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# WENTWORTH VALLEY ROAD BUSINESS CASE

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Feasibility of proposed Cycle Way and Seal Extension / Road Improvements

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## Executive Summary

The Thames Coromandel District Council (TCDC) are evaluating the feasibility of the construction of a 5.1km recreational cycle way linking Whangamata with the Department of Conservation (DoC) recreational facilities located at the end of Wentworth Valley Rd.

Feasibility of a project to improve Wentworth Valley Rd, including a seal extension to seal currently unsealed sections, is also being evaluated. Improvements done in conjunction with the seal extension (widening and geometric improvements to meet TCDC sealed road standards) will be applied to the entire length of Wentworth Valley Rd.

The cycle way and seal extension projects are independent of each other but are linked in that the benefits of each are part of the justification for completing the other.

Key findings are:

- Project aligns with strategic objectives
- Net Benefit of the project is \$2.1 million
  - Based on costs of \$2.0 million and benefits of \$4.1 million, in present value terms
- The Benefit Cost Ratio (BCR) of the project is 2.1
- Initial funding will likely have to be supplied by TCDC
- Assessment of an alternative option that utilises shared usage (the cycle way is on the road for some sections) is recommended to be included in the detailed design stage as a standby option. Whilst considered less ideal than a separate cycle way this option could be developed to provide flexibility should cost or land issues arise with the preferred cycle way alignment. It is recognised that shared usage increases the safety risk for cyclists and would likely be less attractive to inexperienced cyclists, including children.

The key issue is likely to revolve around the addition of the path

- The path is feasible and safety features can be incorporated to allow both a higher average vehicle speed on the road and shared usage by the bikes.
- And while aligning with objectives, the path requires at least 1500 users per annum extending their stay and spending more money in town by 2029, and more thereafter, to provide benefits that exceed the costs.
- This may require active promotion of the path by local stakeholders.

Suggested further analysis:

1. Consultation with local land owners is required as consenting requirements and potential acquisition of land could be both an additional cost and a cause of delay. Also future developments have potential to significantly affect the expected benefits from road usage.
2. Future road usage will also depend significantly on capacity of the DOC infrastructure at the end of the road. Construction of the projects will increase the need for improved facilities at the DoC land in Wentworth Valley (car parking, bike parking,

additional toilets, etc.). It is possible that DoC may look to TCDC to provide assistance in improving facilities.

3. Consultation with local forest owners is also recommended. The seal extension project should be timed so that logging operations on Wentworth Valley Rd do not damage the new surfacing. Staging of the projects also offers an opportunity to create additional benefits (material taken from one and used on the other, dust issued removed prior to cycle way opening, etc.).
4. It is possible that NZTA would consider funding the road but probably not the path. The BCR has increased from any previous analysis. Monitoring current road usage would be helpful to any such application. However, how high of a priority the project will be for NZTA remains questionable, plus completion of the NZTA funding process has potential to create a delay in the time the project will take.
5. Cost estimates are rough order and include a contingency. Detailed design will be required to improve the accuracy of the estimate.

The next steps are:

- Consider whether to halt project now
- If not, then proceed with consultation as preparation for a Detailed Business Case
- Seek allowance for funding by TCDC

## Introduction

### Project Background

TCDC are evaluating the feasibility of the construction of a 5.1km recreational cycle way linking Whangamata and the DoC recreational facilities located at the end of Wentworth Valley Rd. The cycle way will follow the alignment of Wentworth Valley Rd and will largely be constructed within road reserve. There is a need for some acquisition or use of private property for some sections of the cycle way. The shape of the road reserve, proximity of the river and contour of the land will dictate the final alignment of the pathway. Constructing the cycle way in flood prone areas or areas where construction costs will increase through the need to import material or acquire land should be avoided where possible.



The key driver for this project is to improve access to the Wentworth Valley for walking and cycling. This link will be a natural extension to the recently constructed walking and cycling route from Whangamata township to Wentworth Valley Rd which is now being used regularly by residents of Whangamata. The cycle way is expected to become a recreational activity itself as well as providing access to Wentworth Valley activities. This project will form part of a wider network of walking tracks around the Peninsula as part of the Coromandel Great Walks.

Feasibility of a project to improve Wentworth Valley Rd, including a seal extension to seal currently unsealed sections, is also being evaluated. Improvements done in conjunction with the seal extension (widening and geometric improvements to meet TCDC sealed road standards) will be applied to the entire length of Wentworth Valley Rd. The seal extension is proposed in response to 20 years of community support or need based on dust nuisance and safety concerns.

The cycle way and seal extension projects are independent of each other but are linked in that the benefits of each are part of the justification for completing the other. I.e. the increased profile and visitor numbers due to the cycle way construction further justifies the seal extension. Conversely completing the seal extension will improve the experience of the cycle way users increasing usage.

There is potential to use material from the road improvements as fill for the construction of the cycle way (e.g. material removed from the inside of corners to widen alignment and improve sight lines). This requires the projects to be planned and constructed taking the other project into account.

### Report Format

The following report considers the feasibility of both projects as an overall improvement of access to Wentworth Valley for light vehicles, bicycles and pedestrians. The report format is set in accordance with a "The Treasury Indicative Business Case" (see Appendix A) which requires addressing five issues (or Cases).

- Strategic Case – review of alignment between the proposed project and the organisations strategic intentions.
- Economic Case – calculation of the value for money or rate of return on investment the proposed project provides.
- Commercial Case – assessment of commercial viability of the project in terms of attractiveness to potential suppliers and in long term value for money.
- Financial Case – affordability and funding.
- Management Case – review of project management requirements to ensure planning and implementation is achievable.

Emphasis was given to first two Cases at this early planning stage because the remaining three elements are largely irrelevant without a strong link to TCDC's strategic objectives and sound economic justification. The other three elements have been considered at a high level to ensure they do not present a major barrier to completing the project, however, further development will be applied in these areas should the projects progress to the detailed design phase following approval.

## Strategic Case

### Alignment with Strategic Objectives

The project aligns closely with the objectives of TCDC, Whangamata Community Board and the local community and fits broadly with objectives of DOC, NZTA and WRC although it would be a low priority for these organisations.

This alignment is detailed in Table 1 for the major stakeholders, with detail of the strategies set by respective stakeholders provided in Appendix B.

Table 1 Alignment with stakeholder strategies.

Other stakeholders who do not have defined strategic objectives will also receive positive benefit from the proposed improvements. Recreational users (pony club, walkers, runners, users of DoC facilities, etc.) will benefit from the new cycle way facility as well as improved access from the seal extension and improvements. Local residents who have commercial

Stakeholder	Project Fit
<b>TCDC</b>	Project closely aligned to TCDC objectives, particularly Prosperity and a target for increased visitor guest nights. Project also explicitly included in the 2015 LTP.
<b>TCDC Economic Development Committee</b>	Project closely aligned to EDC vision of “preferred visitor destination”
<b>Track programmes (TCDC / DOC / HDC / Hauraki Rail Trail Charitable Trust)</b>	<p>This project does not fit directly with potential Great Walks of the district but it does provide a complementary activity for the large number of extra walkers expected as these tracks are completed.</p> <p>Likewise, with the Hauraki Rail Trail which is expected to bring increasing bikers near to or into the district.</p> <p>The project does fit with any future plans to improve the Mataroto-Wentworth Crossing but immediate project benefits are closer linked to (a) increased visitors to the camp site and/or walking the Wentworth Valley tracks and (b) increasing biker numbers to visit the camp site (but not bike the tramping tracks).</p>
<b>Whangamata Community Board</b>	The project fits with and is included in the Community Board Plan, aligning closely with camping and tourism aims.
<b>WRC Economic Development</b>	While tourism is part of the “Waikato story” and hence will be recognised as a large important revenue provider for the region, it is not a major economic development focus for the collective Waikato local bodies.
<b>WRC Regional Transport Committee</b>	The project fits directly with the Waikato RLTP in terms of improved safety but otherwise is not a priority amongst the collective roading authorities of the region.
<b>DOC</b>	<p>The project is closely aligned with DoC’s goal to connect New Zealanders and international visitors with natural places (and historic sites although not explicit in goals opposite).</p> <p>DoC funding is tight and this project is unlikely to fit with priorities on:</p> <ul style="list-style-type: none"> <li>• Sites with larger visitor numbers</li> <li>• Sites where DoC can form business partnerships</li> </ul>
<b>NZTA/MoT</b>	The road is a local road. While the project is consistent with Government and NZTA objectives, the project is not expected to have a sufficiently high BCR to gain NZTA priority for co-funding. This would require testing to be certain.
<b>Local residents</b>	The seal extension is the desired response to concerns about dust.

activities on Wentworth Valley Rd (farming, forestry, sub-division development and tourism) will benefit from improved access. The Tourist Lodge and camp ground can be expected to gain additional benefit from the cycle way.

### The Case for Change

The case for change can also be described as the need for investing to change from the current situation to a desired situation.

The issues around Wentworth Valley Road are several, including dust being imposed on local residents, concerns for safety on the road and tourism opportunities existing around the river and park. These issues are listed below, showing the potential beneficiaries of any improvement to the road and factors that may inhibit the realisation of desired benefits. More detail is provided in Appendix C.

Table 2 Case for change

Issue / Opportunity	Who benefits from change?	Risks, Constraints and Dependencies
<b>Increase tourist visits to Whangamata</b>	<ul style="list-style-type: none"> <li>• Tourists</li> <li>• Local providers to tourists</li> <li>• Local population (through property resale values, reduced share of fixed infrastructure costs, increased variety)</li> <li>• General population (benefit to the economy as a whole)</li> </ul>	<ul style="list-style-type: none"> <li>• Bike track is not used to extent expected.</li> <li>• Capacity of DOC camp and tracks to handle restricts visitor numbers.</li> <li>• Local accommodation providers have insufficient capacity during peak periods.</li> <li>• The valley and pathway are sufficiently promoted.</li> <li>• Floods damage road and/or strand visitors.</li> <li>• Locals do not support change.</li> </ul>
<b>Reduce dust from traffic</b>	<ul style="list-style-type: none"> <li>• Local residents (current and potential).</li> <li>• Road users.</li> <li>• Cycle and pedestrian users of path (if introduced)</li> <li>• TCDC (through reduction in need to respond / act to public complaints).</li> </ul>	<ul style="list-style-type: none"> <li>• Possibility that some solutions may not be fully effective.</li> </ul>
<b>Improve safety</b>	<ul style="list-style-type: none"> <li>• All road users, including any new users of road &amp; path (if introduced)</li> </ul>	<ul style="list-style-type: none"> <li>• Any changes to the road to address the other issues may compromise safety</li> <li>• Lack of road reserve limits viable improvements.</li> <li>• Support of adjacent land owners and potentially land acquisition may be required.</li> </ul>

## Investment objectives

At this stage there does not appear to be a specific objective for any investment but rather a general desire to achieve the following:

- Provide a new recreational facility within the district.
- Raise the profile of Wentworth Valley and the attractions it has.
- Contribute to growing tourism within the Whangamata area and TCDC as a whole.
- Provide an alternative transport link between Whangamata township and Wentworth Valley attractions that encourages exercise (walking, running or cycling).
- Improve service level of existing road, reducing dust and road user complaints.
- Assist / support commercial activities on Wentworth Valley Rd (tourism and land development).

It is recommended if the project were to proceed that more specific objectives are established.

## Economic Case

The proposal is to seal Wentworth Valley Road and add a path. Before examining whether this option provides value for money, a more general question is whether there exist other options that would achieve the same of similar objectives. The exercise below is one of specifying what any alternative option must be able to achieve and checking some alternative options as to their viability. As will be seen, some solutions address one or more objectives but there are no obvious alternatives to the proposal (other than undertake minimum change for now).

## Alternative solutions

To limit the scope of potential projects, it is believed that any proposed solution will be required to meet ALL the following criteria (referred to as Critical Success Factors (CSF)):

- Visitor numbers to Whangamata and Wentworth Valley must increase.
- More people must end up cycling to Wentworth Valley.
- Dust levels must be reduced.
- The service level of the road must be improved.
- The project is affordable (it is not known what the viable budget is for this project but it is likely to be well below \$5 million, say)
- Safety of users (of road and path) must be maintained.

Possible ways to address the issues listed in Table 2 are provided in Table 3 below. These alternatives are considered against the critical success factors above.

In particular, consideration is given to use of dust suppressants, alternative means of transport to the park/river, changes to the road speed and variations around the road/path combination. None of these alternatives will meet all the requirements of the project but there are features of alternatives (see box below table) that are worthy of closer investigation in any detailed design case.

Table 3 Possible Solutions compared with Critical Success Factors

Opportunity / Solution	Critical Success Factor						Comment
	Increased visitors?	Increase in cycling?	Dust removed?	Service level increase?	Affordable ?	Safety of users?	
1. <b>Dedicated cycle track (and no road seal)</b>	Y	Y	N	N	N	Y	Provides no benefit to road users.
2. <b>Road widening, seal and narrow track (as proposed)</b>	Y	Y	Y	Y	Y	Y	Achieves all CSF's.
3. <b>Road widening, seal and track more integrated with road (requiring less land)</b>	Y	Y	Y	Y	Y	Moderate	Achieves all CSF's. Cheaper and potentially more flexible than (2) but has safety compromise.
4. <b>Road widening, seal and more extensive track</b>	Y	Y	Y	Y	N	Y	Achieves CSF except for affordability. Additional cost greater than additional benefit.
5. <b>Dust suppressants</b>	N	N	Y	Moderate	Y	Y	Removes dust but offers little other value.
6. <b>Bus to camp</b>	Y	N	Moderate	N	Unknown	Y	Potential dust reduction (based on bus service reducing vehicles). No increase in cyclists.
7. <b>Reduced road speed limit</b>	N	Maybe	N	N	Y	Y	NZTA tool assesses current posted speed as appropriate.

#### Variation of current proposal for consideration in detailed study:

An alternative option that utilises shared usage (3) is recommended for assessment in the detailed design stage as a standby option. Shared usage involves cyclists using the shoulder of the road instead of a separate cycle way. The 'cycle lane' could be created using road marking. Signage could be applied to inform road users and a reduction in the posted speed could also be considered. Removing the separation between vehicles and cyclists increases the safety risk for cyclists and would likely make the cycle way less attractive to inexperienced cyclists, including children. This option may also deter walkers / runners from using the pathway. The recommendation to assess this option is to provide flexibility should cost or land issues arise with the preferred cycle way alignment. This flexibility allows TCDC a back-up plan should it be required.

## Economic Assessment

The costs and benefits of the proposed options are estimated below and compared against business as usual (the “Do Minimum” option). That is, the option analysed is “Road widening and seal with narrow adjacent track (i.e. 2 in the list included in Table 3). The initial capital cost of the project is estimated to be \$2.1 million, comprising of \$1.4m for the road improvements and \$0.7m for the path. Both the road and path will also incur ongoing annual costs, the combined costs exceeding the approximate \$35,000 p.a. of the existing partially unsealed road.

Table 4 Cost Estimate

Phase	Cycle Way (\$000's)	Seal Extension & Improvements (\$000's)	Total (\$000's)	Comment
<b>Planning &amp; Investigation</b>	21	38	80	3% of construction cost.
<b>Design</b>	35	64	40	5% of construction cost.
<b>Construction</b>	700	1,280	1,980	EPL path estimate & TCDC Roothing team estimate reviewed & accepted.
<b>Total Cost</b>	<b>765</b>	<b>1,382</b>	<b>2,147</b>	Includes 30% contingency
<b>Operating Cost (per annum)</b>	25	20	45	\$25k includes allowance for flood damage. \$20k includes allowance for periodic reseals.

The benefits of the project are less certain, given that benefits will largely depend on how many people use the road and path, with path use in particular uncertain given that no path exists at present. Nonetheless an assessment of benefits is required. A summary of such an assessment is provided in Table 5 below, with extra detail given in Appendix D.

The benefits tend to fall to those associated with road use and those associated with path use.

The benefits associated with road usage largely fall to the users of the road, arising from the faster average speed that will be likely should the road be sealed and improved in some places. Note, the improvements are considered necessary to offset the increased accident risk that would otherwise emerge if the road were simply sealed. Applying NZTA methods and values for travel time, vehicle costs and emission costs, the expected benefit in present value terms to road users is of the order of \$3 million. It should be pointed out that this estimate is based on a higher-than-usual growth rate in road usage, namely 3.6% p.a. rather than a typically applied 2% p.a. assumption. The reason for the higher road usage growth rate assumption is the expectation that the number of local residences will continue to increase and that visitor numbers to the park/river will also increase quickly (the 3.6% is based on 3% more resident trips and 4% more tourist trips per annum).

Table 5 Assessment of value of benefits.

	Benefit expected	Description of benefit	Who benefits?	Value of benefits (PV)				Key issues in benefit estimation
				\$1 - 100k	\$100-500k	\$500k-1m	\$1-2m	
Due to Seal/alteration	Dust	Reduced discomfort.	Local residents.		Y			How much \$ per household? How many households in valley over next 30 years?
	Road user: people	Time saved. More trip comfort.	Vehicle occupants.				Y	Is NZTA average \$/hour appropriate? How many trips at present? How many trips over 30 years? How much extra speed?
	Road use: vehicle	Lower running costs. Fewer CO <sub>2</sub> emission.	Vehicle owners.				Y	As above except: Is NZTA average \$/speed appropriate?
Both	Safety	Less serious and minor accidents.	Vehicle occupants. Riders/walkers/runners.	Improved safety due to seal BUT cyclist risk increased.				How many accidents will occur between vehicles and cyclists/ pedestrians? What is the average 'cost' of accidents? Cyclist risk is increased particularly where cycle way crosses the road. Crossing conflict points will require managing. Refer safety at crossing points section below.
Due to Path	Path users	More enjoyment. Better health.	Riders/walkers.	Y				How many cyclists and pedestrians? How much extra benefit is derived relative to what they otherwise would be doing?
	Local income	More wages and profits.	Local business owners. Local employees.			Y		<i>How many extra people will stay in town because of path?</i> <i>How much extra will they spend?</i>

There is no established NZTA methodology for assessing the benefit of dust reduction on households, largely due to the belief that the value is relatively low. A crude estimate has been made here based on the assumption that property owners would value dust reduction at \$10,000 per property, giving rise to a present value of around \$100,000-\$500,000. There is little evidence to support this assumption, and hence if the project is sensitive to this assumption then an in-depth (and typically expensive) analysis could be undertaken in the detailed business case. For now, it is assumed that the benefit is material but is not sufficient to justify the proposed changes on its own but, equally, the other benefits are sufficient to not require a more precise estimate of this dust-reduction benefit.

The benefits associated with path usage are likely to largely accrue to local businesses and their employees. Applying similar methodology to that used within the Coromandel Great Walks benefit cost analysis, the present value of the extra profits and wages derived from extra visitor nights to Whangamata are likely to be around \$500,000-\$1,000,000. This assumes path usage of around 4000 per annum by 2029 and then increasing by 4% p.a., with 25% staying one more night in town as a result of this activity and sufficient capacity in town to provide the accommodation and hospitality services. These assumptions are based off usage of other tracks (see Appendix E) and spending assumptions employed with the recent Coromandel Great Walk appraisal. Note, these benefits would not usually be taken into account within a NZTA roading appraisal as they are benefits that accrue to the people of Whangamata but not to New Zealand (effectively these are nights that are not spent in some other region). These local benefits are, though, applicable to a Whangamata project, especially if funded by Whangamata residents.

All users of the path will also derive some value from the activity. As with dust reduction, there is no established NZTA methodology to measure this benefit. Again an assumption has been made that is considered 'in the ball park' and applied to expected path users. Assuming \$2/rider suggests a present value of the benefit of less than \$100,000. It would require many more users or a much higher value per rider for a large path-user benefit to exist.

The value of safety improvements – the third benefit component – has been assessed at zero. This is because the accident risk at present is relatively low and any changes proposed are assumed to include features to retain this safety rating. Some of these suggested features are discussed in the next section.

In total, and in present value terms, the sum of incremental benefits is estimated at \$4.1 million and sum of the incremental costs at \$2.0 million. The difference is a Net Present Value of \$2.1 million and the ratio (i.e. the Benefit Cost Ratio or BCR) is 2.1.

Of these totals, the BCR for the road improvements only, and excluding any quantification of a dust benefit, would be 3.1. This would be classified 'medium' priority by NZTA.

Given the uncertainties involved, it is important to consider a range of reasonable estimates.

If a slightly lower road usage was assumed now and road usage was to grow by only 2% p.a. then the road user benefits would amount to \$2.4 million, only slightly higher than the

present value of the total project costs. With low path patronage also of around 1000 p.a. by 2029, the extra value to the town above the road user benefits would add around \$100,000. Add on benefits elsewhere and a low-scenario benefit would be around \$2.8 million; on balance of net benefit of \$0.8m under a low use scenario.

Conversely, stronger growth (say path usage 10,400 by 2029 and road and path usage growing by 4% p.a.) would lift the benefits to \$3.2 million for road users and another \$1.7 million to path users and local business i.e. \$5.1m versus the \$2.0m extra costs (in PV terms).

Note in all three scenarios, the major benefit is to road users due to the increase in average speed.

### Safety at Cycle Crossing Points

Points where the cycle way crosses over the road create increased risk of conflict between cyclists and vehicles. The use of crossings is unavoidable to achieve the most cost effective construction of the cycle way based on the shape of the road reserve, proximity of the river and contour of the land. Avoiding construction in flood prone areas or construction cost increases (material quantities, land acquisition, consent requirements) is a sensible approach. The initial alignment developed by EPL Construction and used as the basis of the preferred option assessment has three crossing points.

Management of crossing safety will, at a minimum, require;

- Road signage providing advanced warning to vehicles of the crossing.
- Applicable sight distance to allow cyclist and vehicles to see each other in advance.
- Signage on the cycle way warning of a crossing point and informing users that vehicles have the right of way.
- Gates or barriers on the cycle way which force cyclist to stop adjacent to the road.

Minimum requirements could be further enhanced by;

- Road markings that make the crossing points more obvious (e.g. similar to the green cycle lane markings used in various urban environments).
- Large gated signs at the crossing points.
- Installation of a pedestrian island either side of the road crossing. Islands make crossing points more obvious and create a width restriction which slows traffic down.

How much of a safety issue the crossings present is an unknown. Feedback from the Hauraki Rail Trail (HRT) is that there has been no noticeable increase in crash frequency where the trail crosses State Highways at various points. All HRT crossings have signage and barriers for the cyclists.

## Commercial Case

The construction contract is expected to follow well-established tendering procedures.

Council staff will require to consult and negotiate with

- local land owners, including forestry owners using or intending to use Wentworth Valley Road for logging trucks
- DOC
- Local iwi (as considered appropriate)
- Waikato Regional Council

## Financial Case

The costs for the project are listed in Table 4.

It is noted that the proposal would be a significant capital expenditure for Whangamata (2016/17 Whangamata CAPEX = \$984,300, as per Sep-15 meeting).

It is possible that co-funding could be gained from NZTA for the initial roading capital expenditure, especially given the higher road usage that is believed to apply relative to earlier assumptions. It is expected that all roading operating expenses, including reseals, will be co-funded by NZTA, especially given evidence of higher road usage over time.

Other funding sources include grants from Charities and sponsorship from corporates – some of these sources are listed in Appendix F. Other cycle paths have also been part-funded by the NZ Cycle Trail Trust but these funds are restricted to “Great Rides”.

## Management Case

The project is expected to follow well-established project management practices. No project team or plan is suggested at this stage but would be expected in a Detailed Business Case, if the project were to proceed.

It is also recommended that the following items are included in a Detailed Business Case

- Benefit map
- Risk register
- Planning for post implementation review

## Appendices.

### A. The Treasury Indicative Business Case

#### **The Treasury Indicative Business Case ...**

- Outlines how the proposed investment fits within the organisation(s) strategic intentions.
- Confirms the need for investment and the case for change.
- Recommends an indicative or preferred way forward for further development of the investment proposal, by considering the feasibility of full range options – supported by a limited number of short-listed options for further analysis.
- Seeks the approval of decision-makers to proceed to developing a Detailed Business Case, based on the preferred way forward and to formally commence engagement with the market.
- The evidence expected is indicative by nature. It provides the decision maker with an early opportunity to consider change and confirm the options being considered before more detailed evidence is gathered in a detailed business case.

Source: The Treasury (2015). Guide to Developing an Indicative Business Case.

## B. Stakeholder alignment detail

Stakeholder	Strategy (including reference)	Project Fit
<b>TCDC</b>	<p>Overarching: “the Coromandel will be the most desirable area of New Zealand in which to live, work and visit”</p> <p>“Prosperous District, a Liveable District and a clean and Green District”</p> <p>LTP: Reseal a priority in 2012-22 LTP “for safety and practicality reasons”</p> <p>“target of a 5%+ annual increase in visitor guest nights”</p> <p>Annual Plan 2016/17  <a href="http://www.tcdc.govt.nz/Your-Council/Documents-incl-Bylaws-Policies-and-Strategies/Annual-Plans/Annual-Plan-2016-2017/">http://www.tcdc.govt.nz/Your-Council/Documents-incl-Bylaws-Policies-and-Strategies/Annual-Plans/Annual-Plan-2016-2017/</a></p> <p>Wentworth Valley track. “This project has a high likelihood of tying in with our Great Walks programme. Traffic counts and student surveys of people were undertaken in the summer of 2015-16, which will help inform a business case that will be taken to the Whangamata Community Board for a recommendation by June 2016. A decision will then be made as to whether the project will go ahead (the project is identified to occur in year 4 of the 2015 LTP)”.</p>	<p>Project closely aligned to TCDC objectives, particularly Prosperity and a target for increased visitor guest nights. Project also explicitly included in the 2015 LTP.</p>
<b>TCDC Economic Development Committee</b>	<p>EDC “Plan on a Page 2016/17”</p> <ul style="list-style-type: none"> <li>• “We will make the Coromandel the preferred visitor destination in NZ”</li> </ul>	<p>Project closely aligned to EDC vision of “preferred visitor destination”</p>
<b>Track programmes (TCDC / DOC / HDC / Hauraki Rail Trail Charitable Trust)</b>	<p>Coromandel Great Walks  <a href="http://www.tcdc.govt.nz/Your-Council/Council-Projects/Current-Projects/Coromandel-Great-Walks-Project/">http://www.tcdc.govt.nz/Your-Council/Council-Projects/Current-Projects/Coromandel-Great-Walks-Project/</a></p> <ul style="list-style-type: none"> <li>• High priority in 2015-2025 LTP</li> <li>• Initially Hot Water Beach – Purangi Estuary (includes Cathedral Cove)</li> <li>• Forecast extra 35,000 new visitors to region</li> <li>• In time could include upgrade and extension of Kaueranga-Broken Hills track to complete West-East crossing</li> </ul>	<p>This project does not fit directly with potential Great Walks of the district but it does provide a complementary activity for the large number of extra walkers expected as these tracks are completed.</p>
Stakeholder	Strategy (including reference)	Project Fit

	<p>Hauraki Rail Trail <a href="http://www.tcdc.govt.nz/Your-Council/Council-Projects/Current-Projects/Hauraki-Rail-Trail-Kopu-to-Kaiaua/">http://www.tcdc.govt.nz/Your-Council/Council-Projects/Current-Projects/Hauraki-Rail-Trail-Kopu-to-Kaiaua/</a></p> <ul style="list-style-type: none"> <li>• Current trail to be extended to Kaiaua</li> </ul> <p>Wentworth Falls Walk / Whangamata TT Waipaheke to Wentworth Junction Tramping Track / Wiapaheke Motorbike Track</p> <ul style="list-style-type: none"> <li>• Wentworth Valley forms the northern end of 3 tracks that cross the ranges (Maratoto Road, the Hauraki access road, is mostly sealed but not out to the track entrance)</li> <li>• Wentworth Falls Walk currently not available to cyclists</li> <li>• Crossing walk approximately 5 hours (DOC estimate)</li> <li>• Drive time Maratoto to Whangamata is 63 minutes (Google estimate)</li> </ul> <p><a href="http://www.doc.govt.nz/parks-and-recreation/places-to-go/coromandel/places/coromandel-forest-park/things-to-do/maratoto-wentworth-crossing/">http://www.doc.govt.nz/parks-and-recreation/places-to-go/coromandel/places/coromandel-forest-park/things-to-do/maratoto-wentworth-crossing/</a></p>	<p>Likewise, with the Hauraki Rail Trail which is expected to bring increasing bikers near to or into the district.</p> <p>The project does fit with any future plans to improve the Mataroto-Wentworth Crossing but immediate project benefits are closer linked to (a) increased visitors to the camp site and/or walking the Wentworth Valley tracks and (b) increasing biker numbers to visit the camp site (but not bike the tramping tracks).</p>
<p><b>Whangamata Community Board</b></p>	<p>Whangamata Community Strategic Plan includes:</p> <ul style="list-style-type: none"> <li>• “Continue to support the kiwi tradition of camping holidays in Whangamata (with specific action to: improve Wentworth Valley Road access to DOC campground)”</li> <li>• “Support and encourage local retail, tourism, healthcare, manufacturing and fishing to contribute towards a minimum increase of 2.5% of GDP by the end of 2018 (with specific action to: Promote and enhance sustainable events that attract a wide range of people and interests to our town, expanding into the shoulder months)”</li> <li>• “Position and promote Whangamata as a world class visitor destination for outdoor activities (with specific action to: Seal Wentworth Valley Road and construct a new cycleway/walkway with access to world class walking tracks)”</li> </ul>	<p>The project fits with and is included in the Community Board Plan, aligning closely with camping and tourism aims.</p>

Stakeholder	Strategy (including reference)	Project Fit
	<ul style="list-style-type: none"> <li>• “The Board indicate that this is a future priority project helping to improve Whangamata as a visitor destination and the economic benefits (particularly around tourism) by improving roading conditions to a number of world class walks up this valley. Longer term link with the Coromandel Walks project.”</li> </ul>	
<b>WRC Economic Development</b>	Waikato Means Business, Feb-2014 lists five priority areas: <ul style="list-style-type: none"> <li>• “Maintaining and building our location advantage</li> <li>• Growing global industries</li> <li>• Making business easier</li> <li>• Building, attracting and retaining skills and talent</li> <li>• Telling the Waikato story”</li> </ul> <a href="http://docs.tcdc.govt.nz/store/default/4278143.pdf">http://docs.tcdc.govt.nz/store/default/4278143.pdf</a>	While tourism is part of the “Waikato story” and hence will be recognised as a large important revenue provider for the region, it is not a major economic development focus for the collective Waikato local bodies.
<b>WRC Regional Transport Committee</b>	Waikato Regional Land Transport Plan 2015-2045 lists key priorities: <ul style="list-style-type: none"> <li>• “Completing the Waikato Expressway projects and associated improvements (the region’s top priority).</li> <li>• Focusing on strategic inter-regional road and rail corridors.</li> <li>• Improving safety, particularly reducing risk and addressing speed management.</li> <li>• Optimising and growing public transport within Hamilton and between Hamilton and satellite towns.</li> <li>• Improving accessibility for transport disadvantaged groups.</li> <li>• Building upon existing collaborative integrated planning with a focus on emerging transport planning issues.</li> <li>• Maximising efficiencies and optimisation across the transport system.</li> <li>• Ensuring route security and resilience.</li> <li>• Addressing National Energy Efficiency and Conservation Strategy requirements.”</li> </ul> <a href="http://www.waikatoregion.govt.nz/Council/Policy-and-plans/Transport-policy/RLTP/">http://www.waikatoregion.govt.nz/Council/Policy-and-plans/Transport-policy/RLTP/</a>	The project fits directly with the Waikato RLTP in terms of improved safety but otherwise is not a priority amongst the collective roading authorities of the region.
<b>DOC</b>	Annual Plan 2015 list stretch goals as <ul style="list-style-type: none"> <li>• “90% of New Zealanders’ lives are enriched through connection to our nature.</li> <li>• Whānau, hapū and iwi are able to practise their responsibilities as kaitiaki of natural and cultural resources on public conservation lands and waters.</li> <li>• 50% of New Zealand’s natural ecosystems are benefiting from pest management.</li> <li>• 50 freshwater ecosystems are restored from ‘mountains to thesea’.</li> </ul>	The project is closely aligned with DoC’s goal to connect New Zealanders and international visitors with natural places (and historic sites although not explicit in goals opposite).

Stakeholder	Strategy (including reference)	Project Fit
	<ul style="list-style-type: none"> <li>A nationwide network of marine protected areas is in place, representing New Zealand's marine ecosystems.</li> <li>The stories of 50 historic Icon Sites are told and protected.</li> <li>50% of international holiday visitors come to New Zealand to connect with our natural places"</li> </ul> <a href="http://www.doc.govt.nz/about-us/our-role/corporate-publications/annual-reports-archive/annual-report-for-year-ended-30-june-2015/">http://www.doc.govt.nz/about-us/our-role/corporate-publications/annual-reports-archive/annual-report-for-year-ended-30-june-2015/</a>	<p>DoC funding is tight and this project is unlikely to fit with priorities on:</p> <ul style="list-style-type: none"> <li>Sites with larger visitor numbers</li> <li>Sites where DoC can form business partnerships</li> </ul>
<b>NZTA/MoT</b>	<p>Government Policy Statement 2015/16 – 2024/25</p> <ol style="list-style-type: none"> <li>Economic growth and productivity</li> <li>Road safety</li> <li>Value for money</li> </ol> <p>NZTA co-funding policy for local roads from National Land Transport Fund (NLTF)</p> <ul style="list-style-type: none"> <li>Will co-fund 51% from 2018/19 of project if meeting following criteria (48% for TCDC 2017/18)             <ul style="list-style-type: none"> <li>Strategic fit (rated High, Medium, Low) – typically require High or Medium</li> <li>Effectiveness (rated High, Medium, Low) – typically required High or Medium</li> <li>Benefit cost ratio (BCR) – determines priority                 <ul style="list-style-type: none"> <li>1-2.9 (low)</li> <li>3-4.9 (medium)</li> <li>5+ (high)</li> </ul> </li> </ul> </li> </ul> <a href="https://www.pikb.co.nz/home/nzta-investment-policy/funding-assistance-and-sources/">https://www.pikb.co.nz/home/nzta-investment-policy/funding-assistance-and-sources/</a> <a href="https://www.pikb.co.nz/assessment-framework/2015-18-nltp-investment-assessment-framework-overview/">https://www.pikb.co.nz/assessment-framework/2015-18-nltp-investment-assessment-framework-overview/</a>	<p>The road is a local road. While the project is consistent with Government and NZTA objectives, the project is not expected to have a sufficiently high BCR to gain NZTA priority for co-funding. This would require testing to be certain.</p>

### C. Case for Change detail

Issue / Opportunity	Evidence	Who benefits from change	Comment	Risks, Constraints and Dependencies
<b>Increase tourist visits to Whangamata</b>	<p>The opportunity for more tourism is evidenced by the growing numbers of walkers and bikers in the Coromandel and Hauraki areas (now and/or expected), particularly those associated with proposed Coromandel Great Walks and the lengthened Hauraki Rail Trail. Support for the probability of extra visitors is the existence of “world class walks up this valley”.</p>	<p>Tourists</p> <p>Local providers to tourists (Accommodation/ Food/ Other activities including retail)</p> <p>Local population (through property resale values, reduced share of fixed infrastructure costs, increased variety)</p> <p>General population (benefit to the economy as a whole)</p>	<p>Results of the January 2016 Wentworth Valley Car Park Survey (undertaken by TCDC) show:</p> <ul style="list-style-type: none"> <li>• Period staying in the area:               <ul style="list-style-type: none"> <li>○ 73% 4+ nights</li> <li>○ 95% 1+ nights</li> </ul> </li> <li>• Reason for visit:               <ul style="list-style-type: none"> <li>○ 77% hiking</li> <li>○ 11% camping</li> <li>○ 6% swimming</li> <li>○ 1% cycling</li> <li>○ 4% other</li> </ul> </li> </ul> <p>At this stage there do not appear to be many cyclists using the road</p> <ul style="list-style-type: none"> <li>• 94% support construction of link to Hauraki Rail Trail</li> <li>• 80% said yes they would use an extension of the walk / cycle way</li> <li>• 84% are not discouraged to visit by the current condition of the road – those that commented were in support of sealing and improving the road.</li> </ul>	<p>A major risk is that the bike track is not used, either due to lack of knowledge or simply lack of interest. A lesser risk – and hence potential extra cost or safety factor – is that of flooding damaging the road and path and/or stranding visitors.</p> <p>Major constraint is the ability of the DOC camp and tracks to handle increased visitor numbers (NB Jan-2016 survey includes feedback “more parking”).</p> <p>A major dependency – and hence risk – is DOC being able to upgrade both as required (or some other party).</p> <p>Likewise, local accommodation providers having sufficient capacity. An associated dependency is that the valley and pathway are promoted.</p>

Issue / Opportunity	Evidence	Who benefits from change	Comment	Risks, Constraints and Dependencies
Create tourist facility (cycle way) and link between Whangamata and Wentworth Valley attractions.	As outlined above tourism growth is expected.  80% of Wentworth Valley users said	Tourists / holidaymakers.  Local providers to tourists.	Construction of recreational facilities aligns designed to increase tourist numbers aligns with TCDC objectives.	Risks: as above with an additional risk that adjacent land owners do not support the project creating delay and cost.
	yes they would use an extension of the walk / cycle way (Jan-2016 survey).	Local residents (through having a recreational facility to use).		Major constrain is cost.
	Other 'similar' facilities (Hauraki Rail Trail, Whangamata cycle trails) have proven very popular.	Cyclists using Wentworth Valley Rd.		Major dependency is completion of the seal extension. If dust issue remains it is expected to impact on the cycle way user

<p>Traffic is causing dust.</p>	<p>Anecdotal</p>	<p>Local residents (current and potential).</p> <p>Road users.</p> <p>Cycle and pedestrian users of path.</p> <p>TCDC (through reduction in need to respond / act to public complaints).</p>	<p>A number of short length dust seals have been constructed adjacent to houses. This demonstrates that dust has and is an issue. Current dust seals reduce the impact of the issue for residents but do not remove the issue.</p> <p>Traffic numbers have been too low to justify spending priority to date. But traffic flows have increased and will increase further due (a) local subdivision and (b)</p>	<p>numbers.</p> <p>The risk exists that any solution is not effective, especially those involving suppressants and intermittent seal (as at present).</p> <p>Any solution could be compromised if logging trucks were to use the road frequently, especially immediately after any seal or suppressant.</p> <p>Major constraint is cost.</p>
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growing visitor numbers to the camp and tracks.				
Issue / Opportunity	Evidence	Who benefits from change	Comment	Risks, Constraints and Dependencies
<p><b>Road condition, width &amp; geometry creates issues with safety of road users.</b></p>	<p>“3 crashes per year”</p> <p>2 reported in CAS 2009-2014 but “a number” also not reported. Including 1 head-on with international driver)</p> <p>Accidents expected to increase if seal without width/alignment improvement (due to likely speed increase)</p>	<p>All road users</p>	<p>Road is currently under width for the operational speed. (desirable width is 7m).</p> <p>A number of out of context curves exist on the current road alignment (low speed curves that are out of context with the approach speeds creating a need for sudden reduction in speed).</p> <p>Sightline visibility is minimal along sections of the current alignment on the inside of curves.</p> <p>Curve alignment in general requires attention to make curves smoother and more safe.</p>	<p>Major risk is that increased traffic and/or speeds may increase the frequency of crashes.</p> <p>Increased risk of crashes involving cyclists, compounded by increased speeds.</p> <p>Major constraints are cost and room within the road reserve to make improvements. Support of adjacent land owners and potentially land acquisition will be required.</p> <p>Major dependency, then, is all road users being fully aware of this risk and acting appropriately (possibly mitigated by extra signage and/or speed restrictions).</p>

## D. Benefit Cost Analysis detail

Item	Road	Path	Low	High	Comment
Description	Seal remaining 3.2km currently unsealed, add path adjacent to road	Build narrow cycle path next to fully sealed road			Pathway prompts some mode shift from cars to cycles. Seal removes dust. Geometric safety improvements offset increased speed and interaction with cyclists.
Average Annual Daily Traffic (AADT) 2019	230		200	230	230 AADT SH25 end and 111 AADT 4.6km mark (Oct-15 survey, Traffic Counts email 9/11/2015). Implies equivalent of 200 across whole road in 2015 and 230 in 2019 at conservative growth rates. Was 123 and 44 in 2002-2003 (in Traffic volumes sheet and as used in Seal BCR). Cf. 266 LCV, 3 bike, 4 camper surveyed over 5 days 4-Jan-2016 (i.e. 55 vehicles per day), of which people= 24 local, 51 WRC, 170 NZ and 42 Inter
Growth rate	3.6%		2.0%	4.0%	
PV travel time cost savings	\$1.15		\$0.88	\$1.19	Combined value of occupants/vehicle is \$32.72/hour now (possible that Whangamata Valley users are lower \$/hr but occupancy will be higher)
PV road user comforts	\$0.89		\$0.68	\$0.91	
PV VOC and CO2 savings	\$1.05		\$0.80	\$1.08	VOC=Vehicle Operating Costs Assumed in both is average speed from 50km/hr to 70km/hr
PV accident cost savings	\$0.00		\$0.00	\$0.00	Assumes 5 minor and 10 non-injury accidents over 5 years under Do Min and improvements are managed to not raise this incidence (and possibly reduce).
Sub-total Road benefits	\$3.09		\$2.36	\$3.18	Calculated for next 30 years only, as per NZTA
Road Costs	\$0.98		\$0.98	\$0.98	Cost shows as those additional to current situation in PV terms 30% contingency included in costings Includes all reseals within 30 years

Item	Road	Path	Low	High	Comment
Road NPV	\$2.1		\$1.4	\$2.2	Net Present Value (i.e. sum of benefits and costs), as per NZTA methodology
<b>Road BCR</b>	<b>3.1</b>		<b>2.4</b>	<b>3.2</b>	<b>The ratio of benefits to costs (ignoring signs), as used by NZTA</b>
Annual unique riders 2029		4160	1040	10400	
Growth rate		4.0%	4.0%	4.0%	
PV path users value		\$0.08	\$0.02	\$0.20	Crude estimate based on \$2/rider/year
PV higher local profit/wages		\$0.59	\$0.15	\$1.48	Crude estimate, consistent with Coromandel Great Walk analysis. Assumes plus 25% staying 1 more night, spending \$147 with a 40% value add to town (incl. 90% visitors are domestic)
Sub-total Path benefits		\$0.67	\$0.17	\$1.68	
Path Costs		\$0.98	\$0.98	\$0.98	
Path NPV		-\$0.3	-\$0.8	\$0.7	
Path BCR		<b>0.7</b>	<b>0.2</b>	<b>1.7</b>	
Combined benefits					
Sub-total Road benefits	\$3.09		\$2.36	\$3.18	
Sub-total Path benefits	\$0.67		\$0.17	\$1.68	
PV dust reduction	\$0.30		\$0.30	\$0.30	Crude estimate based on one-off \$10k PV per property and 3% p.a. growth in the number of properties
Combined benefits	\$4.06		\$2.82	\$5.16	
Combined costs	\$1.96		\$1.96	\$1.96	
Combined NPV	\$2.1		\$0.9	\$3.2	The sum of all benefits and costs
<b>Combined BCR</b>	<b>2.1</b>		<b>1.4</b>	<b>2.6</b>	<b>The ratio of all benefits to costs</b>

The following tables show the sensitivity of benefit present value estimates to assumptions (value used in table above in **bold**).

PV to road users		Growth		
	AA DT 2019	As initially 2%	As used 3.6%	As now estimated 4%
<b>As in initial calculations</b>	120	\$1,413,301	\$1,609,634	\$1,658,717
	150	\$1,766,626	\$2,012,042	\$2,073,396
	200	\$2,355,502	\$2,682,723	\$2,764,529
<b>As now estimated</b>	230	\$2,708,827	<b>\$3,085,132</b>	\$3,179,208

PV of dust reduction (crude approximation)		Extra houses in 30 years			
		Value per house	0	15	30
<b>Houses now=</b>	15	\$5,000	\$75,000	\$150,000	\$225,000
		\$10,000	\$150,000	<b>\$300,000</b>	\$450,000
		\$15,000	\$225,000	\$450,000	\$675,000

PV to cyclists (crude approximation)		Unique riders in 2029, growing by 4% p.a. thereafter				
Value per rider	1040	2080	3120	4160	5200	10400
<b>\$0.5</b>	\$5,018	\$10,036	\$15,054	\$20,073	\$25,091	\$50,181
<b>\$1.0</b>	\$10,036	\$20,073	\$30,109	\$40,145	\$50,181	\$100,363
<b>\$2.0</b>	\$20,073	\$40,145	\$60,218	<b>\$80,290</b>	\$100,363	\$200,726
<b>\$3.0</b>	\$30,109	\$60,218	\$90,327	\$120,435	\$150,544	\$301,089
<b>\$4.0</b>	\$40,145	\$80,290	\$120,435	\$160,581	\$200,726	\$401,451
<b>\$5.0</b>	\$50,181	\$100,363	\$150,544	\$200,726	\$250,907	\$501,814

PV to local businesses (crude approximation)			Unique riders in 2029, growing by 4% p.a. thereafter					
			1040	2080	3120	4160	5200	10400
		New visitor nights	260	520	780	1040	1300	2600
<b>% new visitors=</b>	25%	Spending/year	\$38,272	\$76,544	\$114,816	\$153,088	\$191,360	\$382,720
<b>Value add per visitor=</b>	\$58.9	Value add/year	\$15,309	\$30,618	\$45,926	\$61,235	\$76,544	\$153,088
<b>Value add proportion=</b>	40%	PV	\$147,734	\$295,468	\$443,202	<b>\$590,936</b>	\$738,671	\$1,477,341

## E. Cycle track statistics

Track	Description	Period	Track count	Unique users	Source
<b>Hauraki Rail Trail</b>	Easy rail trail	Dec12-Mar13 (4 months)	38,535	21,173	Angus (2013)
<b>Dunes Trail, Opotiki</b>		Dec12-Mar13 (4 months)	2,578	2,740	Angus (2013)
<b>Bridge to Nowhere, Ruapehu</b>	Destination ride	Dec12-Mar13 (4 months)	11,905	7,876	Angus (2013)
<b>Lake Whakatipu Ride, Queenstown</b>	Easy ride around Frankton Arm	Dec12-Mar13 (4 months)	114,700	99,566	Angus (2013)
<b>Jack's Point</b>	Extension to Jack's Point	2015 (12 months)	15,000	Not available	Queenstown Trails Trust
<b>Waimea Inlet, Nelson</b>	At Nelson end of Great Taste Trail	2015 (12 months)	76,729	Not available	Marwick (2016)
<b>Kaiteriteri, Tasman</b>	At popular beach end of Great Taste Trail	2015 (12 months)	21,823	Not available	Marwick (2016)
<b>W2K, Taupo</b>	Off road track near Kinloch	2012 (12 months)	18,732	Not available	DOC

Sources:

Angus & Associates (2013) New Zealand Cycle Trail Evaluation – Four Cycle Trail Case Studies. Report to MBIE.

Marwick (2016) Tasman's Great Taste Trail 2016 Survey Report. Report to Nelson Tasman-Cycle Trails Trust.

## F Funding sources

Funds known to have supported cycling projects:

- NZ Cycle Trail Trust/MBIE Maintaining the Great Rides Fund
- Local Economic Development Agencies
- Walking Access Commission
- Lottery Grants Board
- Lion Foundation
- Trillian Trust
- Pelorus Trust
- Rotary NZ
- Lions Clubs NZ
- Commercial sponsors (e.g. Radio Works, Nelson Airport, Southern Discoveries)

Sources: Nelson Tasman Cycle Trails Trust, Queenstown Trails Trust.