



Dargaville Wharf / Pontoon Upgrade Business Case

Dargaville Wharf Upgrade Business Case

Developed on behalf of Kaipara District Council by:



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Document History and Status

Revision	Date	Author	Reviewed & Approved by	Status
70% Draft	18-Oct-19	Aaron Patterson WSP Opus	Diane Bussey Kaipara District Council	70% Draft
95% Draft	11-Nov-19	Aaron Patterson WSP Opus	Diane Bussey Kaipara District Council	95% Draft
Final		Aaron Patterson WSP Opus	Louise Miller Kaipara District Council	Final

Executive Summary

This Business Case sets the justification for the Dargaville Wharf / Pontoon Upgrade Project which is located in central business area of Dargaville, the main town of the Kaipara District.

The Dargaville Wharf / Pontoon Upgrade Project is estimated to cost \$1,065,600, with an estimated five (5) months to construct. The scope of the project includes upgrading the wharf and surrounding infrastructure assets to support services. The primary purpose of the Dargaville Wharf is to serve as the ferry transport hub for the district.

This project is strategically aligned in Council's objectives and is part of the Kaipara Kick Start Programme - Wharves Activation Programme; achieving economic growth through harnessing the Kaipara Harbour the largest harbour in New Zealand.

The Dargaville Wharf is the first infrastructure to be built as part of the Wharves Activation Programme with a supporting wharf network being established as identified in the Wharves Feasibility Study. The outcomes to be achieved by this project include:

- Increasing tourism activity
- Improving transport efficiency
- Improve safety
- Enhance, promote and protect heritage and local iwi culture.
- Increase local employment
- Developing a sense of place for the community.

This business case applies a project prioritisation matrix to evaluate and quantify several criteria across each of the three key elements:

- Strategic alignment to Council's objectives; scoring 71%
- Project risk and complexity; scoring 70%
- Economic cost benefit analysis including options analysis; scoring 80%

The overall priority score for this project is 74 out of a 100 - high.

Economic benefits for the recommended option for this project over the next 25 years (the analysis period, AP) are estimated to provide: a net present value cost benefit of \$4,113,065, a return on investment of 386% (cost/benefit ratio of 1:3.8) and internal rate of return of 16% p.a. This is based on an increase of 1000 tourists, from the current base of approximately 5000 p.a via harbour cruises, in year 2 of the AP and growing at 3% p.a thereafter. Under this scenario, the project has a 8 year pay back period. Conservatively the project would break-even over the 25 year period, with an increase of 485 tourists in year 2 and growing at 3% p.a thereafter.

It is recommended that based on this project's alignment to achieving Council's objectives, a manageable project risk and complexity, combined with positive economic benefits and additional non-monetised community benefits, that this project proceeds. This qualified yes, is dependent on the tourism-only derived economic benefit based on key assumptions. The Wharves and Water Transport Network Feasibility Study will explore benefits in greater detail. Capital cost estimates supplied by client are recommended to be validated to improve cost estimate accuracy and certainty.

Business Case

Project Name: Dargaville Wharf Upgrade Project

Project No.:

Project Owner: Kaipara District Council

Project Cost \$ 888,000

Contingency 20%

Total \$ 1,065,600

Council Objective Alignment:	71%	Is this an Existing or New Asset?	Existing	New	
Project Risk & Complexity Score:	70%		Growth	Renewal	Level of Service
Cost Benefit Analysis:	80%		Total Score	74%	

Governance

Prepared By: WSP - Aaron Patterson

Project Sponsor: Louise Miller

Proposed Start Date: December 2019

Date: 11 November 2019

Business Owner: Jim Sephton

Duration: 5 months (May 2020)

Context (Background/ Intro):

The Dargaville Wharf Upgrade Project is part of the Kaipara District Council – Kaipara Kick-start (Kaipara Moana Activation Plan) - funding through the Provincial Growth Fund. Kaipara Kick-start consist of three complementary streams;

- Kai: Unlocking the potential of fertile land assets in the Kaipara through investigations and analysis and programme of work to begin the transformation of idle land, to productive land.
- Wharves: Making the harbour accessible to tourism and the horticulture industry, and providing a lasting connection to Auckland, to provide a sustainable future for the Kaipara.
- Roads: Remediation and upgrade work to current roading infrastructure. The primary drivers for this are land access and road user (e.g. tourist) safety.

The Dargaville Wharf Upgrade Project is part of the broader Wharves Network Project which consists of;

- Phase 1a: feasibility, project master planning network of wharves, project prioritisation through business cases, \$950,000.
- Phase 1b: projects construction; \$4,000,000.

Business Need / Justification:

The Kaipara Harbour is the biggest harbour in New Zealand. The natural topography of the harbour enables efficient harbour transport of passengers, vehicles and light freight as well as serving tourism. The harbour links locally the communities and lwi of the Kaipara District as well as connections to Auckland. The Dargaville Wharf is situated in the nearby town centre of Dargaville which is the main township of the Kaipara District. The Dargaville Wharf will serve as the Wharves transport hub servicing the district. The existing Dargaville Wharf is a few years old and in good condition yet the current design and surrounding infrastructure (bus stop, access, carparks) is not fit for purpose or adequately safe to serve as a wharf passenger ferry terminal.

Objective(s):

To construct an upgraded; safe, cost effective, fit for purpose, optimum option wharf that fulfills all key functional requirements for stakeholders to serve as the ferry terminal hub for wharves network promoting tourism, ferry passenger commute and light ferry freight. This will in turn increase transport efficiency, tourism, safety, sense of place and connect a network of wharves supporting increased economic activity in the district.

Benefit(s):

Providing a town centre ferry terminal hub servicing a network of wharves connecting communities, fertile lands, lwi at strategic nodes of the Kaipara Harbour and linkage to Auckland This will in turn increase transport efficiency, increase tourism, promote use of fertile lands and be a catalyst for increased economic activity. This project links to the broader Kaipara Kick-start program.

Strategic Alignment:

This project is in alignment to:

- Kaipara Kick-start program (Wharves Activation Plan), - Twin Coast Discovery Route, - Northland Cycle Plan BC,
- Kaipara District Council Long Term Financial Plan, - Kaipara District Council Infrastructure Strategy, - The Kaipara District Plan,
- Northland Journeys Tourism Strategy, - Tai Tokerau Northland Economic Action Plan, - Regional Land Transport Plan,
- Aotearoa New Zealand Government Tourism Strategy,

Planning

Project Scope: Project options include scope consideration for wharf / pontoon upgrade and surrounds. Scope:

- improved wharf; floating pontoon for berthing (+ dredger), improved wharf shelter, removal old redundant piles.
- upgraded supporting infrastructure; upgraded carpark / line marking; bus bay, loading bay, accessibility parking.
- new recreational assets; bike racks, notice board, historical & lwi signage, drinking fountain, lighting.
- new public convenience (toilets).

Assumptions:

- Detailed engineering assessments have not been completed, no major issues are assumed
- Resource consent(s) approved.
- Wharves Network feasibility not complete, preliminary network concept assumed.
- Engineers estimates for design options required

Project Phase



Wharves Activation Feasibility Study underway, this is business case for Dargaville Wharf / Pontoon Upgrade.

Preliminaries (complete Yes / No)

Feasibility:	YES	NO	Stakeholder Engagement:	YES	NO
Concept Design:	YES	NO	Identified Funding:	YES	NO
Detailed Designs:	YES	NO	Authorised for Business Case:	YES	NO

Identified Stakeholders Engaged With:

Leadership Team:	YES	NO	Planning & Regulatory:	YES	NO
Asset Manager:	YES	NO	Councillors:	YES	NO
Community:	YES	NO	Regional Council:	YES	NO
Iwi Groups:	YES	NO	Central Government:	YES	NO

Project Resourcing (internal)

Project Manager:	YES	NO	Project Manager:	Mark Bell
Procurement:	YES	NO	Procurement Officer:	Diane Miller
Engineer:	YES	NO	Engineer:	Mark Bell
Communications	YES	NO	Communications Officer:	Gillian Bruce

Procurement

Delivery Model:	INTERNAL	OPEN TENDER	INVITE TENDER
Market Resources:	AVAILABLE	UNSURE	CONSTRAINED
Has an EOI gone out:	YES	INFORMAL	NO

Project Alignment to Council Objectives

Description:

- This business case applies a project prioritisation matrix which evaluates criteria across three key themes:
- Strategic alignment to Council's objectives.
 - Project risk and complexity.
 - Economic cost benefit analysis including options analysis.

The element measured here is strategic alignment to Council's objectives. The criteria as referenced below are quantified by variables scored 1 (low) to 3 (high) with exception of the Provincial Growth Funding criteria which is scored 1 (low) to 10 (high). The criteria are then totalled and converted to an overall percentage score. A low percentage score represents low project alignment to Council's objectives, whilst a high score represent high alignment and thus a more attractive - higher prioritised project.

Prioritisation Score	71%
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Low High

Criteria	Score	Weighting
Political appetite	3	
Community alignment, including Iwi	2	
Strategic alignment.	3	
Is the project related to a core service**	2	
Organisational efficiency cost benefit	1	
Risk (of not carrying out the project)	1	
Provincial Growth Fund Criteria	8	



Value	Variable
1	There is no political appetite and this has been expressed.
2	The level of political appetite is unknown.
3	The project has been discussed previously and political appetite has been expressed.
1	The Community has signalled they do not support the project.
2	The Community is unaware or indifferent. There is no key Community member or members driving the project.
3	The Community has signalled they support the project. There is a member/s of the Community driving the project.
1	This project is not aligned to a specific action or objective specified in a Council approved strategic document.
2	This project is aligned to one specific action or objective specified in a Council approved strategic document.
3	This project is aligned to more than one specific action or objective specified in a Council approved strategic document.
1	The project is not impacting the delivery of Council's core services**. This project is discretionary.
2	Project is maintaining or improving a core service but not fundamental to Community health and wellbeing.
3	Project is maintaining or improving a core service and is fundamental to Community health and wellbeing.
1	This project will be of not provide cost savings to the Organisation i.e. increased effectiveness or efficiency (soft or bottom line benefits).
2	This project will provide value to the Organisation i.e. increased effectiveness or efficiency (soft or bottom line benefits) to the equivalent of 0 to \$50k.
3	This project will be of value to the Organisation i.e. increased effectiveness or efficiency (soft or bottom line benefits) to the equivalent of >\$50k p.a.
1	No or low risks of not carrying out the project.
2	Medium or high-level risks exist if the project were not to proceed.
3	Very high or extreme level risks if the project were not to
Each criteria is worth one score each:	
✓	Increase economic output.
✓	Enhance utilisation of and/or returns for Māori assets.
✓	Increase productivity and growth.
✓	Increase local employment and wages (in general and for Maori).
✓	Increase local employment, education and/or training opportunities for youth (in general and for Māori).
X	Improve digital communications, within and/or between regions.
✓	Improve resilience and sustainability of transport infrastructure, within and/or between regions.
X	Contribute to mitigating or adapting to climate change.
✓	Increase the sustainable use of and benefit from natural assets.
✓	Enhance wellbeing, within and/or between regions.

*Core Service defined in Part 2 Section 11A of the LGA 2002: (a) network infrastructure, (b) public transport services, (c) solid waste collection and disposal, (d) the avoidance or mitigation of natural hazards, (f) libraries, museums, reserves, recreational facilities , community amenities.

Project Risk & Complexity

Description:

This business case applies a project prioritisation matrix which evaluates criteria across three key themes:
 - Strategic alignment to Council's objectives.
 - Project risk and complexity.
 - Economic cost benefit analysis including options analysis.

The element measured here is project risk and complexity. The criteria as referenced below are quantified by variables scored 1 (low) to 3 (high) with exception of the Estimated Cost criteria which is scored 1 (low) to 6 (high). The criteria are then totalled and converted to an overall percentage score. A low percentage score represents a project with higher risk and complexity, whilst a high percentage score represent low risk and complexity and thus a more attractive, easier to delivery higher prioritised project.

Project Risk & Complexity Score	70%
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Low High

Description	Score	Weighting	Value	Criteria
Benefit expectation	2		1	There are challenges in clearly defining benefits and stakeholders have not clearly stated their expectation of benefits.
Dependencies	2		1	Dependencies with major impacts to other projects, cost or services if changed.
Impact & consultation with customer or ratepayer	2		1	Customers won't notice any change and no consultation required.
Impact on council	3		1	There will be significant changes to council stakeholders as a result of the project, such as changes in everyday activities, processes, systems or budget.
Risk	3		1	Some very high or extreme risks exist.
Scope	2		1	Unable to fully define scope, will require diligent monitoring and management as scope is agreed and further defined.
Funding source	1		1	The majority of the funding is provided by organisations external to council and/or is arriving from multiple organisations.
Estimated project cost	4		1-2	estimated cost < 100K
			3-4	100k < estimated cost < 1m
			5-6	1m < estimated cost
Procurement	2		1	Procurement requirements are minimal and can be managed by the business area.
			2	Procurement will involve formal tender.
			3	Procurement will involve a procurement strategy and market engagement.

Cost Benefits Analysis

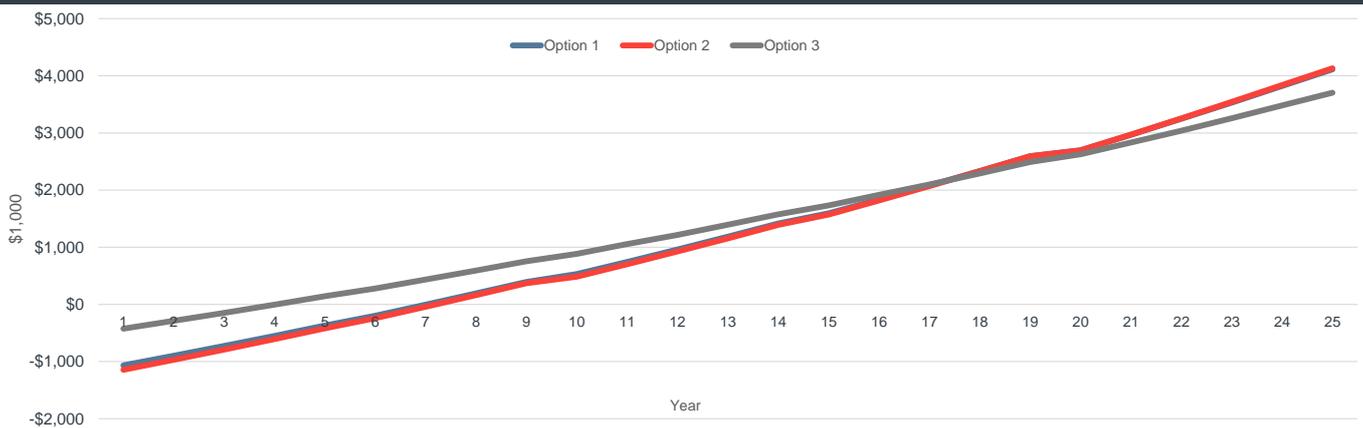
Description Cost Benefit Analysis has been performed in alignment to "The Treasury" of New Zealand's "Better Business Case – 2019 Guidelines". Cost benefit analysis important feature of decision-making where the economic impacts are evaluated via a systematic approach by estimating the strengths and weaknesses of project options to inform the optimum approach to achieving benefits while preserving savings. Tangible benefits are quantified in monetary terms and are adjusted for the time value of money; all flows of benefits and costs, over time are expressed in terms of their net present value (NPV). NPV, Pay Back Period, Return on Investment (ROI) and Internal Rate of Return (IRR) are the methods used in the business case for cost benefit analysis and evaluation, with final options selection incorporating non-monetised benefits (such as cultural, environmental, efficiency, community well being and so on). The overall cost benefit analysis is then scored as a percentage based on internal rate of return over the 25 year period, with 0% producing a negative IRR the 10% scored per 2% of IRR until maximum score of 100 percent is attained (20% IRR).

Cost Benefits Analysis Score	80%
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Options

Project Title	Description	NPV	IRR	Payback	ROI
1. Concrete kit pontoon with surrounds	Concrete floating pontoon, dolphins, lighting, toilet, carpark, toilet, signage, removal of redundant piles	\$ 4,113,065	16%	8	386%
2. Bespoke pontoon with surrounds	Concrete floating pontoon, dolphins, lighting, toilet, carpark, toilet, signage	\$ 4,131,645	15%	8	361%
3. Concrete kit pontoon no surrounds	Concrete floating pontoon only	\$ 3,703,956	34%	5	874%

Net Present Value Options Cost Benefits Analysis



Year	1	2	3	4	5	6	7	8	9	10	11	12	13	14	15	16	17	18	19	20	21	22	23	24	25
Option 1																									
Capital Costs	-1066									-100						-100				-450					
Operating Costs		-18	-19	-19	-20	-20	-21	-21	-22	-23	-23	-24	-25	-26	-26	-27	-28	-29	-30	-31	-32	-33	-33	-34	-36
Maintenance Costs		-15	-15	-16	-16	-37	-18	-19	-19	-40	-20	-22	-23	-53	-25	-25	-25	-25	-66	-28	-29	-30	-31	-62	
Economic Benefit*		210	227	246	266	287	311	336	363	393	425	460	497	538	582	629	680	736	796	860	931	1006	1088	1177	1273
NPV Total	-1066	-899	-727	-550	-368	-196	-5	192	394	531	744	963	1186	1416	1593	1834	2081	2334	2594	2697	2969	3247	3532	3823	4113
Option 2																									
Capital Costs	-1144									-150						-100				-470					
Operating Costs		-10	-10	-11	-11	-11	-12	-12	-12	-13	-13	-13	-14	-14	-15	-15	-16	-16	-17	-17	-18	-18	-19	-19	-20
Maintenance Costs		-15	-15	-16	-16	-37	-18	-19	-19	-40	-20	-22	-23	-53	-25	-25	-25	-25	-66	-28	-29	-30	-31	-62	
Economic Benefit*		210	227	246	266	287	311	336	363	393	425	460	497	538	582	629	680	736	796	860	931	1006	1088	1177	1273
NPV Total	-1144	-969	-790	-606	-418	-239	-41	163	371	484	703	927	1156	1391	1574	1820	2072	2330	2594	2695	2971	3254	3542	3837	4132
Option 3																									
Capital Costs	-424									-60						-60				-200					
Operating Costs		-3	-3	-3	-3	-3	-3	-4	-4	-4	-4	-4	-4	-4	-4	-5	-5	-5	-5	-5	-5	-5	-6	-6	-6
Maintenance Costs		-12	-12	-13	-13	-34	-14	-14	-15	-15	-16	-38	-17	-18	-28	-29	-54	-35	-36	-37	-38	-64	-35	-36	-67
Economic Benefit*		160	173	187	202	219	237	256	277	299	324	350	379	410	443	479	518	560	606	656	709	767	829	897	970
NPV Total	-424	-287	-147	-3	144	280	435	593	755	886	1055	1218	1395	1577	1732	1918	2099	2293	2491	2627	2835	3040	3259	3482	3704

Options Recommendation Summary

Project Option 1 - Concrete kit pontoon with surrounds is the recommended project to option to proceed. The scope includes:
 - upgraded wharf; floating pontoon for berthing high and low tides, improved wharf shelter, removal old redundant piles, dolphins for larger ship such as dredger, LED lighting; elevated and underneath, 15AMP electric charger
 - upgraded supporting infrastructure; carpark upgrade / realignment; bus bay, loading bay, 2x accessibility parking spaces, car park lighting, large bin
 - new recreational assets; bike racks, notice board, historical & iwi signage, drinking fountain, lighting
 - new public convenience (toilet)

This project has the highest NPV at \$4,113,065 with a 8 year pay back. Whilst option 3 - "do minimum" - wharf only has the highest ROI and IRR, Option 1 with additional surround scope provides additional non monetary community benefits such as:
 - establishing an improved sense of place (the lens through which people experience and make meaning of their experiences in and within a place for the community) improved aesthetics / town beautification, cultural and heritage enhancement including local lwi, improved security with lighting, catering for aging population and accessible challenged persons with accessibility parking, public toilet amenities, bike racks for popular tourist cycling of district trails, future proofing infrastructure.
 - electric charger for future electric ferry and boat charging capability enabling reducing carbon footprint.
 - enhancing transport capability for efficiency and reduced transportation costs via Kaipara Harbour.
 - improved safety through improved traffic and pedestrian interaction with bus bay and loading bay.

Assumptions and Diligence Check List

Description:

The purpose of this check list is to provide a business case and preliminary project planning due diligence and governance check, identifying the main project risks and identify tasks to mitigate these risks. This check list is no exhaustive. The intension is to transfer knowledge collated through the development of this business case to inform the project manager to facilitate project planning for delivery.

Questions	Assessment					Key Observations & Actions
	WEAK		STRONG			
	THREAT			OPPORTUNITY		
	1	2	3	4	5	
1 STRATEGIC FIT						
1.1 Does this asset serve a core mandatory service?			✓			Core service, level of service undefined.
1.2 Is this project supported by stakeholders?			✓			Yes,+ community consultation planned 20 Nov 2019
1.3 Does this project sit within a developed and endorsed master plan?					✓	Kaipara Kick Start Programme
2 FUNDING						
2.1 Is the project identified in the Long Term Financial Plan?				✓		Will be in next round LTFP 2021 - 2031
2.2 Is the project in the alignment to Infrastructure Strategy?				✓		Will be in next round IS 2021 - 2051
2.3 Are funds available and secured?				✓		Preliminary PGF secured, funds to be made available
2.4 Does the project has a positive NPV?					✓	Yes, >\$4m over 25yrs
2.3 Are whole of life costs for the asset acceptable and affordable?					✓	Yes, WOL costs estimated
3 PROJECT REQUIREMENTS						
3.1 Have we established the full functionality the asset(s)? (What is has to do)					✓	Wharves Steering Group meeting 18th Oct 2019
3.2 Do we fully understand the scope of the project?				✓		Wharves Steering Group meeting 18th Oct 2019
3.3 Have we consulted with stakeholders?			✓			Wharves Steering Group established, community engagement planned
3.4 Are the project timelines acceptable?			✓			5 months, tight
3.5 Do we have the right Project Manager available?					✓	Mark Bell
3.6 Do we have the right resources & capability to deliver?					✓	KDC resources available, market to deliver
3.7 Does delivery requiring more than one primary contractor?		✓				Unsure
3.8 Are the potential risks understood and manageable to acceptable level?				✓		Minimal risks and mitigated
4 DELIVERY PREPARATION						
4.1 Have concept designs been produced?			✓			Draft concept designs
4.2 Has an engineers estimate been developed?			✓			Cost data Supplied KDC and Wharves Steering Group
4.3 Are Resource Consents likely to be obtained without issue?					✓	Yes, RC for concept design approved
4.4 Are time constraints in line with proposal / tender timetables?			✓			Tight timelines
4.5 Do we have experience with the procurement process?					✓	Yes and experienced
5 Risk						
5.1 Are assumptions well known and acceptable?				✓		Minimal risks and mitigated
5.2 Are additional investigations needed to sure up assumptions and risks?			✓			Refer below.
6 Key Economic Analysis Assumptions						
6.1 Costs are indicative, supplied by Kaipara District Council and the Wharves Steering Group.						
6.2 Detailed engineering assessments will produce no major issues that will impact on cost.						
6.3 Project options and scope provided by Kaipara District Council and the Wharves Steering Group.						
6.4 Weighted average cost of capital 6%						
6.5 River cruise tourists increase by 1000 in yr.2 (increase of 20%), 800 of which will spend \$100 in local economy, \$200 stay over night and spend \$400 in local economy, at 5% growth p.a. and 3% CPI						
6.6 Option 1 and 2 with supporting infrastructure with 'sense of place' will attract additional 500 p.a people in yr.2 to township spending \$100 in local economy at 3% growth p.a. and 3% CPI						
6.7 Refer Appendix A Cost & Benefit Assumptions for additional detail						
What are the main risks associated with THE "PROJECT" and "BUSINESS CASE"? How they will be managed & communicated?						Based on the assessment, the assumptions and BC is acceptable as viable?
- Community consultation planned. - Project timelines to be confirmed. - Engineering assessments will improve cost accuracy. - Wharves & Water Network Feasibility Study planning will refine cost benefits - Project costs to be validated						YES
					NO	

Go / No Go Approval

	NAME	SIGNATURE	DATE
Completed by Business Case Developer:	Aaron Patterson - WSP Principal Asset Mgmt Eng.		
Acceptable by Project Manager:	Jim Sephton - KDC General Manager Infrastructure		
Acceptable by Project Sponsor:	Louise Miller - KDC Chief Executive Officer		

Appendix

A

Cost & Benefit Assumptions



Cost & Benefit Assumptions

1. Concrete kit pontoon with surrounds Capital Costs \$1,065,600

Item	Cost	Comment
Pontoon supply & delivery*	\$ 145,000	
Pontoon craneage, elec, gangway install, shelter*	\$ 65,000	
Pontoon fending*	\$ 50,000	
Dolphins*	\$ 18,000	Two pile dolphins with double timber headstock, SS fasteners – pine (bare) - supply/driven/assembled
Removal redundant piles*	\$ 10,000	Barge based pull - \$900/pile or 2. Diver cut off at seabed - \$10k/day – could do 8-10 in a day
Toilet*	\$ 250,000	Removal of old toilet and new install
Water drinking fountain*	\$ 5,000	
Carpark, re-alignment	\$ 250,000	Busbay, loading bay, 2x accessibly car spaces, medians, crossing, greenspace
Lighting*	\$ 75,000	Carpark and surrounds
Bike racks*	\$ 5,000	
Signage	\$ 15,000	
Contingency	20%	
Operating, Maintenance & Renewal Costs	variable	Indicative estimates. No allowance for full asset renewal at end of life (>25years)

*Cost estimates supplied by client

2. Bespoke pontoon with surrounds Capital Costs \$1,143,600

Item	Cost	Comment
Pontoon supply & delivery	\$ 210,000	Derived January 2018 Barfoot Construction quote and information supplied by Hawthorne Geddes during Wharves Steering Group meeting 18 Oct 2019.
Pontoon craneage, elec, gangway install, shelter*	\$ 65,000	
Pontoon fending*	\$ 50,000	
Dolphins*	\$ 18,000	Two pile dolphins with double timber headstock, SS fasteners – pine (bare) - supply/driven/assembled
Removal redundant piles*	\$ 10,000	Barge based pull - \$900/pile or 2. Diver cut off at seabed - \$10k/day – could do 8-10 in a day
Toilet*	\$ 250,000	Removal of old toilet and new install
Water drinking fountain*	\$ 5,000	
Carpark, re-alignment*	\$ 250,000	Bus bay, loading bay, 2x accessibly car spaces, medians, crossing, greenspace
Lighting*	\$ 75,000	Carpark and surrounds
Bike racks*	\$ 5,000	
Signage	\$ 15,000	
Contingency	20%	
Operating, Maintenance & Renewal Costs	variable	Indicative estimates. No allowance for full asset renewal at end of life (>25years)

*Cost estimates supplied by client

Cost & Benefit Assumptions

3. Concrete kit pontoon without surrounds Capital Costs \$423,600

Item	Cost	Comment
Pontoon supply & delivery*	\$ 210,000	
Pontoon craneage, elec, gangway install, shelter*	\$ 65,000	
Pontoon fending*	\$ 50,000	
Dolphins*	\$ 18,000	Two pile dolphins with double timber headstock, SS fasteners – pine (bare) - supply/driven/assembled
Removal redundant piles*	\$ 10,000	Barge based pull - \$900/pile or 2. Diver cut off at seabed - \$10k/day – could do 8-10 in a day
Contingency	20%	
Operating, Maintenance & Renewal Costs	variable	Indicative estimates. No allowance for full asset renewal at end of life (>25years)

*Cost estimates supplied by client

4. Economic Benefit Assumptions

Item	Benefit	Comment
Tourism from wharf	\$160,000 year 2 then 3% p.a.	Current Kaipara Harbour River Cruises bring 5000 tourists per year. The Dargaville wharf current can only operation at 25% availability for docking due to tidal movements. A pontoon will enable 100% docking availability and in alignment with organic tourism growth and the assumption that cruise operators will take advantage of the increased availability, 1000 tourists are projected to increase after to build of the new wharf pontoon. 75% of tourist will bring \$100 per day into local economy with day trips and 25% will bring \$400 with staying overnight (accommodation ect), Growth is then projected at 3% p.a. thereafter.
Tourism from wharf with surrounds	\$50,000	500 additional people per year come to Dargaville central business district p.a. and spend \$100 each
Light Freight	None	Further investigation needed – feasibility study will inform
Ferry passengers	None	Further investigation needed – feasibility study will inform
Transport efficiency	None	Further investigation needed – feasibility study will inform
Safety	None	Further investigation needed – feasibility study will inform
Weighted average cost of capital	-	6% applied as discount factor
Cost Accuracy	-	Costs are indicative, supplied by Kaipara District Council and the Wharves Steering Group. Additional cost accuracy recommended via validating costs.
Engineering assessments	-	Detailed engineering assessments will produce no major issues that will impact on cost.
Project options and scope		Workshopped and provided by Kaipara District Council and the Wharves Steering Group.

Cost & Benefit Assumptions

6. Disclaimer of liability for reliance on client-supplied data if appropriate

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Appendix

B

Dargaville Wharf
Facility Preliminary
Layout Concept

wsp





BUS

Pedestrian Islands

Accessibility Parks

Loading Zone

Bus Bay

Bike Rack

pontoon

Green space

Signage Info

Truck Loading

Toilets

Green Space Rubbish Bins

Taxi

BUS

Appendix

C

Wharf Pontoon Upgrade Concept Design



provisional - not for construction

KEY

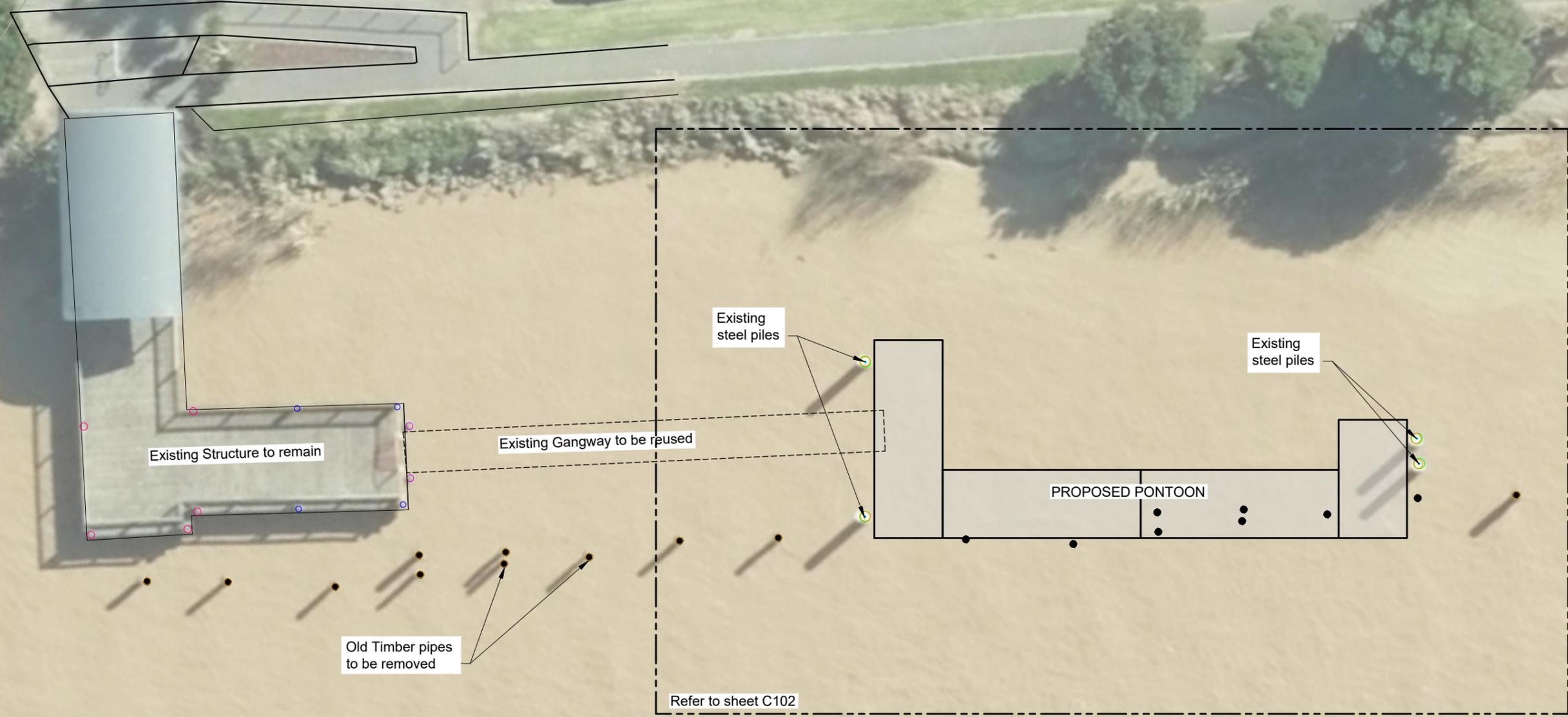
- Cap on top of pile
- Low on pile
- Top of pile
- 300mmØ pile with bracket
- 250mmØ pile (approx)
- 330mmØ pile (approx)

Heights are in terms of the One Tree Point Datum
Origin SM25 SO 5884 RL = 3.14

Measurements to the steel piles are taken low down, just below the top and on the screw on cap on the top of the pile

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CLIENT **KAIPARA DISTRICT COUNCIL**
PROJECT **DARGAVILLE WHARF PONTOON**
WAIROA RIVER, DARGAVILLE
DRAWING **SITE PLAN**

P1	ISSUED FOR CLIENT COMMENT	DT	04/11/19
REV.	REVISION DETAILS	BY	DATE

CONCEPT

SCALE @ A3
1:200

DRAWN DT NOV 2019 PROJECT No. **10788**

CHECK

APPROVED JAMES BLACKBURN

DRAFT

SHEET **C101** REV. **P1**

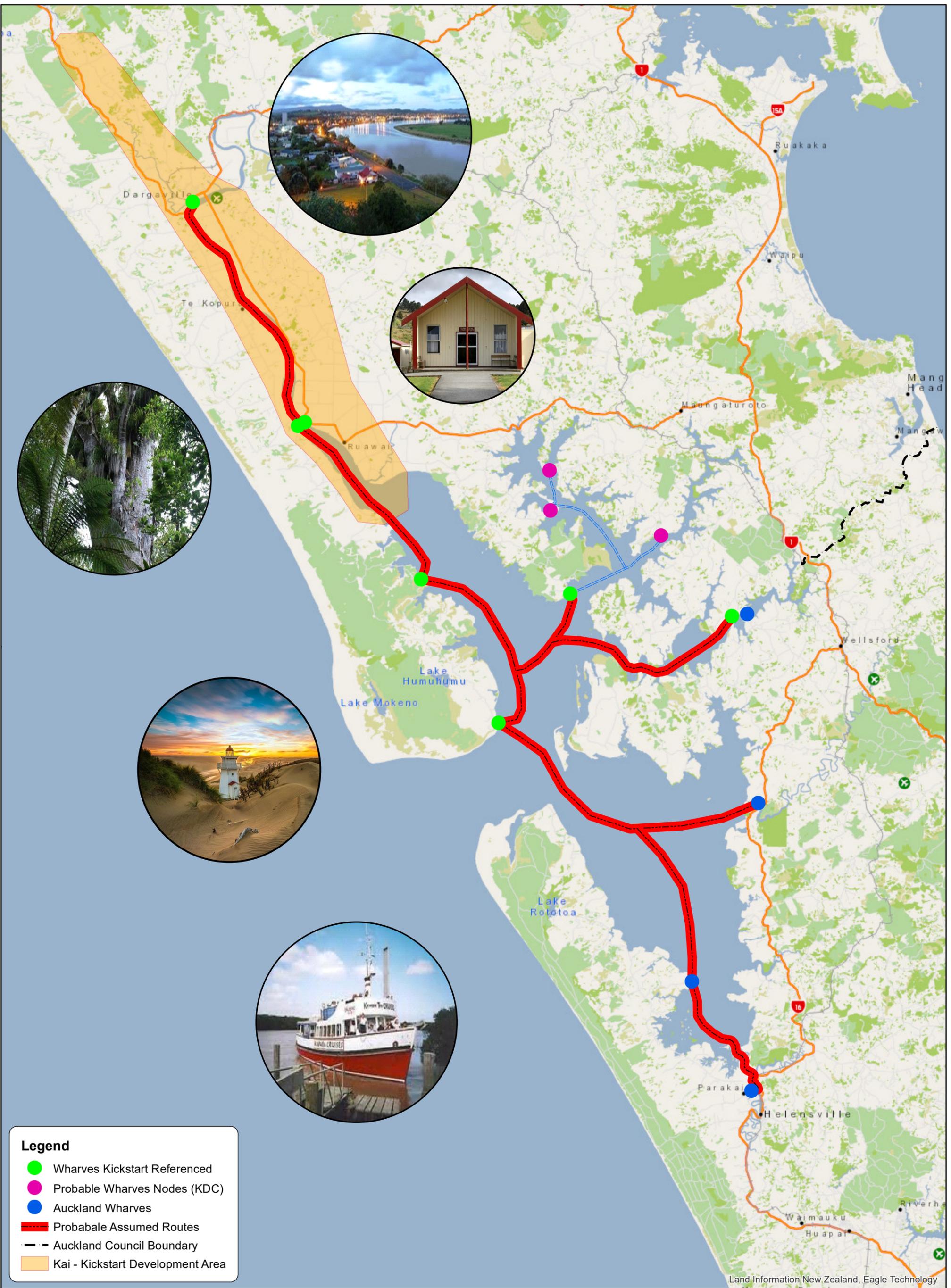
7/11/2019 9:42:31 AM 10788 CONCEPT.dwg

Appendix

D

Preliminary Ideation Concept Wharves & Water Network





Legend

- Wharves Kickstart Referenced
- Probable Wharves Nodes (KDC)
- Auckland Wharves
- Probable Assumed Routes
- Auckland Council Boundary
- Kai - Kickstart Development Area

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Client:

KAIPARA DISTRICT
KAIPARA TO ORANGATAKI - THE OCEANS TAKE CARE

Kaipara Kickstart

Wharves and Water Transport Network Feasibility Study

Project No:	Proposal	Scale:	<p>1:300,000 @A3</p>
Designed:	W.Teal	Approved:	
Drawn:	W.Teal	Revision:	
Note:		Map No:	Date:
		1	07/11/2019
		A	Revision Date:
			07-Nov-19

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