

TOURISM INFRASTRUCTURE FUND

MARCH 2020



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About the Tourism Infrastructure Fund

The Tourism Infrastructure Fund is administered by MBIE and provides up to \$25 million annually to develop tourism-related infrastructure that supports regions facing pressure from tourism growth

The fund aims to protect and enhance New Zealand's reputation both domestically and internationally. Supporting robust infrastructure contributes to quality experiences for visitors and maintains the social licence for the sector to operate.

The Tourism Infrastructure Fund is open to all local councils and not-for-profit community organisations that can demonstrate support from their local council.

Eligibility Criteria

The following criteria set out which types of projects are eligible for grants from the Tourism Infrastructure Fund

- Only publicly available infrastructure used significantly by tourists is eligible.
- Projects need to be for new facilities, or enhancements. Like-for-like replacement will not be funded.
- Development of new attractions, accommodation, and commercial activity is not eligible.
- Projects must demonstrate that they do not compete with commercial activities in the region.
- Projects will not be eligible if seeking funding under \$25,000 (though a series of linked projects can be joined in one application).
- Projects already receiving funding from NZTA are not eligible.
- Councils must meet at least one of the following tests (now or within 5 years), priority will be given to councils that meet two or more of these tests:
 - Visitor: rating unit ratio >5
 - Revenue from tourism in the region <\$1 billion per annum
 - Local Government Finance Agency lending limits have been reached.

Applicants are expected to co-fund their project to the maximum extent they are able, and to a minimum of 50%.

Assessment Criteria

In summary, the key assessments criteria are:

- | | |
|--|--|
| • <i>Addresses Infrastructure capacity constraints</i> | • <i>Supports the attraction of visitors to a region</i> |
| • <i>Represents value for money</i> | • <i>Otherwise may not happen, or happen more slowly</i> |
| • <i>Other funding options have been investigated</i> | • <i>Applicant has maximised funding contribution</i> |
| • <i>The balance of visitor and resident demand</i> | |

In addition to these criteria each round will open with a priorities statement. The statement for the upcoming round five is due for release on 01 March 2020. It is not anticipated that there will be any significant departure from the round three priorities statement quoted below;

“Round four of the TIF will continue the focus on prioritising projects that demonstrate current need for additional visitor-related public infrastructure in order to meet current visitor demand. I am also keen to encourage projects which look to address potential capacity issues and future-proofs local infrastructure

before problems develop. Support for feasibility studies will continue to be considered on a case-by-case basis.”

FNDC - March 2018 TIF Project Status

Approved Project	Value	Status as at February 2020
Waitangi Mountain Bike Park Toilet	\$138k	COMPLETED – (under budget)
Waitangi Boat Ramp Toilet	\$250k	<ul style="list-style-type: none">• Ground lease to be finalised• Waitangi Trust to sign off design amendments• Building consent and tender process required <p>Handover: November 2020 (subject to Trust sign-off)</p>
Haruru Falls Car park Toilet	\$256k	<ul style="list-style-type: none">• Ground lease to be finalised• Waitangi Trust to sign off design amendments• Building consent and tender process required <p>Handover: November 2020 subject to Trust sign-off</p>
Opononi i-Site Toilet	\$266k	<ul style="list-style-type: none">• Ground lease in place• Building consent approved• Tender process required <p>Handover: October 2020</p>
Mitimiti Toilets and Showers	\$288k	<ul style="list-style-type: none">• Ground lease in place• Building consent issued but requires amendment due to design changes (cost driven)• Negotiations underway with proposed contractor <p>Handover: August 2020</p>

FNDC - August 2019 TIF Project Status

Approved Project	Value	Status as at February 2020
Project 1A: Waipapa Public Toilet Capacity Upgrade Install a new field on the available FNDC land approximately 300m to the south of the toilet facility.	\$172k	<ul style="list-style-type: none"> • MBIE Agreement received for signing • FY21 Start
Project 1B: Waitangi Jetty Toilet Facilities Capacity Upgrade (BOI Yacht Club) Increase toilet capacity at Waitangi jetty to meet the rising demands of cruise ship visitors	\$252k	<ul style="list-style-type: none"> • MBIE Agreement received for signing • Building consent granted • Builder booked • Pending Waitangi Trust notification
Pungaere Road Seal Extension 3.59 Km to the start point to the Puketi Forest Kauri Walkway.	\$1.6M	<ul style="list-style-type: none"> • With NTA for scheduling • MBIE Agreement Pending • FY21 Start
Cable Bay Car Parks Improvements to three Cable Bay car parks	\$476k	<ul style="list-style-type: none"> • MBIE Agreement Pending • FY21 Start
Taipa Beach -Pohutukawa Protection Arborist to advise on protection options against cars parking close	\$16k	<ul style="list-style-type: none"> • MBIE Agreement Pending • Liaison with NRC Coast Care • Arborist asked to quote
Paihia Beach Toilet Upgrade to include Outdoor Shower Outdoor shower and address drainage issues	\$29k	<ul style="list-style-type: none"> • MBIE Agreement Pending • FY20 Start
Kerikeri Stone Store Lighting Lighting plan that enhances the night-time visitor experience	\$28k	<ul style="list-style-type: none"> • MBIE Agreement Pending • Heritage NZ engaged • McKay Electrical to support • FY20 Start
Regional Boat Ramp Study Grant Study into current issues around public boat ramp access and car-parking issues	\$75k	<ul style="list-style-type: none"> • MBIE Agreement Completed • Physical surveys complete • Completion due December 2020
Freedom Camping Operational Plan Study Grant Research to support the development of a regional plan for addressing Freedom camping issues	\$75k	<ul style="list-style-type: none"> • MBIE Agreement Completed • Data mapping underway • Completion due December 2020

March 2020 Proposed Applications

1. Smart Cities: WiFi Network Lighting (Russell and Paihia)
2. Smart Cities: Smart Bins
3. Lake Manuwai Toilet
4. Te Paki Stream Road Seal
5. Toilet Infrastructure Response Improvement Study Grant

Financial Summary

Table 1: March 2020 TIF Financial Data

PROJECT	Community Funds	FNDC FUNDS		MBIE FUNDS		TOTAL
		FY21	FY22	FY21	FY22	
SMART CITIES: Smart Lighting (Wifi)		\$ 143,313	-	\$ 143,313	-	\$ 286,626
SMART CITIES: Smart Bins		\$ 53,763	-	\$ 53,763	-	\$ 107,525
Lake Manuwai Toilet		\$ 81,840	-	\$ 81,840	-	\$ 163,680
Te Paki Stream Road Seal		-	\$ 1,086,371	-	\$ 1,086,371	\$ 2,172,742
Paihia WWTP		\$ 390,762		\$ 390,762		\$ 781,524
Awanui Reserve-SH10 Access	\$33,000	\$ 61,875		\$ 94,875		\$ 189,750
Toilet Infrastructure Response Study Grant		\$ 55,000	-	\$ 55,000	-	\$ 110,000
		\$ 333,916	\$ 1,086,371	\$ 333,916	\$ 1,086,371	\$ 3,811,847
	\$ 33,000	\$ 1,872,924		\$ 1,905,924		

Background

New smart technologies and sensors are now a proven and cost-effective opportunity to gather real-time data across a number of areas enabling a better understanding of how support services are functioning and if required enable staff to respond appropriately. These networks also provide the infrastructure for public WiFi to be available in popular tourist areas.

Paihia, Russell and Mangonui waterfronts see a significant number of pedestrian tourists, face service pressures over peak periods and have tourist number density to make a small WiFi network effective. As the technology is embedded and the key benefits are proven then networks can be extended and deployed in other regions of the Far North.

The network infrastructure is contained within smart street lighting options.



GYRO-PLUS-20

20 pcs. High Power LEDs
17W-40W Optional Power Setting
8 different optical lenses

AS/NZS 1158 :P1, P2, P3, P4
EN13201: ME5-ME4

Park, Paths, Driveways
Residential, Urban, Feeder



Infrastructure Issues

A WiFi network enabled by the fitting of Smart Streetlights will set up the infrastructure needed to support the following options as a minimum;

- WiFi hotspots
- Deployment of smart rubbish bins
- Localised Information services
- CCTV camera operation
- Smart Parking
- Air Quality Sensors
- Options for revenue through commercial applications – (advertising, camera feed, WiFi access)

Project: SMART CITIES:Smart Lighting (Wifi)

Paihia Waterfront Assets



Install a meshed WiFi network using NB Connect embedded within the streetlights. delivering a carrier grade WiFi network as an effective backbone for tourism, industry and the public. Utilise current FNDC infrastructure at Paihia, Russell and Mangonui waterfronts for installation.

NB SmartCities NZ Ltd has proven light designs that are approved by NZTA.

NB SmartCities NZ Ltd is a New Zealand based joint venture between NB SmartCities Pty Ltd (Australia and Denmark) and the McKay Group who are the FNDC contracted streetlight services provider.

McKay are currently working through a smart lights design for the Hundertwasser car park in Kawakawa and have installed NZTA specification smart lights on the new Taipa Bridge.

Russell Waterfront Assets



It is recommended that McKay's be engaged as a partner for this project due to the small scope and the fact that they have systems operational in Northland. Should FNDC decide to widen the networks to other areas, a wider sourcing process can occur in order to provide additional competition, security of supply and reduce dependency on one vendor.

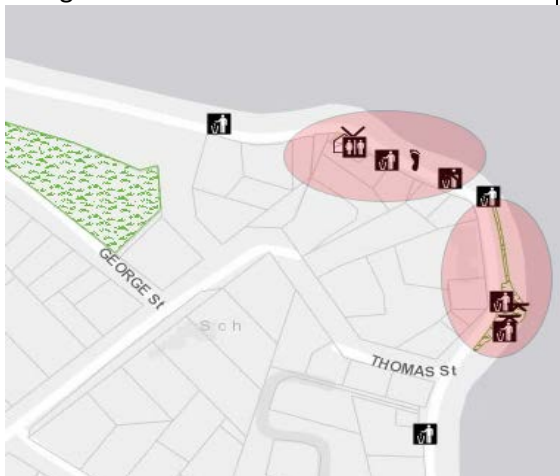
Focus Paihia Chairman has been consulted and is supportive.

Application will include two years operating costs

Ongoing operating costs (Unlimited Data and Connection)

Paihia \$ 5,780 , Mangonui \$ 4,300 Russell \$ 4,349

Mangonui Waterfront Assets



Cost Estimate			Benefits																																																																					
<table><tr><th colspan="3">PAIHIA</th></tr><tr><td>Construction</td><td>80%</td><td>\$ 79,392</td></tr><tr><td>Project Management</td><td>8%</td><td>\$ 7,939</td></tr><tr><td>Project Engineer (MSQA)</td><td>3%</td><td>\$ 3,176</td></tr><tr><td>Contingency (Risk Based)</td><td>9%</td><td>\$ 9,051</td></tr><tr><td></td><td></td><td>\$ 99,558</td></tr></table> <p>FNDC Contribution: \$ 49,779</p> <table><tr><th colspan="3">RUSSELL</th></tr><tr><td>Construction</td><td>80%</td><td>\$ 69,177</td></tr><tr><td>Project Management</td><td>8%</td><td>\$ 6,918</td></tr><tr><td>Project Engineer (MSQA)</td><td>3%</td><td>\$ 2,767</td></tr><tr><td>Contingency (Risk Based)</td><td>9%</td><td>\$ 7,886</td></tr><tr><td></td><td></td><td>\$ 86,748</td></tr></table> <p>FNDC Contribution: \$ 43,373</p> <table><tr><th colspan="3">MANGONUI</th></tr><tr><td>Construction</td><td>80%</td><td>\$ 80,000</td></tr><tr><td>Project Management</td><td>8%</td><td>\$ 8,000</td></tr><tr><td>Project Engineer (MSQA)</td><td>3%</td><td>\$ 3,200</td></tr><tr><td>Contingency (Risk Based)</td><td>9%</td><td>\$ 9,120</td></tr><tr><td></td><td></td><td>\$ 100,320</td></tr></table> <p>FNDC Contribution: \$ 50,160</p> <table><tr><th colspan="3">TOTAL COSTING</th></tr><tr><td>FNDC</td><td>50%</td><td>\$ 143,313</td></tr><tr><td>MBIE</td><td>50%</td><td>\$ 143,313</td></tr><tr><td></td><td></td><td></td></tr><tr><td></td><td></td><td>\$ 286,626</td></tr></table>			PAIHIA			Construction	80%	\$ 79,392	Project Management	8%	\$ 7,939	Project Engineer (MSQA)	3%	\$ 3,176	Contingency (Risk Based)	9%	\$ 9,051			\$ 99,558	RUSSELL			Construction	80%	\$ 69,177	Project Management	8%	\$ 6,918	Project Engineer (MSQA)	3%	\$ 2,767	Contingency (Risk Based)	9%	\$ 7,886			\$ 86,748	MANGONUI			Construction	80%	\$ 80,000	Project Management	8%	\$ 8,000	Project Engineer (MSQA)	3%	\$ 3,200	Contingency (Risk Based)	9%	\$ 9,120			\$ 100,320	TOTAL COSTING			FNDC	50%	\$ 143,313	MBIE	50%	\$ 143,313						\$ 286,626	<ul style="list-style-type: none">Enables deployment of Smart services<ul style="list-style-type: none">- Smart Bins- Smart parking- Tourism and services data gathering- CCTVOpportunity for Public WiFi hotspots-improving visitor experiencePotential commercial opportunitiesGather Data to support future projects
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SMART CITIES:
Smart Lighting
(Wifi)



✓✓✓ Unity of purpose

✓✓✓ Environmental stewardship

✓✓✓ Partnership

✓✓✓ Community

✓✓✓ Safety and Wellbeing

PROJECT OBJECTIVES

- 1 Install Smart Cities capable Wifi Network
- 2 Provide Public Wifi Hotspot
- 3 Enhance visitor experience

★ TOP PROJECT BENEFITS

- 1 Enables deployment of Smart services
- 2 Opportunity for Public Wifi hotspots
- 3 Improved visitor experience
- 4 Potential commercial opportunities

▲ PROJECT RISKS

- 1 Chorus Infrastructure issues
- 2 Project will not proceed without TIF Funding
- 3 Unforeseen construction difficulties

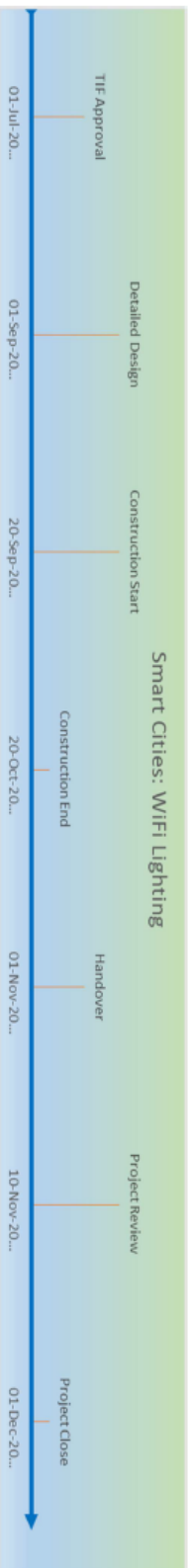
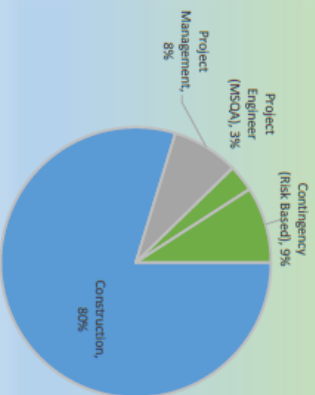
FUNDING SOURCES

FNDC CAPEX	\$ 143,313
OTHER GOV'T AGENCIES	\$.
NZTA	\$.
COMMUNITY CONTRIBUTION	\$.
OTHER SOURCES	\$.
MBIE - TIF	\$ 143,313
TOTAL FUNDING	\$ 286,626

COST ESTIMATE

CONSTRUCTION	80%	\$ 228,569
PROJECT MANAGEMENT	8%	\$ 22,857
PROJECT ENGINEER	3%	\$ 9,143
CONTINGENCY (RISK BASED)	9%	\$ 26,057
		\$ 286,626

Cost Breakdown



✓ Publicly available infrastructure used significantly by tourists



✓ New facilities or enhancement



✓ Not a new attraction or commercial activity

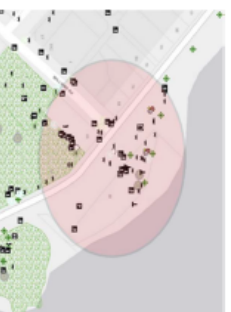


Figure 1: Pōhia

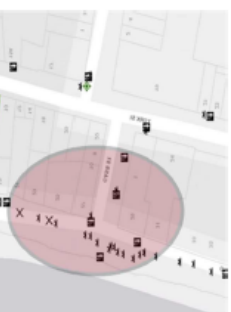


Figure 2: Russell

✓ Does not compete with commercial activities

✓ Over \$25,000

✓ No funding from NZTA

Background

The introduction of a Smart City WiFi capability in Paihia, Russell and Mangonui will enable the deployment of smart technology bins at some of the highest use tourist areas in the district.

Paihia and Russell have suffered from overflowing rubbish bins at their respective waterfront hubs. This is often caused by a significant peak tourist flow when the Cruise ships are in port. Overflowing bins are not a good look nor environmentally responsible. The use of temporary additional bins does not contribute to the aesthetics of these popular areas. Mangonui is becoming increasingly busy and is likely to continue to see additional pressures in this service area.

Smart bins utilise smart sensors that detect rubbish levels and alert maintenance contractors when they are nearing capacity and need to be emptied. A built-in solar cell-powered compactor means the bins can take up to eight times more rubbish than a standard waste bin, helping to deal with the influx of day-trippers and cruise ship visitors.

The compacting and online alert systems also ensure optimum use of waste collectors' time while the technology prevents rubbish overflow.



Infrastructure Issues

Popular tourist destinations across the Far North region often struggle to deal with surges in visitors over short periods of time. This can result in overflowing rubbish bins. This situation causes additional operational strain on services and additional contractor requirements add additional cost.

The introduction of smart city WiFi (subject to TIF approval) at Paihia, Russell and Mangonui provide the opportunity to deploy smart bin technology on an initial small scale. Feedback from Palmerston North Council (Clean Cube Bins) and Taupo (Big Belly Bins) has been positive.

Project: SMART CITIES: Smart Bins

Big Belly Bin: Matakana



Deploy smart bins to four selected high use locations in Paihia, Russell and Mangonui
(Option also exists to deploy a remote 3G or 4G bin unit to an alternate location if not utilising WiFi network))

FNDC Operations management staff to be involved in site selection, model selection and in benefits tracking. Consultation with contracted service providers.

Given the installation of the Smart Bins will be after the installation of the Smart Streetlights that support the network a final decision on the model of bins does not need to be made at this point in time. Clean Cube are currently in the process of a supplier change and other players are potentially entering the market in the upcoming months as demand for service increases. Due to the current supplier changes Clean Cube could not provide pricing at this time.

Big Belly Bins (Manco Engineering) are one of the options used by several Councils in New Zealand and form the cost basis for this project funding estimate. Installation costs will be relatively standard across the brands, with proprietary software charges the main variable outside of hardware cost.

Big Belly Bins also have the option to host the WiFi network infrastructure from the bin. There are also remote 3G and 4G communication options.

TIF Application will also include bid for two years operational funding

Note: Big Belly bins pricing estimates are for a double bin set-up.

Cost Estimate

Construction & Installation	79%	\$ 85,000
Project Management	8%	\$ 8,500
Specialist Consultancy (IT)	4%	\$ 4,250
Contingency (Risk Based)	9%	\$ 9,775
		\$ 107,525

FNDC Contribution: **\$ 53,763**

Benefits

- Reduces waste overflow
- Reduces collection trips and operational cost
- Compaction increases bin capacity
- Supports the use of renewable energy

Stakeholders

FNDC, Bay of Islands and Whangaroa Community Board, Focus Paihia

Risks

Will not proceed if Smart Cities infrastructure not yet installed (3G or 4G remote network can proceed)

Project doesn't start without TIF funding. The proposed program of work is unlikely to go ahead without an additional funding source.

SMART CITIES: Smart Bins



✓✓✓ Unity of purpose

✓✓✓ Environmental stewardship

✓✓✓ Partnership

✓✓✓ Community

✓✓✓ Safety and Wellbeing

PROJECT OBJECTIVES

- 1 Address environment issue of overflowing bins
- 2 Improve operational management of services
- 3 Enhance visitor experience

★ TOP PROJECT BENEFITS

- 1 Reduced waste overflow
- 2 Reduces collection trips and operational cost
- 3 Improves visitor experience
- 4 Supports the use of renewable energy

▲ PROJECT RISKS

- 1 Smart Cites infrastructure not yet installed
- 2 Internet connectivity issues
- 3 Project will not proceed without TIF Funding

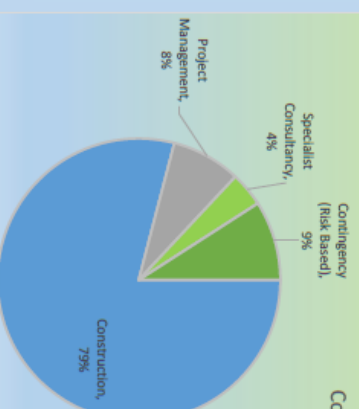
FUNDING SOURCES

FNDC CAPEX	\$ 53,763
OTHER GOV'T AGENCIES	\$.
NZTA	\$.
COMMUNITY CONTRIBUTION	\$.
OTHER SOURCES	\$.
MBIE - TIF	\$ 53,762
TOTAL FUNDING	\$ 107,525

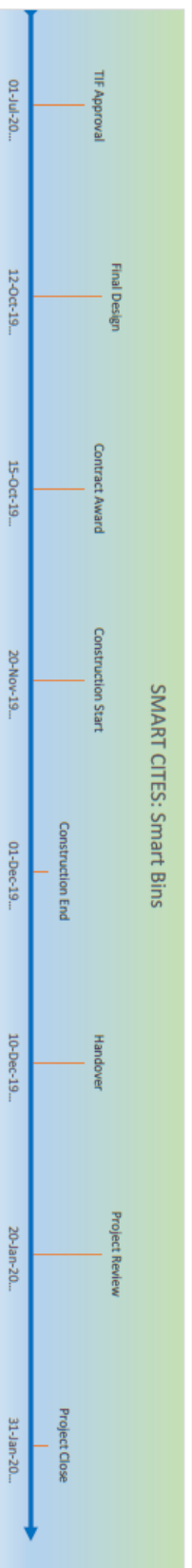
COST ESTIMATE

CONSTRUCTION	79%	\$ 85,000
PROJECT MANAGEMENT	8%	\$ 8,500
SPECIALIST CONSULTANCY	4%	\$ 4,250
CONTINGENCY (RISK BASED)	9%	\$ 9,775
		\$ 107,525

Cost Breakdown



SMART CITIES: Smart Bins



✓ Publicly available infrastructure used significantly by tourists

✓ New facilities or enhancement

✓ Not a new attraction or commercial activity

✓ Does not compete with commercial activities

✓ Over \$25,000

✓ No funding from NZTA

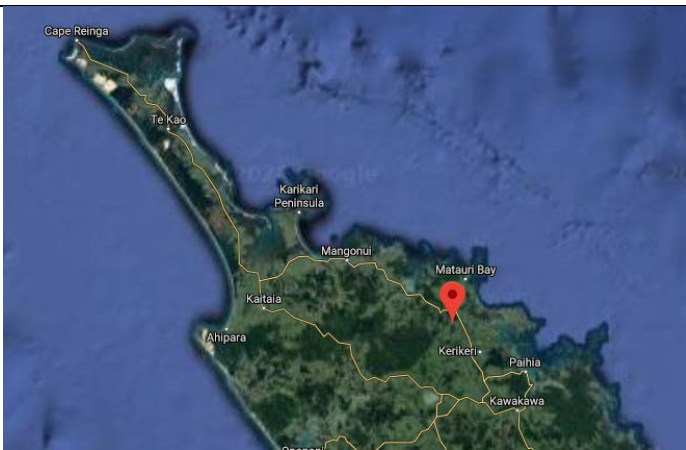


Background

Situated north of Waipapa, near Kerikeri, Lake Manuwai is a man-made irrigation lake. The former Ministry of Works created it in 1982, and it's one of the reservoirs that sustains Kerikeri's horticulture industry. Kerikeri Irrigation Co now owns Lake Manuwai and an easement for Far North District Council allows public access.

The Lake is a popular swimming, kayaking and Waka Ama spot and also hosts children's learn to sail programs. The natural rock formations are also an attraction.

Geologist Dr Bruce Hayward described the formations as, "One of two best developed and most extensive examples of fluted basalt proto-karst in New Zealand and possibly in the world."



Infrastructure Issues

Given the increased visitor numbers a facility with better capacity and more user friendly needs to be installed. Maintaining adequate toilet facilities is an important environmental consideration and the ongoing public access to the lake is more secure if the environmental risks are mitigated.

The lake is currently served by a single portaloo. This is not sufficient, and a more functional facility is required.

Kerikeri Irrigation Company required to confirm public access rights for extended duration which is not anticipated to be an issue.

Project: Lake Manuwai Toilet



Construction of dry vault/holding tank toilet facility,

Pricing is for a double precast concrete unit with disabled access, holding tank and standard flush toilets. Other options are potentially cheaper subject to final site testing and design.

These units are built offsite and transported. No soakage field requirements and can be relocated in the future if required.

Installed by local contractors.

Other options include:

Single concrete units

Double fibreglass dry vault

2 Years operational funding to be requested. Ongoing operational period will be negotiated with local user groups.



Cost Estimate

Construction	83%	\$ 133,800
Project Management	5%	\$ 8,000
Specialist Consultancy	3%	\$ 5,000
Consents	1%	\$ 2,000
Contingency (Risk Based)	9%	\$ 14,880
	%	\$ 163,680

FNDC Contribution: **\$ 81,840**

Benefits

- Better environmental outcome
- Provides security of access
- Opens up possibility of freedom camping
- Reduces pressure on other swimming locations
- Moving more children's sailing to the lake reduces boat ramp pressures at Doves Bay

Stakeholders

FNDC, Kerikeri Irrigation Company, Kerikeri Cruising Club

Risks

Project doesn't start without TIF funding. The proposed program of work is unlikely to go ahead without an additional funding source.

Kerikeri Irrigation Company does not confirm access rights

Lake Manuawai Toilet Facility



✓✓✓ Unity of purpose

✓✓✓ Environmental stewardship

✓✓✓ Partnership

✓✓✓ Community

✓✓✓ Safety and Wellbeing

PROJECT OBJECTIVES

- 1 Provide functional and environmentally responsible toilet facilities
- 2 Prevent environmental damage
- 3 Enhance Visitor experience
- 4 Maintain positive relationship with key stakeholders

TOP PROJECT BENEFITS

- 1 Better environmental outcome
- 2 Helps reduce visitor pressure on other swimming/watersport locations
- 3 Provides security of access
- 4 Opens up possibility of freedom camping

PROJECT RISKS

- 1 Project will not proceed without TIF Funding
- 2 Preparation works reveal additional complexities
- 3 Long-term land access revoked (unlikely)

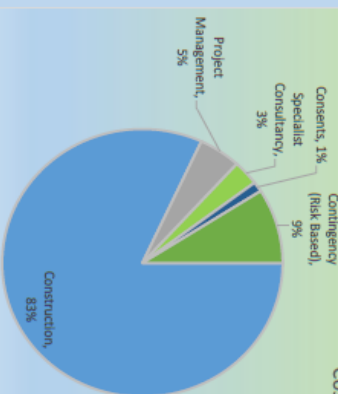
FUNDING SOURCES

FND C APEX	\$ 81,840
OTHER GOV'T AGENCIES	\$ -
NZTA	\$ -
COMMUNITY CONTRIBUTION	\$ -
OTHER SOURCES	\$ -
MBIE - TIF	\$ 81,840
TOTAL FUNDING	\$ 163,680

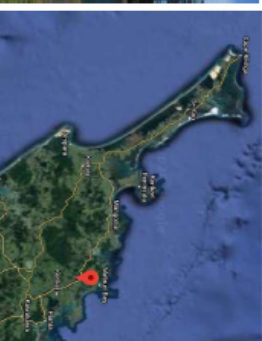
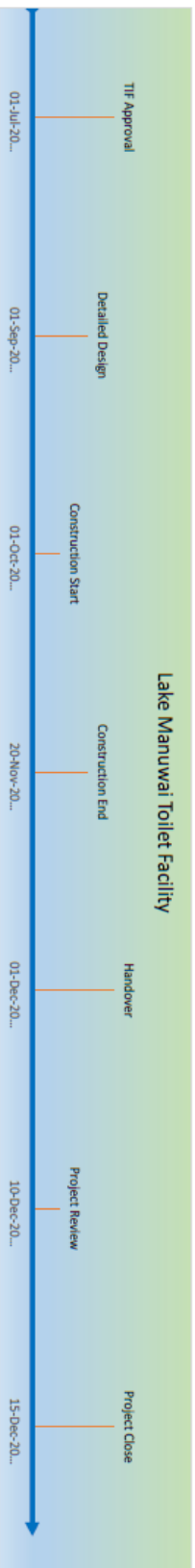
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Cost Breakdown



Lake Manuawai Toilet Facility



✓ Publicly available infrastructure used significantly by tourists

✓ New facilities or enhancement

✓ Not a new attraction or commercial activity

✓ Does not compete with commercial activities

✓ Over \$25,000

✓ No funding from NZTA



Background

Te Paki stream road is the access point to the Giant Sand Dunes tourist attraction. a natural feature of constantly shifting sand dunes, popular for sandboarding. The Te Paki Sand Dunes are the largest in the Southern Hemisphere and are a popular destination for scheduled tours and independent travelers.

Ngati Kuri have noted significant increases in visitor numbers in the last three to five years, with numbers approaching a 600% increase.

The road is unsealed.

Te Paki Stream road is in the top three on the FNDC tourist roads priority list.



Infrastructure Issues

The road is only 5.6m wide and with a growing number of tour buses sharing the road with tourists unfamiliar with gravel roads there is an ever-present road safety risk. The dust generated over the peak summer period is also an environmental concern.

Ongoing maintenance issues with the current gravel road would also be addressed with a sealing project.

Te Paki Stream road is in the top three on the FNDC tourist roads priority list.

Project: Te Paki Stream Road Seal



3.738 Km at an estimated construction only cost of \$ 1.846M (formula derived)

The project will require enabling works to address the 5.6m width. There will also potentially be a requirement for fencing set-backs at points along the road.

The project will be delivered in co-ordination with the Northland Transport Alliance (NTA) and has the support of Ngati Kuri.

Cost estimates utilise an indicative planning formula for sealing. The cost breakdown is in accordance with Pungaere Road TIF project and will be verified by NTA.

Cost Estimate

Construction	85%	\$ 1,846,000
Project Management	3%	\$ 60,918
Specialist Consultancy	2%	\$ 40,612
Project Engineer (MSQA)	2%	\$ 40,612
Contingency (Risk Based)	8%	\$ 184,600
		\$ 2,172,742

FNDC Contribution: **\$ 1.086M**

Benefits

- Reduced accident risk on busy tourist road
- Eliminates the environmental issue of road dust
- Improved quality of the Te Paki Sand Dunes experience
- Reduced annual maintenance

Stakeholders

FNDC, Te Hiku Community Board, Ngati Kuri

Risks

Project doesn't start without TIF funding. The proposed program of work is unlikely to go ahead without an additional funding source.

Availability of contractors. Scheduling into the summer build program

Te Paki Stream Road Seal



✓✓✓ Unity of purpose

✓✓✓ Environmental stewardship

✓✓✓ Partnership

✓✓✓ Community

✓✓✓ Safety and Wellbeing

PROJECT OBJECTIVES

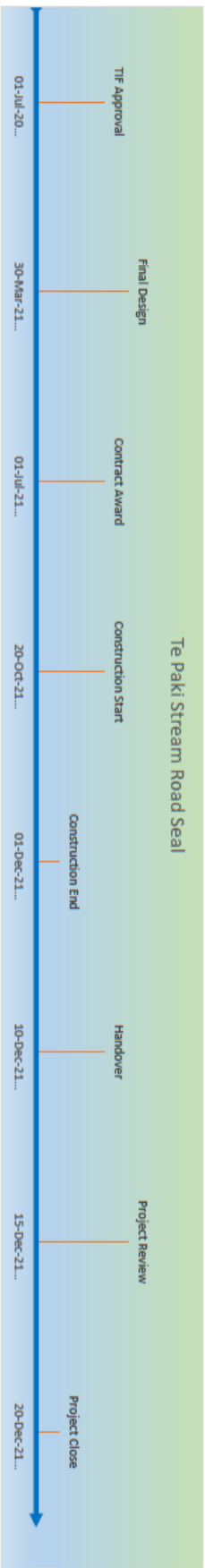
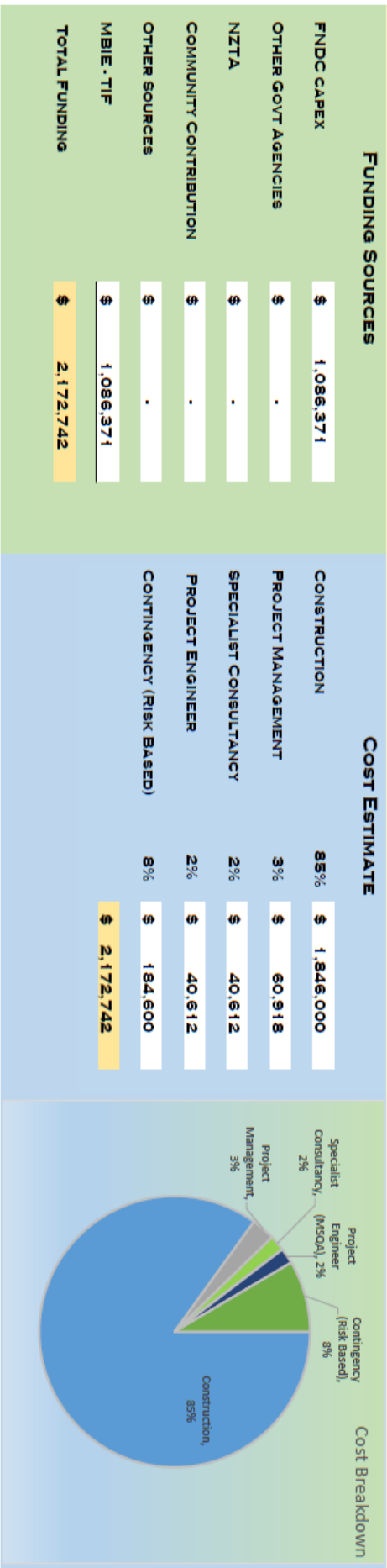
1. Improve road safety on a busy tourist road
2. Reduce the environmental impact of road dust
3. Enhance visitor experience
4. Continue to develop working relationship with Ngati Kuri

★ TOP PROJECT BENEFITS

1. Reduced accident risk on busy tourist road
2. Eliminates the environmental issue of road dust
3. Improved quality of the Te Paki Sand Dunes experience
4. Reduced annual maintenance

▲ PROJECT RISKS

1. Scheduling into already committed summer build program
2. Project will not proceed without TIF Funding
3. Unforeseen construction difficulties



- ✓ Publicly available infrastructure used significantly by tourists
- ✓ New facilities or enhancement
- ✓ Not a new attraction or commercial activity
- ✓ Does not compete with commercial activities
- ✓ Over \$25,000
- ✓ No funding from NZTA

Background

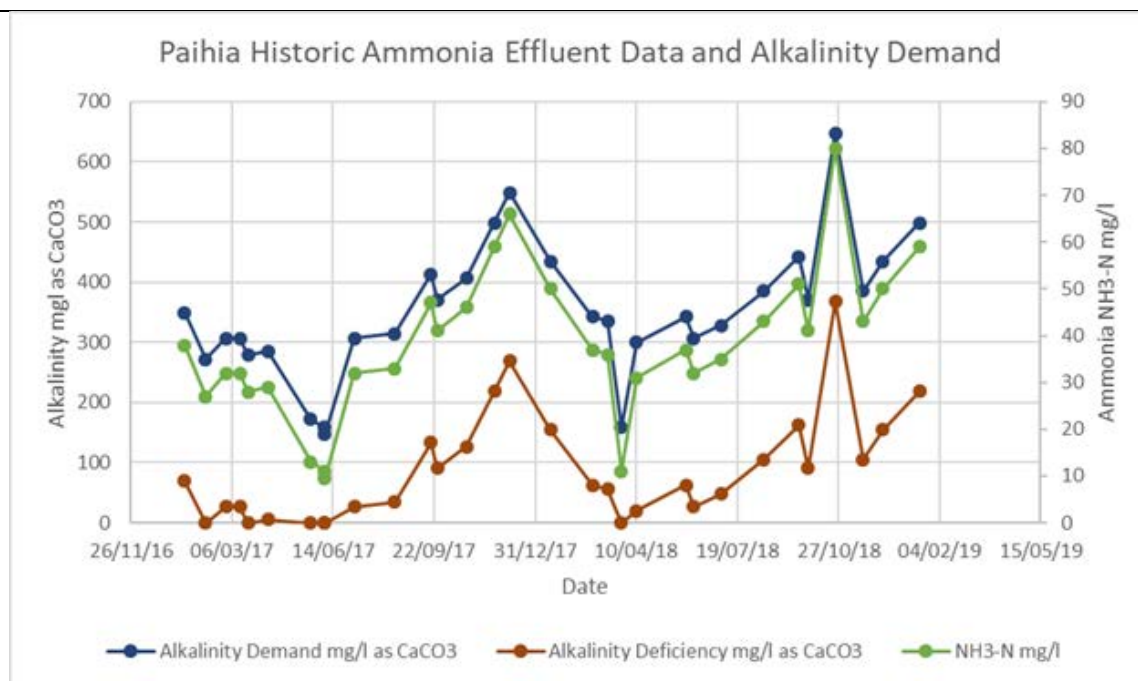
The Paihia WWTP was first constructed in 1980 to the Ministry of Works standard for wastewater treatment ponds. This was intended to remove suspended solids and organic material only. A later consent revision required the plant to also remove total nitrogen and ammonia to improve the downstream water course.

The site of the plant is situated in the Waitangi Forest, a Waitangi Treaty Settlement area that until later 2019 was in unresolved ownership. This means that the land of the site and the surroundings are not of defined ownership and no works were permitted outside of the operating boundary.

In 2018 FNDC started procurement and construction of an upgrade of the existing pond system by the addition of in pond treatment (Bioshells). This proprietary treatment process was able to be installed within the confines of the existing site boundary so reducing expensive and space consuming construction

When built in 1980 the WWTP was intended for up to 6000 people. (There are 2010 permanent residents according to 2018 census). Visitor numbers over peak periods, including a significant number of cruise ship arrivals, are push over the 6000 capacity and additional operational capacity is needed to meet and maintain required standards over future peak periods.

Historical Data shows significant increase in ammonia and alkalinity demand in Summer associated with increased visitor numbers.



There is a clear seasonal demand for alkalinity due to increased concentration of ammonia, the table above shows that when dealing with resident population only, there is no deficit for alkalinity to achieve full performance.

Infrastructure Issues

The resource consent average performance requires the plant to be removing ammonia to less than 2 mg/l and never exceeding 4 mg/l. Critical to the removal is the availability of alkalinity. For every mg/l of ammonia Nitrogen to be removed, 7.1 mg/l of alkalinity are required.

Indicators of the contribution from the non-residents is shown in dry day flow data. 1 January 2018 recorded flows of 1749 m³/d, where as a dry period in May 2018 saw an average for the week of 860 m³/d. Operational data on the WWTP sees a marked seasonal trend in effluent quality. In May the ammonia was around 30 mg/l, but results in December, January and February record 60 – 80 mg/l.

This is indicative of tourism contributing in excess of twice the flow and nearly twice the load contribution. This indicates that the population served by Paihia is 2000 resident increasing to over 8000 in peak holiday periods and growing.

It is therefore necessary to increase alkalinity in the process to enable the full removal of ammonia

There is a clear seasonal demand for alkalinity as a result of increased concentrations of ammonia, that means that when dealing with resident population only, there is no deficit for alkalinity to achieve full performance

There are 2 options to address the Alkalinity issue. *Chemical Dosing Treatment* and *On-Site Recovery*.

Chemical dosing is a higher risk option for both staff and the environment and comes with a significant ongoing operational cost. The aim of this application is to secure funding to enable an On-site recovery option to be selected and constructed as soon as possible.



Project:



In the presence of food and the absence of oxygen many bacteria in a wastewater plant will use nitrate as an alternative to oxygen. This means that if nitrate can be recycled to the head of the treatment works where bacteria numbers are highest and food is most available, the natural processes will remove nitrate.

The denitrification, removal of nitrate, can recover some of the alkalinity lost in the conversion of ammonia to nitrate.

This is a process widely used in activated sludge plants to remove nitrate and recover alkalinity.

The proposed solution is to recycle treated effluent from the end of the bioshell zone to the head of pond one. Here it will mix with incoming organic material rich wastewater and the bacteria present will remove the nitrate, so regaining some alkalinity.

This solution offers a local solution within the operational site and avoids the use of chemicals and causes no increased safety risks to personnel.

Cost Estimate

Construction	84%	\$ 645,888
Project Management	3%	\$ 38,753
Project Engineer (MSQA)	2%	\$ 25,836
Contingency (Risk Based)	9%	\$ 71,048
		\$ 781,524

FNDC Contribution: **\$ 390,762**

Note: Potential requirement for additional design/engineer fees of \$140k as at 10 March 20. FNDC share would then be \$460K

Benefits

- Maintains resource consent standards
- Provides operational capacity to better meet current and future high demand peaks
- Is the most environmentally friendly option
- Lowest ongoing operational costs

Stakeholders

FNDC, Waitangi Forest

Risks

Project is delayed without TIF funding.

Pathia WWTP:
Alkalinity On-site
Recovery



- ✓✓✓ Unity of purpose
- ✓✓✓ Environmental stewardship
- ✓✓✓ Partnership
- ✓✓✓ Community
- ✓✓✓ Safety and Wellbeing

PROJECT OBJECTIVES

- 1 Improve capacity to meet peak tourist demand
- 2 Maintain Resource consent standards
- 3 Improve Infrastructure to support increasing visitor numbers

★ TOP PROJECT BENEFITS

- 1 Maintains Resource consent standards
- 2 Provides operational capacity to better meet current and future high demand peaks
- 3 Environmentally friendly option
- 4 Low ongoing operational costs

▲ PROJECT RISKS

- 1 Project will be delayed without TIF Funding
- 2 Unforeseen construction difficulties

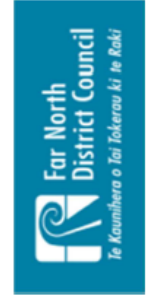
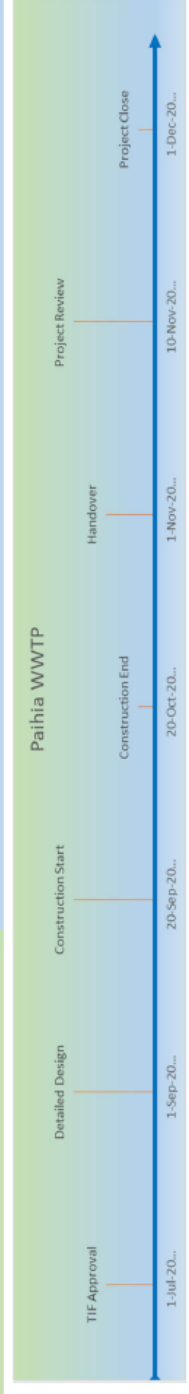
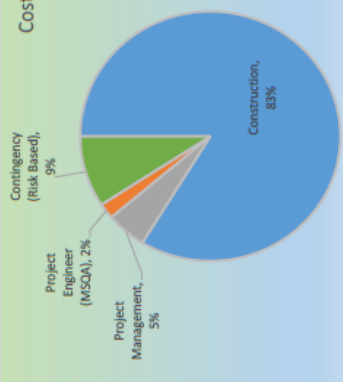
FUNDING SOURCES

FNDC CAPEX	\$ 390,762
OTHER GOVT AGENCIES	\$ -
NZTA	\$ -
COMMUNITY CONTRIBUTION	\$ -
OTHER SOURCES	\$ -
MBIE - TIF	\$ 390,762
TOTAL FUNDING	\$ 781,524

COST ESTIMATE

CONSTRUCTION	84%	\$ 645,888
PROJECT MANAGEMENT	3%	\$ 38,753
PROJECT ENGINEER	2%	\$ 25,836
CONTINGENCY (RISK BASED)	9%	\$ 71,048
		\$ 781,524

Cost Breakdown



- ✓ Publicly available infrastructure used significantly by tourists
- ✓ New facilities or enhancement
- ✓ Not a new attraction or commercial activity
- ✓ Does not compete with commercial activities
- ✓ Over \$25,000
- ✓ No funding from NZTA

Background

The intersection of State Highway 10 (SH10) and Far North Road in Awanui is a high-volume tourist traffic area, being at the crossroads for onward travel to Cape Reinga. A significant and rising number of visitors travel SH10 heading north, and those wishing to use the public toilets must turn south and then cross two lanes of traffic to turn back north from the public toilet carpark.

Access to the reserve area from SH10 not only makes access to the toilet facilities safer it also provides a safer option to park for those travelling North. This will encourage more visitors to stop in Awanui .



Infrastructure Issues

There are toilet facilities and a children's play area at Awanui Reserve with the only access off Far North road, which is a left turn off SH 10-. Travelers approaching Awanui from the coastal route on SH 10 are predominantly turning right towards Waipapakauri, Houhora , Te Paki Sand dunes and ultimately Cape Reinga.

To take advantage of the toilet facilities or to stop at the local shops involves a slight backtrack and subsequent turn right across the traffic at a major intersection. As a result, cars are either park along the verges of SH10 for those stopping at the Café, Craft store and other shops or travelers continue straight on north, not using the public facilities or commercial premises.

Providing safe access to the reserve off SH10 will not only provide a better and safer experience for tourists it will also enable the township to benefit from tourism. This is also in alignment with the NZTA township plan for Awanui. (Attached).

Project: Awanui Reserve: State Highway 10 Access



The Awanui Reserve backs onto a clear area of land owned by NZTA . This area (marked in the image below) can be accessed of an existing SH10 exit that was formed to service a Council housing area.

The turn-off is in the 50 Km area.

A gravel car=park capable of accommodating 10-15 vehicles will be formed and a footpath laid to join the existing park footpath through to the toilet facilities.

Awanui Park



Improve park landscaping and facilities.



Create entrance on northern boundary with SH10. Connect with proposed crossing and open space at River's Edge. Use park entrance to contribute to a town centre gateway



Improve existing entrance on west boundary with SH1. Improve landscaping, add amenity, consider shifting and rearranging public toilets and carpark



Grow activity and amenity: use park for markets and events, add seating, shade, more/improved play, and sports facilities such as basketball and cycling.

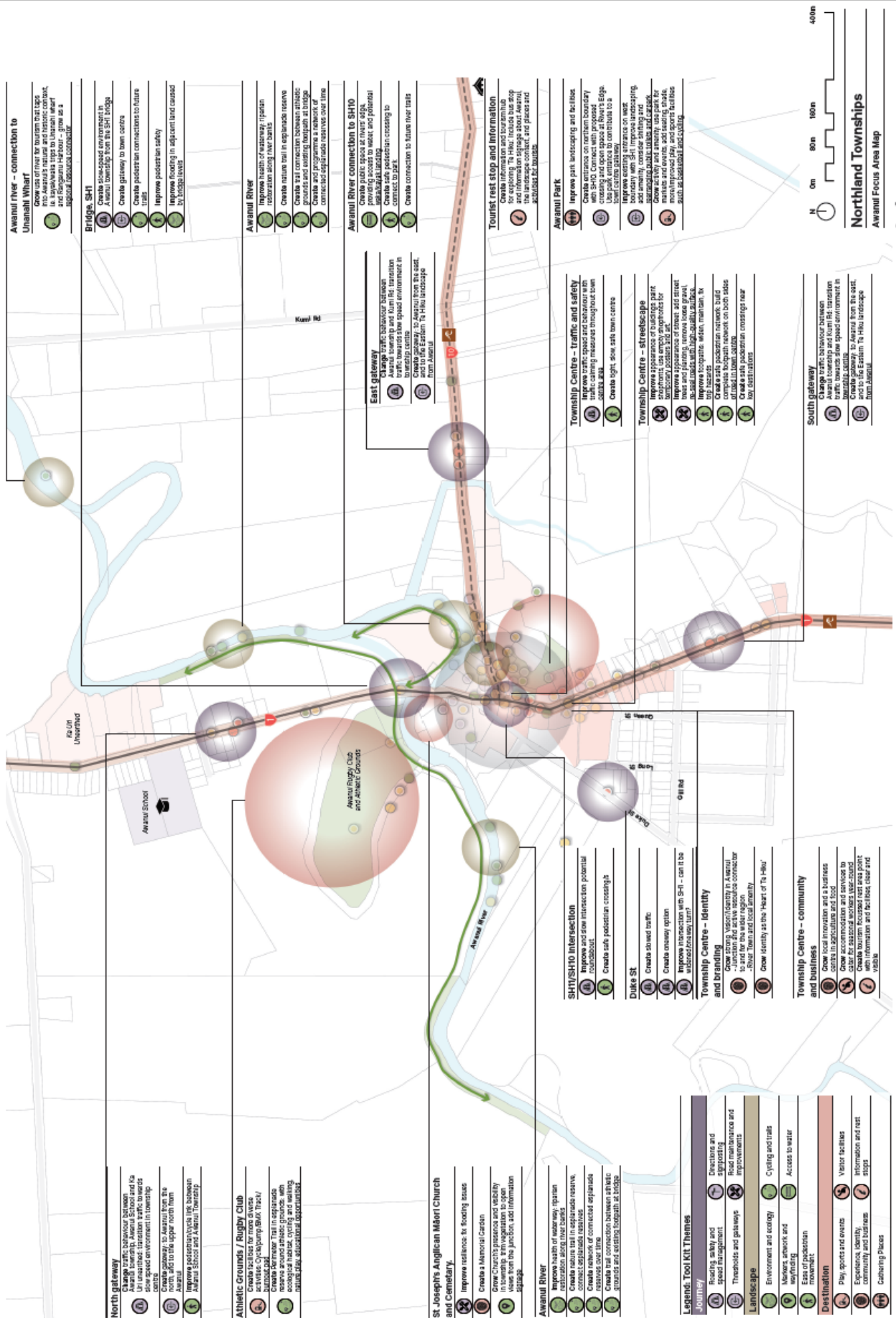
Access to the SH10 commercial area and riverside will be via the commercial car parking area on the intersection of S10 and Far North Road.

The Awanui Community have identified the Placemaking project, which allocates \$ 33k of Community Board funding as a source for this project. This is also in alignment with the NZTA township plan for Awanui.



Cost Estimate			Benefits
Construction	79%	\$ 150,000	<ul style="list-style-type: none">• Safer access to Awanui shops and services• Increases likelihood of tourists stopping and contributing to local economy• Makes better use of existing facilities• Supports future growth
Project Management	5%	\$ 10,000	
Specialist Consultancy	3%	\$ 6,250	
Project Engineer (MSQA)	3%	\$ 6,250	
Contingency (Risk Based)	9%	\$ 17,250	
		\$ 189,750	
FNDC Contribution: \$ 61,875 Awanui Community Fund \$ 33,000			
Stakeholders			
FNDC, Awanui Progressives and Ratepayers, Te Hiku Community Board, NZTA			
Risks			
<p>Project doesn't start without TIF funding. The proposed program of work is unlikely to go ahead without an additional funding source.</p> <p>Access to Required Land (NZTA)</p> <p>Preparation Works reveal additional complexities</p>			

Awanui Focus Area Map.



Awanui Reserve SH10 Access



✓✓✓ Unity of purpose

✓✓✓ Environmental stewardship

✓✓✓ Partnership

✓✓✓ Community

✓✓✓ Safety and Wellbeing

PROJECT OBJECTIVES

- 1 Improve safety and reduce congestion
- 2 Encourage Tourist to contribute to local economy
- 3 Enhance visitor experience
- 4 Support future growth

★ TOP PROJECT BENEFITS

- 1 Improved safety
- 2 Increases likelihood of tourists stopping and contributing to local economy
- 3 Makes better use of existing facilities
- 4 Supports future growth

⚠ PROJECT RISKS

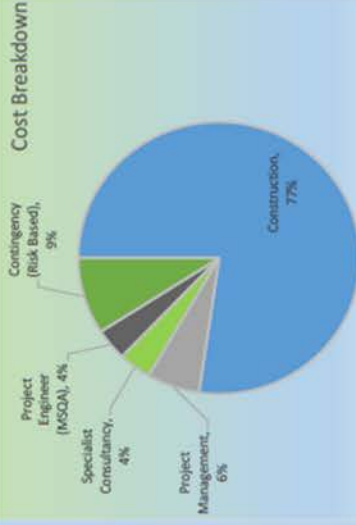
- 1 Access to required land (NZTA)
- 2 Preparation works reveal additional complexities
- 3 Availability of contractors to avoid peak season issues
- 4 Project will not proceed without TIF Funding

FUNDING SOURCES

FNDC CAPEX	\$ 61,875
OTHER GOVT AGENCIES	\$ -
NZTA	\$ -
COMMUNITY CONTRIBUTION	\$ 33,000
OTHER SOURCES	\$ -
MBIE - TIF	\$ 94,875
TOTAL FUNDING	\$ 189,750

COST ESTIMATE

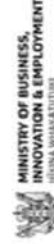
CONSTRUCTION	79%	\$ 150,000
PROJECT MANAGEMENT	5%	\$ 10,000
SPECIALIST CONSULTANCY	3%	\$ 6,250
PROJECT ENGINEER (MSQA)	3%	\$ 6,250
CONTINGENCY (RISK BASED)	9%	\$ 17,250
		\$ 189,750



Awanui Park

- Improve park landscaping and facilities.
- Create entrance on northern boundary with SH10. Connect with proposed crossing and open space at River's Edge. Use park entrance to contribute to a town centre gateway.
- Improve existing entrance on west boundary with SH1. Improve landscaping, add amenity, consider shifting and rearranging public toilets and carpark.
- Grow activity and amenity use park for markets and events, add seating, shade, more improved play, and sports facilities such as basketball and cycling.

✓ Publicly available infrastructure used significantly by tourists



✓ New facilities or enhancement

✓ Not a new attraction or commercial activity

✓ Does not compete with commercial activities

✓ Over \$25,000

✓ No funding from NZTA



Background

The significant increase in visitors to the Far North over the last five years is placing considerable strain on current infrastructure and is also increasing pressure to provide services in areas currently not supported. The provision of adequate and hygienic toilet facilities is one of the major regional concerns. Potable water supply is another area of concern that was vividly highlighted by the recent drought in the Far North.

The Freedom camping study approved in TIF R4, although in its infancy, is as expected receiving considerable feedback on the requirement for additional toilet and water facilities for both campers and day visitors and it can safely be anticipated that numerous toilet facilities will be required in the 3 to 5 year plan. In most instances water supply will also be an issue in these locations.

As experienced with the 2018 TIF Toilet Projects the delivery of these facilities can face numerous delays as design, consent and procurement processes are initiated from scratch for each project. The availability of contractors on a project by project basis is also becoming a significant issue. There is potential to streamline the overall process, reduce the cost of implementation and improve delivery times.

Infrastructure Issues

- Design including engineering is reinvented site by site
- Water harvesting needs more focus in initial facility planning
- Although consultation is a fundamental necessity too much flexibility in engineering and design is creating delays and financial pressures.
- Operations and servicing staff have considerable feedback to offer in design improvement and the good work done to date can be formalised in a complete start to finish process.
- Off the shelf options are possible
- One off procurement events are inefficient. A competitive procurement process which encompasses current and potential demand will net positive results
- A strategic approach may induce more interest and investment from local contractors
- Are there opportunities to collaborate with Whangarei and Kaipara councils.

A well-researched and implement designed and selection criteria, prequalified where possible will enable better value for money, faster delivery and in most cases will provide options for consultation rather than a green field.

Project: Toilet Infrastructure Response Improvement Study Grant

Consult internally, with industry , other agencies and community boards to:

1. Identify the most common toilet design requirements such as;
 - Dry Vault
 - Soakage field
 - Connected
 - Number of cubicles
 - Water requirements
 - Water Harvesting potential
2. Identify successful designs through consultation with servicing staff
3. Expand water harvesting options to include current buildings
4. Look to the market for options and partnerships
5. Determine if local industry can support requirements
6. Standardise where possible
7. Seek pre-approvals where possible
8. Produce selection and budgeting guide

Budget allows for contracting engineering design services as required.

Cost Estimate			Benefits					
<table><tr><td>Project Resources</td><td>100%</td><td>\$ 110,000</td></tr><tr><td></td><td></td><td>\$ 110,000</td></tr></table>	Project Resources	100%	\$ 110,000			\$ 110,000		<ul style="list-style-type: none">• Proactive rather than reactive approach• Ensures maximum value for money• Opportunities for local economic development• Can respond quickly to adhoc funding opportunities
Project Resources	100%	\$ 110,000						
		\$ 110,000						
FNDC Contribution: \$ 55,000								
Stakeholders								
FNDC , Community groups, Industry								
Risks								
Will not proceed without TIF funding								

Future Projects for Consideration

Potential TIF Projects		
Community Board	Project	Description
Bay of Islands-Whangaroa	Manginganina (Puketi Forest Kauri Walkway)	Carpark, Toilet and pedestrian control. Needs DOC to engage. Will relieve pressure on Waipapa public toilets.
Bay of Islands-Whangaroa	Flag Staff Hill (Russell)	Footpath from Wellington Street. High number tourist attraction.
Kaikohe-Hokianga	Freese Park	Stabilisation and erosion protection
Te Hiku	Unahi (Rangaunu Harbour)	Toilet facility. May also be a focus of Boat ramp study/Freedom Camping study.
Te Hiku	Pukenui Wharf (Houhora Harbour)	Upgrade carpark lines. Signage etc
Te Hiku	Paua Wharf (Parengarenga Harbour)	Possibly seasonal toilet. Option for freedom camp. Requires consultation
Te Hiku	Shipwreck Bay Entrance	The entrance to Shipwreck Bay needs upgrading. Requires further consultation.
Te Hiku	Shipwreck Bay access road	Sealing
Bay of Islands-Whangaroa	Kawhiti Glow Worms Cave	Car park/ Toilet. Land ownership/commercial issues
Bay of Islands-Whangaroa	Ruapekapeka	Car park/ Toilet. Land ownership/commercial issues
All	Freedom Camping	Requirements developed through operational plan project.
All	Boat Ramp Parking	Requirements developed through operational plan project.

Bay of Islands-Whangaroa	Rangitane Reserve Toilet	
Bay of Islands-Whangaroa	Long Beach Toilet	Reconfigure or move soakage field
All	Tourist toilet strategy	Identify areas requiring additional infrastructure.
All	Potable water/ wastewater feasibility at other tourist hotspots	Identify areas requiring additional infrastructure.
All	Data Capture	Options for better capture of visitor numbers and infrastructure demands
Te Hiku	HIHI sewage system upgrade	Major project (over \$3m)– Hoskins have the lead and it is well progressed
Te Hiku	Top 4 Road seal projects	Matai Bay @ 1.377km \$478k
Bay of Islands-Whangaroa	Top 4 Road seal projects	Purerua Road @ 480m \$197k
Bay of Islands-Whangaroa	Top 4 Road seal projects	Haruru Falls @ 3.262km \$ 1.611M
All	Boat ramp safety	Floating docks where access to shore is potentially dangerous. Consultation with FNHL required
Bay of Islands-Whangaroa	Te Ngere Bay toilet carpark seal	Seal carpark
Te Hiku	Awanui reserve car park	Basic carpark/ gravel
Te Hiku	Footpath along Ahipara	FNDC and Haigh Workman have plans for footpath. (Jaco at FNDC)
Te Hiku	Walkway to Shipwreck Bay	Concept only at this stage. May not be physically feasible.
Bay of Islands-Whangaroa	Paihia WWTP Alkalinity	Put forward for March 2020. Bill Downs