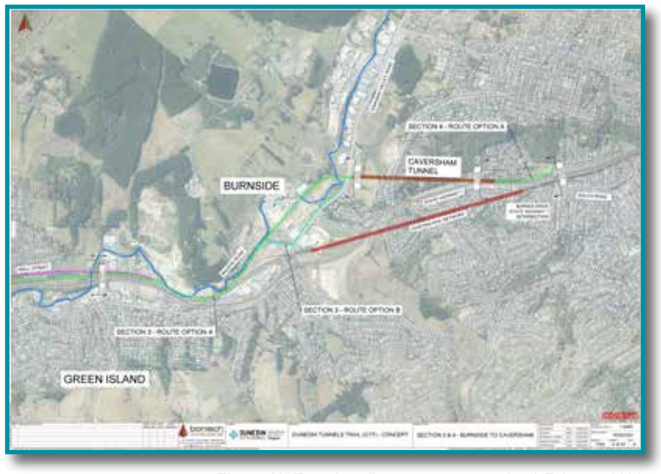


Figure 11: Tunnels trail route concept, section 3 February 2021

STAKEHOLDER ENGAGEMENT

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WORKSHOP 5: STAKEHOLDER WORKSHOP

A stakeholder workshop was held on 11 May 2021 at Dunedin Public Art Gallery with a wide range of project stakeholders to provide them with an overview of the project and get their thoughts on the preferred route developed to date.

The workshop provided an opportunity for any information to be shared that would help shape the project. The outcomes from the workshop have been used to inform the business case process.

Attendees at the workshop were taken through the project background, objectives and scope then given an update on where the project was at along the business case process.

The preferred route was then presented to the workshop so information and feedback could be shared and discussed. The information captured in the workshop was distributed to the attendees following the workshop for any final comments.

A summary of the information from the workshop has been captured on the following pages.

The plan below shows the route and options presented at the workshop for feedback and comment.

Figure 12: Dunedin Tunnels Trail route plan, stakeholder workshop May 2021

STAKEHOLDER WORKSHOP CONT.

FEEDBACK THEMES

We asked the stakeholders a series of questions relating to the project objectives and project outcomes to see what they thought about the preferred route and how it had developed to date.

There was a lot of positive feedback received at the workshop, the main themes of the feedback for each question have been summarised in the following.

WHAT ARE YOUR THOUGHTS ON THE PREFERRED ROUTE?

- There was a strong preference to keep the route off-road as much as possible to ensure the trail is safe and inviting for people to use it
- Many people wanted the proposed route to have as many connections as possible to access the trail from surrounding areas
- There were many suggestions of specific destinations the trail could connect to including; Tunnel Beach, Concord, Silverstream and the Central Otago Rail Trail
- Some people wanted to be able to drive to the trail and be able to park their cars near
- There was support for the trail being used for recreation, people wanted to be able to easily access it from their homes, connections along the trail into the areas it passes through were well supported

HOW DOES THE PREFERRED ROUTE MEET THE PROJECT OBJECTIVES?

- Connections to other trails, shops and projects were supported and encouraged to encourage people to use the trail and cycle more as a transport option
- Many people supported keeping the trail off-road to make it safer for users
- The connection to other existing cycling trails, both in the city and in the surrounding areas was very important
- Getting the surfacing right was very important to ensure the trail is safe, easy to use and a great asset to receive
- The flatness of the route was supported as it will make the trail more appealing and easier to use for e-bikes, children cycling to school and commuters
- There was support for the trail as a great community asset that encourages healthy activity while socialising

STAKEHOLDER WORKSHOP CONT.

WHAT ARE YOUR THOUGHTS ON THE ALTERNATIVE ROUTES?

- Keeping the trail off-road around North Taieri Road was supported due to safety concerns of a very busy road (North Taieri Road)
- A strong desire to keep the trail off-raod wherever possible, the less interaction with the traffic was viewed as more desirable
- Support was voiced for telling the history and heritage of the former rail alignment without necessarily having to use it - interpretation and signage could help with this story telling
- The route which has the flattest gradient and is the easiest to use for all abilities was also supported.

ANY OTHER COMMENTS? HAVE WE MISSED ANYTHING?

- There is a lot more potential to tell more stories about the heritage of the tunnels and former rail route it loosely follows
- Many people wanted the trail to allow for car parking with access to the trail, there was much discussion about informal car parking areas rather than large formal off-street carparks
- Signage to make the trail easy to follow and informative about the history of the former rail route would be appreciated
- Public bathrooms along the journey would be appreciated alongside rubbish bins
- Connecting the route into other existing recreational and commuter cycle routes was reiterated as very important.

ENGAGING WITH EMERGENCY SERVICES

A meeting was held with Emergency services in regard to the project's preferred route on 08 June 2021 at the DCC offices. The emergency services represented in the meeting included; New Zealand Police, Fire & Emergency NZ and St John Ambulance New Zealand.

The same route as shown at the stakeholder workshop (figure 12) was presented to the emergency services stakeholders. A number of key topics were discussed and recorded in meeting minutes that can be found in the appendices of this report.

As requested at the meeting, a site visit in June with emergency services and project personnel was also undertaken to inspect the tunnels proposed to be used in the preferred route. This allowed a rigorous discussion and feedback to be provided on safety and access in the case of an emergency. This information has been incorporated in the development of the project and the preferred route.

The emergency services will continue to be consulted throughout the business case process.

FEEDBACK THEMES

ACCESS FOR EMERGENCY VEHICLES

- Ensure design cater for emergency vehicles to access patients if required along the route
- Turning points to be included where possible to avoid emergency vehicles reversing
- Alternate access points to the trail to be considered - eg. Forestry and farm tracks

REFERENCE POINTS ALONG ROUTES

- Numbering system along lighting posts or similar supported
- Distance markers in tunnels also recommended

TUNNELS ON THE ROUTE

- Emergency communication ability would be supported eg. phone or panic button
- CCTV within Tunnels to be linked into existing city CCTV network monitored by Police
- Cell reception could have a dead spot within the tunnels, to be further considered

TRAIL GENERALLY

- Gravel surfacing has an effect on St John's ability to move patients on stretchers
- Way finding and signage helpful for the trail design to encourage behaviour
- The more off-road the trail, the better for users safety, more encouraging
- Destinations and connections along the trail supported
- Limit speed of trail in places such as tunnel interiors
- Try to avoid trail being behind buildings for crime reduction

CPTED & IPTED

- Permanent lighting within tunnels preferred over sensor lighting
- Ensure private properties adjacent trail clearly defined - public | private space
- Physical barriers recommended to separate tunnel from rail corridor and road when adjacent

FURTHER STAKEHOLDER FEEDBACK

MANA WHENUA

The project team have engaged with local iwi through Aukaha, an external consultant. The project has been advised that they there are no issues or particular concerns from a Te Ao Maori perspective at this stage of the business case process.

Local iwi will be consulted again in the future when the project is moving forward after the business case process.

HERITAGE NEW ZEALAND POUHERE TAONGA

Heritage New Zealand made an email submission to the project providing their advice and comments on the project to date. Their recommendations included:

- Engaging an archaeologist for the design stage of the project
- Overall support for the use of the tunnels in the project with reference to specific issues that need to be considered as the project develops
- Support for including heritage through interpretation where key historic features are and/or use to be

LANDOWNERS

Landowners who are to be effected by the preferred design route have been consulted with since the beginning of the project, dating back to 2016.

Landowners have continued to be consulted throughout the project business case with one-on-one meetings and through the stakeholder workshop, depending on the degree in which the proposed route effects their land.

Land owners will continue to be consulted with throughout the business case and into the future.

CAVERSHAM COMMUNITY GROUP

The Caversham Community Group contacted the DCC in relation to the project expressing their desire to be included in the project. Representatives from the community group were invited and attended the Stakeholder Workshop for the project in May 2021.

ENGAGEMENT THEMES

ROUTE DEVELOPMENT

Themes from the stakeholder feedback have informed how the preferred route has developed. A summary of the key themes and how they have been included in the design are detailed below:

KEEPING THE ROUTE OFF ROAD

- There was a strong preference from stakeholders to keep the route off-road as much as possible to ensure the trail is safe and inviting for people to use it, navigating complex spatial constraints and land availability resulted in some minor alternations to the route.
- The resulting preferred route is off-road for the majority with the exception of a small section along the existing cycle way of Kaikorai Valley road.

CONNECTING THE ROUTE TO LOCAL NEIGHBOURHOODS

- A strong theme of the stakeholder feedback was connections; the preferred route provided many opportunities for connecting to local neighbourhoods and other recreational facilities, such as local parks and walking tracks.
- Where possible, the route utilises existing bridges, underpasses and paths to connect directly to communities.

CREATING A COMMUNITY ASSET FOR EVERYONE TO ENJOY

- There was strong feedback on the trail being developed as a community asset that provide an easy gradient for a range of users with clear signage and other facilities to encourage users to make the most of the trail.
- Future design of the trail will look to include more detail on the types of spaces that will be included along the trail including seating, planting and other facilities.

NEXT STEPS

As the project progresses through preliminary design, engagement with landowners and key stakeholders will continue. The public and local neighbourhoods will also be kept informed about the project with regular updates through local community channels and organisations.

Prior to trail construction starting in 2023, and to reflect stakeholder feedback, further work will be done on elements such as street furniture, planting and improved amenity at key locations along and next to the trail route. This work may provide further opportunity for people to be involved in the development of the project.

All future engagement will be guided by a new engagement plan.

THE PREFERRED ROUTE

The preferred route for the Dunedin Tunnels Trail (Figure 13, below) has been developed following the stakeholder engagement, technical investigations and preliminary design processes.

The route has undergone alignment changes and developments but remains to be a version of the original tunnels trail route that was developed for the start of the business case process by the DTTT in May 2019. The route connects into the existing Mosgiel cycling network at the intersection of Wingatui Road and Factory Road and also connects into the existing Dunedin City urban cycleway network at Barnes Drive, Caversham.

Stakeholder engagement including engagement with property owners, engineering challenges and spatial constraints were the defining factors in the current preferred route orientation. The route will continue to develop as the design progresses in further detail and reaches a higher level of resolution.

Figure 13: Dunedin Tunnels Trail Plan, Route Option F October 2021

APPENDIX

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About Boffa Miskell

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

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Appendix H. MCA on two final routes

			Route section:		
Mode	**Criteria**	**Description**	**Scoring**	**Route E**	**Route F**
Investment objective	1	To reduce deaths and serious injuries of active modes crashes between Mosgiel and Dunedin by 100% by 2035	1 (low) - 5 (high)	A larger proportion of Route F is off road with less road and accessway crossings therefore reducing the risk of active mode creashes. Route F has less cyclist interfeace with busy Road and interchanges compared with Route E.	
			Score	**2**	**4**
	2	To improve perceptions about the safety of active modes between Mosgiel and Dunedin by 15% by 2030	1 (low) - 5 (high)	A larger proportion of Route F is off road with less road and accessway crossings therefore reducing the risk of active mode creashes. Route F has less cyclist interfeace with busy Road and interchanges compared with Route E.	
			Score	**2**	**4**
	3	To improve the level of service for active mode network between Mosgiel and Dunedin to enable community cohesion and participation in social, commercial and employment opportunities by 50% by 2030	1 (low) - 5 (high)	Route F conforms with the concept of the tunnels trail route being an extension to the Otago Rail Trail and will provide greater participation in social, commercial and employment oportunities	
			Score	**3**	**5**
	4	To increase active mode share for journeys between Mosgiel and Dunedin by 3% by 2035	1 (low) - 5 (high)	Route F will be a more attractive off road route than Route E which will encourage greater active mode share	
			Score	**2**	**4**
Cycling	**Safety**	Cycle routes should be safe, in terms of both actual and perceived safety. They should limit conflict between cyclists and others, and provide a good level of personal security. Consideration of volume, speed and mass differentials is key to the safety aspect of the cycleway design	1 (low) - 5 (high)	A larger proportion of Route F is off road with less road and accessway crossings therefore reducing the risk of active mode crashes	
			Score	**2**	**5**
	Comfort	Cycling routes should be smooth, non-slip, well maintained and free of debris, and be designed to avoid complicated manoeuvres. The gradient of individual sections of a route and the cumulative amount of climbing over the route's length will affect people's levels of comfort differently, depending on their preferences and trip purposes.	1 (low) - 5 (high)	Both routes are designed to have a smooth sealed surface full length. Route F has isolated sections of steeper grade to either access or avoid exisitng structures in the rail corridor, overall both routes have a similar number of complicated manoeuvres required.	
			Score	**3**	**3**
	Directness	Cycle routes should be direct, based on desire lines, and result in minimal delays door to door.	1 (low) - 5 (high)	Route F is 200m shorter than Route E by following the more direct route along tha rail corridor	
			Score	**4**	**5**
	Coherence	To be coherent, cycle routes should be continuous, intuitive and recognisable. People cycling and other road users should be able to recognise that this is a cycle route and identify where people are expected to cycle and what facilities are intended exclusively for cycling.	1 (low) - 5 (high)	Route E along main south road is the transition form the Tunnel trail route to an urban cycleway facility. This facility will utilise a combination consist of a bi directional shared path with multiple driveway and access crossing and reuse of exisitng se4ctions of shared path. This will be les sintuitive to and recognisable than Route F which is continuous in the rail corridor.	
			Score	**3**	**5**
	Attractiveness	Cycle routes should integrate with and complement their surroundings, look appealing and contribute in a positive way to a pleasant cycling experience.	1 (low) - 5 (high)	Both Routes will have less desireable and apealing sections. Route E along main south Road will not be an appealing section and Route F alongside the motorway will not be an appealing or pleasesant section to traverse.	
			Score	**3**	**3**
Pedestrians	**Safe from vehicles**	Separation from traffic, traffic volume, heavy vehicle volume, traffic speed	1 (low) - 5 (high)	Route E main south road section is the differentiator between these two routes as cyclists have minimal separation from high traffic volumes and the crossing of Motorway on and off ramps at Kaikorai Valley Road.	
			Score	**2**	**4**
	Safe and appropriate crossings	Crossing the street frequency and type, crossing the side street frequency and type	1 (low) - 5 (high)	Route E has Multiple accessway and side road crossings along Mainsouth Road as well as the crossing of Motorway on and off ramps at Kaikorai Valley Road. Overall Route F has much less interactions between pedestrains and vehicles	
			Score	**2**	**4**
	Secure	Survillience, lighting	1 (low) - 5 (high)	Both routes have large setions of cycle path in the rail coridor which will provide minimal opportunities for passive surveilance. Route E has less cycle path in the rail corridor overall so scores higher.	
			Score	**3**	**2**
	High quality paths	Footpath width, surface quality, gradient, cross fall	1 (low) - 5 (high)	Both Routes E and F will be designed to conform with the requirements for minimum path width, will have an asphalt surface and will both be lit from the Haraway underpass to Barnes Drive. Therefore both routes get the same score for quality. Route E has more driveways and road crossings whilst route F has more section of path at 7% grade.	
			Score	**4**	**4**
	Pleasant and attractive environment	Greenery, comfort features,engaging surroundings	1 (low) - 5 (high)	Higher rating for route F as it is largely isolated from the road carriageway with a longer path length in the rail corridor.	
			Score	**3**	**4**
			TOTAL score	**38**	**56**
	Cost	Capital cost and maintenance/operations	Low, Medium, High, Very high	**$20,590,000**	**$25,000,000**
	Cost estimate details			This option utilises 1600m of existing path which reduces the overall cost. The construction cost of this option can be reduced to **$19.82M** if the path is constructed with a gravel surface from Factory Road through to Grand Vista Drive.	This option does not utilise any sections of existing shared path which leads to a higher overall cost than route E. However there are opportunities to reduce the construction cost of this option during the preliminary design phase through the use of the exisitng kiwirail bridge crossing of Carniforth Street, optimisation of the horizontal and vertical alignment in the rail corridor to reduce earthworks and retaining costs. The ocnstruction cost of this option can be reduced to $**23.46M** if the path is constructed with a gravel surface from Factory Road through to Kaikorai Valley Road.
	BCR			PV Transportation Benefits = $23.7M PV Wider Economic Benefits = $28.5M PV Total Costs = $19.1M ($18.5M for gravel surface) BCR = 1.2, or 2.7 including wider economic benefits (1.3, or 2.8 including wider economic benefits for gravel surface)	PV Transportation Benefits = $22.6M PV Wider Economic Benefits = $28.5M PV Total Costs = $23.0M ($21.6M for gravel surface) BCR = 0.98, or 2.2 including wider economic benefits (1.0, or 2.4 including wider economic benefits for gravel surface)
	Property	Property Implications		Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive) Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive)	Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive) Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive) Will require easement or purchase or entry agreement for reshaping of the land between 70 and 24A North Tairei Road (Unknown if owners are supportive) Landowners of 5 Patterson Street and 4A Runciman Street are occupying the rail corriidor and will be affected by the cycle trail. (No consultation with these landowners undertaken to date) Will require agreement with Waka Kotahi for reclassification a strip of the motorway designation into legal Road to situate the cyleway on (Property Owner is supportive) Will require agreement with Kiwirail and landowner of 58 Kaikorai Valley Road for occupation of the rail corridor which has been leased to the adjacent landowner - (Property Owner is supportive) Will require an easement or purchase of 49 Main South Road to situate the cycleway on (Unknown if Property Owner is Supportive)
	Feasiblity	Identification of any issue that make implementation difficult	Describe	Loss of parking on Main South Road Safety Audit may raise issues with the many accessway crossings on Main South Road alignment that cannot be mitigated	Construction of new or alteration of existing structures in the rail or motorway corridor may require complex traffic management and construction staging
	Risks			The condition of various structures on the route has not been formally assessed No topographical survey has been undertaken to date No Geotechnical Testing has been undertaken to date Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken Loss of parking on Mainsouth Road may result in loss of support and political will for the project The need to gain agreements with kiwirail to occupy the rail corridor may delay the project	The condition of various structures on the route has not been formally assessed No topographical survey has been undertaken to date No Geotechnical Testing has been undertaken to date Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken The reclassification of motorway to legal Road reserve may be a complex and drawn out process - delaying the project The need to gain agreements with kiwirail to occupy the rail corridor may delay the project CPTED review of route option may identify issues requiring mtigation will in turn increase project cost
All	Decision		Preferred - not preferred	Not Preferred	Preferred

Appendix I. Project Control Group options decision paper

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Telephone: 03 218 2546
Email: admin@bonisch.nz
Web: www.bonisch.nz

Memorandum

TO: Jesse Jacometti – Project Manager

FROM: Glenn O'Connor

DATE: 10 September 2021

SUBJECT: **Dunedin Tunnels Trail - Preferred Option Assessment Report**

Executive Summary

Three workshops have been undertaken to date for the Dunedin Tunnels Trail project. These workshops identified the Tunnels Trail route as the preferred alignment for the project. Following this, key landowner consultation was completed which identified that the Tunnels Trail route could not pass through the Ross and Nash landfill site. This necessitated the investigation of alternative alignment options to navigate this site.

Two alternatives have been developed to avoid the landfill site, being Route E, which utilises Mainsouth Road, and Route F which utilises the motorway corridor. A Multi Criteria Analysis (MCA) process was used to determine the option which is most aligned to the investment objectives of the project and will provide the best outcome for pedestrians and cyclists.

Criteria	Route E	Route F
MCA scoring	38	56
Cost	**$20,590,000**	**$25,000,000**
BCR	1.2, or 2.7 including wider economic benefits (1.3, or 2.8 including wider economic benefits for gravel surface)	0.98, or 2.2 including wider economic benefits (1.0, or 2.4 including wider economic benefits for gravel surface)
Property Implications	Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive) Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive)	Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive) Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive)

		Will require easement or purchase or entry agreement for reshaping of the land between 70 and 24A North Tairei Road (Unknown if owners are supportive) Landowners of 5 Patterson Street and 4A Runciman Street are occupying the rail corridor and will be affected by the cycle trail. (No consultation with these landowners undertaken to date) Will require agreement with Waka Kotahi for reclassification of a strip of the motorway designation into legal Road to situate the cycleway on (Property Owner is supportive) Will require agreement with Kiwirail and landowner of 58 Kaikorai Valley Road for occupation of the rail corridor which has been leased to the adjacent landowner - (Property Owner is supportive) Will require an easement or purchase of 49 Main South Road to situate the cycleway on (Unknown if Property Owner is Supportive)
Feasibility Issues	Loss of parking on Main South Road Safety Audit may raise issues with the many accessway crossings on Main South Road alignment that cannot be mitigated	Construction of new or alteration of existing structures in the rail or motorway corridor may require complex traffic management and construction staging
Risks	The condition of various structures on the route has not been formally assessed No topographical survey has been undertaken to date No Geotechnical Testing has been	The condition of various structures on the route has not been formally assessed No topographical survey has been undertaken to date No Geotechnical Testing has been

	undertaken to date Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken Loss of parking on Mainsouth Road may result in loss of support and political will for the project The need to gain agreements with KiwiRail to occupy the rail corridor may delay the project	undertaken to date Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken The reclassification of motorway to legal Road reserve may be a complex and drawn out process - delaying the project The need to gain agreements with Kiwirail to occupy the rail corridor may delay the project CPTED review of route option may identify issues requiring mitigation which will increase project cost
Outcome	**Not Preferred**	**Preferred**

Based on the above assessment we recommend that route option F is progressed to preliminary design as the preferred option for the Dunedin Tunnels Trail Project. Route F scores significantly higher in the MCA process as it is much better aligned to the investment objectives for the project and will deliver a much better outcome for pedestrians and cyclists than Route E. We acknowledge that currently Route F has a higher cost and lower BCR than Route E however with further design development and investigation there is an opportunity to reduce the expected cost estimate through optimisation of the alignment in the rail corridor and potential reuse of the redundant Kiwirial bridge crossing of Carniforth Street.

Background

The Dunedin Tunnels Trail Project Single Stage Business Case (SSBC) investigates options to connect Dunedin's urban cycleway network with Mosgiel and beyond.

To date there have been 3 project workshops held:

- Workshop 1 – ILM - To identify problems and benefits and to define the investment objectives for the project.
- Workshop 2 – Longlist - To identify options which could meet the assessment objectives and identify 2 options to carry forward to concept design. These two options were:
    1. The tunnels trail route
    2. Upgrade of the existing route (Southern route consisting of Morris Road, Main Road and Main South Roads)
- Workshop 3 – Shortlist – To identify a preferred route through the use of an MCA process. This workshop confirmed that the Tunnels Trail Route was the preferred route to take forward to the next stage.

Following the shortlisting workshop a site visit and discussion was held with the owner of the Ross and Nash Landfill site that was proposed to accommodate an easement for the cycleway adjacent to the Kaikorai stream. This visit identified that the Ross and Nash Landfill site would not be a viable

alignment option for the Tunnels Trail due to site and safety constraints associated with creating a cycleway through the primary access to a commercial landfill operation. The landowner was also unsupportive of the proposal.

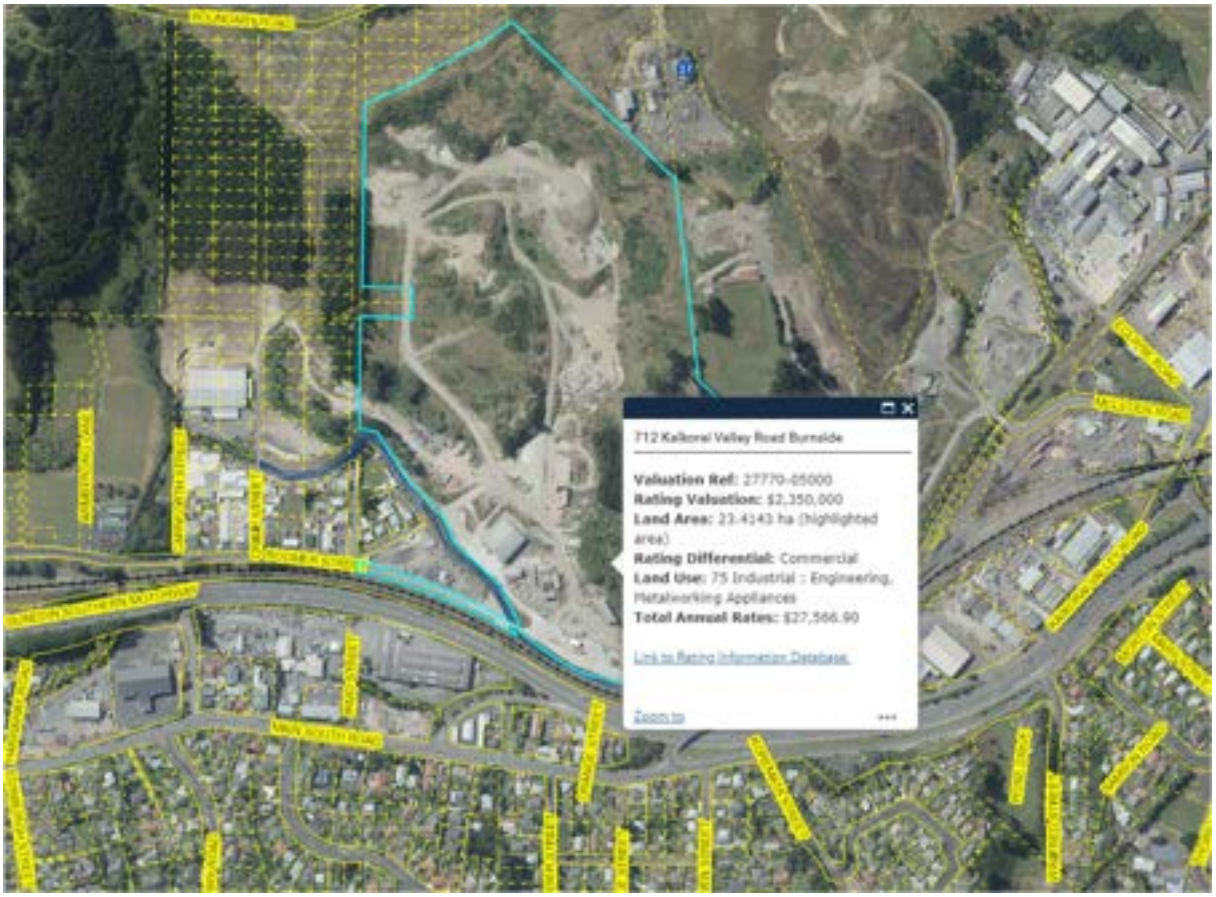


Image 1 – Clip from DCC GIS data showing the location of the Ross and Nash Landfill site

Two route alternatives have been developed to avoid the Ross and Nash Landfill site. These are discussed and assessed in the following report.

Report Purpose

The purpose of this memo report is to present analysis and discussion of the two alternative routes that have been developed to avoid the Ross and Nash Landfill site, and to recommend a preferred option to take forward to preliminary design.

Options Description

Section 1 - Factory Road to the Chainhills Tunnel

Both route option E and F are the same for this section.

This consists of on road cycle lanes on Factory Road before entering the Tairei Industrial rail corridor which it follows south to the Wingatui Racecourse access road then onto Gladstone Road. It travels east on Gladstone Road before heading off through an easement to and through the Chainhills tunnel.

Image 2 – Section 1 of the Dunedin Tunnels Trail alignment – Factory Road to the Chainhills Tunnel

Section 2 - Chainhills Tunnel to Harraway Road underpass

Route option F is maintained largely within the rail-corridor in this section and Route option E deviates from the rail corridor to utilise the existing road corridor network (this deviation was completed to consider an alternative to areas of the rail corridor which would require extensive retaining modification).

Route E deviates from Route F at the Abbotsford School underpass where it crosses to the south under the rail corridor and begins to follow the urban road network along Grand Vista Drive, Severn Street, Abbotsford Road and Unsworth Street before crossing north over the rail corridor using an existing pedestrian overbridge to connect with Runciman and Neil Streets.

Both routes converge prior to the Harraway Road underpass and both utilise the underpass to traverse under the rail corridor to the south.

Image 3 – Section 2 of the Dunedin Tunnels Trail alignment Chainhills Tunnel to Harraway Road underpass

Section 3 - Harraway Road Underpass to Barnes Drive

Route E utilises the Harraway Road underpass and exits on the south side of the Motorway corridor onto Harraway Road before entering onto Mainsouth Road. Route E then follows Mainsouth Road utilising a network of new and existing shared paths before exiting onto Kaikorai Valley Road south of the motorway underpass.

Route F utilises the Harraway Road underpass and exits on the southern side of the rail, adjacent to the north side of the motorway for approximately 800m before rejoining the rail corridor through to Kaikorai Valley Road.

Both routes converge at Kaikorai Valley Road and then head north along the western side of Kaikorai Valley Road through to the Caversham Tunnel and ultimately onto Barnes Drive.

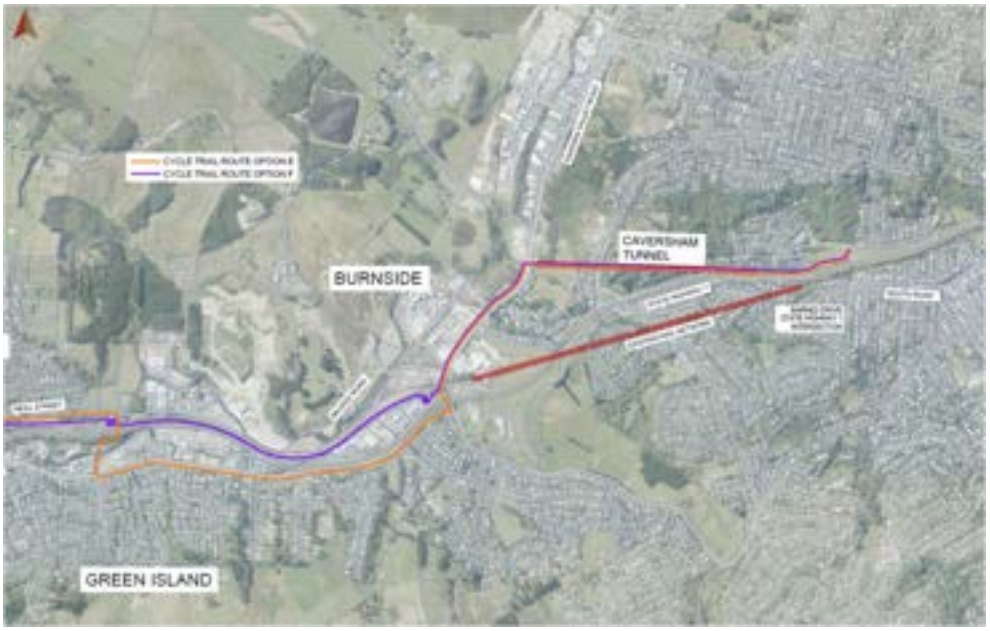


Image 4 – Section 3 of the Dunedin Tunnels Trail alignment – Harraway Road Underpass to Barnes Drive

Summary - General

Both Routes E and F have been designed with a 3m wide path width and an asphalt surface. Route F has isolated sections of 2.5m path width due to space constraints in the rail corridor.

The vertical alignment is similar for Both routes with maximum grades of 7% over short sections with the majority of the route at 3% grade or less.

The cost estimate for both Routes E and F exclude lighting from Factory Road through to the Harraway underpass (except for Chainhills Tunnel which has been allowed to be fully lit).

Refer to appendix A for the full concept route option plans.

Options Analysis

MCA

Both Route options have been assessed using an MCA process covering alignment with the Investment Objectives and Cycling and Pedestrian requirements consisting of:

- Safety
- Comfort
- Directness
- Coherence
- Attractiveness
- Safety from Vehicles
- Safe crossings
- Security
- Quality
- Attractiveness of environment

The full Analysis result is attached to this report in Appendix B

Using a scoring for each criteria of 1 for a low rating and 5 for high, Route E scored 38 against route F's score of 56. Based on the assessment route F is the preferred option.

Cost

The expected cost estimate (50th percentile estimate) for each route option has been calculated as follows

- **Route E = $20,590,000**

This option utilises 1600m of existing path which reduces the overall cost. The construction cost of this option can be reduced to **$19.82M** if the path is constructed with a gravel surface from Factory Road through to Grand Vista Drive.

- **Route F = $25,000,000**

This option does not utilise any sections of existing shared path which leads to a higher overall cost than Route E. However, there are opportunities to reduce the construction cost of this option during the preliminary design phase through the use of the existing Kiwirail bridge crossing of Carniforth Street, optimisation of the horizontal and vertical alignment in the rail corridor to reduce earthworks and retaining costs. The construction cost of this option can be reduced to $**23.46M** if the path is constructed with a gravel surface from Factory Road through to Kaikorai Valley Road.

Refer to Appendix C for Cost estimate summaries

BCR

Route E	Route F
PV Transportation Benefits = $23.7M PV Wider Economic Benefits = $28.5M PV Total Costs = $19.1M ($18.5M for gravel surface) BCR = 1.2, or 2.7 including wider economic benefits (1.3, or 2.8 including wider economic benefits for gravel surface)	PV Transportation Benefits = $22.6M PV Wider Economic Benefits = $28.5M PV Total Costs = $23.0M ($21.6M for gravel surface) BCR = 0.98, or 2.2 including wider economic benefits (1.0, or 2.4 including wider economic benefits for gravel surface)

Property

The effects and implications on property for each route are summarised in the table below

Route E	Route F
Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive)	Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive)

Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive)	Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive) Will require easement or purchase or entry agreement for reshaping of the land between 70 and 24A North Tairei Road (Unknown if owners are supportive) Landowners of 5 Patterson Street and 4A Runciman Street are occupying the rail corridor and will be affected by the cycle trail. (No consultation with these landowners undertaken to date) Will require agreement with Waka Kotahi for reclassification a strip of the motorway designation into legal Road to situate the cycleway on (Property Owner is supportive) Will require agreement with Kiwirail and landowner of 58 Kaikorai Valley Road for occupation of the rail corridor which has been leased to the adjacent landowner - (Property Owner is supportive) Will require an easement or purchase of 49 Main South Road to situate the cycleway on (Unknown if Property Owner is Supportive)

Feasibility

Issues that will make the implementation of either route option difficult are summarized in the table below

Route E	**Route F**
Loss of parking on Main South Road Safety Audit may raise issues with the many accessway crossings on Main South Road alignment that cannot be mitigated	Construction of new or alteration of existing structures in the rail or motorway corridor may require complex traffic management and construction staging

Risk

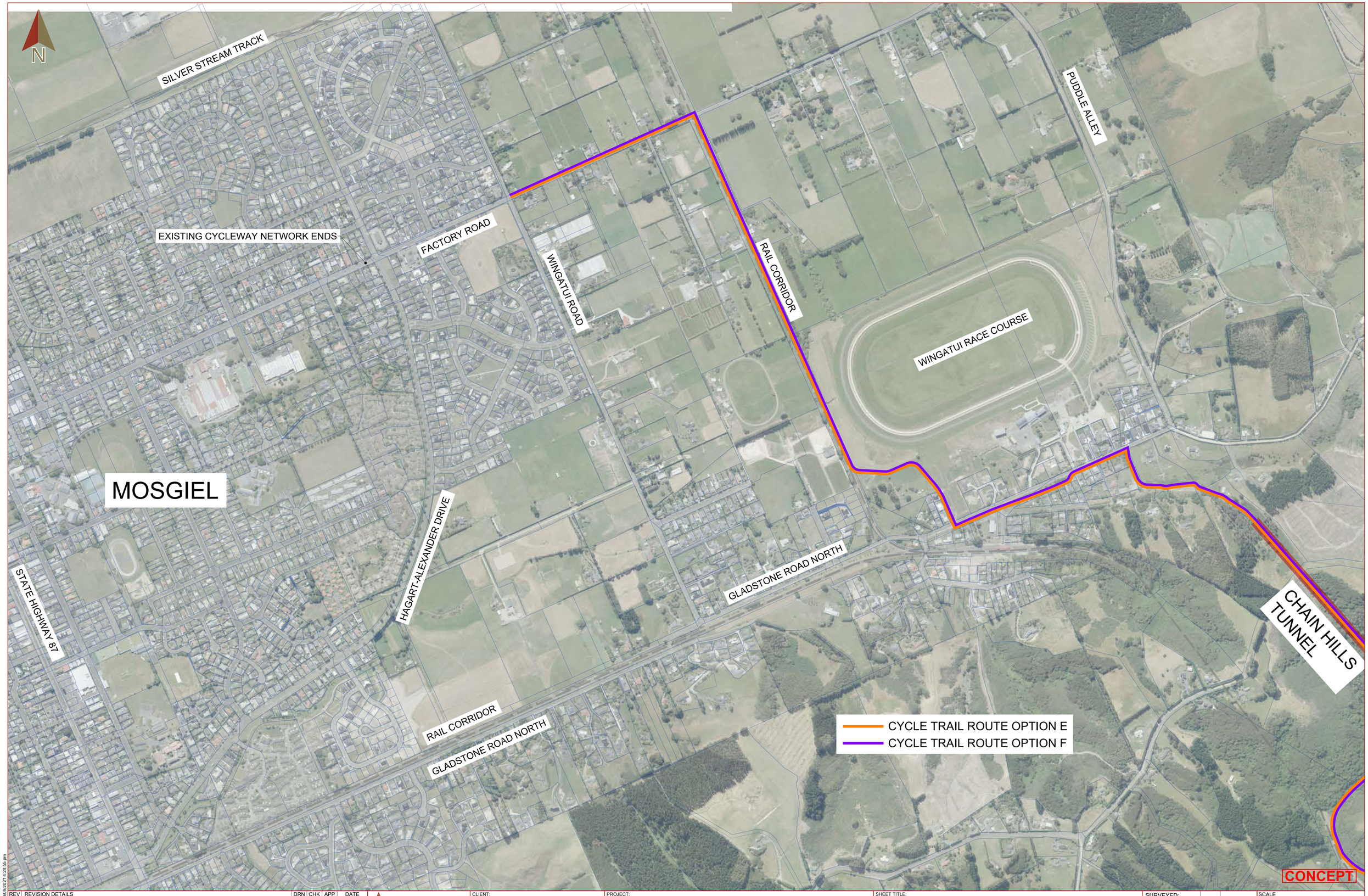
Significant Risks that will need to be mitigated in future phases of the project for each route option are summarized in the table below.

Route E	Route F
The condition of various structures on the route has not been formally assessed	The condition of various structures on the route has not been formally assessed
No topographical survey has been undertaken to date	No topographical survey has been undertaken to date
No Geotechnical Testing has been undertaken to date	No Geotechnical Testing has been undertaken to date
Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken	Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken
Loss of parking on Mainsouth Road may result in loss of support and political will for the project	The reclassification of motorway to legal Road reserve may be a complex and drawn out process - delaying the project
The need to gain agreements with Kiwirail to occupy the rail corridor may delay the project	The need to gain agreements with Kiwirail to occupy the rail corridor may delay the project

Recommendation

Based on the above assessment we recommend that route option F is progressed to preliminary design as the preferred option for the Dunedin Tunnels Trail Project. Route F scores significantly higher in the MCA process as it is much better aligned to the investment objectives for the project and will deliver a much better outcome for pedestrians and cyclists than Route E. We acknowledge that at this time Route F has a higher cost and lower BCR than Route E however with further design development and investigation there is an opportunity to reduce the expected cost estimate through optimisation of the alignment in the rail corridor and potential reuse of the redundant Kiwirial bridge crossing of Carniforth Street.

Appendix A – Concept route option plans



REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR DISCUSSION	BMS		PGO	9/09/2021

bonisch consultants
T 03 218 2546 F 03 214 4285 FP 0800 802 546
19 The Crescent, P.O. Box 1262, Invercargill 9840
E admin@bonisch.nz W www.bonisch.nz

CLIENT: DUNEDIN CITY COUNCIL | kaunihera a-rohe o Otepoti

PROJECT: DUNEDIN TUNNELS TRAIL (CYT) - CONCEPT

SHEET TITLE: ROUTE OPTIONS - MOSGIEL TO CHAIN HILLS TUNNEL

SURVEYED:		
DESIGNED:	PGO	AUG 2021
DRAWN:	BMS	AUG 2021
DRAWING CHECK:		
DESIGN CHECK:		
APPROVED:	PGO	SEP 2021

SCALE (ORIGINAL SIZE A1) 1:5,000

DATE ISSUED 9/09/2021

JOB NO 7332 | SHEET 1 of 3 | REV. A

Last Edited by: Brad on 9/09/2021 4:24:55 pm

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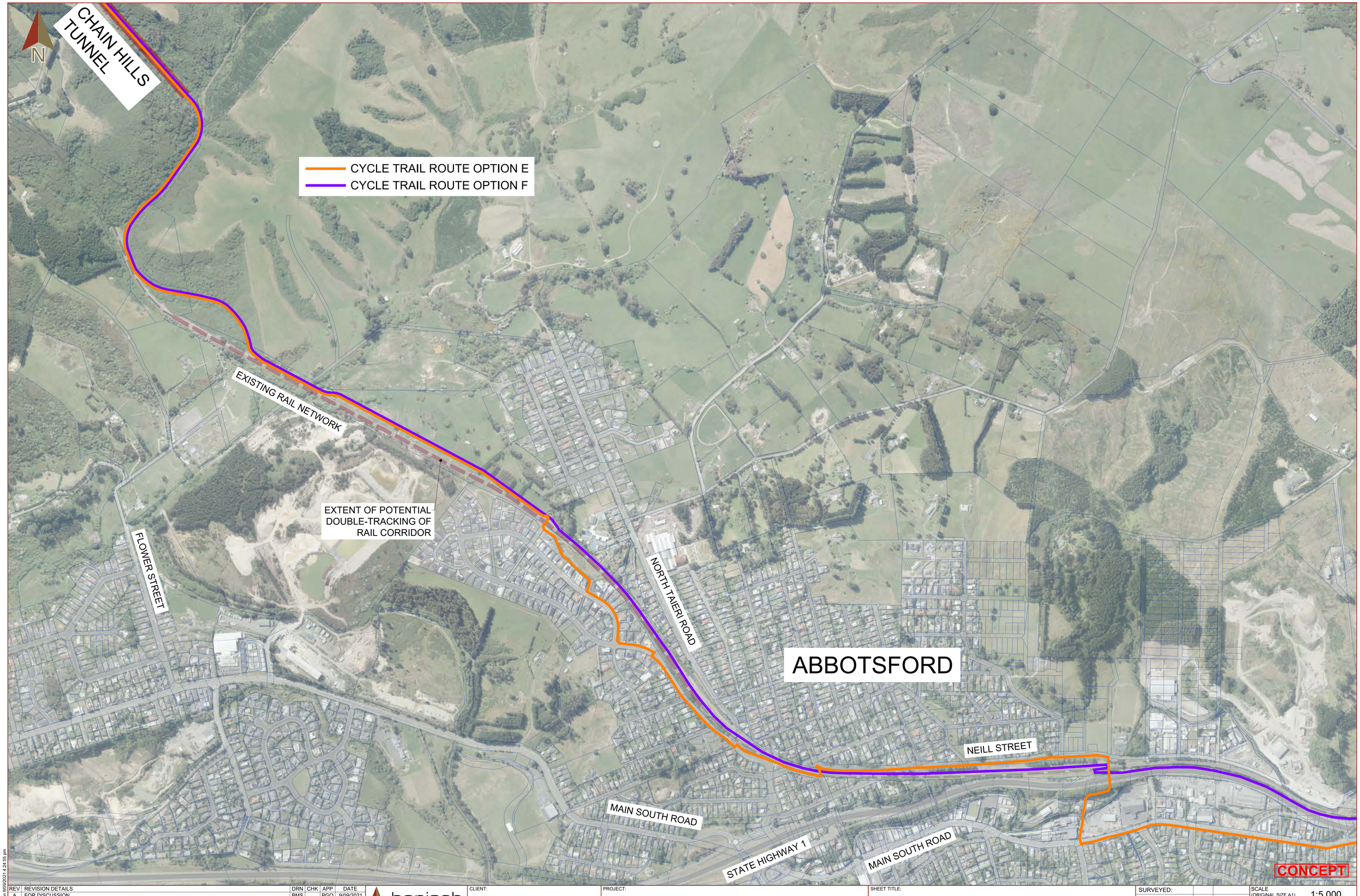

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR DISCUSSION	BMS		PGO	9/09/2021

bonisch consultants
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E admin@bonisch.nz W www.bonisch.nz

CLIENT: DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

PROJECT: DUNEDIN TUNNELS TRAIL (CYT) - CONCEPT

SHEET TITLE: ROUTE OPTIONS - CHAIN HILLS TUNNEL TO BURNSIDE

SURVEYED:			
DESIGNED:	PGO	AUG 2021	
DRAWN:	BMS	AUG 2021	
DRAWING CHECK:			
DESIGN CHECK:			
APPROVED:	PGO	SEP 2021	

SCALE (ORIGINAL SIZE A1): 1:5,000
DATE ISSUED: 9/06/2021
JOB NO: 7332 | SHEET: 2 of 3 | REV.: A

Last Edited by: Brad on 9/09/2021 4:24:55 pm

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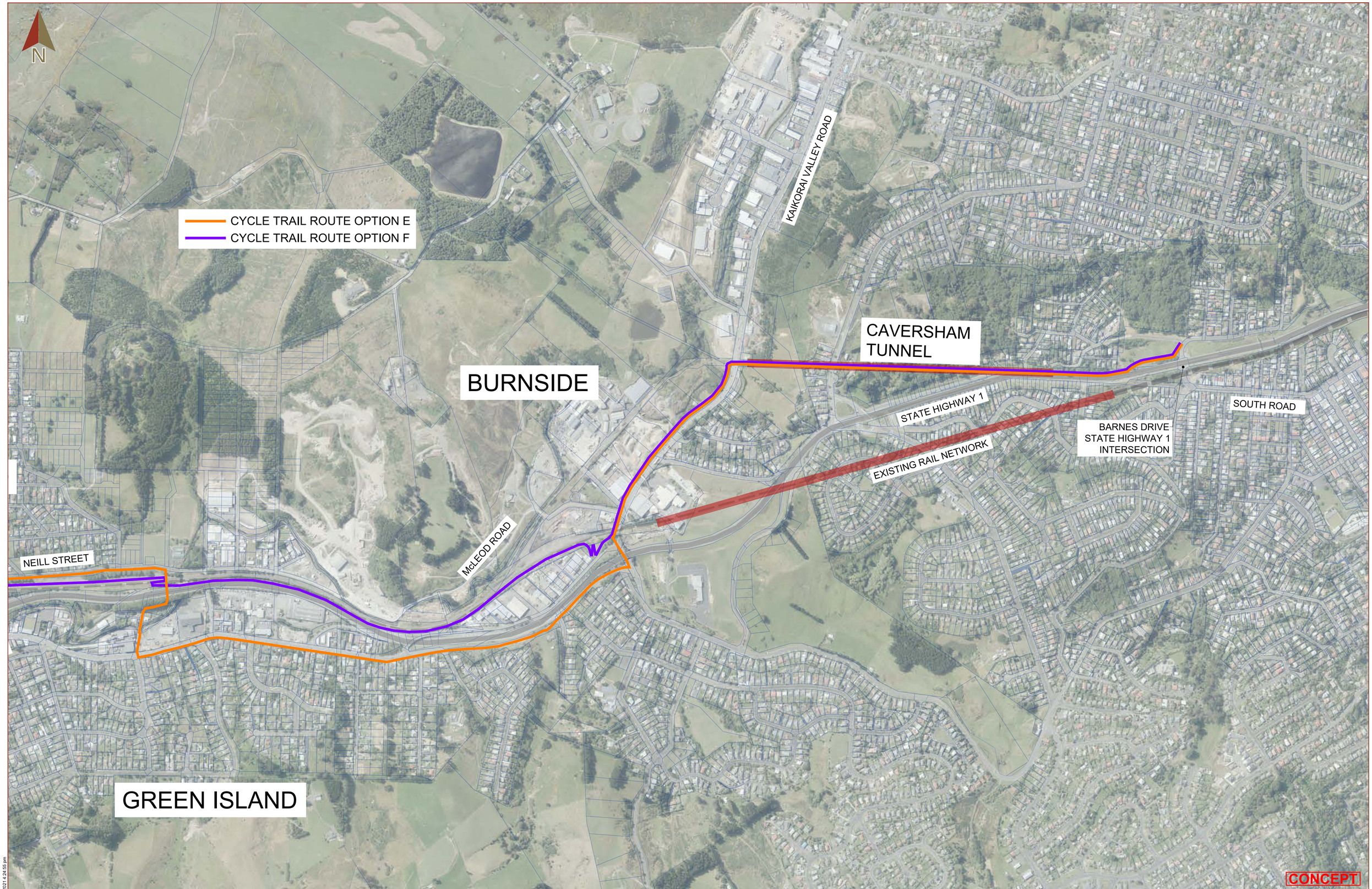

REV	REVISION DETAILS	DRN	CHK	APP	DATE
A	FOR DISCUSSION	BMS		PGO	9/09/2021

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CLIENT: DUNEDIN CITY COUNCIL | kaunihera a-rohe o Ōtepoti

PROJECT: DUNEDIN TUNNELS TRAIL (CYT) - CONCEPT

SHEET TITLE: ROUTE OPTIONS - CHAIN HILLS TUNNEL TO BURNSIDE

SURVEYED:			SCALE (ORIGINAL SIZE A1) 1:5,000
DESIGNED:	PGO	AUG 2021	
DRAWN:	BMS	AUG 2021	DATE ISSUED 9/09/2021
DRAWING CHECK:			
DESIGN CHECK:			JOB NO 7332 / SHEET 3 of 3 / REV. A
APPROVED:	PGO	SEP 2021	

Last Edited by: Brad on 9/09/2021 4:24:55 pm

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Appendix B – MCA

			Route section:		
Mode	**Criteria**	**Description**	**Scoring**	**Route E**	**Route F**
Investment objective	1	To reduce deaths and serious injuries of active modes crashes between Mosgiel and Dunedin by 100% by 2035	1 (low) - 5 (high)	A larger proportion of Route F is off road with less road and accessway crossings therefore reducing the risk of active mode creashes. Route F has less cyclist interfeace with busy Road and interchanges compared with Route E.	
			Score	**2**	**4**
	2	To improve perceptions about the safety of active modes between Mosgiel and Dunedin by 15% by 2030	1 (low) - 5 (high)	A larger proportion of Route F is off road with less road and accessway crossings therefore reducing the risk of active mode creashes. Route F has less cyclist interfeace with busy Road and interchanges compared with Route E.	
			Score	**2**	**4**
	3	To improve the level of service for active mode network between Mosgiel and Dunedin to enable community cohesion and participation in social, commercial and employment opportunities by 50% by 2030	1 (low) - 5 (high)	Route F conforms with the concept of the tunnels trail route being an extension to the Otago Rail Trail and will provide greater participation in social, commercial and employment oportunities	
			Score	**3**	**5**
	4	To increase active mode share for journeys between Mosgiel and Dunedin by 3% by 2035	1 (low) - 5 (high)	Route F will be a more attractive off road route than Route E which will encourage greater active mode share	
			Score	**2**	**4**
Cycling	**Safety**	Cycle routes should be safe, in terms of both actual and perceived safety. They should limit conflict between cyclists and others, and provide a good level of personal security. Consideration of volume, speed and mass differentials is key to the safety aspect of the cycleway design	1 (low) - 5 (high)	A larger proportion of Route F is off road with less road and accessway crossings therefore reducing the risk of active mode crashes	
			Score	**2**	**5**
	Comfort	Cycling routes should be smooth, non-slip, well maintained and free of debris, and be designed to avoid complicated manoeuvres. The gradient of individual sections of a route and the cumulative amount of climbing over the route's length will affect people's levels of comfort differently, depending on their preferences and trip purposes.	1 (low) - 5 (high)	Both routes are designed to have a smooth sealed surface full length. Route F has isolated sections of steeper grade to either access or avoid exisitng structures in the rail corridor, overall both routes have a similar number of complicated manoeuvres required.	
			Score	**3**	**3**
	Directness	Cycle routes should be direct, based on desire lines, and result in minimal delays door to door.	1 (low) - 5 (high)	Route F is 200m shorter than Route E by following the more direct route along tha rail corridor	
			Score	**4**	**5**
	Coherence	To be coherent, cycle routes should be continuous, intuitive and recognisable. People cycling and other road users should be able to recognise that this is a cycle route and identify where people are expected to cycle and what facilities are intended exclusively for cycling.	1 (low) - 5 (high)	Route E along main south road is the transition form the Tunnel trail route to an urban cycleway facility. This facility will utilise a combination consist of a bi directional shared path with multiple driveway and access crossing and reuse of exisitng se4ctions of shared path. This will be les sintuitive to and recognisable than Route F which is continuous in the rail corridor.	
			Score	**3**	**5**
	Attractiveness	Cycle routes should integrate with and complement their surroundings, look appealing and contribute in a positive way to a pleasant cycling experience.	1 (low) - 5 (high)	Both Routes will have less desireable and apealing sections. Route E along main south Road will not be an appealing section and Route F alongside the motorway will not be an appealing or pleasesant section to traverse.	
			Score	**3**	**3**
Pedestrians	**Safe from vehicles**	Separation from traffic, traffic volume, heavy vehicle volume, traffic speed	1 (low) - 5 (high)	Route E main south road section is the differentiator between these two routes as cyclists have minimal separation from high traffic volumes and the crossing of Motorway on and off ramps at Kaikorai Valley Road.	
			Score	**2**	**4**
	Safe and appropriate crossings	Crossing the street frequency and type, crossing the side street frequency and type	1 (low) - 5 (high)	Route E has Multiple accessway and side road crossings along Mainsouth Road as well as the crossing of Motorway on and off ramps at Kaikorai Valley Road. Overall Route F has much less interactions between pedestrains and vehicles	
			Score	**2**	**4**
	Secure	Survillience, lighting	1 (low) - 5 (high)	Both routes have large setions of cycle path in the rail coridor which will provide minimal opportunities for passive surveilance. Route E has less cycle path in the rail corridor overall so scores higher.	
			Score	**3**	**2**
	High quality paths	Footpath width, surface quality, gradient, cross fall	1 (low) - 5 (high)	Both Routes E and F will be designed to conform with the requirements for minimum path width, will have an asphalt surface and will both be lit from the Haraway underpass to Barnes Drive. Therefore both routes get the same score for quality. Route E has more driveways and road crossings whilst route F has more section of path at 7% grade.	
			Score	**4**	**4**
	Pleasant and attractive environment	Greenery, comfort features,engaging surroundings	1 (low) - 5 (high)	Higher rating for route F as it is largely isolated from the road carriageway with a longer path length in the rail corridor.	
			Score	**3**	**4**
			TOTAL score	**38**	**56**
	Cost	Capital cost and maintenance/operations	Low, Medium, High, Very high	**$20,590,000**	**$25,000,000**
	Cost estimate details			This option utilises 1600m of existing path which reduces the overall cost. The construction cost of this option can be reduced to **$19.82M** if the path is constructed with a gravel surface from Factory Road through to Grand Vista Drive.	This option does not utilise any sections of existing shared path which leads to a higher overall cost than route E. However there are opportunities to reduce the construction cost of this option during the preliminary design phase through the use of the exisitng kiwirail bridge crossing of Carniforth Street, optimisation of the horizontal and vertical alignment in the rail corridor to reduce earthworks and retaining costs. The ocnstruction cost of this option can be reduced to $**23.46M** if the path is constructed with a gravel surface from Factory Road through to Kaikorai Valley Road.
	BCR			PV Transportation Benefits = $23.7M PV Wider Economic Benefits = $28.5M PV Total Costs = $19.1M ($18.5M for gravel surface) BCR = 1.2, or 2.7 including wider economic benefits (1.3, or 2.8 including wider economic benefits for gravel surface)	PV Transportation Benefits = $22.6M PV Wider Economic Benefits = $28.5M PV Total Costs = $23.0M ($21.6M for gravel surface) BCR = 0.98, or 2.2 including wider economic benefits (1.0, or 2.4 including wider economic benefits for gravel surface)
	Property	Property Implications		Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive) Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive)	Will require easement over Wingatui Racecourse land - (Property Owner is supportive) Will require agreement with Kiwirail for occupation of their corridor with the cycle trail - (Property Owner is supportive) Will require an easement or purchase of the old rail corridor through Wendy Campbells Land (Property Owner is Supportive) Will require easement or purchase or entry agreement for reshaping of the land between 70 and 24A North Tairei Road (Unknown if owners are supportive) Landowners of 5 Patterson Street and 4A Runciman Street are occupying the rail corriidor and will be affected by the cycle trail. (No consultation with these landowners undertaken to date) Will require agreement with Waka Kotahi for reclassification a strip of the motorway designation into legal Road to situate the cyleway on (Property Owner is supportive) Will require agreement with Kiwirail and landowner of 58 Kaikorai Valley Road for occupation of the rail corridor which has been leased to the adjacent landowner - (Property Owner is supportive) Will require an easement or purchase of 49 Main South Road to situate the cycleway on (Unknown if Property Owner is Supportive)
	Feasiblity	Identification of any issue that make implementation difficult	Describe	Loss of parking on Main South Road Safety Audit may raise issues with the many accessway crossings on Main South Road alignment that cannot be mitigated	Construction of new or alteration of existing structures in the rail or motorway corridor may require complex traffic management and construction staging
	Risks			The condition of various structures on the route has not been formally assessed No topographical survey has been undertaken to date No Geotechnical Testing has been undertaken to date Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken Loss of parking on Mainsouth Road may result in loss of support and political will for the project The need to gain agreements with kiwirail to occupy the rail corridor may delay the project	The condition of various structures on the route has not been formally assessed No topographical survey has been undertaken to date No Geotechnical Testing has been undertaken to date Air Quality Monitoring in both Chainhills and Caversham tunnels has not been recently undertaken The reclassification of motorway to legal Road reserve may be a complex and drawn out process - delaying the project The need to gain agreements with kiwirail to occupy the rail corridor may delay the project CPTED review of route option may identify issues requiring mtigation will in turn increase project cost
All	Decision		Preferred - not preferred	Not Preferred	Preferred

Appendix C – Cost estimate summaries

CYT	Prepared	8/07/2021	M Dawson
Dunedin Tunnels Trail	Checked	9/09/2021	G O'Connor
Route E - Concept Design Cost Estimate	Approved	9/09/2021	G O'Connor

Section	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
	Summary				
A	Factory Road (Wingatui Road to Railway Corridor)				$ 339,000.00
B	Railway Corridor to Gladstone road (northern side approach)				$ 1,207,000.00
C	Gladstone roadside cycleway				$ 358,000.00
D	Gladstone Road off-road cycle track				$ 494,000.00
E	Wingatui/Chain Hills Tunnel				$ 1,379,000.00
F	Sum of Chain Hill Tunnel structural repairs, based on Terra Managed Design report 14 May 2013				$ 143,000.00
G	Chainhills tunnel eastern Portal to Grandvista Drive				$ 2,733,000.00
H	Grandvista Drive to Severn St				$ 105,000.00
I	Severn Street to existing Zebra crossing at begining of Abbotsford Road				$ 281,000.00
J	Existing Zebra crossing at begining of Abbotsford Road to Runciman Street (including existing overbridge)				$ 426,000.00
K	Runciman Street to Neill Street				$ 75,000.00
L	Neill Street to Existing underpass				$ 922,000.00
M	Existing Underpass to start of Main South Road				$ 148,000.00
N	Main South Road to Kaikorai Valley Road				$ 1,107,000.00
O	Kaikori Valley Road to end of cycleway				$ 1,554,000.00
P	Caversham/Burnside Tunnel				$ 3,689,000.00
Q	Sum for Caversham Tunnel structural repairs, based on Opus Feasibility report 15 August 2010				$ 444,000.00
R	Caversham Tunnel Portal to Barnes Drive				$ 768,000.00
S	Sundries				$ 2,207,000.00
	Total Physical Works including 15% contingency				**$ 18,379,000.00**
T	Legal fees, council rates and levies, RMA costs, NZTA fees, Kiwirail fees and lease costs, Building consent costs and contributions	%	2%	$ 18,379,000.00	$ 367,580.00
U	Professional fees (Excludes Business case and preliminary design fees which are assumed to be a sunk cost, includes PM costs)	%	8%	$ 18,379,000.00	$ 1,470,320.00
V	Land acquisition	%	2%	$ 18,379,000.00	$ 367,580.00
	Total				**$ 20,584,480.00**
	Total Project Cost (Rounded)				**$ 20,590,000.00**
	Exclusions				
	Temporary accommodation and/or relocation cost				
	Escalation, cost fluctuations and currency fluctuations				
	GST				
	Finance and interest				
	Ventilation to tunnels				
	Lighting from Factory Road to Haraway underpass				
	Security in tunnels (cameras and emergency phones etc.)				

CYT	Prepared	8/07/2021	M Dawson
Dunedin Tunnels Trail	Checked	9/09/2021	G O'Connor
Route F - Concept Design Cost Estimate	Approved	9/09/2021	G O'Connor

Section	DESCRIPTION	UNIT	QUANTITY	RATE	TOTAL
	Summary				
A	Factory Road (Wingatui Road to Railway Corridor)				$ 339,000.00
B	Railway Corridor to Gladstone road (northern side approach)				$ 1,201,000.00
C	Gladstone roadside cycleway				$ 358,000.00
D	Gladstone Road off-road cycle track				$ 494,000.00
E	Wingatui/Chain Hills Tunnel				$ 1,379,000.00
F	Sum of Chain Hill Tunnel structural repairs, based on Terra Managed Design report 14 May 201				$ 143,000.00
G	Chainhills tunnel eastern Portal to Underpass at Haraway Road				$ 7,371,000.00
H	Haraway Road Underpass to Kaikorai Valley Road (motorway and rail corridor)				$ 2,779,000.00
I	Kaikori Valley Road - Rail bridge to caversham tunnels				$ 1,211,000.00
J	Caversham/Burnside Tunnel				$ 3,689,000.00
K	Sum for Caversham Tunnel structural repairs, based on Opus Feasibility report 15 August 2010				$ 444,000.00
L	Caversham Tunnel Portal to Barnes Drive				$ 768,000.00
M	Sundries				$ 2,137,000.00
N	**Total Physical Works including 15% contingency**				**$ 22,313,000.00**
O					
P	Legal fees, council rates and levies, RMA costs, NZTA fees, Kiwirail fees and lease costs, Building consent costs and contributions	%	2%	$ 22,313,000.00	$ 446,260.00
Q	Professional fees (Excludes Business case and preliminary design fees which are assumed to be a sunk cost, includes PM costs)	%	8%	$ 22,313,000.00	$ 1,785,040.00
R	Land acquisition	%	2%	$ 22,313,000.00	$ 446,260.00
	Total				**$ 24,990,560.00**
	Total Project Cost (Rounded)				**$ 25,000,000.00**
	Exclusions				
	Temporary accommodation and/or relocation cost				
	Escalation, cost fluctuations and currency fluctuations				
	GST				
	Finance and interest				
	Ventilation to tunnels				
	Lighting from Factory Road to Haraway underpass				
	Security in tunnels (cameras and emergency phones etc.)				

Appendix J. Economic analysis

Summary of Costs and Benefits, PV 2021$

From Western-Only Benefits

YrNum	Year	PV Total Costs	NPV TTC Saving - Existing Users	NPV TTC Saving - New Users	NPV H&E Benefit	NPV Safety Benefit	NPV JTW Benefit	NPV Emissions	NPV Tourism Benefit	PV Total Benefits ex tourism	PV Total Benefits
	2020	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2021	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2022	$1,797,328	$0	$0	$0	$0	$0	$0	$0	$0	$0
1	2023	$4,939,236	$0	$0	$0	$0	$0	$0	$0	$0	$0
2	2024	$7,331,522	$8,033	$3,909	$73,337	$1,184	$17,601	$1,597	$101,995	$105,662	$207,657
3	2025	$6,774,514	$15,812	$7,694	$144,509	$2,331	$34,695	$3,195	$200,519	$208,236	$408,755
4	2026	$2,620,127	$15,554	$7,568	$142,359	$2,293	$34,194	$3,191	$197,106	$205,159	$402,266
5	2027	$53,573	$90,567	$49,595	$586,053	$14,178	$145,343	$16,582	$968,759	$902,318	$1,871,077
6	2028	$51,512	$88,998	$48,735	$576,965	$13,933	$143,246	$16,553	$952,272	$888,429	$1,840,701
7	2029	$49,531	$87,415	$47,869	$567,921	$13,685	$141,180	$16,521	$936,065	$874,592	$1,810,657
8	2030	$47,626	$85,823	$46,996	$558,929	$13,435	$139,144	$16,489	$920,134	$860,817	$1,780,951
9	2031	$45,794	$84,223	$46,121	$549,995	$13,185	$137,137	$16,260	$904,474	$846,922	$1,751,396
10	2032	$44,033	$82,620	$45,243	$541,125	$12,934	$135,159	$16,097	$889,080	$833,177	$1,722,258
11	2033	$42,339	$81,015	$44,364	$532,323	$12,683	$133,210	$15,787	$873,949	$819,383	$1,693,332
12	2034	$40,711	$79,412	$43,486	$523,596	$12,432	$131,289	$15,526	$859,075	$805,740	$1,664,815
13	2035	$39,145	$77,812	$42,610	$514,947	$12,181	$129,395	$15,127	$844,454	$792,072	$1,636,526
14	2036	$37,639	$76,218	$41,737	$506,381	$11,932	$127,529	$14,746	$830,082	$778,542	$1,608,625
15	2037	$36,192	$74,631	$40,868	$497,901	$11,683	$125,689	$14,279	$815,955	$765,051	$1,581,006
16	2038	$34,800	$73,054	$40,004	$489,510	$11,436	$123,876	$13,744	$802,068	$751,625	$1,553,693
17	2039	$33,461	$71,487	$39,146	$481,212	$11,191	$122,090	$13,110	$788,417	$738,237	$1,526,654
18	2040	$32,174	$69,933	$38,295	$473,009	$10,948	$120,329	$12,346	$774,999	$724,861	$1,499,860
19	2041	$30,937	$68,393	$37,452	$464,904	$10,707	$118,593	$11,492	$761,809	$711,541	$1,473,350
20	2042	$29,747	$66,868	$36,617	$456,898	$10,468	$116,883	$10,676	$748,844	$698,409	$1,447,253
21	2043	$28,603	$65,359	$35,790	$448,993	$10,232	$115,197	$9,837	$736,099	$685,408	$1,421,507
22	2044	$27,503	$63,867	$34,973	$441,192	$9,998	$113,536	$9,048	$723,571	$672,613	$1,396,185
23	2045	$26,445	$62,393	$34,166	$433,494	$9,768	$111,898	$8,362	$711,257	$660,081	$1,371,338
24	2046	$25,428	$60,938	$33,370	$425,902	$9,540	$110,284	$7,701	$699,151	$647,735	$1,346,886
25	2047	$24,450	$59,502	$32,584	$418,417	$9,315	$108,694	$7,056	$687,252	$635,567	$1,322,820
26	2048	$23,509	$58,087	$31,809	$411,038	$9,094	$107,126	$6,488	$675,556	$623,641	$1,299,197
27	2049	$22,605	$56,693	$31,045	$403,766	$8,875	$105,581	$5,973	$664,059	$611,934	$1,275,992
28	2050	$21,736	$55,320	$30,293	$396,602	$8,660	$104,058	$5,492	$652,757	$600,427	$1,253,183
29	2051	$20,900	$53,969	$29,553	$389,547	$8,449	$102,557	$5,413	$641,647	$589,488	$1,231,136
30	2052	$20,096	$52,640	$28,826	$382,599	$8,241	$101,078	$5,335	$630,727	$578,718	$1,209,445
31	2053	$19,323	$51,333	$28,110	$375,760	$8,036	$99,620	$5,258	$619,993	$568,117	$1,188,110
32	2054	$18,580	$50,049	$27,407	$369,028	$7,835	$98,183	$5,182	$609,441	$557,685	$1,167,125
33	2055	$17,865	$48,788	$26,716	$362,404	$7,638	$96,767	$5,107	$599,069	$547,420	$1,146,489
34	2056	$17,178	$47,550	$26,038	$355,886	$7,444	$95,371	$5,034	$588,873	$537,324	$1,126,197
35	2057	$16,517	$46,335	$25,373	$349,476	$7,254	$93,996	$4,961	$578,851	$527,394	$1,106,245
36	2058	$15,882	$45,143	$24,720	$343,171	$7,067	$92,640	$4,890	$568,999	$517,631	$1,086,630
37	2059	$15,271	$43,974	$24,080	$336,972	$6,884	$91,304	$4,819	$559,315	$508,033	$1,067,348
38	2060	$14,684	$42,828	$23,453	$330,877	$6,705	$89,987	$4,749	$549,796	$498,600	$1,048,396
39	2061	$14,119	$41,706	$22,838	$324,886	$6,529	$88,689	$4,681	$540,439	$489,329	$1,029,768
40	2062	$13,576	$40,606	$22,236	$318,998	$6,357	$87,410	$4,613	$531,241	$480,220	$1,011,461
	2063	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2064	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0
	2065	$0	$0	$0	$0	$0	$0	$0	$0	$0	$0

Total Benefits, Costs and BCR

	PV Total Costs	NPV TTC Saving - Existing Users	NPV TTC Saving - New Users	NPV H&E Benefit	NPV Safety Benefit	NPV JTW Benefit	NPV Emissions	NPV Tourism Benefit	PV Total Benefits	BCR
Total	$24,516,210	$2,344,950	$1,281,690	$16,300,881	$366,741	$4,190,559	$363,319	$26,738,148	$51,586,288	2.1
Ex Tourism Estimate	$24,516,210	$2,344,950	$1,281,690	$16,300,881	$366,741	$4,190,559	$363,319	$0	$24,848,140	1.0

Incremental Increase from Western Section Only

	PV Total Costs	NPV TTC Saving - Existing Users	NPV TTC Saving - New Users	NPV H&E Benefit	NPV Safety Benefit	NPV JTW Benefit	NPV Emissions	NPV Tourism Benefit	PV Total Benefits	BCR
Total	$16,769,890	$1,916,275	$1,073,100	$12,072,317	$303,540	$3,152,447	$288,224	$20,990,822	$39,796,726	2.4
Ex Tourism Estimate	$16,769,890	$1,916,275	$1,073,100	$12,072,317	$303,540	$3,152,447	$288,224	$0	$18,805,904	1.1

Appendix K. Consenting strategy

Consenting Strategy

1 Introduction

The preferred option recommends proceeding with the alignment that utilises two decommissioned rail tunnels to provide an alternative to riding over two steep hills and contribute to building an attractive micro-mobility transport options for people getting to/from work, school and key destinations. To provide suitable trail access to the tunnel entrances, and to connect from the tunnel to the main route alignment alongside KiwiRail corridor, some property purchase is required. Additionally, in order to make the trail safe and to standards, some retaining and structures will be required.

2 Legislative and Policy Context

This section considers the Resource Management Act 1991 and the relevant statutory and draft RMA documents that apply to the Project.

2.1 Resource Management Act 1991

The Resource Management Act 1991 (RMA) is the principal statutory framework for consideration of the consent requirements prior to implementation. It provides the framework under which statutory development can occur.

2.1.1 Council Jurisdictions

Part 4 of the RMA also sets out the jurisdiction of regional and territorial local authorities. For the purposes of the Tunnel Trail Project preferred option, the alignment is above the line of the mean high water springs and therefore within the jurisdiction of the relevant territorial local authority (in this instance, Dunedin City Council (DCC)). Any part of the project that intersects with fresh water resources (such as the Abbots Creek) fall within the jurisdiction of the relevant regional council (in this instance, Otago Regional Council (ORC)).

Each Council is responsible for deciding on resource consents for work within their jurisdictional areas. Through their plans and statutory documents, the Councils also set the objectives and policy frameworks under which projects are to be considered.

2.1.2 Designations

"**Designations**" sought by a notice of requirement (NOR) are typically the preferred choice of territorial local authority RMA approval for network utilities such as roads, rail, high voltage electricity transmission and for the distribution of water for supply including irrigation. These activities can be carried out by a "requiring authority" which is a term utilised for an organisation with financial responsibility for the public work or utility activity involved. A requiring authority means:

A. A Minister of the Crown; or
B. A local authority; or
C. A network utility operator approved as a requiring authority under s 167 of the Act.

Designations mean that the requiring authority who has the designation can develop it as stated in the NOR, and the need for territorial local authority resource consent is not required. However, regional resource consent is still necessary for any regional issues that may be a part of the proposed works within or potentially beyond the designation. There is also a strong linkage between designations and land interest acquisition processes particularly the ability to utilise the provisions of the Public Works Act if that is considered necessary.

More specifically a designation is a provision in a district plan which provides notice to the community that a requiring authority intends to use land in the future for a particular work or project.

Once a site is designated for a particular purpose, the requiring authority is able to:

- proceed with the specific work on the site as if it was permitted by the district plan
- control activities that occur on the site, to prevent the landowner doing anything that would compromise the future work (this is the case even if the requiring authority does not own the site)
- apply to the Minister of Lands to compulsorily purchase or lease all or part of the land under the Public Works Act 1981
- enter private land to undertake investigations.

As a designation can restrict the use of the land, in the event that the requiring authority does not own the site, the landowner also has certain rights. Where land is subject to a designation the landowner may apply for an order obliging the requiring authority to purchase or lease all or part of the land. In general terms, this is done where the owner is unable to sell the land at a market value, or the owner cannot reasonably use the land.

While a designation gives a requiring authority 'permission' under the district plan, the requiring authority must still address all the relevant matters under the regional plans – including discharges to air and water and land, and earthworks in some instances. This can include obtaining regional resource consents.

It should be noted that designations within the project area included in the Dunedin Second Generation District Plan:

- Kiwirail – D419 Main South Railway – Railway purposes
- Kiwirail - D420 Taieri Branch Railway – railway purposes
- Otago Regional Council – D218 East Taieri Drainage Scheme
- NZ Transport Agency – D457 SH1 Southern Motorway – Motorway purposes
- NZ Transport Agency – D456 SH1 Southern Motorway – Motorway purposes
- NZ Transport Agency – D455 SH1 Southern Motorway – Motorway purposes
- Dunedin City Council – D701 Caversham Tunnel Entrance Water Pipeline valves

The proposed route will be located between the Main South Railway and the Southern Motorway which may require designation of either the Kiwirail corridor or the southern motorway to enable the walking and cycling trail between Kaikorai Valley Road and Neill Street in Abbotsford.

2.2 Regional Statutory Documents

Regional Statutory Documents under the RMA include the Regional Policy Statement and Operative Regional Plans which, for the Dunedin Tunnels Trail, are written and implemented by Otago Regional Council (ORC).

2.2.1 Partially Operative Otago Regional Policy Statement 2019

The current Regional Policy Statement (RPS) became partially operative on 15 March 2021. This RPS aims to ensure Otago's natural and built resources are managed well, and to provide for Otago's social, economic, cultural, and environmental wellbeing; community health and safety; and for future generations. The Proposed Otago Regional Policy Statement (PORPS 2021) has been notified with submission currently being considered by the ORC.

2.3 Dunedin City District Plan

The Dunedin City District Plan applies to land above the line of mean high-water springs (MHWS) and the surface of rivers and lakes within the territorial boundaries of Dunedin City. District Plans set out the objectives, policies, rules and other methods adopted by City/District Councils to promote the sustainable management of the natural and physical resources of their territories.

2.4 Other Legislation

Apart from the RMA other legislation may apply. The most significant of these is the Historic Place Act 1993 while there may be an implication on statutory reserves gazetted under the Reserves Act 1997.

The purpose of Historic Places Act is to promote the identification, protection, preservation, and conservation of the historical and cultural heritage of New Zealand. The Historic Places Trust administers the functions of the Act and a list of historic places is produced by HPT. None of these identified places are in any of the sites identified. In any event and regardless of any sites of cultural or historical significance being identified in the, general authorisation will need to be sought under the Historic Places Act for destruction of modification of any sites, in addition to consultation with iwi on cultural matters.

The Reserves Act has three main functions. These are:

- to provide for the preservation and management, for the benefit and enjoyment of the public, areas possessing some special feature or values such as recreational use, wildlife, landscape amenity or scenic value. For example, the reserve may have value for recreation, education, as wildlife habitat or as an interesting landscape.
- to ensure, as far as practicable, the preservation of representative natural ecosystems or landscapes and the survival of indigenous species of flora and fauna, both rare and commonplace.
- to ensure, as far as practicable, the preservation of access for the public to the coastline, islands, lakeshore and riverbanks and to encourage the protection and preservation of the natural character of these areas.

3 Anticipated Authorisations Required

This consenting strategy includes a high level overview of the district plan rules which will need to be addressed in any resource consent applications for the Dunedin Tunnels Trail project. The project will require retaining and new structures for the formation of the trail. Designations and land use consents have been considered during the analysis of the relevant plans.

3.1 District Plans

The proposed route travels through a mix of zones including:

- General Residential 1 zone
- Low Density Residential zone
- Rural Residential zone
- Taieri Plain Rural zone
- Hill Slopes Rural zone
- Industrial zone
- Recreation zone
- Major Facility zone (Abbotsford School)

The objectives and policies of the Second Generation Plan (2GP) must be considered alongside the objectives and policies of the Operative District Plan. In terms of the Proposed District Plan the following Objectives are considered most relevant to the application:

- Objective 13.2.2 Policy 13.2.1.5 (Heritage) that seek to ensure the heritage values of scheduled heritage sites are protected and additions and alterations that affect a protected part of a scheduled heritage building or structure where are only allowed when adverse effects on heritage values are avoided, or if avoidance is not possible, are no more than minor and the visual impact of additions on protected parts of the building, including building utilities, is minimised.
- Objectives 15.2.5 (Residential Zone) and 16.2.5 (Rural Zone) that seek to ensure earthworks necessary for permitted or approved land use and development are enabled, while avoiding, or adequately mitigating, any adverse effects on: visual amenity and character; the stability of land, buildings, and structures; and surrounding properties.

3.1.1 Second Generation Plan:

Policy 6.2.1.3	Only allow new roads or additions or alterations to existing roads where: a. the road is designed to provide for the needs of all users and to integrate with surrounding land uses as appropriate for the surrounding environment and road **classification hierarchy mapped area**; and b. the location and design of the road: i. minimises, as far as practicable, adverse effects on surrounding residential or other sensitive activities, including severance effects, changes to drainage patterns, and vibration, noise, glare and fumes from vehicle movements; and

	ii. maintains or enhances the safety and efficiency of the overall transport network.

New Roads or Additions or Alterations to Existing Roads is a discretionary activity

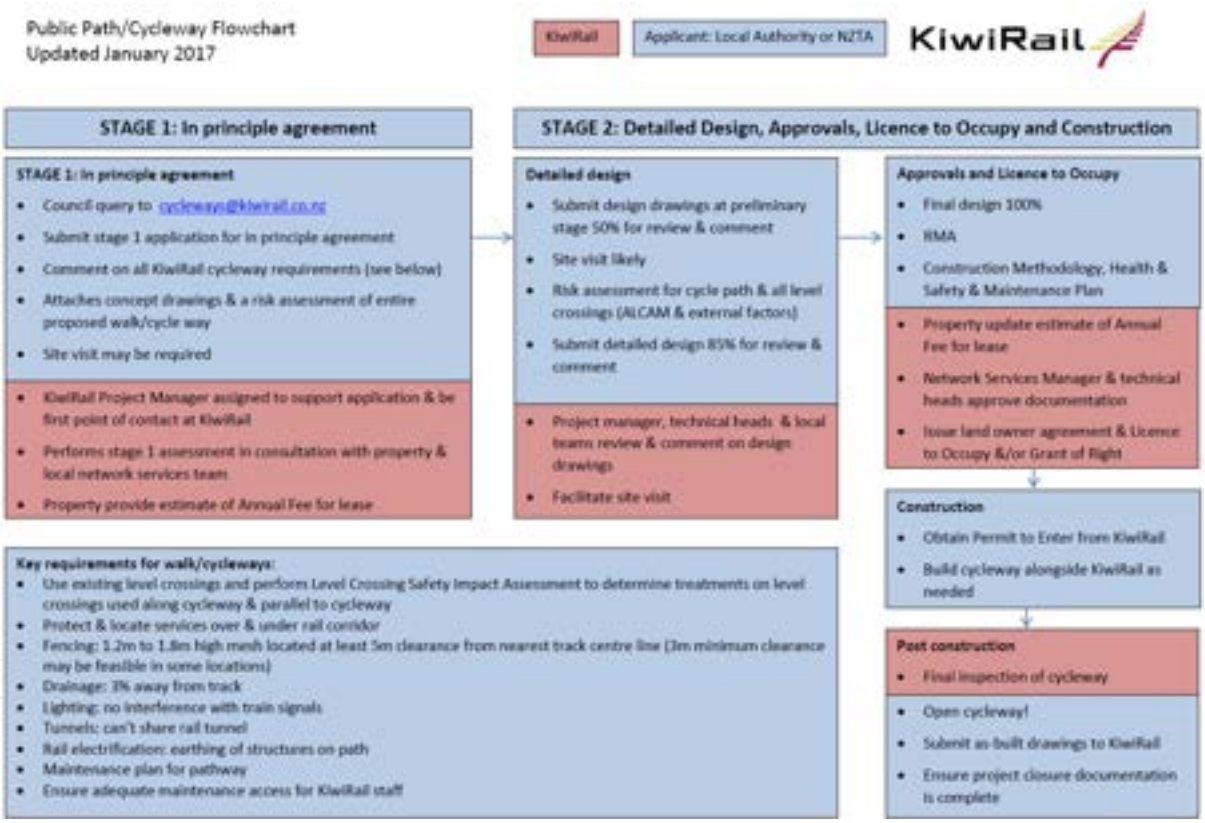
Insert table which details the likely consent required for each section and the proposed strategy to obtain – see Go example

All offroad sections likely to need land use consent due to earthworks and, NES requirements

Majority of the route likely to need Authority from heritage NZ

3.2 KiwiRail Approval Process

Detailed below is the approval process required by KiwiRail for public paths and cycleways within the KiwiRail corridor. The design approval process operates as the KiwiRail consenting process, which includes the RMA resource consents and a final design before KiwiRail grants approval.



3.3 Consenting Options

3.3.1 Multiple consent approach

The project could be designed and consented in sections, breaking the project up into a logical number of smaller packages. This may result in enabling construction crews to commence work sooner but runs the risk of a lack of coherence between the sections, resulting in redesign and additional consenting requirements. If any one of the sections or work packages requires changes through the design and consenting process, it is possible that these changes will impact other work packages. It is also unlikely that the overall design and consent process will be substantially faster due to the KiwiRail approval process requirements.

3.3.2 Single consent approach

The project could be designed and consented in its entirety from end to end, without breaking it into sections. This approach will mean construction activities cannot commence until the entire project is designed and consented, however, changes throughout the design process can be captured and adjustments more easily made. The overall design and consenting process timeframe is likely to be similar to the staged consent approach.

3.3.3 Recommended option

The KiwiRail approval process and the need to have both tunnels consented in order to enable the scheme means the single consent approach is the recommended one. A substantial portion of the preferred route option is in the KiwiRail corridor meaning that approximately 80% of the alignment requires the requisite RMA consents prior to receiving KiwiRail design approval. It is likely the timeframes for the single consent approach will be similar to the staged consent approach, while the single consent approach reduces the risk of redesign and consent delays.

3.4 Motorway Designation

A portion of the Tunnels Trail route will be adjacent to the SH1 motorway through Burnside and Green Island (DPLAN_ID D457) and is a designated motorway. The motorway designation is larger than motorway itself and prohibits cyclists and pedestrians from using this area. This section will require surveying and changes to the motorway designation.

4 Consenting Process

To reach the successful lodging of the application, and progress through the consenting process, there are considered to be five main phases associated with the statutory process delivery for the Dunedin Tunnels Trail, these are:

A. Strategy and Formulation,
B. Environmental Investigation and Assessment,
C. Drafting of Technical Reporting and Assessment of Environmental Effects (AEE),
D. Technical reviews and completion of the AEE; and
E. Lodgement of Statutory Authorisation Applications.

This document provides a strategy which will need to be transferred to a more comprehensive consenting plan. This is because of the need to establish a robust method for managing the project including the submission of a notice or notices of requirement for the required designation(s) and lodging the applications for resource consents with either the EPA or Councils. This consenting strategy is therefore intended to set the parameters for capturing the following information in one clear, central document to enable easy access and comprehension by all parties involved.

In particular the more fully populated consenting plan will define:

- The pre-lodgement programme and milestones
- The confirmation of key stakeholders involved in the statutory process and their roles and responsibilities

- The communication between the project's various groups and external parties involved in the process
- The identification of project documentation required for the statutory process
- The purpose, process and timeframes for the development and review of project documentation to meet the needs of the statutory process
- The responsibilities of the various individuals within the project's work streams
- Throughout the process a key objective is that the development and review of reports and documents will ultimately be of high quality and fit for purpose.

The consenting plan shall become an agreed and approved document to be used as a guideline for the consideration, management and control of the statutory components of the Dunedin Tunnels Trail. It is anticipated that this document will be subject to review and updating on perhaps a bi-monthly basis.

The five phases are described below. Throughout the five phases, it should be noted that engagement with the EPA and/or Councils is critical to the success of the authorisations process.

4.1 Phase One - Strategy and Formulation

RMA Strategy Formulation - Determine the strategy to best obtain the statutory authorisations (designation(s) and resource consents). This includes:

- Confirming the project team and roles,
- Confirming Requiring Authority status,
- Confirming preferred consent pathway,
- Formulating and more fully populating a Consenting Plan and seeking feedback,
- Ensuring the Consenting Plan is aligned with the Stakeholder Engagement Plan formulated for the project,
- Identifying and initially scoping the detailed consenting and designation requirements (including inputting more site specific detail as it comes to hand),
- Identifying all potential environmental effects and key consultants to assist through the process,
- Engaging legal assistance to advise on RMA legal matters if required,
- Undertaking further Issues and Opportunities workshop(s) with key stakeholders to further identify issues, opportunities, project risks, constraints and other matters relating to the project,
- Undertaking early engagement with DCC, ORC, KiwiRail and Waka Kotahi to discuss expectations and outline the anticipated statutory process,
- Confirming and reviewing the process carried out to date so that options and alternatives are adequately considered,
- Formulating Process / Review Control Plan for appropriate verification and review of documents,
- Identification of other statutory approvals required for the project not covered by the RMA;
- Assessing timeframe requirements for approval process and implications for the two stage or BOI process; and,

- Formulating strategy for other approvals and acquisition processes to meet construction programme and to minimise potential issues at the statutory hearing phase.

4.2 Phase Two – Environmental Investigation and Assessment

Environmental Investigation and Assessment – Scope and undertake environmental assessment reporting and documentation to support the statutory authorisation applications and the statutory process. This includes:

- Confirming the environmental assessments required
- Confirming environmental inputs into more detailed options analysis
- Confirming the technical reporting structure
- Confirming the scope of further environmental investigations and templates for reports
- Liaising with the design team to identify opportunities for further detailed design work to inform environmental reporting requirements
- Preparing templates and glossary/ index of reports
- Preparing technical reports, review reports and respond to comments
- Seeking confirmation of any proposed changes to the project scope and mitigation register.

4.3 Phase Three - Drafting of Technical Reporting and Assessment of Environmental Effects (AEE)

Drafting of Technical Reporting and AEE – Finalising the documentation process and preparing the draft AEE. This includes:

- Confirming the documentation process for each environmental discipline with the EPA and/or consent authorities.
- Commencement of GAP analysis after feedback from the EPA and/or Councils is received.
- Formulation of a draft AEE.
- Upon receipt of client comments this is the point in which the project will go through formal gap analyses to identify whether additional reporting or investigation may be required.

4.4 Phase Four - Technical reviews and completion of the AEE

Technical reviews and completion of the AEE – Finalising the documentation process and finalising the draft AEE. This includes:

- Working with the project design team to complete any further design to inform the final environmental and technical reporting,
- Completing the GAP analysis of the proposal in preparation of the statutory authorisations application being lodged,
- Final pre-lodgement meetings with the EPA and/or Councils and completing any further technical reviews,
- Finalise the technical reporting and inclusion into the AEE and statutory application,
- Preparation of a Construction Environmental Management Plan and associated Management Plans such as ecological, landscape, erosion and sediment control etc,
- Preparation of proposed conditions of consent; and,

- Ensuring all statutory approvals (designations and resource consents) are included in the application.

4.5 Phase five - Lodgement of Statutory Authorisation Applications

Lodgement of Statutory Authorisations Application – Formal submission of the Statutory application and process though the Councils or through the EPA. This includes:

- Completion of the Assessment of Environmental Effects and statutory application to the required standard,
- Lodging the application with the EPA or Councils,
- Liaising with the EPA (if that process is being followed) with respect to lodgement and protocols required for recommendation to the Minister for the Environment,
- Working with the EPA throughout the recommendation process, submission period and board of inquiry process; and,
- It is expected that the detailed process of evidence preparation, reviews, rebuttal evidence will be outlined once the gap analysis has been completed and the Assessment of Environmental Effects has been internally reviewed by the Project Team.

5 Consent Pathways

It is appropriate to consider the benefits and disbenefits of the two stage consent process against a single entity process.

Under the two stage process, the regional resource consent application would be made to ORC and a Land Use Consent lodged with Dunedin City Council. These entities would make a decision which are open to appeal. This would mean the resource consent application may be referred to the Environment Court for a decision.

Under the single entity process, a Board of Inquiry could consider the application under the national consenting process (the Environmental Protection Authority (EPA)) or the project could be considered for direct referral to the Environment Court.

5.1 Two stage process

The two stage or conventional process means that all RMA applications for resource consent and/ or designations are lodged with the relevant local authority and ORC at the same time and bundled together as they are interrelated and there is an expectation in the RMA that all matters are considered concurrently.

It must be assumed that due to the scale of the project that public notification will be required. After a hearing and the decision is made any party including the applicant can appeal the decision to the Environment Court. Further appeals can only be made to the High Court on points of law. Whilst there is risk of delay with the two stage process, it gives the public the ability to submit on the project and have their voices heard. This is the recommended consent pathway for the project.

Appendix L. Engagement strategy

Boffa Miskell

Dunedin Tunnels Trail Project

Design and Business Case Writing Services: Engagement Plan
Prepared for Dunedin City Council

12 November 2021

DUNEDIN CITY COUNCIL

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Contents

1.0 Introduction

1.1 Purpose of the engagement plan

This Engagement Plan provides advice about the engagement approach for the Dunedin Tunnels Trail Project (the Project). It outlines how and when the Dunedin City Council (DCC) and project partners Dunedin Tunnels Trail Trust (DTTT) will engage with key stakeholders, the local community and the wider public as part of the Dunedin Tunnels Trail Project Single Stage Business Case (SSBC) process.

The engagement plan provides recommendations for:

- why we need to engage and with whom
- engagement methods and techniques
- timeline for engagement
- indication of roles and responsibilities

The Plan reflects the Dunedin City Council's *'Significance and Engagement Policy | Kaupapa here hirahira whakatūtaka'* and the Council's commitment to engage with mana whenua.

It should be read in conjunction with the Dunedin Tunnels Trail Project Communications Plan (Sept 2020) prepared by Dunedin City Council. Both the communications plan and this engagement plan are 'living documents' that will be reconfirmed at key points during the project.

The outcome of the engagement as set out in this engagement plan will form part of a suite of technical and supporting information that will be used to complete the business case in June 2021.

1.2 Project background

The Dunedin Tunnels Trail is a project initiated by the Dunedin Tunnels Trail Trust (DTTT) to build a 15km cycle and walking trail between Dunedin and Mosgiel.

The DTTT have been working on this project for several years and have a Memorandum of Understanding (MoU) with Dunedin City Council to progress the project. The trail route, as proposed by the DTTT is primarily off road and follows the railway corridor from Wingatui to Caversham (Figure 1).

It passes through Fairfield, Abbotsford and Green Island suburbs, across private and publicly owned land and through two decommissioned Victorian rail tunnels (Chain Hills Tunnel and Caversham Tunnel). It connects to the wider Dunedin city cycle network at Caversham.

Figure 1: Dunedin Tunnels Trail route (Source: Dunedin Tunnels Trail Trust website)

1.3 Project objectives and scope

The project aims to achieve a range of environmental, social (including safety) and economic objectives. These include:

- Improve the safety of cyclists (and pedestrians) travelling between Dunedin and Mosgiel
- Encourage more people to use the trail to travel to work and school by bicycle or other active modes, contributing to a low carbon transport system
- Increase the number of people cycling and walking for recreation and tourism, providing supporting tourism and recreation opportunities, and associated economic development
- Work towards connecting Dunedin to cycle trails and routes beyond the city e.g. to the Taieri Plains, the Clutha Gold Trail, Otago Central Rail Trail
- Improve community outcomes, including health, neighbourhood connectedness and quality of local environment

The scope of the project includes:

- Acquiring easements over private property to enable continuous public access along the trail. This includes the recent acquisition by Dunedin City Council of 324 Gladstone Rd North, Wingatui
- Preparing the trail to be a shared path suitable for pedestrians and cyclists, this includes repairing and improving existing surface, improving drainage, and clearing vegetation
- Ensuring route gradients are safe and accessible for all (1:12 min gradient)
- Remedial work and repairs to tunnel entrances and structures to ensure they are safe and fit for purpose
- Providing lighting and signage along the trail route, including lighting in the tunnels

1.4 Purpose of Dunedin Tunnels Trail Project Business Case

The purpose of the business case is to undertake a robust, evidence-based assessment of the Dunedin Tunnels Trail project and potential solutions, prior to confirming funding for the project. The business case will explore the viability of the trail route as currently proposed, with a preferred route confirmed at the end of the business case process.

The preferred trail route will be informed by technical investigations and assessments, stakeholder and public engagement and a preliminary design exercise. It will also need to address the business case problem statements and achieve the project benefits and investment objectives as listed below.

Problem Statements

- The poor cycling level of service, particularly steep gradients, discourages the use of active mode travel
- Low active mode usage does not support a low carbon transport system or realise healthy lifestyles
- The disconnected active mode network creates a severance between local and regional communities, constraining tourism, recreational, social and employment opportunities, affecting the uptake of low carbon transport choices and healthy lifestyles
- The perceived safety issues between Mosgiel and Dunedin deter active modes choice, limiting viable travel options

Project benefits

- Attractive and safe active modes alternatives
- Healthy people, connected community
- Strong and thriving community
- Low carbon transport system

Investment objectives

- To reduce deaths and serious injuries of active modes crashes between Mosgiel and Dunedin by 100% by 2035
- To improve perceptions about the safety of active modes between Mosgiel and Dunedin by 15% by 2030
- To improve the level of service of the active mode network for communities to enable cohesion and participation in tourism, recreation, social and employment opportunities by 50% by 2030
- To increase active mode share for journeys between Mosgiel and Dunedin by 3% by 2035

1.5 Trail route options developed to date

Following an initial assessment of the proposed trail route (Figure 1) and a series of business case workshops with key stakeholders, two trail route options have been identified to date.

- One is the on-rail corridor route as proposed by the DTTT (Figure 2).
- The other option avoids the rail network (Figure 3).

Figure 2: Dunedin Tunnels Trail route (on-rail network)

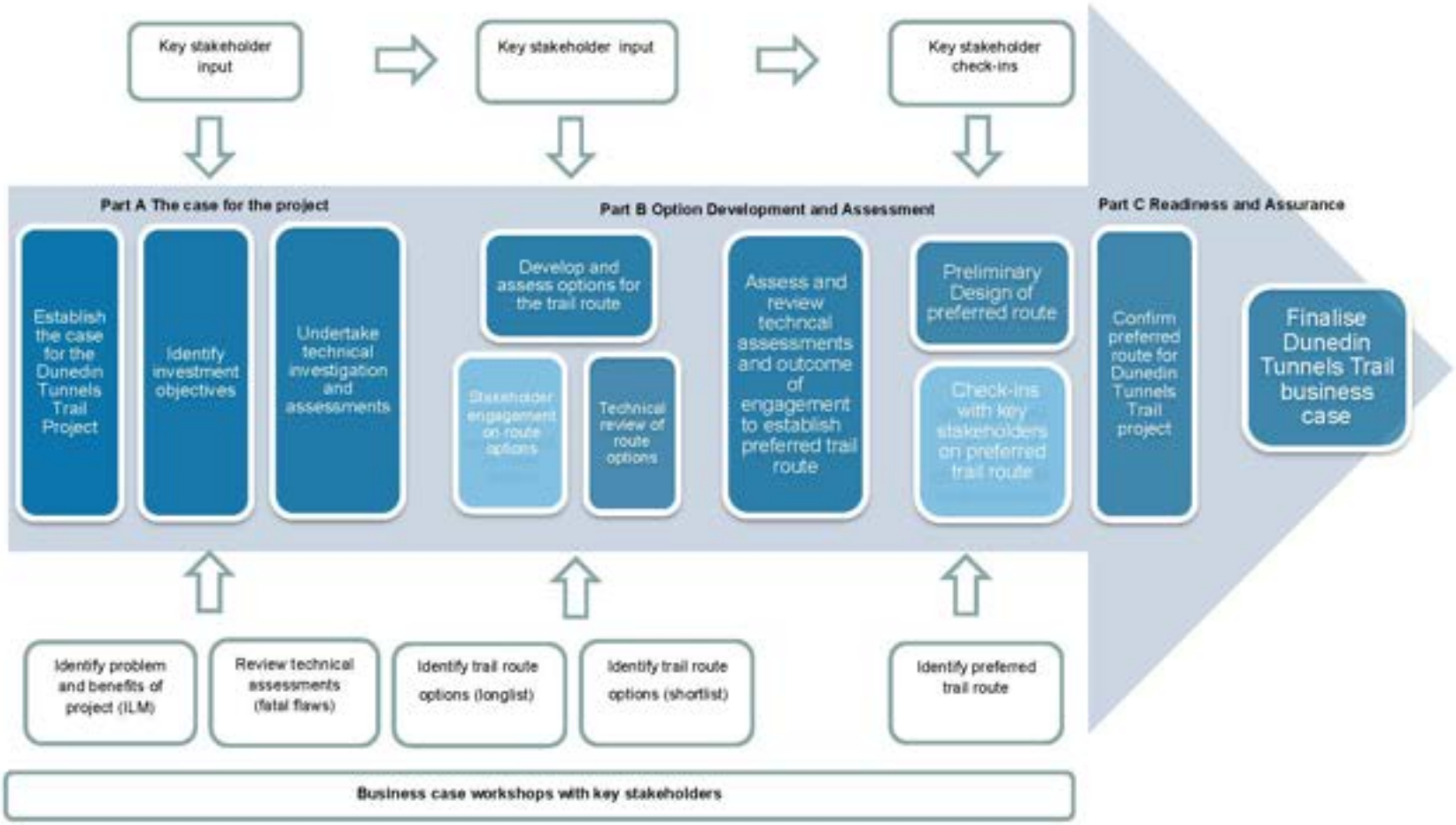
Figure 3: Dunedin Tunnels Trail route (off rail network)

NOTES:

- These two options are scheduled to be developed further in the first half of 2021 and will be informed by technical assessments and key stakeholder.
- The outcome of the technical assessments and engagement will inform the preferred trail route.
- Further engagement with key stakeholders on the preferred trail route may occur from mid-2021.

An overview of the business case and engagement process is provided in Section 1.6 below.

1.6 Overview of business case and indicative engagement process



2.0 Engagement approach

2.1 Why do we need to engage?

Meaningful and coordinated engagement is an important part of the Dunedin Tunnels Trail business case process. It will enable the Council to build effective relationships with stakeholders, , adjacent landowners and the local community, gain an understanding of the degree of support and/or opposition to the project and get buy-in to the project from the wider public.

Key stakeholder engagement will inform the Option Development and Assessment stage (Part B) of the business case (see Section 3 for detail). It will build on the business case workshops already undertaken with key stakeholders.

An engagement and feedback report and summary will be produced which will be part of the suite of information that will be used by the Council to finalise the business case, and subsequently make decisions about the viability of the project, the preferred trail route and funding.

2.2 Engagement principles

The proposed engagement approach follows the principles of engagement as set out in the *Dunedin City Council's Significance and Engagement Policy | Kaupapa here hirahira whakatūtaka.* The policy commits the Council to a principle-based approach to community engagement activities. These include:

- **Genuine:** We will engage honestly, and we will respect and listen to the views provided by the community with an open mind and will give due consideration to them when making decisions.
- **Timely:** We will engage with the community as early as appropriate and ensure that engagement processes are an integral part of project planning. We will allow enough time for participants to contribute and for them to be able to raise unexpected issues.
- **Purposeful:** We will be clear about the purpose of engagement and the ability and scope of the engagement to influence decisions.
- **Inclusive and accessible:** We will engage in a way which encourages participation of all who are likely to be affected by, or are interested in, a decision.
- **Recognition of diversity:** We will use engagement methods which are appropriate to the issue and those we are seeking to engage, having regard to their culture, age, ability and time availability.
- **Informed:** We will provide clear, easy to understand and objective information relating to the engagement and ensure it is readily available so that participants can make informed contributions.
- **Responsive:** We will be transparent about how we record, consider and respond to participants' contributions, and provide clear information on how the community's feedback has been taken into account in decision making.
- **Engagement with Māori:** We will acknowledge the unique perspectives of Māori in the city.
- **Cost-effective:** We will engage in a cost-effective manner, and resource engagement in proportion to the significance of the decision. We will ensure the least possible cost to all involved in the engagement (including the costs to the communities / affected parties

2.3 Engagement objectives

The overall objective of the Dunedin Tunnels Trail engagement is to get input and feedback from a range of stakeholders into the project. Specific engagement objectives include:

- To seek and get buy-in from key stakeholders into the trail route options developed to date (Section 1.5).
- To clearly communicate how the project contributes to a range of social, economic, environmental, and cultural benefits including those as set out in the Dunedin City Council's 10 Year Plan
- To support the *Dunedin City Council's Significance and Engagement Policy | Kaupapa here hirahira whakatūtaka*
- To uphold and demonstrate behaviours that support Council's core values which are to be:
    - Outstanding: We strive to be EXCELLENT // Ka whaia ITI KAHURAKI
    - Upstanding: We are always TRUSTWORTHY // He iwi MATAKIA
    - Upfront: We are OPEN AND HONEST // He iwi KĪ TAHI
    - Upbeat: Our approach is POSITIVE // Ka arua ara TIKA

2.4 International Association of Public Participation (IAP2)

In accordance with Dunedin City Council's Significance and Engagement Policy, the engagement approach and activities will be based on International Association of Public Participation (IAP2) principles and values. The IAP2 core values are:

- Public Participation is based on the belief that those who are affected by a decision have a right to be involved in the decision-making process.
- Public participation includes the promise that the public's contribution will influence the decision.
- Public participation promotes sustainable decisions by recognising and communicating the needs and interests of all participants, including decision makers.
- Public participation seeks out and facilitates the involvement of those potentially affected by or interested in a decision.
- Public participation provides participants with the information they need to participate in a meaningful way
- Public participation communicates to participants how their input affected the decision.

The IAP2 Public Participation Spectrum is used to assist with the selection of the level of participation that defines the public's role in any community engagement programme.

The five levels of public participation are Inform, Consult, Involve, Collaborate and Empower and are explained in Figure 5.

Spectrum of Public Participation

Increasing impact on the decision

Level of Engagement	Public Participation Goal	Promise to the Public	Role of Community
Inform	To provide the public with balanced and objective information to assist them in understanding the problem, alternatives, opportunities and/or solutions.	We will keep you informed.	Listen
Consult	To obtain public feedback on analysis, alternatives and/or decisions.	We will keep you informed, listen to and acknowledge concerns and aspirations, and provide feedback on how public input influenced the decision. We will seek your feedback on drafts and proposals.	Contribute
Involve	To work directly with the public throughout the process to ensure that public concerns and aspirations are consistently understood and considered.	We will work with you to ensure that your concerns and aspirations are directly reflected in the alternatives developed and provide feedback on how public input influenced the decision.	Participate
Collaborate	To partner with the public in each aspect of the decision including the development of alternatives and the identification of the preferred solution.	We will work together with you to formulate solutions and incorporate your advice and recommendations into the decisions to the maximum extent possible.	Partner
Empower	To place final decision making in the hands of the public.	We will implement what you decide.	Decide

Figure 5: IAP2 Spectrum of Public Participation

3.0 Project Stakeholders

3.1 Who do we need to engage with?

There are a range of people and groups that we may need to engage with as part of the Dunedin Tunnels Trail project. Others may be added as the project and engagement progresses. Those identified to date are listed in the table below.

Stakeholder groups identified to date	
Project partner	**Dunedin Tunnels Trail Trust ***
Mana whenua	Te Rūnanga o Ngāi Tahu
	Te Rūnanga o Ōtākou
	Kāti Huirapa Rūnaka ki Puketeraki.
Local Government	Otago Regional Council (ORC)
	Dunedin City Council departments (inc **Property*, 3 Waters*, Transport*,** Parks and Recreation, Enterprise Dunedin, Customer Services Agency)
	Dunedin City Councillors
	Mosgiel-Taieri Community Board
	Saddle Hill Community Board *
	Neighbouring Councils & associated trusts e.g. Central Otago District Council, Clutha District Council
Central Government Agencies	**Waka Kotahi NZ Transport Agency ***
	KiwiRail *
Business and recreational/tourism sector	Dunedin i-SITE (DCC Enterprise Dunedin)
	Central Otago Clutha Trails Limited (COCTL)
	Otago Central Rail Trail Charitable Trust
	Economic Development department (DCC Enterprise Dunedin)
Public service providers	Police
	Emergency Services
Heritage and Conservation sector	Department of Conservation (DOC)
	Heritage New Zealand Pouhere Taonga
Interest groups	**Spokes ***
	Other local cycling and walking groups e.g. Green Hut Track Group, Greater Green Island Walking Group
	Mountain Bike Otago
Utility Service Providers	Aurora Energy
	Chorus
	Genesis
Adjacent landowners and neighbours	Private landowners
	Directly affected residential and commercial neighbours.
Local community groups and associations	**Greater Green Island Community Network *** https://greatergreenisland.nz/
	Caversham Community Group
	Resident and business associations, including **Greater Green Island Business Association***
Neighbouring Communities	Mosgiel, Caversham, Fairfield, Green Island and Abbotsford communities
	Local Schools: Fairfield, Abbotsford schools, and Green Island schools (St Peters Chanel and Green Island primary), Abbotsford and Green Island kindergartens
General public	Dunedin residents

* Stakeholders involved in the business case process as at February 2021

3.2 Stakeholder engagement table

Using IAP2 stakeholder groups' level of engagement, interest, and ability to influence the project has also been identified, together with their area of interest and the purpose of the engagement. The stakeholder engagement table will inform the engagement activity and timing for each group. It will be continually updated as the business case process continues

Group	Stakeholders	Purpose of the engagement	Level of Engagement (IAP2)	Areas of interest	Level of interest (low>medium >high)	Ability to influence (low>medium >high)	Suggested engagement methods
Project partner	**Dunedin Tunnels Trails Trust ***	To partner with Dunedin Tunnels Trail Trust (as set out in the MoU) in each aspect of the decision making including the development of alternatives and identification of the preferred trail route solution.	Partner	• Extent to which outcome of business case and engagement process supports project progressing • Enable Trust's aspirations and priorities to be achieved • Preferred trail route • Commitment by DCC to project delivery and funding	High	High	• One-on-one meetings throughout project • Involvement in business case workshops • Attendance at wider engagement activities, including stakeholder workshop, community drop-in sessions and public open days as an advocate for the project • Review of technical assessments • Involvement in monthly Project Control Group (PCG) meetings, to ensure the Project is coordinated to include the DTTT. regular monthly meetings have been undertaken to cover progress, issues and programme to ensure the DTTT is included on the Project and kept up to date • Seek input on engagement from DTTT and opportunity to comment (incl. FAQs)
Mana whenua	***Te Rūnanga o Ngāi **** ***Tahu Te Rūnanga o Ōtākou**** ***Kāti Huirapa Rūnaka ki Puketeraki****	To partner directly with mana whenua throughout business case process to ensure their concerns and aspirations are consistently understood and considered	Partner	• Effects (if any) on wāhi taonga (sites of cultural and spiritual importance), wai Māori (water), biodiversity, and other taonga • Ability for project to support cultural values and meet DCC obligations under Treaty of Waitangi	Medium	High	• Through DCC's Kaiwhakamaherehere (Senior Policy Manager - Maori) to manage relationship with mana whenua e.g. engage with Aukaha • Initial hui before business case shortlist workshop to explain and provide background information on the project • Involvement in business case workshops eg business case shortlist workshop • Informal hui to provide an update on the preferred trail route option following stakeholder workshop
Transport sector/ central government	**Waka Kotahi NZ Transport Agency ***	To partner with Waka Kotahi NZ Transport Agency in each aspect of the decision making including the development of alternatives and identification of the preferred trail route solution	Collaborate	• Outcome of technical assessments including Health and Safety, Crime Prevention through Environmental Design (CPTED), structural considerations, connections to SH cycle routes and lanes • Impact on NZTA statutory and regulatory requirements • Alignment with national active transport strategic goals • Funding requirements/contributions	High	High	• One-on-one meetings throughout project • Involvement in business case workshops • Attendance at wider engagement activities, including stakeholder workshop, community drop-in sessions and public open days • Review of technical assessments and engagement reports
	KiwiRail *	To partner with Kiwi Rail in each aspect of the decision making including the development of alternatives and identification of the preferred trail route solution	Collaborate	• Impact on the rail corridor • Outcome of technical assessments including Health and safety, Crime Prevention through Environmental Design (CPTED), structural considerations	High	High	• One-on-one meetings throughout project • Involvement in business case workshops • Attendance at wider engagement activities, including stakeholder workshop, community drop-in sessions and public open days as an advocate for the project • Review of technical assessments and engagement reports

Group	Stakeholders	Purpose of the engagement	Level of Engagement (IAP2)	Areas of interest	Level of interest (low>medium >high)	Ability to influence (low>medium >high)	Suggested engagement methods
Regional government	*Otago Regional Council (ORC)**	To obtain feedback from ORC into consent strategy, technical assessments, preferred trail route and consent application.	Consult	• Connections to and impact on Dunedin public transport network • Consenting requirements e.g. Regional Water Plan, Regional Policy Statement • Technical areas including hydrogeology, surface water and ecology	Medium	Medium	• Invite to stakeholder workshop
Local government	Dunedin City Councillors	To work directly with the Dunedin City Councillors throughout business case process to ensure their concerns and aspirations are consistently understood and considered, in particular interested Councillors sitting on relevant Community Boards	Involve	• Ability for Tunnels Trail project to achieve wider community outcomes and support 10-Year Plan objectives as required • Views of wider community and potential impacts on local environment • Operational costs, ownership, and impact on rates • Funding expectations/requirements	High	High	• Inform and update prior to public and local community engagement as required • Update reports to relevant Council Committee (Infrastructure and Network Services meeting) as required • Updates as part of 10 Year-plan process • One-on-one meetings as required • Attendance at wider engagement activities, including stakeholder workshop, community drop-in sessions and public open days as an advocate for the project (as required)
	Mosgiel-Taieri Community Board *	To work directly with the Mosgiel-Taieri Community Board throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Impact on local and neighbouring communities • Outcome of technical assessments including Health and safety, Crime Prevention through Environmental Design (CPTED) • Engagement and ability for local communities to be involved in decision making	High	Medium	• Update report to Community Board meetings • Involvement in business case workshops • Attendance at stakeholder workshop, community drop-in sessions and public open days as an advocate for the project
	Saddle Hill Community Board*	To work directly with the Saddle Hill Community Board throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Impact on local and neighbouring communities • Outcome of technical assessments including Health and safety, Crime Prevention through Environmental Design (CPTED) • Engagement and ability for local communities to be involved in decision making	High	Medium	• Update report to Community Board meetings • Involvement in business case workshops • Attendance at stakeholder workshop, community drop-in sessions and public open days as an advocate for the project
	Neighbouring Councils e.g. Central Otago District Council & associated trusts	To provide neighbouring Councils with information to assist them in understanding the project, alternatives and opportunities.	Inform	• Ability for Dunedin Tunnels Trail project to become a regional attraction • Opportunities to connect with Clutha Gold Trail and Otago Central Rail Trail	Medium	Medium	• Provide briefing information to stakeholder representatives
Interest groups	**Spokes *** (local volunteer cycling advocacy group)	To work directly with Spokes throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Ability for Dunedin Tunnels Trail project to achieve better cycling provision for Dunedin cyclists • To promote cycling and its wide-ranging benefits to the citizens of Dunedin • To involve Spokes members	High	Medium	• Involvement in business case workshops • Invite to stakeholder workshop • Reps to attend community drop-in sessions and public open days as an advocate for the project • Inform of wider public consultation and invite to comment

Group	Stakeholders	Purpose of the engagement	Level of Engagement (IAP2)	Areas of interest	Level of interest (low>medium >high)	Ability to influence (low>medium >high)	Suggested engagement methods
	*Mountain Bike Otago (MBO)**	To obtain feedback on proposed options and preferred trail route. Opportunity to have ongoing role in project	Consult	• Ability for Dunedin Tunnels Trail project to form part of wider network of recreational cycle trails and tracks in Otago	High	Low	• Invite to stakeholder workshop • Inform of wider public consultation and invite to comment
	Dunedin walking groups e.g. Green Hut Track group, Greater Green Island Walking Group	To obtain feedback on proposed options and preferred trail route. Opportunity to have ongoing role in project	Consult	• Ability for Dunedin Tunnels Trail project to form part of wider network of recreational walking trails and tracks in Otago	High	Low	• Inform of wider public consultation and invite to comment
Business and recreational/ tourism sector	*Dunedin i-SITE (Enterprise Dunedin) **	To provide Dunedin i-SITE and Enterprise Dunedin with information to assist them in understanding the project and opportunities	Inform	• Role of Dunedin Tunnels Trail as a tourist/visitor attraction and contribute to Dunedin visitor economy	High	Medium	• Invite to stakeholder workshop
	Central Otago Clutha Trails Limited (COCTL)	To provide Central Otago Clutha Trails Limited with information to assist them in understanding the project and opportunities	Inform	• Ability for Dunedin Tunnels Trail project to enable future connections to Clutha Gold Trail and align with regional trail plans • Coordinated funding opportunities	Medium	Medium	• Inform of wider public consultation and invite to comment
	Otago Central Rail Trail Charitable Trust	To provide Otago Central Rail Trail Charitable Trust with information to assist them in understanding the project and opportunities	Inform	• Ability for Dunedin Tunnels Trail project to enable future connections to Otago Central Rail Trail and align with regional trail plans • Coordinated funding opportunities	Medium	Medium	• Inform of wider public consultation - and invite to comment
	Recreation Aotearoa	To provide Recreation Aotearoa reps with information to assist them in understanding the project and opportunities	Inform	• Ability for Dunedin Tunnels Trail project to contribute to Recreation Aotearoa agendas • Opportunity to promote the project nationally	Medium	Low	• Inform of wider public consultation and invite to comment
	Greater Green Island Business Association*	To provide Greater Green Island Business Association with information to assist them in understanding the project and opportunities	Inform	• Role of Dunedin Tunnels Trail as a tourist/visitor attraction and contribute to local economies and businesses	High	Medium	• Invite reps to stakeholder workshop • Inform of wider public consultation and invite to comment
Public Service Providers	*Emergency Services e.g. NZ Police, Fire and Emergency NZ**	To work directly with Police and Fire and Emergency NZ throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Public health and safety including Emergency access • Crime Prevention through Environmental Design (CPTED) • Relationship to adjacent land and neighbouring communities • Ongoing management of Tunnels Trail and associated risks e.g. fire, accidents, civil defence	Medium	Medium	• One-on-one meetings (as required) • Invite to stakeholder workshop • Inform of wider public consultation and invite to comment
Utility Service Providers	*Aurora Energy**	To work directly with Aurora throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Impact of project on energy networks and facilities • Ongoing operational needs for power e.g. lighting to Tunnels and entranceways	Medium	High	• One-on-one meetings (as required) • Invite to stakeholder workshop • Inform of wider public consultation and invite to comment
	*Chorus**	To work directly with Chorus throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Impact of project on communication networks and facilities • Ongoing operational needs for communications	Medium	High	• One-on-one meetings (as required) • Invite to stakeholder workshop • Inform of wider public consultation and invite to comment

Group	Stakeholders	Purpose of the engagement	Level of Engagement (IAP2)	Areas of interest	Level of interest (low>medium >high)	Ability to influence (low>medium >high)	Suggested engagement methods
	*Genesis**	To work directly with Genesis throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Impact of project on gas networks and facilities • Ongoing operational needs for gas	Medium	High	• One-on-one meetings (as required) • Invite to stakeholder workshop • Inform of wider public consultation and invite to comment
Heritage and Conservation sector	*Department of Conservation (DOC)**	To obtain feedback on proposed options and preferred trail route. Opportunity to have ongoing role in project	Consult	• Potential effects of trail and vegetation clearance on indigenous flora and fauna and biodiversity. • Opportunity for project to connect with DOC tracks and trails in Dunedin • Volunteering opportunity to assist with trail management and vegetation clearance e.g. Trail Crew	Medium	Medium	• One-on-one meetings (as required) • Invite to stakeholder workshop • Inform of wider public consultation and invite to comment
	Heritage New Zealand Pouhere Taonga	To obtain feedback on proposed options and preferred trail route. Opportunity to have ongoing role in project	Consult	• Potential effects of trail and tunnel modifications on heritage values. • Opportunity for project to promote Victorian Heritage features and tell stories and history of the Tunnels	Medium	Medium	• One-on-one meetings (as required) • Inform of wider public consultation and invite to comment
Adjacent landowners and residents	Directly affected residential and commercial neighbours and adjoining landowners	To obtain feedback on proposed design and consent application prior to finalising the preferred option and lodging the consent To discuss land purchases and easements (as required)	Consult	• Impact of Tunnels Trail on private land and access; potential land purchases and easements for route and access to route; effects on drainage, vegetation and potential noise; light spill; dust; health and safety and CPTED issues • Consenting requirements and affected party consents (to be determined)	High	High	• Ongoing engagement (one on one meetings) as preferred trail route is finalised (as required)
Local community groups and associations	**Greater Green Island Community Network ***	To work directly with Greater Green Island Community Network throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Impact on local and neighbouring communities • Outcome of technical assessments including Health and safety, Crime Preventation through Environmental Design (CPTED) • Engagement and ability for local communities to be involved in project	High	Medium	• Involvement in business case workshops • Invite to stakeholder workshop • Reps to attend community drop-in sessions and public open days as an advocate for the project • Inform of wider public consultation and invite to comment
	Caversham Community Group*	To provide Caversham Community Group with information to assist them in understanding the project, alternatives and opportunities	Inform	• Effect of Dunedin Tunnels Trail on local communities and residents • Ability for residents to use the Trail (both for commuting and recreation) • Opportunity for affected residents to be involved in project	High	Medium	• Invite reps to business case shortlist workshop • Invite reps to stakeholder workshop • Inform of wider public consultation and invite to comment
Neighbouring Communities	Mosgiel, Caversham, Fairfield, Green Island and Abbotsford communities	To obtain feedback on preferred trail route.	Consult	• Impact on local and neighbouring communities • Outcome of technical assessments including Health and safety, Crime Prevention through Environmental Design (CPTED) • Engagement and ability for local communities to be involved in decision making	High	Medium	• Online public consultation and drop-in session on preferred trial route
	Local (neighbouring) schools Fairfield and Abbotsford schools, Abbotsford and Green Island kindergartens and Green Island schools – St Peters Chanel and Green Island primary	To obtain feedback on preferred trail route.	Consult	• Connections to/from the trail from the communities/schools • Outcome of technical assessments including Health and safety, Crime Prevention through Environmental Design (CPTED) • Engagement and ability for local communities to be involved in decision making	High	Medium	• One-on- one engagement sessions with schools on preferred route • Online public consultation and drop-in session on preferred trial route • Working with DCC's school travel plan and enviroschools coordinators to engage with the schools

Group	Stakeholders	Purpose of the engagement	Level of Engagement (IAP2)	Areas of interest	Level of interest (low>medium >high)	Ability to influence (low>medium >high)	Suggested engagement methods
General public	Dunedin residents	To obtain feedback on preferred trail route.	Consult	• Impact on local and neighbouring communities • Project objectives and relationship to other 10 Year Plan projects, including impact on rates • Opportunities to use Trail and benefit from the project • Ability to be involved in decision making	High	Medium	• Online public consultation and drop-in sessions on preferred trail route
Internal teams/key staff	**Dunedin City Council departments (including Parks and Recreation, 3 Waters, Transport, economic development, community development) ***	To work directly with DCC Departments throughout the business case process to ensure their concerns and aspirations are consistently understood and considered	Involve	• Ability for Tunnels Trail project to achieve wider Council outcomes and support 10-Year Plan objectives • Views of wider community and potential impacts on local environment • Active transport and recreation opportunities • Operational costs, ownership and impact on rates • Funding expectations/requirements	High	High	• Involvement in business case workshops • Invite reps to stakeholder workshop • Reps to attend community drop-in sessions and public open days • Inform of wider public consultation
	DCC Consent team	To seek input into consent applications (pre-application meetings)	Consult	• Consenting requirements under the 2GP for Tunnel Trails project	High	High	• One-on-one meetings

***Denotes key stakeholders that have been involved in the business case workshops to date and /or key stakeholders invited to the business case shortlist workshop**

**Denotes key stakeholders to be invited to the stakeholder workshop*

4.0 Engagement Process

4.1 Key engagement activities and timings

Below is an outline of the proposed engagement process. There are two rounds of engagement proposed and a third informing round to advise of the final outcome. The first round seeks stakeholder and mana whenua input into the Dunedin Tunnels Trail preferred trail **route and sub- options** developed to date. Stakeholders and mana whenua will also be informed on the preferred trail route as part of round two. The proposed timings have been integrated with the single stage business case programme to enable completion of the final business case by April 2022.

FOR NOTNG: Appropriate engagement collateral for each engagement activity is to be developed following approval of the engagement approach. Collateral for the preferred trail route will be agreed prior to beginning the wider public consultation. The below activities will be guided by both this Engagement Plan and the Dunedin Tunnels Trail Project Communications Plan and will be subject to review as the project progresses.

4.2 Engagement Stage One: preferred route and options (Updated November 2021)

Engagement Round One: engagement on preferred route and sub-options				
Activity	**Suggested engagement method**	**Comments**	**Who?**	**When?**
Engage with identified stakeholder groups and mana whenua on the **preferred trail route and sub- options** developed to date	• Business case investment logic mapping workshop	• Business case workshop with key stakeholders to review two problem statements that were developed in the Dunedin Cycleways Strategic Update and Programme Business Case from 2019.	• Council to arrange workshop and liaise/invite attendees. • Abley to facilitate workshop, provide supporting collateral (with input from Boffa Miskell) and capture feedback	9 September 2020
	• Business case fatal flaws workshop	• Business case workshop with key stakeholders to identify any fatal flaws of the project that would result in it not proceeding further along the business case process.	• Council to arrange workshop and liaise/invite attendees. • Abley to facilitate workshop, provide supporting collateral (with input from Boffa Miskell) and capture feedback	15 October 2020
	• Business case longlist workshop	• Business case workshop with key stakeholders to consider a list of all potential routes developed for the project to date against the assessment criteria for the project as set out in the first ILM workshop.	• Council to arrange workshop and liaise/invite attendees. • Abley to facilitate workshop, provide supporting collateral (with input from Boffa Miskell) and capture feedback	3 November 2020
	• Mana whenua hui	• Hui (initial meeting) to be held (subject to advice from Council and Aukaha) before the business case shortlist workshop with key stakeholders on 3 March 2021. • The hui will provide an opportunity to work directly with Mana whenua to ensure their concerns and aspirations are consistently understood and considered as the business case process continues. • It is advised that Aukaha are approached initially to provide guidance to how and when to engage with Mana whenua. This will be through Jeanette Wikaira, DCC's Kaiwhakamaherehere (Senior Policy Manager - Maori), Corporate Services Group together with DCC's Project Manager.	• Council (project team) to arrange initial meeting and liaise with Aukaha/mana whenua	March 2021

Engagement Round One: engagement on preferred route and sub-options				
Activity	**Suggested engagement method**	**Comments**	**Who?**	**When?**
	• One-on-one meeting with Dunedin Tunnels Trail Trust	• Meet with the Project Partner before the business case shortlist workshop with key stakeholders on 24 March 2021 either in person or video meeting to provide an update on the project status, project process, explain the engagement approach to be followed and key project dates. • This meeting is in addition to the DTTT's on-going attendance at regular project management meetings	• Council (project team) to arrange meeting	March 2021
	• Business case shortlist workshop	• Business case shortlist workshop to test the preferred trail route and sub-options developed to date against the business case investment objectives with key stakeholders. • The outcome of the workshop will inform the design of the preferred trail route and form part of the draft Single Stage Business Case.	• Council to arrange workshop and liaise/invite attendees. • Abley to facilitate workshop, provide supporting collateral (with input from Boffa Miskell) and capture feedback	24 March 2021
Engage with identified stakeholder groups and mana whenua on the **preferred trail route and sub-options** developed to date	• Stakeholder workshop	• It's proposed that a 'secondary' stakeholder workshop is held after the business case shortlist workshop as part of the engagement on the preferred trail route and sub-options with key stakeholders not previously engaged or unable to attend the business case shortlist workshop. • The purpose of this workshop will be to test the preferred trail route and sub-options developed to date against the business case investment objectives with key stakeholders. • The outcome of the workshop will inform the design of the preferred trail route and form part of the draft Single Stage Business Case. The following collateral will be developed for the stakeholder workshop: ◦ Powerpoint presentation providing overview of business case process, overview of each route and its key features, and outlining purpose of workshop ◦ A0 plans (on areial photos) x 2 showing proposed routes, relationship to adjacent land and key features (see Figures 2 and 3 as examples) ◦ A series of questions based on the extent to which routes will achieve economic, social, environment and cultural outcomes (simplified version of investment objectives) to be worked through by attendees ◦ Capture feedback	• Council to arrange workshop and liaise/invite attendees • Boffa Miskell to develop workshop collateral and agenda in line with the earlier business case shortlist workshop, facilitate workshop and capture feedback • In collaboration with DCC Engagement Comms Advisor & Project Manager/Team and Abley	Early April 2021 (after Easter)
Produce engagement and feedback report		• Collation and analysis of feedback from business case shortlist and stakeholder workshops • Produce formal engagement and feedback report together with a summary of feedback document • The outcome of round one of engagement will inform the design and development of the preferred trail route and form part of the draft Single Stage Business Case due to be completed in April 2022.	• Boffa Miskell to produce engagement report • In collaboration with Abley DCC Engagement Comms Advisor & Project Manager/Team	By end of April 2021

4.3 Engagement Stage Two: preferred (approved) route (Updated November 2021)

Engagement Round Two: Engagement on preferred (approved) trail route				
Suggest activity	**Suggested engagement method/tasks**	**Comments**	**Who?**	**When?**
Communicate the **preferred (approved) trail route** to key stakeholders prior to Council meeting in December 2021	Meeting: One-on-one meeting with Dunedin Tunnels Trail Trust	• One-on-one meeting with Dunedin Tunnels Trail Trust to 'walk through' the full engagement report and explain how the engagement has informed the preferred (approved) route to be reported to Council on 30 November 2021 • Circulate/distribute hyperlink to Council reports and supporting papers, including the engagement report (on DCC website) • Outline the next steps and agree role of DTTT in the project following approval.	• Council to arrange meeting with DTTT • Council to circulate link to Council report and papers on DCC website (when available)	Before Council meeting in December 2021
	Update DCC website	• Update to use Executive Summary from Stakeholder report and new diagram for the preferred/approved route (Option F)	• Council team	After Council meeting in December 2021
Communicate the **preferred (approved) trail route** to all stakeholders and public following Council meeting in December 2021	Email link to updated DCC website to key stakeholders, including Emergency Services	• Circulate/distribute link to updated DCC website • Use Executive Summary from Stakeholder report and new diagram for the preferred/approved route (Option F)	• Council team	After Council meeting in December 2021
	Media release and promotion in local newspapers e.g. ODT and Star	• Draft media release to provide details of Council decision, overview of approved route and next steps and project milestones • Assign spokesperson/people for project	• Council to draft media release	Media release in late February/early March 2022
Promote the **preferred (approved) trail route** to local community throughout 2022	Newsletter: Draft and produce project newsletter Circulate to local community groups and stakeholders and their networks	• Draft one-page graphic newsletter suitable for circulation via email to local community groups and their networks, put on DCC website and DTTT tunnels website • This can form basis of regular newsletter	• Boffa Miskell to assist with newsletter format/graphics (as required) • Council to circulate	First newsletter circulated by late February/early March 2022 Then once a quarter
Engage with affected landowners and neighbours on **the preferred (approved) trail route**	Meetings: One-on-one meetings.	• Develop an affected landowner/neighbour schedule /register that can be used to collate and record all engagement with directly affected landowners. This will inform the consenting strategy and the land acquisition and easement processes required to ensure public access to the trail route. • Using the register, it's advised that a 'heads up' letter is sent to all directly affected neighbours, including private landowners and residents, telling them about the project the preferred (approved) route. • The letters could also tell them about proposed public information days and ask if they would like a one-on-one meeting. • Ongoing engagement with directly affected landowners (via one on one meetings) will need to continue as the preferred route is finalised and consenting strategy is developed. Refer to the Dunedin Tunnels Trail Project Communications Plan.	• Council to develop register and liaise/meet with landowners.	Timing to be confirmed (if activity is progressed) but to begin following Council decision in November 2021

Engagement Round Two: Engagement on preferred (approved) trail route				
Suggest activity	**Suggested engagement method/tasks**	**Comments**	**Who?**	**When?**
Engage with local schools including Fairfield, Abbotsford and Green Island Schools on the **preferred (approved) trail route**	Meetings: One-on-one meetings Design workshops: seeking children's input into amenity areas and wider connections including opportunities for art, seating and planting	• As part of the preliminary design development of the preferred option, it suggested to hold meetings with local schools to inform them in more detail of the preferred option • Including Fairfield and Abbotsford schools, Abbotsford and Green Island kindergartens and Green Island schools - St Peters Chanel and Green Island primary schools • The format of these meetings to be agreed as part of the engagement plan • Co-design workshops could also be used to get children's input into the connections and amenity improvements designs e.g. art, seating and planting • Key DCC staff to attend meetings	• Council to arrange meetings and lead discussions. • Boffa Miskell to develop collateral, facilitate co-design workshops and attend meetings (as required).	Meetings to be held in early Feb after school holidays (if activity is progressed) Co-design workshops with local children throughout preliminary design stage
Wider public information days/roadshows on the **preferred (approved) trail route and project**	Open days: Local community public information days x 3 (Mosgiel, Green Island and Caversham) Roadshows: Supplemented with a regular ongoing presence (roadshows) at local events and locations to promote the project Community newsletters and notice boards	• Wider public information days held to promote the preferred option and project outcomes • A public information day will be held locally in tandem with local events, including the DTTT working bees etc. • The information days will provide an opportunity for people to attend and find out more about the preferred trail route and the project timelines. • This will be open to the wider Dunedin community and residents and will be promoted across the city via local media. It will also include information about the Chain Hills and Caversham tunnels. • The public information days will display information about two tunnels, key DCC staff, DTTT and project team members will also be available to answer questions. • Promotion of the public information's days in local media e.g. The Star, websites and by information pamphlet to adjacent neighbours, landowners, residents and via DCC FYI pamphlet. • Information will be also be promoted online using the DCC website and DTT public email address, and will be supplemented by newsletters • Collateral used at open days can also be used at roadshows which will provide a regular ongoing presence at other local events and locations to further promote the project and provide information.	• Council to arrange open days and attend • Boffa Miskell to develop collateral for open days and roadshows (as required and in collaboration with DCC engagement and comms Advisor) • DCC to update DCC website • Boffa Miskell to develop content for online engagement in collaboration with the DCC Engagement and Comms Advisor	Timing to be confirmed (if activity is progressed) Open days to be held in Summer 2022 Roadshows 'piggy backing' off other local events

4.4 Reporting and monitoring

A Dunedin Tunnels Trail project engagement report and feedback register will be produced (together with a summary document) at the conclusion of each Engagement Round identified in this plan that collates and analyses the outcome of all engagement for the trail routes, including the findings from the Social Pinpoint online tool (as required).

The report will form part of the draft Single Stage Business Case (SSBC) which is due to be completed in June2021.

The final preferred trail route will be communicated to key stakeholders on completion of the business case and approval by key project partners. DCC and DTTT websites are also to be updated to reflect the feedback received and decisions made.

A separate Communications Activity Schedule will be developed in support and in line with the Engagement Milestones identified in the Dunedin Tunnels Trail Project Communications Plan (dated Sept 2020).

4.5 Health and Safety requirements

As part of the Engagement Activities outlined above, the Council needs to ensure an Event Health and Safety Plan is completed ahead of each activity and instruct /share with the team prior to ensure awareness by all (incl. appropriate and timely Traffic Management Planning.)

This includes displaying the COVID-19 Ministry of Health QR Code Poster for any public event around the area

Appendix 1 : Workshop attendees

The following organisation were represented by the attendees: Heritage NZ, Dunedin Tunnels Trail Trust, KiwiRail, Otago Regional Council, Mountain Bike Otago, Department of Conservation, Genesis, Aurora, Caversham Community Group, Saddle Hill Community Board, Green Island Primary School, Green Island Community Network, DCC (transport planning, project management, city development, communications, 3 waters, parks and recreation, events and community development), Boffa Miskell and Bonisch.